

**APPENDIX 1.1:**  
**TRAFFIC STUDY SCOPING AGREEMENT**

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June 26, 2018

Mr. Nathan Perez  
City of Perris  
135 N. D Street  
Perris, CA 92570

**SUBJECT: RIDER 2 AND 4 SCOPING AGREEMENT**

Dear Mr. Nathan Perez:

Urban Crossroads, Inc. is pleased to submit this scoping agreement to the City of Perris for the proposed Rider 2 and 4 development (“Project”), which are located on the northeast corner of Redlands Avenue and Rider Street, within the City of Perris’ *Perris Valley Commerce Center Specific Plan* (PVCC SP). It is our understanding that the Project is to consist of two high-cube transload/short-term storage warehouse buildings at approximately 1,376,901 square feet. The Project is anticipated to be constructed in one phase by the year 2020. The proposed Project land use is consistent with PVCC SP. A preliminary site plan, of which the traffic study will be based on, is shown on Exhibit 1. The following describes the access proposed for the site:

- Rider 4 will have access along the eastern extension of Morgan Street at Redlands Avenue for both passenger cars and trucks
- Rider 4 will have access along the eastern extension of Sinclair Street at Redlands Avenue for both passenger cars and trucks
- Rider 2 will have access for passenger cars and trucks via Driveway 1 on Redlands Avenue
- Rider 2 will have access for passenger cars only via Driveway 2 on Redlands Avenue
- Rider 2 will have access for passenger cars via Driveways 3 and 5 on Rider Street
- Rider 2 will have access for trucks via Driveways 3 and 4 on Rider Street

The purpose of this agreement is to obtain comments from City of Perris on the proposed traffic study scope of work. The remainder of this agreement describes the proposed analysis methodology, trip generation, trip distribution, and traffic assignment/project trips on the surrounding roadway network, which have been used to establish the proposed project study area and analysis locations.

**STUDY AREA**

Consistent with County of Riverside traffic study guidelines the study area limits have been set based upon a threshold of 50 peak hour project trips with input from City staff. In other words, the study area includes any intersection of Collector roadway or higher classification street with another Collector roadway or higher classification street, at which the proposed Project will add 50 or more peak hour

trips, or as requested by City staff. This methodology is also utilized in other near-by agencies, such as the City of Moreno Valley. The proposed intersection analysis locations have been identified on Exhibit 2.

## **ANALYSIS SCENARIOS**

The following analysis scenarios will be analyzed for this traffic study:

- Existing (2018)
- Existing Plus Project (E+P)
- Existing plus Ambient Growth (EA)
- Existing Plus Ambient Growth Plus Project (E+A+P)
- Existing Plus Ambient Growth Plus Cumulative (E+A+C)
- Existing Plus Ambient Growth Plus Project Plus Cumulative (E+A+P+C)

## **METHODOLOGY**

The methodology used to evaluate peak hour intersection performance is based on the Transportation Research Board's Highway Capacity Manual (HCM), 6<sup>th</sup> Edition. This methodology rates operations based on peak hour delay and associated level of service (LOS).

## **LEVEL OF SERVICE (LOS) CRITERIA**

Required LOS for roadway segments and intersections within the City of Perris is LOS D. An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway or at I-215 freeway ramps. For the purposes of this traffic impact analysis, LOS D has also been considered the acceptable threshold for freeway facilities within the study area, consistent with Caltrans guidelines.

## **PROJECT TRIP GENERATION**

Trip generation represents the amount of traffic that is attracted and produced by a development, and is based upon the specific land uses planned for a given project. Trip generation rates for the Project are shown in Table 1 and Table 2 illustrating daily and peak hour trip generation estimates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition, 2017, for Warehouse (ITE Land Use Codes 154 and 157).

Data regarding the vehicle mix has been obtained from High Cube Warehouse Vehicle Trip Generation Analysis (October 2016). The High Cube Warehouse Vehicle Trip Generation provides vehicle mix for

Short-Term Storage and Transload Warehouse uses, which consists of 32.2% trucks for daily trips, 30.8% trucks for AM peak hour trips and 21.7% trucks for PM peak hour trips. The South Coast Air Quality Management (SCAQMD) recommended truck mix for each axle type has been utilized for 2-axle, 3-axle, and 4+-axle trucks. The recommended truck mix for with for without cold storage warehouses is: 16.7% 2-axle, 20.7% 3-axle, and 62.6% 4+-axle trucks.

As noted on Table 1, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axes, 3-axes, 4+-axes). PCEs allow the typical “real-world” mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Appendix B of the San Bernardino County Congestion Management Program (CMP), 2016 Update. Note that these procedures are consistent with those adopted by the County of Riverside for warehouse projects.

The proposed Project’s trip generation, based on actual vehicles, has been included on Table 1 for informational purposes only. The proposed Project is anticipated to generate a net total of approximately 2,886 PCE trip-ends per day with 166 PCE AM peak hour trips and 190 PCE PM peak hour trips, as shown on Table 2.

## **PROJECT TRIP DISTRIBUTIONS**

The project trip distribution patterns for both passenger cars and trucks have been developed based on recent experience on other studies for similar land uses in the vicinity and comments provided by City of Perris staff. Passenger car distribution patterns will be based on existing and planned land uses and roadway infrastructure in the area. Truck distribution patterns will be based on City truck routes, proximity to the freeway system and the applicant’s input on percentage of traffic oriented to the Port of Long Beach or other destination. The passenger car and truck trip distributions are illustrated on Exhibits 3 and 4, respectively.

## **AMBIENT GROWTH RATE**

Consistent with other City of Perris traffic studies performed by Urban Crossroads, an ambient growth rate of 3 percent per year will be used for this analysis.

## **SPECIAL ISSUES**

The following special issues will be addressed as part of the TIA:

- A truck turning template will be overlaid on the site plan for each project driveway anticipated to have heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turn maneuvers.
- Traffic signal warrant analyses will be conducted for all unsignalized study area intersections for all applicable analysis scenarios.
- A concept striping plan for the site adjacent roadways, with recommended improvements, will be provided.

## **CUMULATIVE DEVELOPMENT PROJECTS**

A list of cumulative development projects and their proposed land uses are shown on Table 3. Exhibit 5 illustrates the locations of these cumulative development projects.

If you have any questions, please contact me directly at (949) 336-5982.

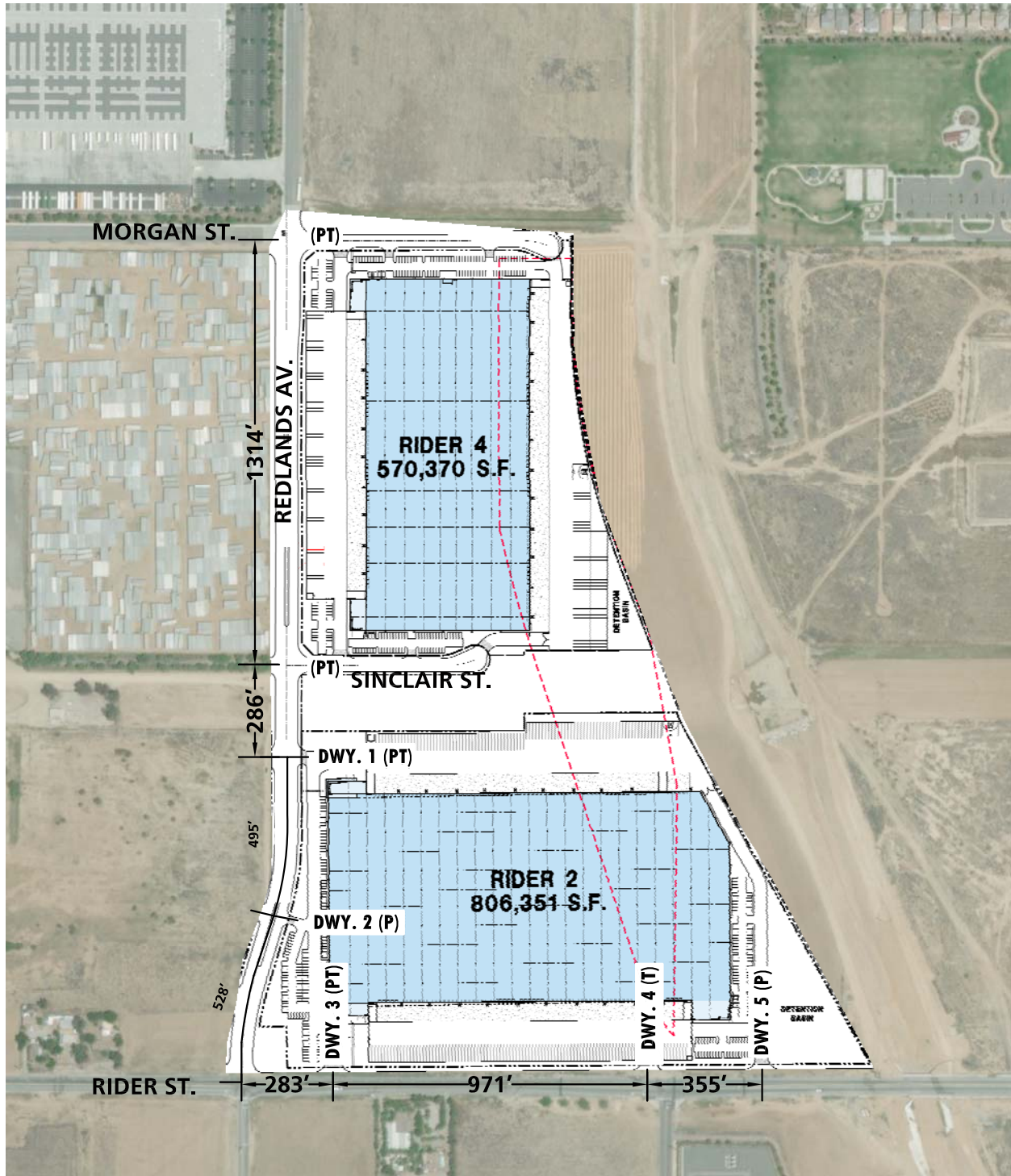
Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE  
Senior Associate

EXHIBIT 1: PRELIMINARY SITE PLAN

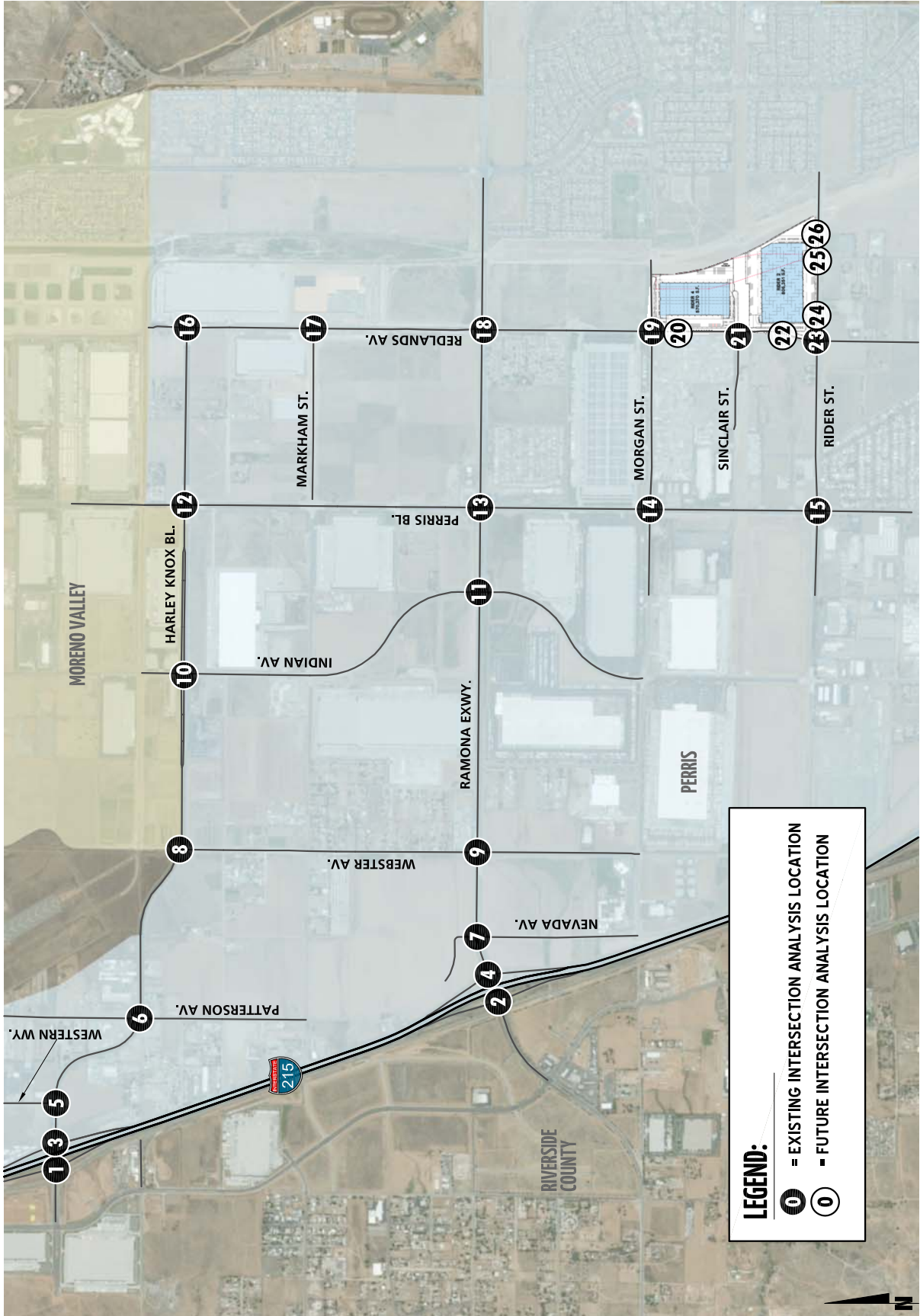


**LEGEND:**

- P = PASSENGER CARS ONLY
- T = TRUCKS ONLY
- PT = PASSENGER CARS AND TRUCKS

NOTE: UNLESS NOTED, ALL DRIVEWAYS ARE ASSUMED TO BE FULL ACCESS.

EXHIBIT 2: LOCATION MAP





### EXHIBIT 3: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



### EXHIBIT 4: PROJECT (TRUCK) TRIP DISTRIBUTION



EXHIBIT 5: CUMULATIVE DEVELOPMENT LOCATION MAP

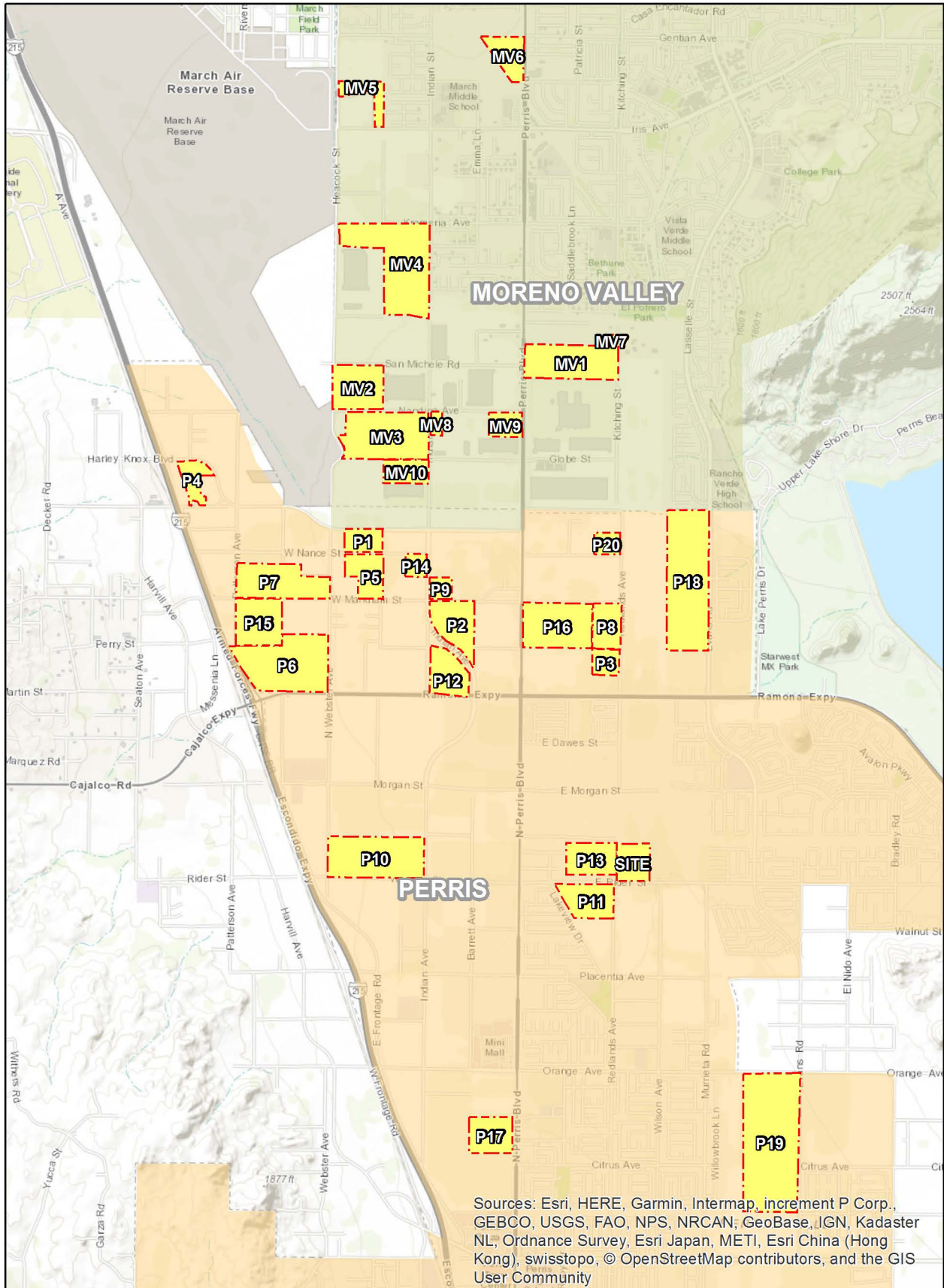


Table 1

Project Trip Generation Summary (Actual Vehicles)

Project Trip Generation Rates									
Land Use <sup>1</sup>	ITE LU Code	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage <sup>3,4</sup>	154	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.043	0.013	0.056	0.022	0.056	0.078	0.949
2-Axle Trucks (5.14% AM, 3.62% PM, 5.38% Daily)			0.003	0.001	0.004	0.001	0.003	0.004	0.076
3-Axle Trucks (6.38% AM, 4.49% PM, 6.66% Daily)			0.004	0.001	0.005	0.001	0.003	0.004	0.093
4-Axle+ Trucks (19.28% AM, 13.59% PM, 20.16% Daily)			0.012	0.003	0.015	0.004	0.010	0.014	0.282

Project Trip Generation									
Project	Quantity	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage	1,376.901	TSF							
Passenger Cars:			60	18	78	31	78	109	1,307
Truck Trips:									
2-axle:			5	2	7	2	5	7	105
3-axle:			6	2	8	2	5	7	129
4+-axle:			17	5	22	6	14	20	389
- Net Truck Trips (Actual Vehicles)			28	9	37	10	24	34	623
<b>TOTAL NET TRIPS (Actual Vehicles)</b>			<b>88</b>	<b>27</b>	<b>115</b>	<b>41</b>	<b>102</b>	<b>143</b>	<b>1,930</b>

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), [Trip Generation Manual](#), Tenth Edition (2017).

<sup>2</sup> TSF = thousand square feet

<sup>3</sup> Vehicle Mix Source: Institute of Transportation Engineers (ITE), [High-Cube Warehouse Vehicle Trip Generation Analysis](#) (October 2016).

<sup>4</sup> Truck Mix Source: SCAQMD [Warehouse Truck Trip Study Data Results and Usage](#) (2014).

Normalized % - Without Cold Storage:

16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

Table 2

Project Trip Generation Summary (PCE)

Project Trip Generation Rates									
Land Use <sup>1</sup>	ITE LU Code	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage <sup>3,4</sup>	154	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.043	0.013	0.056	0.022	0.056	0.078	0.949
2-Axle Trucks (5.14% AM, 3.62% PM, 5.38% Daily, PCE = 1.5) <sup>5</sup>			0.005	0.002	0.007	0.002	0.005	0.007	0.114
3-Axle Trucks (6.38% AM, 4.49% PM, 6.66% Daily, PCE = 2.0) <sup>5</sup>			0.008	0.002	0.010	0.002	0.006	0.008	0.186
4-Axle+ Trucks (19.28% AM, 13.59% PM, 20.16% Daily, PCE = 3.0) <sup>5</sup>			0.036	0.009	0.045	0.012	0.030	0.042	0.846

Project Trip Generation									
Project	Quantity	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage	1,376.901	TSF							
Passenger Cars:			60	18	78	31	78	109	1,307
Truck Trips:									
2-axle:			7	3	10	3	7	10	157
3-axle:			12	3	15	3	9	12	257
4+-axle:			50	13	63	17	42	59	1,165
- Net Truck Trips (PCE)			69	19	88	23	58	81	1,579
<b>TOTAL NET TRIPS (PCE)</b>			<b>129</b>	<b>37</b>	<b>166</b>	<b>54</b>	<b>136</b>	<b>190</b>	<b>2,886</b>

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

<sup>2</sup> TSF = thousand square feet

<sup>3</sup> Vehicle Mix Source: Institute of Transportation Engineers (ITE), High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016).

<sup>4</sup> Truck Mix Source: SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014).

Normalized % - Without Cold Storage:

16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

<sup>5</sup> PCE rates are per San Bernardino County Transportation Authority (SBCTA).

Table 3

Cumulative Development Land Use Summary

No.	Project Name / Case Number	Jurisdiction	Land Use <sup>1</sup>	Quantity	Units <sup>2</sup>	Location
P1	Bargemann / DPR 07-09-0018	Perris	Warehousing	170.000	TSF	NEC OF WEBSTER & NANCE
P2	Duke 2 / DPR 16-00008	Perris	High-Cube Warehouse	669.000	TSF	NEC OF INDIAN & MARKHAM
P3	First Perry / DPR 16-00013	Perris	High-Cube Warehouse	240.000	TSF	SWC OF REDLANDS AVE. & PERRY ST.
P4	Gateway / DPR 16-00003	Perris	High-Cube Warehouse	400.000	TSF	SOUTH OF HARLEY KNOX BLVD. EAST OF HWY. 215
P5	Integra / DPR 14-02-0014	Perris	High-Cube Warehouse	864.000	TSF	EAST OF WEBSTER AVE. SOUTH OF NANCE ST.
P6	OLC 1 / DPR 12-10-0005	Perris	High-Cube Warehouse	1,455.000	TSF	WEST OF WEBSTER AVE. NORTH OF RAMONA EXPY.
P7	OLC2 / DPR 14-01-0015	Perris	High-Cube Warehouse	1,037.000	TSF	WEST OF WEBSTER AVE. NORTH OF MARKHAM ST.
P8	Markham East / DPR 05-0477	Perris	High-Cube Warehouse	460.000	TSF	SWC OF REDLANDS AVE. & MARKHAM ST.
P9	Markham Industrial / DPR 16-00015	Perris	Warehousing	170.000	TSF	NEC OF INDIAN AVE. & MARKHAM ST.
P10	Rados / DPR 07-0119	Perris	High-Cube Warehouse	1,200.000	TSF	NWC OF INDIAN AVE. & RIDER ST.
P11	Rider 1 / DPR 16-0365	Perris	High-Cube Warehouse	1,376.721	TSF	SWC OF REDLANDS AVE. & RIDER ST.
P12	Indian/Ramona Warehouse	Perris	High-Cube Warehouse	428.730	TSF	NORTH OF RAMONA EXWY. WEST OF INDIAN AVE.
P13	Rider 3 / DPR 06-0432	Perris	High-Cube Warehouse	643.263	TSF	NORTH OF RIDER ST. WEST OF REDLANDS
P14	Westcoast Textile / DPR 16-00001	Perris	Warehousing	180.000	TSF	SWC OF INDIAN ST. & NANCE ST.
P15	Duke at Patterson / DPR 17-00001	Perris	High-Cube Warehouse	811.000	TSF	SEC OF PATTERSON AVE. & MARKHAM ST.
P16	Duke at Perris Blvd. / DPR 17-00002	Perris	High-Cube Warehouse	1,200.000	TSF	SEC OF PERRIS BLVD. & MARKHAM ST.
P17	Perris Marketplace / DPR 05-0341	Perris	Commercial Retail	520.000	TSF	WEST OF PERRIS BLVD. AT AVOCADO AVE.
P18	Stratford Ranch Residential / TTM 36648	Perris	SFDR	270	DU	WEST OF EVANS RD. AT MARKHAM ST.
P19	Pulte Residential / TTM 30850	Perris	SFDR	496	DU	WEST OF EVANS RD. AT CITRUS AVE.
P20	Perris Circle 3	Perris	Warehousing	210.900	TSF	NWC OF REDLANDS AVE. AND NANCE AVE.
MV1	Kearney	Moreno Valley	High-Cube Warehouse	1100.000	TSF	EAST OF PERRIS BLVD. AT SAN MICHEL RD.
MV2	IDS	Moreno Valley	High-Cube Warehouse	701.000	TSF	SEC OF HEACOCK ST. & SAN MICHELE RD.
MV3	First Industrial	Moreno Valley	High-Cube Warehouse	1380.000	TSF	SWC OF INDIAN AVE. & NANDINA AVE.
MV4	Prologis 1	Moreno Valley	High-Cube Warehouse	1000.000	TSF	NEC OF INDIAN AVE. & MARIPOSA AVE.
MV5	Moreno Valley Industrial Park	Moreno Valley	High-Cube Warehouse	207.684	TSF	NEC OF HEACOCK ST. & IRIS AVE.
MV6	Moreno Valley Walmart	Moreno Valley	Retail	193.000	TSF	SWC OF PERRIS BLVD. & GENTIAN AVE.
MV7	Moreno Valley Utility Substation	Moreno Valley	High-Cube Warehouse	PUBLIC	TSF	NWC OF EDWIN RD. & KITCHING ST.
MV8	Phelan Development	Moreno Valley	High-Cube Warehouse	98.210	TSF	SEC OF INDIAN ST. & NANDINA AVE.
MV9	Nandina Industrial Center	Moreno Valley	High-Cube Warehouse	335.966	TSF	SOUTH OF NANDINA AVE. WEST OF PERRIS BLVD.
MV10	Indian Street Commerce Center	Moreno Valley	High-Cube Warehouse	433.918	TSF	SWC OF INDIAN ST. & GROVEVIEW RD.

<sup>1</sup> SFDR = Single Family Detached Residential

<sup>2</sup> DU = Dwelling Units; TSF = Thousand Square Feet

**APPENDIX 1.2:**

**SITE ADJACENT QUEUING ANALYSIS**

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Intersection: 19: Redlands Av. & Morgan St.

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	45	36	31	18	24
Average Queue (ft)	20	18	6	1	2
95th Queue (ft)	45	43	26	8	12
Link Distance (ft)	633	633	799		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				150	150
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 20: Redlands Av. & Driveway 1

Movement	WB
Directions Served	R
Maximum Queue (ft)	18
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	234
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Redlands Av. & Sinclair St.

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	28	31	6
Average Queue (ft)	12	6	0
95th Queue (ft)	34	25	6
Link Distance (ft)	1324	565	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Redlands Av. & Driveway 2

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	25	31	42	34	32	63	12	28
Average Queue (ft)	3	9	9	4	3	27	1	2
95th Queue (ft)	16	33	33	20	17	53	8	15
Link Distance (ft)	341	1113		412	412		254	254
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150			150		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 23: Redlands Av. & Driveway 3

Movement	EB	WB
Directions Served	R	R
Maximum Queue (ft)	31	18
Average Queue (ft)	2	1
95th Queue (ft)	14	12
Link Distance (ft)	391	365
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 24: Redlands Av. & Rider St.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	TR
Maximum Queue (ft)	123	298	25	186	202	216	106	212	59	17	57
Average Queue (ft)	32	123	4	96	76	85	35	72	13	1	24
95th Queue (ft)	81	236	18	161	168	170	77	147	44	8	48
Link Distance (ft)		1688	1688		1217	1217		1124		453	453
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			120			150		150		
Storage Blk Time (%)	0	11		5	2			1			
Queuing Penalty (veh)	1	4		19	3			1			

Intersection: 25: Wilson Av./Driveway 4 & Rider St.

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	114	370	76	222	224	164	201	30
Average Queue (ft)	20	172	9	130	86	47	87	4
95th Queue (ft)	69	315	44	205	184	118	162	21
Link Distance (ft)		1217			851	851	862	310
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		50	185				
Storage Blk Time (%)		24	0	2	0			
Queuing Penalty (veh)		10	0	9	1			

Network Summary

Network wide Queuing Penalty: 46

Intersection: 19: Redlands Av. & Morgan St.

Movement	EB	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	L	L	TR
Maximum Queue (ft)	43	31	50	18	23	4
Average Queue (ft)	24	11	19	1	1	0
95th Queue (ft)	46	36	46	11	11	3
Link Distance (ft)	633	633	799			593
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				150	150	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 20: Redlands Av. & Driveway 1

Movement	WB
Directions Served	R
Maximum Queue (ft)	23
Average Queue (ft)	7
95th Queue (ft)	24
Link Distance (ft)	234
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Redlands Av. & Sinclair St.

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	42	40	12
Average Queue (ft)	20	14	1
95th Queue (ft)	42	40	7
Link Distance (ft)	1324	565	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Redlands Av. & Driveway 2

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	40	67	39	48	38	43	24	38
Average Queue (ft)	6	28	8	6	4	13	1	5
95th Queue (ft)	27	53	30	27	21	40	12	23
Link Distance (ft)	252	1113		413	413		253	253
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150			150		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 23: Redlands Av. & Driveway 3

Movement	EB	WB
Directions Served	R	R
Maximum Queue (ft)	30	31
Average Queue (ft)	5	5
95th Queue (ft)	23	22
Link Distance (ft)	269	365
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 24: Redlands Av. & Rider St.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	TR
Maximum Queue (ft)	107	265	43	114	99	104	61	85	46	34	65
Average Queue (ft)	32	124	9	54	38	43	17	33	5	9	26
95th Queue (ft)	77	224	30	98	81	93	45	67	24	30	53
Link Distance (ft)		1688	1688		1204	1204		1124		452	452
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	100			120			150		150		
Storage Blk Time (%)	0	10		0	0						
Queuing Penalty (veh)	1	4		0	0						

Intersection: 25: Wilson Av./Driveway 4 & Rider St.

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	R	L	T	TR	LTR	LTR
Maximum Queue (ft)	90	323	112	154	122	80	177	44
Average Queue (ft)	14	130	12	75	42	23	71	17
95th Queue (ft)	54	265	58	133	100	62	137	43
Link Distance (ft)		1204			851	851	862	515
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		50	185				
Storage Blk Time (%)		16	0	0	0			
Queuing Penalty (veh)		10	0	0	0			

Network Summary

Network wide Queuing Penalty: 17

**APPENDIX 3.1:**

**EXISTING TRAFFIC COUNTS – MAY 2018**

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**Volume Development  
AM Peak Hour**

**1: I-215 Southbound Ramps & Harley Knox Bl.**

	PHF: 0.915		7:00					Count Date: 5/24/2018					
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing 2018:	0	0	0	354	2	125	0	390	5	116	164	0	1,156
2-Axle:	0	0	0	22	0	6	0	13	0	8	6	0	55
3-Axle:	0	0	0	21	0	2	0	5	0	1	3	0	32
4+-Axle:	0	0	0	36	0	12	0	14	1	10	0	0	73
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>458</b>	<b>2</b>	<b>154</b>	<b>0</b>	<b>430</b>	<b>7</b>	<b>141</b>	<b>170</b>	<b>0</b>	<b>1,362</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>467</b>	<b>2</b>	<b>157</b>	<b>0</b>	<b>438</b>	<b>7</b>	<b>144</b>	<b>173</b>	<b>0</b>	<b>1,389</b>
2019 ADT:	4,014		7,909			10,117			16,683				
2019 Pk-Daily:	4%		8%			8%			7%				

**2: I-215 Southbound Ramps & Ramona Exwy.**

	PHF: 0.948		7:00					Count Date: 5/24/2018					
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing 2018:	0	0	0	506	1	154	0	602	297	253	860	0	2,673
2-Axle:	0	0	0	26	0	11	0	22	17	8	36	0	120
3-Axle:	0	0	0	10	0	2	0	6	1	3	5	0	27
4+-Axle:	0	0	0	24	0	12	0	34	7	8	24	0	109
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>577</b>	<b>1</b>	<b>186</b>	<b>0</b>	<b>687</b>	<b>321</b>	<b>276</b>	<b>931</b>	<b>0</b>	<b>2,978</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>589</b>	<b>1</b>	<b>189</b>	<b>0</b>	<b>701</b>	<b>327</b>	<b>282</b>	<b>950</b>	<b>0</b>	<b>3,038</b>
2019 ADT:	9,737		13,579			31,112			40,058				
2019 Pk-Daily:	6%		6%			7%			6%				

**3: I-215 Northbound Ramps & Harley Knox Bl.**

	PHF: 0.928		7:00					Count Date: 5/24/2018					
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing 2018:	10	0	73	0	0	0	230	514	0	0	270	579	1,676
2-Axle:	0	0	4	0	0	0	4	31	0	0	14	16	69
3-Axle:	1	0	1	0	0	0	6	20	0	0	3	27	58
4+-Axle:	0	0	2	0	0	0	13	37	0	0	10	39	101
<b>2018 PCE:</b>	<b>11</b>	<b>0</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>264</b>	<b>624</b>	<b>0</b>	<b>0</b>	<b>300</b>	<b>692</b>	<b>1,971</b>
<b>2019 PCE:</b>	<b>11</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>269</b>	<b>636</b>	<b>0</b>	<b>0</b>	<b>306</b>	<b>706</b>	<b>2,010</b>
2019 ADT:	3,827		11,251			16,683			24,524				
2019 Pk-Daily:	2%		9%			7%			7%				

**4: I-215 Northbound Ramps & Ramona Exwy.**

	PHF: 0.960		7:00					Count Date: 5/24/2018					
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing 2018:	282	5	377	0	0	0	140	968	0	0	831	597	3,200
2-Axle:	16	0	25	0	0	0	4	44	0	0	28	26	143
3-Axle:	1	0	3	0	0	0	3	13	0	0	7	5	32
4+-Axle:	8	0	11	0	0	0	12	46	0	0	24	36	137
<b>2018 PCE:</b>	<b>307</b>	<b>5</b>	<b>415</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>169</b>	<b>1,095</b>	<b>0</b>	<b>0</b>	<b>900</b>	<b>687</b>	<b>3,578</b>
<b>2019 PCE:</b>	<b>313</b>	<b>5</b>	<b>423</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>172</b>	<b>1,117</b>	<b>0</b>	<b>0</b>	<b>918</b>	<b>701</b>	<b>3,649</b>
2019 ADT:	10,572		13,572			40,058			48,579				
2019 Pk-Daily:	7%		6%			6%			7%				

**5: Western Wy. & Harley Knox Bl.**

	PHF: 0.930		7:00					Count Date: 5/24/2018					
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing 2018:	0	0	0	5	0	27	63	536	0	0	843	32	1,506
2-Axle:	0	0	0	1	0	8	5	22	0	0	19	4	59
3-Axle:	0	0	0	0	0	3	2	18	0	0	27	1	51
4+-Axle:	0	0	0	1	0	5	2	37	0	0	43	0	88
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>44</b>	<b>72</b>	<b>639</b>	<b>0</b>	<b>0</b>	<b>966</b>	<b>35</b>	<b>1,763</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>45</b>	<b>73</b>	<b>652</b>	<b>0</b>	<b>0</b>	<b>985</b>	<b>36</b>	<b>1,798</b>
2019 ADT:	0		1,880			24,882			23,525				
2019 Pk-Daily:	0%		9%			7%			7%				

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**6: Patterson Av. & Harley Knox Bl.**

	PHF: 0.918		7:00					Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		
Existing 2018:	43	6	6	11	3	12	19	484	11	9	763	13	1,380	
2-Axle:	1	1	1	1	2	1	4	22	1	2	19	1	56	
3-Axle:	6	0	6	0	0	1	0	16	0	2	17	0	48	
4+-Axle:	4	1	1	7	0	4	2	34	0	3	30	7	93	
<b>2018 PCE:</b>	<b>58</b>	<b>9</b>	<b>15</b>	<b>26</b>	<b>4</b>	<b>22</b>	<b>25</b>	<b>579</b>	<b>12</b>	<b>18</b>	<b>850</b>	<b>28</b>	<b>1,642</b>	
<b>2019 PCE:</b>	<b>59</b>	<b>9</b>	<b>15</b>	<b>26</b>	<b>4</b>	<b>22</b>	<b>26</b>	<b>591</b>	<b>12</b>	<b>18</b>	<b>866</b>	<b>28</b>	<b>1,675</b>	
2019 ADT:	1,015							1,537		22,226			20,973	
2019 Pk-Daily:	11%							7%		7%			7%	

**7: Nevada Av. & Ramona Exwy.**

	PHF: 0.955		7:00					Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		
Existing 2018:	0	0	62	0	0	0	0	1,124	221	16	1,419	0	2,842	
2-Axle:	0	0	0	0	0	0	0	62	7	2	54	0	125	
3-Axle:	0	0	1	0	0	0	0	14	2	0	12	0	29	
4+-Axle:	0	0	0	0	0	0	0	54	3	0	60	0	117	
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,277</b>	<b>233</b>	<b>17</b>	<b>1,578</b>	<b>0</b>	<b>3,168</b>	
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,303</b>	<b>237</b>	<b>17</b>	<b>1,610</b>	<b>0</b>	<b>3,231</b>	
2019 ADT:	4,753							0		48,549			45,258	
2019 Pk-Daily:	7%							0%		6%			7%	

**8: Webster Av. & Harley Knox Bl.**

	PHF: 0.908		7:00					Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		
Existing 2018:	5	0	9	0	0	0	0	485	10	9	757	0	1,275	
2-Axle:	1	0	1	0	0	0	0	25	0	0	18	0	45	
3-Axle:	1	0	0	0	0	0	0	14	0	0	17	0	32	
4+-Axle:	1	0	1	0	0	0	0	39	4	0	39	0	84	
<b>2018 PCE:</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>590</b>	<b>18</b>	<b>9</b>	<b>861</b>	<b>0</b>	<b>1,498</b>	
<b>2019 PCE:</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>601</b>	<b>18</b>	<b>9</b>	<b>878</b>	<b>0</b>	<b>1,527</b>	
2019 ADT:	1,097							0		20,152			19,503	
2019 Pk-Daily:	4%							0%		7%			8%	

**9: Webster Av. & Ramona Exwy.**

	PHF: 0.948		7:00					Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		
Existing 2018:	94	33	24	30	12	90	142	997	47	27	1,251	19	2,766	
2-Axle:	4	0	6	2	0	8	10	49	3	0	44	2	128	
3-Axle:	0	0	0	1	0	1	0	11	4	0	11	0	28	
4+-Axle:	5	1	1	4	0	7	7	46	1	0	48	1	121	
<b>2018 PCE:</b>	<b>106</b>	<b>35</b>	<b>29</b>	<b>40</b>	<b>12</b>	<b>109</b>	<b>161</b>	<b>1,125</b>	<b>55</b>	<b>27</b>	<b>1,380</b>	<b>22</b>	<b>3,100</b>	
<b>2019 PCE:</b>	<b>108</b>	<b>36</b>	<b>30</b>	<b>41</b>	<b>12</b>	<b>111</b>	<b>164</b>	<b>1,147</b>	<b>56</b>	<b>28</b>	<b>1,408</b>	<b>22</b>	<b>3,162</b>	
2019 ADT:	3,835							6,148		45,258			41,110	
2019 Pk-Daily:	7%							6%		7%			7%	

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**10: Indian Av. & Harley Knox Bl.**

	PHF: 0.914		7:00					Count Date: 5/24/2018						
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	94	230	16	10	58	87	194	252	31	12	605	41	1,630	
2-Axle:	3	6	1	0	1	8	9	16	1	0	9	1	55	
3-Axle:	5	2	3	1	5	11	11	1	2	2	2	0	45	
4+-Axle:	4	10	0	0	2	23	23	9	7	0	13	0	91	
<b>2018 PCE:</b>	<b>109</b>	<b>255</b>	<b>20</b>	<b>11</b>	<b>68</b>	<b>148</b>	<b>256</b>	<b>279</b>	<b>48</b>	<b>14</b>	<b>638</b>	<b>42</b>	<b>1,885</b>	
<b>2019 PCE:</b>	<b>111</b>	<b>260</b>	<b>20</b>	<b>11</b>	<b>69</b>	<b>151</b>	<b>261</b>	<b>285</b>	<b>48</b>	<b>14</b>	<b>650</b>	<b>42</b>	<b>1,922</b>	
2019 ADT:	8,707							15,280			19,496			11,565
2019 Pk-Daily:	6%							5%			8%			9%

**11: Indian Av. & Ramona Exwy.**

	PHF: 0.937		7:00					Count Date: 5/24/2018						
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	47	114	38	15	40	22	104	908	41	56	1,309	97	2,791	
2-Axle:	1	11	0	0	0	1	2	40	2	8	30	1	96	
3-Axle:	1	2	0	0	1	3	2	5	2	1	5	0	22	
4+-Axle:	18	6	3	2	4	6	17	17	8	1	26	0	108	
<b>2018 PCE:</b>	<b>85</b>	<b>134</b>	<b>44</b>	<b>19</b>	<b>49</b>	<b>38</b>	<b>141</b>	<b>967</b>	<b>60</b>	<b>63</b>	<b>1,381</b>	<b>98</b>	<b>3,077</b>	
<b>2019 PCE:</b>	<b>86</b>	<b>136</b>	<b>45</b>	<b>19</b>	<b>50</b>	<b>38</b>	<b>144</b>	<b>986</b>	<b>61</b>	<b>64</b>	<b>1,409</b>	<b>99</b>	<b>3,139</b>	
2019 ADT:	8,468							6,484			40,722			39,737
2019 Pk-Daily:	5%							8%			7%			7%

**12: Perris Bl. & Harley Knox Bl.**

	PHF: 0.970		7:00					Count Date: 5/24/2018						
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	148	1,089	3	22	576	309	220	27	25	0	191	130	2,740	
2-Axle:	2	26	0	0	16	3	7	1	6	0	0	2	63	
3-Axle:	1	1	0	0	1	2	2	2	1	0	1	0	11	
4+-Axle:	0	6	1	2	7	9	5	5	0	0	2	3	40	
<b>2018 PCE:</b>	<b>150</b>	<b>1,115</b>	<b>5</b>	<b>26</b>	<b>599</b>	<b>331</b>	<b>236</b>	<b>40</b>	<b>29</b>	<b>0</b>	<b>196</b>	<b>137</b>	<b>2,863</b>	
<b>2019 PCE:</b>	<b>153</b>	<b>1,137</b>	<b>5</b>	<b>27</b>	<b>611</b>	<b>337</b>	<b>240</b>	<b>40</b>	<b>30</b>	<b>0</b>	<b>200</b>	<b>140</b>	<b>2,920</b>	
2019 ADT:	29,754							38,335			11,735			5,200
2019 Pk-Daily:	7%							7%			9%			8%

**13: Perris Bl. & Ramona Exwy.**

	PHF: 0.961		7:00					Count Date: 5/24/2018						
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	252	709	57	112	314	125	352	540	69	100	1,085	191	3,906	
2-Axle:	12	14	2	5	6	7	19	15	6	1	20	2	109	
3-Axle:	2	3	0	0	5	0	0	3	2	1	4	0	20	
4+-Axle:	4	1	0	3	13	4	6	11	5	0	19	0	66	
<b>2018 PCE:</b>	<b>268</b>	<b>721</b>	<b>58</b>	<b>121</b>	<b>348</b>	<b>137</b>	<b>374</b>	<b>573</b>	<b>84</b>	<b>102</b>	<b>1,137</b>	<b>192</b>	<b>4,113</b>	
<b>2019 PCE:</b>	<b>273</b>	<b>735</b>	<b>59</b>	<b>123</b>	<b>355</b>	<b>139</b>	<b>381</b>	<b>584</b>	<b>86</b>	<b>104</b>	<b>1,160</b>	<b>196</b>	<b>4,195</b>	
2019 ADT:	23,801							28,620			39,737			35,380
2019 Pk-Daily:	7%							7%			7%			6%

**14: Perris Bl. & Morgan St.**

	PHF: 0.880		7:00					Count Date: 5/24/2018						
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	31	927	17	5	432	73	30	15	17	16	25	3	1,591	
2-Axle:	1	25	1	0	11	0	1	0	0	0	0	0	39	
3-Axle:	0	6	0	0	10	0	1	0	0	0	0	0	17	
4+-Axle:	1	4	0	0	7	12	2	0	1	0	0	0	27	
<b>2018 PCE:</b>	<b>34</b>	<b>954</b>	<b>18</b>	<b>5</b>	<b>462</b>	<b>97</b>	<b>36</b>	<b>15</b>	<b>19</b>	<b>16</b>	<b>25</b>	<b>3</b>	<b>1,682</b>	
<b>2019 PCE:</b>	<b>34</b>	<b>973</b>	<b>18</b>	<b>5</b>	<b>471</b>	<b>99</b>	<b>36</b>	<b>15</b>	<b>19</b>	<b>16</b>	<b>26</b>	<b>3</b>	<b>1,715</b>	
2019 ADT:	25,211							25,047			1,791			1,433
2019 Pk-Daily:	6%							6%			13%			6%

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**15: Perris Bl. & Rider St.**

	PHF: 0.988		7:00						Count Date: 5/24/2018					
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	37	753	71	70	355	37	32	142	16	149	287	248	2,197	
2-Axle:	2	25	0	3	8	0	0	2	0	2	2	2	46	
3-Axle:	1	5	1	1	6	0	0	0	0	0	1	0	15	
4+-Axle:	1	3	0	0	3	1	2	0	0	0	0	0	10	
<b>2018 PCE:</b>	<b>41</b>	<b>777</b>	<b>72</b>	<b>73</b>	<b>371</b>	<b>39</b>	<b>36</b>	<b>143</b>	<b>16</b>	<b>150</b>	<b>289</b>	<b>249</b>	<b>2,255</b>	
<b>2019 PCE:</b>	<b>42</b>	<b>792</b>	<b>73</b>	<b>74</b>	<b>378</b>	<b>40</b>	<b>37</b>	<b>146</b>	<b>16</b>	<b>153</b>	<b>295</b>	<b>254</b>	<b>2,300</b>	
2019 ADT:	26,860						25,060		5,335			12,064		
2019 Pk-Daily:	5%						6%		11%			8%		

**16: Redlands Av. & Harley Knox Bl.**

	PHF: 0.862		7:00						Count Date: 5/24/2018					
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	319	3	0	0	1	2	6	0	46	0	0	0	377	
2-Axle:	2	0	0	0	0	0	0	0	1	0	0	0	3	
3-Axle:	1	1	0	0	0	0	0	0	2	0	0	0	4	
4+-Axle:	3	0	0	0	0	2	2	0	6	0	0	0	13	
<b>2018 PCE:</b>	<b>327</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>10</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>409</b>	
<b>2019 PCE:</b>	<b>334</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>10</b>	<b>0</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>417</b>	
2019 ADT:	5,029						306		5,200			0		
2019 Pk-Daily:	8%						7%		8%			0%		

**17: Redlands Av. & Markham St.**

	PHF: 0.873		7:00						Count Date: 5/24/2018					
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	45	328	0	0	46	2	2	0	24	0	0	0	447	
2-Axle:	3	5	0	0	1	0	0	0	3	0	0	0	12	
3-Axle:	0	0	0	0	2	0	2	0	0	0	0	0	4	
4+-Axle:	1	2	0	0	2	2	0	0	0	0	0	0	7	
<b>2018 PCE:</b>	<b>49</b>	<b>335</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>471</b>	
<b>2019 PCE:</b>	<b>49</b>	<b>341</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>480</b>	
2019 ADT:	5,461						5,051		724			0		
2019 Pk-Daily:	9%						8%		12%			0%		

**18: Redlands Av. & Ramona Exwy.**

	PHF: 0.958		7:00						Count Date: 5/24/2018					
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>	
Existing 2018:	15	4	89	46	1	6	25	725	14	77	1,459	339	2,800	
2-Axle:	1	0	2	1	0	0	2	21	0	0	19	3	49	
3-Axle:	1	0	0	1	0	1	0	1	1	0	2	0	7	
4+-Axle:	7	1	0	0	0	1	1	7	3	0	7	0	27	
<b>2018 PCE:</b>	<b>31</b>	<b>6</b>	<b>90</b>	<b>48</b>	<b>1</b>	<b>9</b>	<b>28</b>	<b>751</b>	<b>21</b>	<b>77</b>	<b>1,485</b>	<b>341</b>	<b>2,886</b>	
<b>2019 PCE:</b>	<b>31</b>	<b>6</b>	<b>92</b>	<b>48</b>	<b>1</b>	<b>9</b>	<b>29</b>	<b>766</b>	<b>21</b>	<b>79</b>	<b>1,514</b>	<b>347</b>	<b>2,943</b>	
2019 ADT:	2,731						5,282		37,395			41,185		
2019 Pk-Daily:	8%						8%		6%			7%		

**Volume Development  
AM Peak Hour**

**19: Redlands Av. & Morgan St.**

	PHF: 0.578		7:00		Count Date: 5/24/2018								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	0	0	0	0	0	43	31	0	0	0	0	0	74
2-Axle:	0	0	0	0	0	1	1	0	0	0	0	0	2
3-Axle:	0	0	0	0	0	0	0	0	0	0	0	0	0
4+-Axle:	0	0	0	0	0	1	0	0	0	0	0	0	1
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>77</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>79</b>
2019 ADT:	60				1,134		1,074				0		
2019 Pk-Daily:	0%				7%		7%				0%		

**20: Redlands Av. & Dwy. 1**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:		0			0								0
2-Axle:		0			0								0
3-Axle:		0			0								0
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:	60				60		0				0		
2019 Pk-Daily:	0%				0%		0%				0%		

**XX: Redlands Av. & Dwy.**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:		0			0								0
2-Axle:		0			0								0
3-Axle:		0			0								0
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:	60				60		0				0		
2019 Pk-Daily:	0%				0%		0%				0%		

**21: Redlands Av. & Sinclair St.**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:						0	0						0
2-Axle:						0	0						0
3-Axle:						0	0						0
4+-Axle:						0	0						0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:	0				60		60				0		
2019 Pk-Daily:	0%				0%		0%				0%		

**22: Redlands Av. & Dwy. 2**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:		0			0								0
2-Axle:		0			0								0
3-Axle:		0			0								0
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:	0				0		0				0		
2019 Pk-Daily:	0%				0%		0%				0%		

**Volume Development  
AM Peak Hour**

**23: Redlands Av. & Dwy. 3**

	PHF:		Count Date:										TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:		0			0								0
2-Axle:		0			0								0
3-Axle:		0			0								0
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:		0			0								0
2019 Pk-Daily:		0%			0%								0%

**24: Redlands Av. & Rider St.**

	PHF:		7:00		Count Date: 5/24/2018										TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR			
Existing 2018:	43	0	187	0	0	0	0	323	10	157	667	0	1,387		
2-Axle:	0	0	2	0	0	0	0	7	0	2	6	0	17		
3-Axle:	1	0	0	0	0	0	0	1	0	0	0	0	2		
4+-Axle:	0	0	0	0	0	0	0	1	0	0	1	0	2		
<b>2018 PCE:</b>	<b>44</b>	<b>0</b>	<b>188</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>330</b>	<b>10</b>	<b>158</b>	<b>672</b>	<b>0</b>	<b>1,402</b>		
<b>2019 PCE:</b>	<b>45</b>	<b>0</b>	<b>192</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>336</b>	<b>10</b>	<b>161</b>	<b>685</b>	<b>0</b>	<b>1,430</b>		
2019 ADT:		3,783			0			12,392			14,944				
2019 Pk-Daily:		11%			0%			9%			9%				

**25: Wilson Av. & Rider St.**

	PHF:		7:00		Count Date: 9/5/2019										TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR			
Existing 2018:	31	0	170	0	0	0	0	493	17	207	793	0	1,711		
2-Axle:	1	0	2	0	0	0	0	7	2	0	7	0	19		
3-Axle:	0	0	0	0	0	0	0	1	0	0	0	0	1		
4+-Axle:	0	0	0	0	0	0	0	1	0	0	1	0	2		
<b>2018 PCE:</b>	<b>32</b>	<b>0</b>	<b>171</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>18</b>	<b>207</b>	<b>799</b>	<b>0</b>	<b>1,726</b>		
<b>2019 PCE:</b>	<b>32</b>	<b>0</b>	<b>171</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>18</b>	<b>207</b>	<b>799</b>	<b>0</b>	<b>1,726</b>		
2019 ADT:		4,228			0			14,651			16,422				
2019 Pk-Daily:		10%			0%			9%			10%				

**Volume Development  
AM Peak Hour**

	<b>XX: Dwy. &amp; Rider St.</b>								Count Date:				<b>TOTAL</b>
	<b>PHF:</b>								<b>EBR</b>	<b>WBL</b>	<b>WBT</b>	<b>WBR</b>	
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	
Existing 2018:								<b>510</b>			<b>824</b>		1,334
2-Axle:								<b>9</b>			<b>8</b>		17
3-Axle:								<b>1</b>			<b>0</b>		1
4+-Axle:								<b>1</b>			<b>1</b>		2
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>518</b>	<b>0</b>	<b>0</b>	<b>830</b>	<b>0</b>	<b>1,348</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>528</b>	<b>0</b>	<b>0</b>	<b>847</b>	<b>0</b>	<b>1,374</b>
2019 ADT:		0			0			14,944			14,944		
2019 Pk-Daily:		0%			0%			9%			9%		

**Volume Development  
PM Peak Hour**

**1: I-215 Southbound Ramps & Harley Knox Bl.**

	PHF: 0.895		4:00				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	0	0	0	277	4	131	0	304	13	240	150	0	1,119
2-Axle:	0	0	0	11	1	10	0	7	0	5	7	0	41
3-Axle:	0	0	0	10	0	3	0	4	1	0	2	0	20
4+-Axle:	0	0	0	36	1	10	0	13	0	3	6	0	69
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>365</b>	<b>7</b>	<b>159</b>	<b>0</b>	<b>338</b>	<b>14</b>	<b>249</b>	<b>168</b>	<b>0</b>	<b>1,298</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>372</b>	<b>7</b>	<b>162</b>	<b>0</b>	<b>344</b>	<b>14</b>	<b>253</b>	<b>171</b>	<b>0</b>	<b>1,323</b>
2019 ADT:	4,014		7,909			10,117			16,683				
2019 Pk-Daily:	7%		7%			7%			7%				

**2: I-215 Southbound Ramps & Ramona Exwy.**

	PHF: 0.976		4:00				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	0	0	0	649	3	149	0	733	299	324	765	0	2,922
2-Axle:	0	0	0	19	0	9	0	22	14	7	29	0	100
3-Axle:	0	0	0	7	0	2	0	3	1	1	14	0	28
4+-Axle:	0	0	0	37	0	6	0	15	2	5	18	0	83
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>740</b>	<b>3</b>	<b>168</b>	<b>0</b>	<b>777</b>	<b>311</b>	<b>339</b>	<b>830</b>	<b>0</b>	<b>3,166</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>754</b>	<b>3</b>	<b>171</b>	<b>0</b>	<b>793</b>	<b>317</b>	<b>345</b>	<b>846</b>	<b>0</b>	<b>3,229</b>
2019 ADT:	9,737		13,579			31,112			40,058				
2019 Pk-Daily:	7%		7%			7%			7%				

**3: I-215 Northbound Ramps & Harley Knox Bl.**

	PHF: 0.855		4:00				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	16	3	195	0	0	0	194	387	0	0	374	424	1,593
2-Axle:	0	1	12	0	0	0	4	14	0	0	12	17	60
3-Axle:	0	0	28	0	0	0	1	13	0	0	2	9	53
4+-Axle:	2	0	2	0	0	0	11	38	0	0	7	45	105
<b>2018 PCE:</b>	<b>20</b>	<b>4</b>	<b>233</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>483</b>	<b>0</b>	<b>0</b>	<b>396</b>	<b>532</b>	<b>1,886</b>
<b>2019 PCE:</b>	<b>20</b>	<b>4</b>	<b>238</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>223</b>	<b>493</b>	<b>0</b>	<b>0</b>	<b>404</b>	<b>542</b>	<b>1,924</b>
2019 ADT:	3,827		11,251			16,683			24,524				
2019 Pk-Daily:	7%		7%			7%			7%				

**4: I-215 Northbound Ramps & Ramona Exwy.**

	PHF: 0.982		4:00				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	299	5	357	0	0	0	182	1,200	0	0	790	618	3,451
2-Axle:	12	0	15	0	0	0	5	36	0	0	24	14	106
3-Axle:	5	0	11	0	0	0	0	10	0	0	10	5	41
4+-Axle:	4	1	4	0	0	0	7	45	0	0	19	37	117
<b>2018 PCE:</b>	<b>318</b>	<b>7</b>	<b>384</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>199</b>	<b>1,318</b>	<b>0</b>	<b>0</b>	<b>850</b>	<b>704</b>	<b>3,779</b>
<b>2019 PCE:</b>	<b>324</b>	<b>7</b>	<b>391</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>202</b>	<b>1,344</b>	<b>0</b>	<b>0</b>	<b>867</b>	<b>718</b>	<b>3,855</b>
2019 ADT:	10,572		13,572			40,058			48,579				
2019 Pk-Daily:	7%		7%			7%			7%				

**5: Western Wy. & Harley Knox Bl.**

	PHF: 0.835		4:00				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	0	0	0	9	0	76	17	578	0	0	732	7	1,419
2-Axle:	0	0	0	1	0	4	3	13	0	0	21	2	44
3-Axle:	0	0	0	0	0	0	0	36	0	0	10	0	46
4+-Axle:	0	0	0	0	0	2	4	41	0	0	52	0	99
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>82</b>	<b>27</b>	<b>703</b>	<b>0</b>	<b>0</b>	<b>857</b>	<b>8</b>	<b>1,685</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>84</b>	<b>27</b>	<b>717</b>	<b>0</b>	<b>0</b>	<b>874</b>	<b>8</b>	<b>1,719</b>
2019 ADT:	0		1,880			24,882			23,525				
2019 Pk-Daily:	0%		7%			7%			7%				



**Volume Development**  
**PM Peak Hour**

**6: Patterson Av. & Harley Knox Bl.**

	PHF: <u>0.818</u>				4:00				Count Date: <u>5/24/2018</u>				TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	32	2	4	18	3	23	19	527	18	2	631	7	1,286
2-Axle:	2	0	2	3	1	1	2	6	1	0	17	1	36
3-Axle:	0	0	0	0	0	1	2	33	0	0	7	0	43
4+-Axle:	2	0	0	0	0	3	7	33	0	0	46	2	93
<b>2018 PCE:</b>	<b>37</b>	<b>2</b>	<b>5</b>	<b>20</b>	<b>4</b>	<b>31</b>	<b>36</b>	<b>629</b>	<b>19</b>	<b>2</b>	<b>739</b>	<b>12</b>	<b>1,533</b>
<b>2019 PCE:</b>	<b>38</b>	<b>2</b>	<b>5</b>	<b>20</b>	<b>4</b>	<b>31</b>	<b>37</b>	<b>642</b>	<b>19</b>	<b>2</b>	<b>753</b>	<b>12</b>	<b>1,564</b>
2019 ADT:	1,015			1,537			22,226			20,973			
2019 Pk-Daily:	7%			7%			7%			7%			

**7: Nevada Av. & Ramona Exwy.**

	PHF: <u>0.978</u>				4:00				Count Date: <u>5/24/2018</u>				TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	0	0	31	0	0	0	0	1,305	252	13	1,406	0	3,007
2-Axle:	0	0	1	0	0	0	0	38	13	1	38	0	91
3-Axle:	0	0	0	0	0	0	0	20	1	0	15	0	36
4+-Axle:	0	0	2	0	0	0	0	44	5	0	56	0	107
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,432</b>	<b>270</b>	<b>14</b>	<b>1,552</b>	<b>0</b>	<b>3,303</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,461</b>	<b>275</b>	<b>14</b>	<b>1,583</b>	<b>0</b>	<b>3,369</b>
2019 ADT:	4,753			0			48,549			45,258			
2019 Pk-Daily:	7%			0%			7%			7%			

**8: Webster Av. & Harley Knox Bl.**

	PHF: <u>0.775</u>				4:00				Count Date: <u>5/24/2018</u>				TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	22	0	8	0	0	0	0	530	22	6	572	0	1,160
2-Axle:	1	0	0	0	0	0	0	10	0	0	20	0	31
3-Axle:	0	0	0	0	0	0	0	33	0	1	6	0	40
4+-Axle:	4	0	0	0	0	0	0	26	3	0	42	0	75
<b>2018 PCE:</b>	<b>31</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>620</b>	<b>28</b>	<b>7</b>	<b>672</b>	<b>0</b>	<b>1,366</b>
<b>2019 PCE:</b>	<b>31</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>632</b>	<b>29</b>	<b>7</b>	<b>685</b>	<b>0</b>	<b>1,393</b>
2019 ADT:	1,097			0			20,152			19,503			
2019 Pk-Daily:	7%			0%			7%			7%			

**9: Webster Av. & Ramona Exwy.**

	PHF: <u>0.974</u>				4:00				Count Date: <u>5/24/2018</u>				TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	129	27	17	75	22	123	130	1,189	17	21	1,167	23	2,940
2-Axle:	7	1	8	1	0	4	4	34	1	1	28	0	89
3-Axle:	1	0	0	1	0	0	2	18	0	0	14	0	36
4+-Axle:	1	0	0	0	1	0	1	41	4	1	55	0	104
<b>2018 PCE:</b>	<b>136</b>	<b>28</b>	<b>21</b>	<b>77</b>	<b>24</b>	<b>125</b>	<b>136</b>	<b>1,306</b>	<b>26</b>	<b>24</b>	<b>1,305</b>	<b>23</b>	<b>3,229</b>
<b>2019 PCE:</b>	<b>138</b>	<b>28</b>	<b>21</b>	<b>78</b>	<b>24</b>	<b>128</b>	<b>139</b>	<b>1,332</b>	<b>26</b>	<b>24</b>	<b>1,331</b>	<b>23</b>	<b>3,293</b>
2019 ADT:	3,835			6,148			45,258			41,110			
2019 Pk-Daily:	7%			7%			7%			7%			

**Volume Development**  
**PM Peak Hour**

**10: Indian Av. & Harley Knox Bl.**

	PHF: 0.797		4:00		Count Date: 5/24/2018								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	39	170	20	43	215	252	188	329	30	11	278	10	1,585
2-Axle:	2	5	0	0	2	6	5	6	1	1	11	0	39
3-Axle:	2	14	2	0	0	3	27	4	3	0	4	1	60
4+-Axle:	7	12	1	0	9	15	9	10	6	1	19	1	90
<b>2018 PCE:</b>	<b>56</b>	<b>211</b>	<b>24</b>	<b>43</b>	<b>234</b>	<b>288</b>	<b>236</b>	<b>356</b>	<b>46</b>	<b>14</b>	<b>326</b>	<b>13</b>	<b>1,845</b>
<b>2019 PCE:</b>	<b>57</b>	<b>215</b>	<b>24</b>	<b>44</b>	<b>239</b>	<b>294</b>	<b>240</b>	<b>363</b>	<b>46</b>	<b>14</b>	<b>332</b>	<b>13</b>	<b>1,881</b>
2019 ADT:	8,707		15,280		19,496		11,565						
2019 Pk-Daily:	7%		7%		7%		7%						

**11: Indian Av. & Ramona Exwy.**

	PHF: 0.966		5:00		Count Date: 5/24/2018								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	72	46	30	55	151	48	41	1,242	72	111	1,085	25	2,978
2-Axle:	1	3	0	0	1	1	0	25	2	8	15	0	56
3-Axle:	1	0	0	2	1	0	1	6	1	1	6	4	23
4+-Axle:	11	7	0	2	8	5	7	14	10	1	19	0	84
<b>2018 PCE:</b>	<b>96</b>	<b>62</b>	<b>30</b>	<b>61</b>	<b>169</b>	<b>59</b>	<b>56</b>	<b>1,289</b>	<b>94</b>	<b>118</b>	<b>1,137</b>	<b>29</b>	<b>3,197</b>
<b>2019 PCE:</b>	<b>97</b>	<b>63</b>	<b>31</b>	<b>62</b>	<b>172</b>	<b>60</b>	<b>57</b>	<b>1,314</b>	<b>96</b>	<b>120</b>	<b>1,159</b>	<b>30</b>	<b>3,261</b>
2019 ADT:	8,468		6,484		40,722		39,737						
2019 Pk-Daily:	7%		7%		7%		7%						

**12: Perris Bl. & Harley Knox Bl.**

	PHF: 0.921		4:30		Count Date: 5/24/2018								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	15	772	3	101	1,071	251	202	113	71	4	34	63	2,700
2-Axle:	1	11	0	1	24	4	0	0	0	0	0	0	41
3-Axle:	2	3	0	3	1	1	4	0	0	0	2	3	19
4+-Axle:	0	11	1	2	4	13	5	0	0	1	5	2	44
<b>2018 PCE:</b>	<b>18</b>	<b>803</b>	<b>5</b>	<b>109</b>	<b>1,092</b>	<b>280</b>	<b>216</b>	<b>113</b>	<b>71</b>	<b>6</b>	<b>46</b>	<b>70</b>	<b>2,828</b>
<b>2019 PCE:</b>	<b>18</b>	<b>819</b>	<b>5</b>	<b>111</b>	<b>1,114</b>	<b>286</b>	<b>220</b>	<b>115</b>	<b>72</b>	<b>6</b>	<b>47</b>	<b>71</b>	<b>2,884</b>
2019 ADT:	29,754		38,335		11,735		5,200						
2019 Pk-Daily:	7%		7%		6%		7%						

**13: Perris Bl. & Ramona Exwy.**

	PHF: 0.976		5:00		Count Date: 5/24/2018								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	251	411	92	316	583	242	226	973	128	93	728	85	4,128
2-Axle:	4	0	0	3	11	8	5	13	7	2	11	1	65
3-Axle:	3	0	0	0	1	1	0	7	1	0	7	3	23
4+-Axle:	4	3	1	1	0	6	4	10	2	0	10	4	45
<b>2018 PCE:</b>	<b>264</b>	<b>417</b>	<b>94</b>	<b>320</b>	<b>590</b>	<b>259</b>	<b>237</b>	<b>1,007</b>	<b>137</b>	<b>94</b>	<b>761</b>	<b>97</b>	<b>4,274</b>
<b>2019 PCE:</b>	<b>269</b>	<b>425</b>	<b>96</b>	<b>326</b>	<b>601</b>	<b>264</b>	<b>241</b>	<b>1,027</b>	<b>139</b>	<b>96</b>	<b>776</b>	<b>98</b>	<b>4,359</b>
2019 ADT:	23,801		28,620		39,737		35,380						
2019 Pk-Daily:	7%		7%		7%		7%						

**14: Perris Bl. & Morgan St.**

	PHF: 0.912		4:30		Count Date: 5/24/2018								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	13	704	11	7	874	13	26	20	28	32	5	10	1,743
2-Axle:	0	9	0	0	18	2	0	0	1	1	1	0	32
3-Axle:	0	0	0	0	3	1	1	1	0	0	0	1	7
4+-Axle:	0	3	0	0	2	0	4	1	0	0	0	3	13
<b>2018 PCE:</b>	<b>13</b>	<b>715</b>	<b>11</b>	<b>7</b>	<b>890</b>	<b>15</b>	<b>35</b>	<b>23</b>	<b>29</b>	<b>33</b>	<b>6</b>	<b>17</b>	<b>1,792</b>
<b>2019 PCE:</b>	<b>13</b>	<b>729</b>	<b>11</b>	<b>7</b>	<b>908</b>	<b>15</b>	<b>36</b>	<b>23</b>	<b>29</b>	<b>33</b>	<b>6</b>	<b>17</b>	<b>1,828</b>
2019 ADT:	25,211		25,047		1,791		1,433						
2019 Pk-Daily:	7%		7%		7%		7%						

**Volume Development  
PM Peak Hour**

**15: Perris Bl. & Rider St.**

	PHF: 0.967		4:45				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	18	567	180	113	824	14	33	175	48	149	62	122	2,305
2-Axle:	0	5	0	3	12	1	0	2	0	3	0	1	27
3-Axle:	0	1	0	1	1	0	0	0	0	0	0	0	3
4+-Axle:	0	1	0	0	0	0	2	1	0	0	0	0	4
<b>2018 PCE:</b>	<b>18</b>	<b>573</b>	<b>180</b>	<b>116</b>	<b>831</b>	<b>15</b>	<b>37</b>	<b>178</b>	<b>48</b>	<b>151</b>	<b>62</b>	<b>123</b>	<b>2,330</b>
<b>2019 PCE:</b>	<b>18</b>	<b>584</b>	<b>184</b>	<b>118</b>	<b>848</b>	<b>15</b>	<b>38</b>	<b>182</b>	<b>49</b>	<b>154</b>	<b>63</b>	<b>125</b>	<b>2,376</b>
2019 ADT:	26,860		<b>25,060</b>				5,335		12,064				
2019 Pk-Daily:	7%		7%				7%		7%				

**16: Redlands Av. & Harley Knox Bl.**

	PHF: 0.906		4:30				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	96	2	0	0	2	5	4	0	213	0	0	0	322
2-Axle:	0	0	0	0	1	0	0	0	1	0	0	0	2
3-Axle:	5	0	0	0	0	0	1	0	2	0	0	0	8
4+-Axle:	6	0	0	0	0	2	1	0	2	0	0	0	11
<b>2018 PCE:</b>	<b>113</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>7</b>	<b>0</b>	<b>220</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>353</b>
<b>2019 PCE:</b>	<b>115</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>7</b>	<b>0</b>	<b>224</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>360</b>
2019 ADT:	5,029		306				5,200		0				
2019 Pk-Daily:	7%		7%				7%		0%				

**17: Redlands Av. & Markham St.**

	PHF: 0.901		4:30				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	5	90	0	0	219	2	5	0	32	0	0	0	353
2-Axle:	0	0	0	0	2	2	1	0	2	0	0	0	7
3-Axle:	0	3	0	0	3	0	0	0	0	0	0	0	6
4+-Axle:	0	4	0	0	2	0	1	0	0	0	0	0	7
<b>2018 PCE:</b>	<b>5</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>227</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>377</b>
<b>2019 PCE:</b>	<b>5</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>232</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>384</b>
2019 ADT:	5,461		5,051				724		0				
2019 Pk-Daily:	7%		7%				7%		0%				

**18: Redlands Av. & Ramona Exwy.**

	PHF: 0.953		4:15				Count Date: 5/24/2018						TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	15	4	43	213	12	9	15	1,381	27	21	968	78	2,786
2-Axle:	0	0	1	3	1	1	0	16	1	1	12	1	37
3-Axle:	3	0	0	0	3	0	0	1	4	1	6	3	21
4+-Axle:	8	2	0	0	4	0	0	3	10	0	10	1	38
<b>2018 PCE:</b>	<b>34</b>	<b>8</b>	<b>44</b>	<b>215</b>	<b>24</b>	<b>10</b>	<b>15</b>	<b>1,396</b>	<b>52</b>	<b>23</b>	<b>1,000</b>	<b>84</b>	<b>2,902</b>
<b>2019 PCE:</b>	<b>35</b>	<b>8</b>	<b>44</b>	<b>219</b>	<b>24</b>	<b>10</b>	<b>15</b>	<b>1,424</b>	<b>53</b>	<b>23</b>	<b>1,020</b>	<b>85</b>	<b>2,960</b>
2019 ADT:	2,731		5,282				37,395		41,185				
2019 Pk-Daily:	7%		7%				7%		7%				

**Volume Development  
PM Peak Hour**

**19: Redlands Av. & Morgan St.**

	PHF: <u>0.700</u>		4:00		Count Date: <u>5/24/2018</u>								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
Existing 2018:	0	1	0	0	1	30	38	0	0	0	0	0	70
2-Axle:	0	0	0	0	0	2	2	0	0	0	0	0	4
3-Axle:	0	1	0	0	1	0	2	0	0	0	0	0	4
4+-Axle:	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>2018 PCE:</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>31</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>76</b>
<b>2019 PCE:</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>32</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78</b>
2019 ADT:	60		1,134		1,074		0						
2019 Pk-Daily:	7%		7%		7%		0%						

**20: Redlands Av. & Dwy. 1**

	PHF:				Count Date:								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
Existing 2018:		1			1								2
2-Axle:		0			0								0
3-Axle:		1			1								2
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>2019 PCE:</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
2019 ADT:	60		60		0		0						
2019 Pk-Daily:	7%		7%		0%		0%						

**XX: Redlands Av. & Dwy.**

	PHF:				Count Date:								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
Existing 2018:		1			1								2
2-Axle:		0			0								0
3-Axle:		1			1								2
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>2019 PCE:</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
2019 ADT:	60		60		0		0						
2019 Pk-Daily:	7%		7%		0%		0%						

**21: Redlands Av. & Sinclair St.**

	PHF:				Count Date:								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
Existing 2018:						1	1						2
2-Axle:						0	0						0
3-Axle:						1	1						2
4+-Axle:						0	0						0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
2019 ADT:	0		60		60		0						
2019 Pk-Daily:	0%		7%		7%		0%						

**22: Redlands Av. & Dwy. 2**

	PHF:				Count Date:								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
Existing 2018:		0			0								0
2-Axle:		0			0								0
3-Axle:		0			0								0
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:	0		0		0		0						
2019 Pk-Daily:	0%		0%		0%		0%						

**Volume Development  
PM Peak Hour**

**23: Redlands Av. & Dwy. 3**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:		0			0								0
2-Axle:		0			0								0
3-Axle:		0			0								0
4+-Axle:		0			0								0
<b>2018 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2019 PCE:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2019 ADT:		0			0				0		0		
2019 Pk-Daily:		0%			0%				0%		0%		

**24: Redlands Av. & Rider St.**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	26	0	110	0	0	0	0	451	34	81	347	0	1,049
2-Axle:	0	0	1	0	0	0	0	5	1	1	6	0	14
3-Axle:	0	0	0	0	0	0	0	1	0	1	0	0	2
4+-Axle:	0	0	0	0	0	0	0	1	0	0	1	0	2
<b>2018 PCE:</b>	<b>26</b>	<b>0</b>	<b>111</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>457</b>	<b>35</b>	<b>83</b>	<b>352</b>	<b>0</b>	<b>1,062</b>
<b>2019 PCE:</b>	<b>27</b>	<b>0</b>	<b>113</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>466</b>	<b>35</b>	<b>84</b>	<b>359</b>	<b>0</b>	<b>1,083</b>
2019 ADT:		3,783			0			12,392			14,944		
2019 Pk-Daily:		7%			0%			7%			7%		

**25: Wilson Av. & Rider St.**

	PHF:				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
Existing 2018:	36	0	101	0	0	0	0	515	46	103	392	0	1,193
2-Axle:	0	0	0	0	0	0	0	6	0	2	7	0	15
3-Axle:	0	0	0	0	0	0	0	1	0	0	1	0	2
4+-Axle:	0	0	0	0	0	0	0	0	1	0	1	0	2
<b>2018 PCE:</b>	<b>36</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>519</b>	<b>48</b>	<b>104</b>	<b>399</b>	<b>0</b>	<b>1,207</b>
<b>2019 PCE:</b>	<b>36</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>519</b>	<b>48</b>	<b>104</b>	<b>399</b>	<b>0</b>	<b>1,207</b>
2019 ADT:		4,228			0			14,651			16,422		
2019 Pk-Daily:		7%			0%			7%			7%		

	Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks																		
Start Time	I-215 Southbound Off Ramp				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Int. Total
07:00 AM	94	0	26	16	27	58	0	0	85	0	0	0	108	2	0	110	16	315	331
07:15 AM	83	1	31	10	28	47	0	0	75	0	0	0	74	0	0	74	10	264	274
07:30 AM	94	1	35	11	32	32	0	0	64	0	0	0	120	1	0	121	11	315	326
07:45 AM	83	0	33	15	28	25	0	0	53	0	0	0	88	2	1	90	16	259	275
Total	354	2	125	52	115	162	0	0	277	0	0	0	390	5	1	395	53	1153	1206
08:00 AM	76	1	26	12	27	36	0	0	63	0	0	0	62	2	1	64	13	230	243
08:15 AM	70	0	24	8	15	27	0	0	42	0	0	0	51	1	0	52	8	188	196
08:30 AM	71	0	29	12	100	35	12	0	47	0	0	0	49	0	0	49	12	196	208
08:45 AM	70	3	26	13	99	19	19	0	38	0	0	0	42	1	0	43	13	180	193
Total	287	4	105	45	396	96	94	0	190	0	0	0	204	4	1	208	46	794	840
Grand Total	641	6	230	97	211	256	0	0	467	0	0	0	594	9	2	603	99	1947	2046
Approach %	73.1	0.7	26.2		45.2	54.8				0	0	0	98.5	1.5					
Total %	32.9	0.3	11.8		10.8	13.1			24	0	0	0	30.5	0.5		31	4.8	95.2	
% Passenger Vehicles	462	4	178		175	237			412	0	0	0	545	6		552	0	0	1691
% Passenger Vehicles	72.1	66.7	77.4	85.6	82.9	92.6			88.2	0	0	0	91.8	66.7	50	91.2	0	0	82.6
% 2 Axle Vehicles	48	0	16		12	12			29	0	0	0	17	0		17	0	0	118
% 2 Axle Vehicles	7.5	0	7	8.2	7.4	4.7			6.2	0	0	0	2.9	0		2.8	0	0	5.8
% 3 Axle Vehicles	37	0	6		3	3			6	0	0	0	8	0		8	0	0	59
% 3 Axle Vehicles	5.8	0	2.6	2.1	4.6	1.2			1.3	0	0	0	1.3	0		1.3	0	0	2.9
4+ Axle Trucks	94	2	30		16	4			20	0	0	0	24	3		28	0	0	178
% 4+ Axle Trucks	14.7	33.3	13	4.1	7.6	1.6			4.3	0	0	0	4	33.3	50	4.6	0	0	8.7

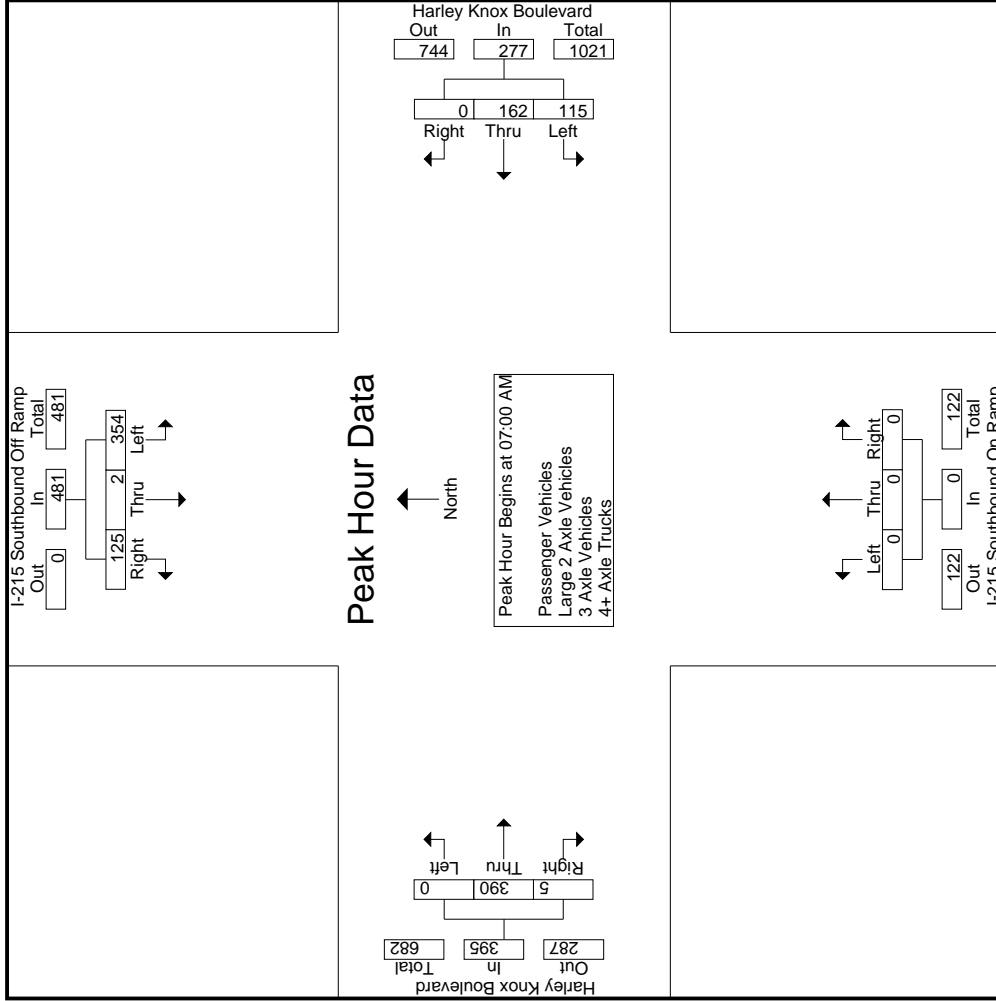
Start Time	I-215 Southbound Off Ramp				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Int. Total
07:00 AM	94	0	26	16	27	58	0	0	85	0	0	0	85	0	0	85	0	0	110
07:15 AM	83	1	31	10	28	47	0	0	75	0	0	0	74	0	0	74	10	264	274
07:30 AM	94	1	35	11	32	32	0	0	64	0	0	0	120	1	0	121	11	315	326
07:45 AM	83	0	33	15	28	25	0	0	53	0	0	0	88	2	1	90	16	259	275
Total	354	2	125	52	115	162	0	0	277	0	0	0	390	5	1	395	53	1153	1206
PHF	.941	.500	.893	.925	.898	.698	.000	.815	.000	.000	.000	.000	.000	.813	.625	.816	.816	.915	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:											
	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	94	0	26	27	58	0	85	0	0	0	108	2
+15 mins.	83	1	31	28	47	0	75	0	0	0	74	0
+30 mins.	94	1	35	32	32	0	64	0	0	0	120	1
+45 mins.	83	0	33	28	25	0	53	0	0	0	88	2
Total Volume	354	2	125	115	162	0	277	0	0	0	390	5
% App. Total	73.6	0.4	26	41.5	58.5	0	81.5	0	0	0	98.7	1.3
PHF	.941	.500	.893	.898	.698	.000	.815	.000	.000	.000	.813	.625



Groups Printed- Passenger Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	69	0	23	14	92	22	57	0	0	79	0	0	0	0	106	14	277	291
07:15 AM	68	1	27	10	96	22	44	0	0	66	0	0	0	0	70	10	232	242
07:30 AM	74	1	27	11	102	27	30	0	0	57	0	0	0	0	106	11	265	276
07:45 AM	67	0	28	14	95	27	23	0	0	50	0	0	0	1	80	15	225	240
<b>Total</b>	<b>278</b>	<b>2</b>	<b>105</b>	<b>49</b>	<b>385</b>	<b>98</b>	<b>154</b>	<b>0</b>	<b>0</b>	<b>252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>362</b>	<b>50</b>	<b>999</b>	<b>1049</b>
08:00 AM	52	1	20	10	73	22	33	0	0	55	0	0	0	0	59	10	187	197
08:15 AM	46	0	18	5	64	15	21	0	0	36	0	0	0	0	48	5	148	153
08:30 AM	46	0	20	10	66	26	12	0	0	38	0	0	0	0	44	10	148	158
08:45 AM	40	1	15	9	56	14	17	0	0	31	0	0	0	0	38	9	125	134
<b>Total</b>	<b>184</b>	<b>2</b>	<b>73</b>	<b>34</b>	<b>259</b>	<b>77</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>189</b>	<b>34</b>	<b>608</b>	<b>642</b>
<b>Grand Total</b>	<b>462</b>	<b>4</b>	<b>178</b>	<b>83</b>	<b>644</b>	<b>175</b>	<b>237</b>	<b>0</b>	<b>0</b>	<b>412</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>551</b>	<b>84</b>	<b>1607</b>	<b>1691</b>
Approch %	71.7	0.6	27.6		42.5	57.5				25.6				1.1	98.9			
Total %	28.7	0.2	11.1		10.9	14.7								0.4	34.3			

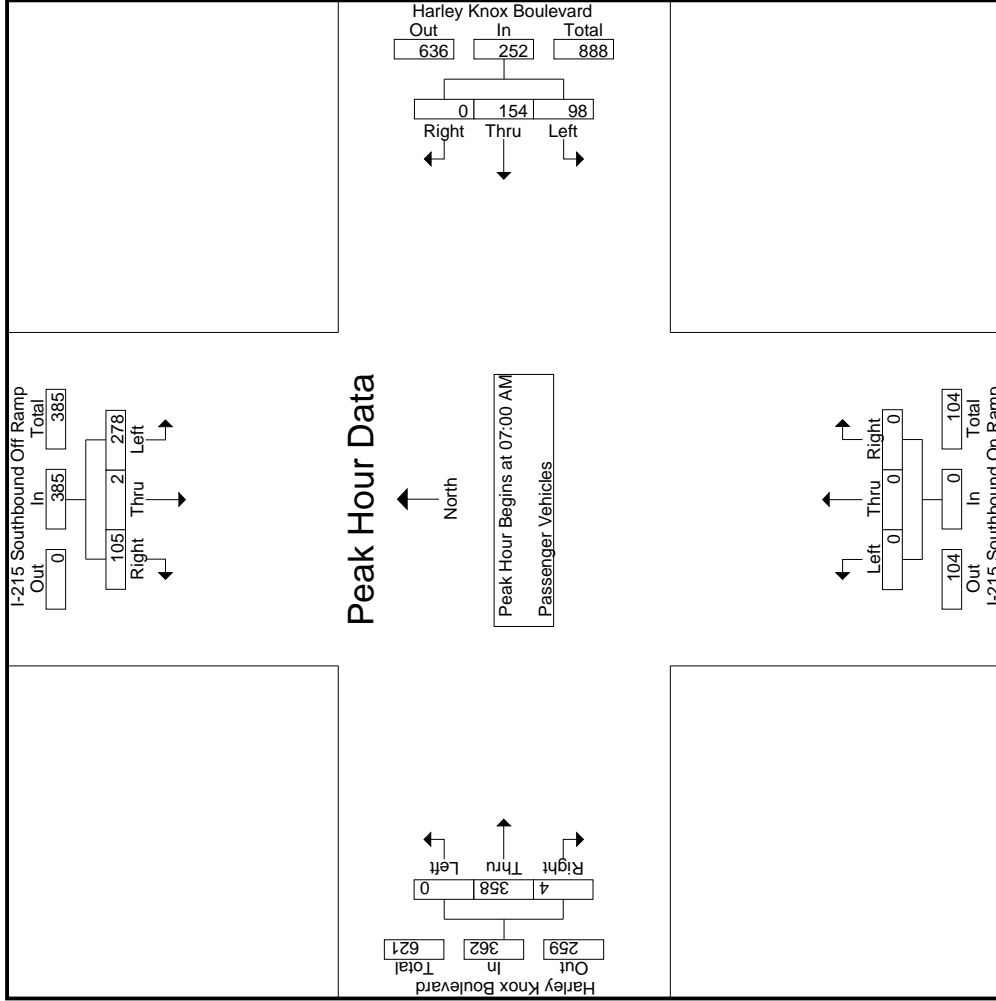
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	69	0	23		92	22	57	0		79	0	0	0		106	14	277	291
07:15 AM	68	1	27		96	22	44	0		66	0	0	0		70	10	232	242
07:30 AM	74	1	27		102	27	30	0		57	0	0	0		106	11	265	276
07:45 AM	67	0	28		95	27	23	0		50	0	0	0		80	15	225	240
<b>Total Volume</b>	<b>278</b>	<b>2</b>	<b>105</b>	<b>49</b>	<b>385</b>	<b>98</b>	<b>154</b>	<b>0</b>	<b>0</b>	<b>252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>362</b>	<b>50</b>	<b>999</b>	<b>1049</b>
% App. Total	72.2	0.5	27.3		42.5	57.5				25.6				1.1	98.9			
PHF	.939	.500	.938		.944	.907	.675			.000	.797	.000	.000	.000	.852	.500	.854	.902

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	69	0	23	57	0	79	0	0	0	0	105	1
+15 mins.	68	1	27	44	0	66	0	0	0	0	70	0
+30 mins.	74	1	27	30	0	57	0	0	0	0	105	1
+45 mins.	67	0	28	23	0	50	0	0	0	0	78	2
Total Volume	278	2	105	154	0	252	0	0	0	0	358	4
% App. Total	72.2	0.5	27.3	38.9	0	61.1	0	0	0	0	98.9	1.1
PHF	.939	.500	.938	.907	.675	.797	.000	.000	.000	.000	.852	.500

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	7	0	2	1	9	3	1	0	0	4	0	0	0	0	0	2	1	15	16
07:15 AM	4	0	0	0	4	4	2	0	0	6	0	0	0	0	0	3	0	13	13
07:30 AM	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	7	0	11	11
07:45 AM	6	0	3	1	9	0	1	0	0	1	0	0	0	0	0	1	1	11	12
<b>Total</b>	<b>19</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>25</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>50</b>	<b>52</b>	
08:00 AM	5	0	2	0	7	4	2	0	0	6	0	0	0	0	0	3	0	16	16
08:15 AM	9	0	1	1	10	0	4	0	0	4	0	0	0	0	0	1	14	15	15
08:30 AM	8	0	3	2	11	3	0	0	0	3	0	0	0	0	1	2	15	17	17
08:45 AM	7	0	4	3	11	3	1	0	0	4	0	0	0	0	0	3	15	18	18
<b>Total</b>	<b>29</b>	<b>0</b>	<b>10</b>	<b>6</b>	<b>39</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>60</b>	<b>66</b>	
<b>Grand Total</b>	<b>48</b>	<b>0</b>	<b>16</b>	<b>8</b>	<b>64</b>	<b>17</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>8</b>	<b>110</b>	<b>118</b>	
Approch %	75	0	25		58.6	41.4	0			26.4	0	0	0	0	15.5	6.8	93.2		
Total %	43.6	0	14.5		58.2	15.5	10.9				0	0	0	0					

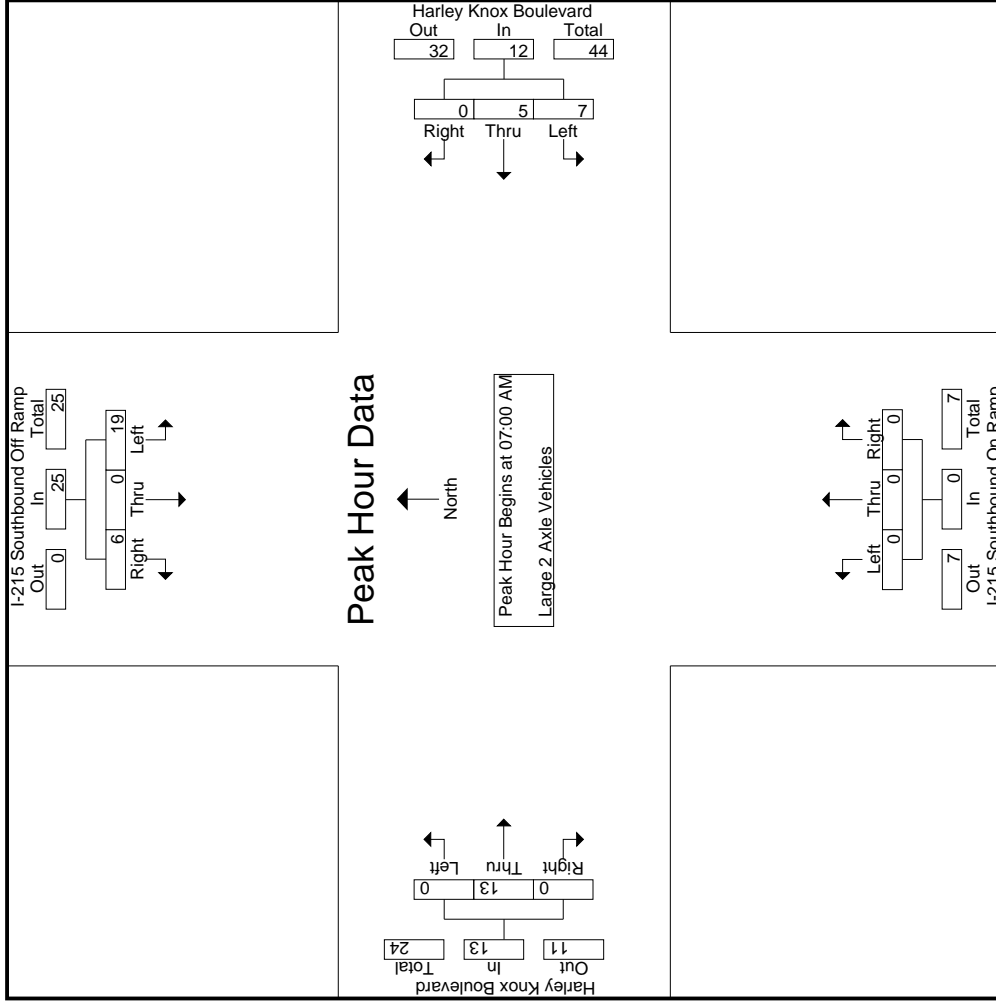
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	7	0	2	1	9	3	1	0	0	4	0	0	0	0	0	2	1	15	16
07:15 AM	4	0	0	0	4	4	2	0	0	6	0	0	0	0	0	3	0	13	13
07:30 AM	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	7	0	11	11
07:45 AM	6	0	3	1	9	0	1	0	0	1	0	0	0	0	0	1	1	11	12
<b>Total Volume</b>	<b>19</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>25</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>50</b>	<b>52</b>	
% App. Total	76	0	24		58.3	41.7	0			26.4	0	0	0	0	15.5	6.8	93.2		
PHF	.679	.000	.500		.694	.438	.625				.500	.000	.000	.000	.464	.000	.833		

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	7	0	2	3	1	0	4	0	0	0	0	2
+15 mins.	4	0	0	4	2	0	6	0	0	0	0	3
+30 mins.	2	0	1	0	1	0	1	0	0	0	0	0
+45 mins.	6	0	3	0	1	0	1	0	0	0	0	1
Total Volume	19	0	6	7	5	0	12	0	0	0	13	0
% App. Total	.76	0	.24	.438	.417	0	.500	.000	.000	.000	.100	0
PHF	.679	.000	.500	.694	.625	.000	.500	.000	.000	.000	.464	.000

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7	7
07:15 AM	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	0	4	4
07:30 AM	7	0	2	0	9	1	1	0	0	2	0	3	0	0	3	0	14	14
07:45 AM	4	0	0	0	4	0	1	0	0	1	0	2	0	0	2	0	7	7
<b>Total</b>	<b>21</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>32</b>	<b>32</b>
08:00 AM	6	0	1	1	7	0	0	0	0	0	0	0	0	0	0	1	7	8
08:15 AM	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
08:30 AM	3	0	0	0	3	2	0	0	0	2	0	2	0	0	2	0	7	7
08:45 AM	4	0	3	1	7	0	0	0	0	0	0	0	0	0	0	1	7	8
<b>Total</b>	<b>16</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>20</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>25</b>	<b>27</b>
<b>Grand Total</b>	<b>37</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>43</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>57</b>	<b>59</b>
Approch %	86	0	14		50	50	5.3			10.5	0	14	0	0	14	3.4	96.6	
Total %	64.9	0	10.5		75.4	5.3	5.3				0	14	0	0	14	3.4	96.6	

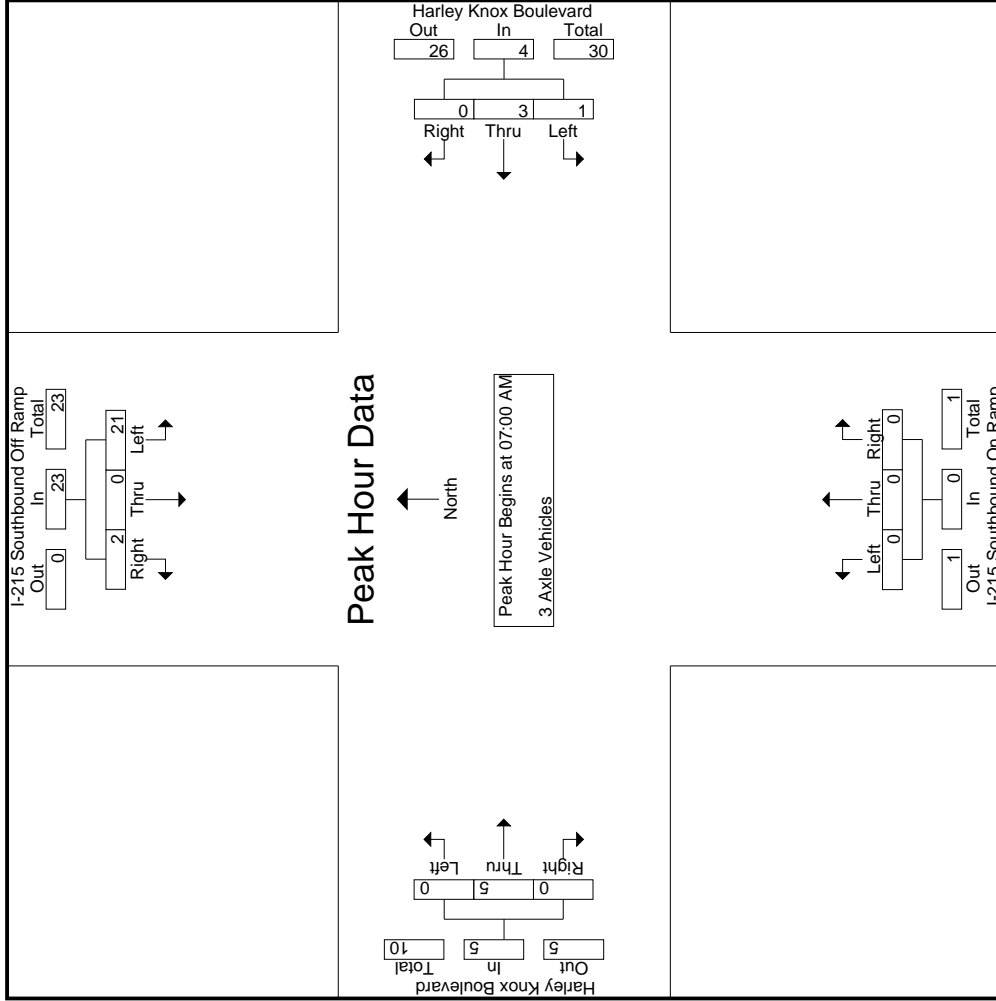
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
07:15 AM	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	4
07:30 AM	7	0	0	0	9	1	1	0	0	2	0	3	0	0	3	0	14	14
07:45 AM	4	0	0	0	4	0	1	0	0	1	0	2	0	0	2	0	7	7
<b>Total Volume</b>	<b>21</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>32</b>	<b>32</b>
% App. Total	91.3	0	8.7		25	25	75			100	0	100	0	0	100	0	571	
PHF	.750	.000	.250		.639	.250	.750	.000	.500	.000	.000	.417	.000	.000	.417	.000	.571	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	7	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	3	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	7	0	2	1	0	2	0	0	0	0	3	0
+45 mins.	4	0	0	0	0	1	0	0	0	0	2	0
Total Volume	21	0	2	1	3	0	0	0	0	0	5	0
% App. Total	91.3	0	8.7	25	75	0	0	0	0	0	100	0
PHF	.750	.000	.250	.250	.750	.000	.500	.000	.000	.000	.417	.000

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	11	0	1	1	12	2	0	0	0	2	0	0	0	0	0	1	16	17
07:15 AM	8	0	4	0	12	2	0	0	0	2	0	0	0	0	1	0	15	15
07:30 AM	11	0	5	0	16	4	0	0	0	4	0	0	0	0	5	0	25	25
07:45 AM	6	0	2	0	8	1	0	0	0	1	0	0	0	0	7	0	16	16
<b>Total</b>	<b>36</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>48</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>72</b>	<b>73</b>
08:00 AM	13	0	3	1	16	1	1	0	0	2	0	0	0	1	1	2	20	22
08:15 AM	12	0	5	2	17	0	2	0	0	2	0	0	0	0	3	2	22	24
08:30 AM	14	0	6	0	20	4	0	0	0	4	0	0	0	2	0	2	26	26
08:45 AM	19	2	4	0	25	2	1	0	0	3	0	0	0	4	1	0	33	33
<b>Total</b>	<b>58</b>	<b>2</b>	<b>18</b>	<b>3</b>	<b>78</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>4</b>	<b>101</b>	<b>105</b>
<b>Grand Total</b>	<b>94</b>	<b>2</b>	<b>30</b>	<b>4</b>	<b>126</b>	<b>16</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>3</b>	<b>5</b>	<b>173</b>	<b>178</b>
Approch %	74.6	1.6	23.8			80	20	0	0		0	0	0	88.9	11.1			
Total %	54.3	1.2	17.3		72.8	9.2	2.3	0	0	11.6	0	0	0	13.9	1.7	2.8	97.2	

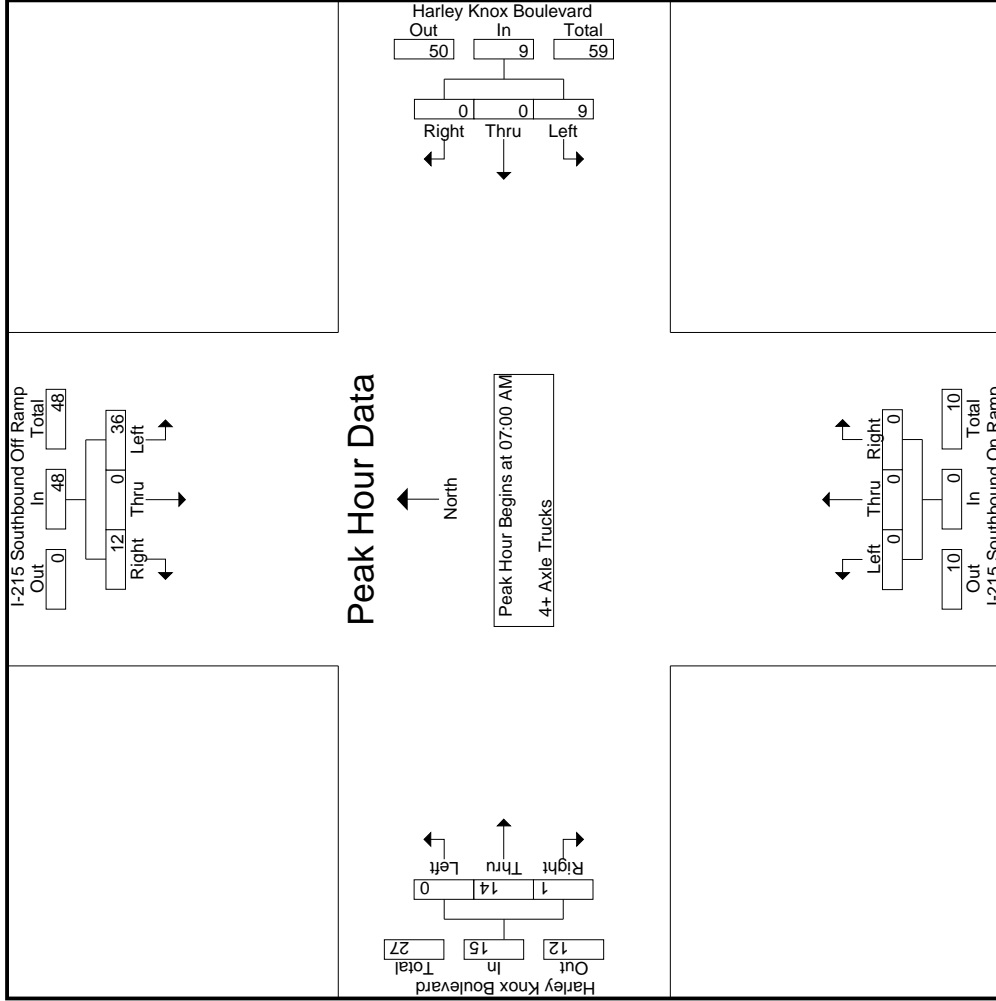
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	11	0	1	1	12	2	0	0	0	2	0	0	0	0	0	1	16	16
07:15 AM	8	0	4	0	12	2	0	0	0	2	0	0	0	0	1	0	15	15
07:30 AM	11	0	5	0	16	4	0	0	0	4	0	0	0	0	5	0	25	25
07:45 AM	6	0	2	0	8	1	0	0	0	1	0	0	0	0	7	0	16	16
<b>Total Volume</b>	<b>36</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>48</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>72</b>	<b>72</b>
% App. Total	75	0	25			100	0	0	0		0	0	0	93.3	6.7			
PHF	.818	.000	.600		.750	.563	.000	.000	.000	.563	.000	.000	.000	.250	.536		.720	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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County of Riverside  
 N/S: I-215 Southbound Ramps  
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 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	11	0	1	2	0	0	2	0	0	0	0	1
+15 mins.	8	0	4	2	0	0	2	0	0	0	0	1
+30 mins.	11	0	5	4	0	0	4	0	0	0	5	0
+45 mins.	6	0	2	1	0	0	1	0	0	0	7	0
Total Volume	36	0	12	9	0	0	9	0	0	0	14	1
% App. Total	.75	0	.25	.100	0	0	.100	0	0	0	.933	.67
PHF	.818	.000	.600	.563	.000	.000	.563	.000	.000	.000	.500	.250
			.750						.000			.536

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp							Harley Knox Boulevard Westbound							I-215 Southbound On Ramp Northbound							Harley Knox Boulevard Eastbound						
	Southbound			RTOR				Westbound			RTOR				Northbound			RTOR				Eastbound			RTOR			
	Left	Thru	Right	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total				
04:00 PM	82	0	35	18	117	93	48	45	0	0	0	0	0	0	0	97	5	2	102	20	312	332						
04:15 PM	65	0	35	20	100	70	38	32	0	0	0	0	0	0	0	75	2	0	77	20	247	267						
04:30 PM	66	4	29	15	99	120	85	35	0	0	0	0	0	0	0	67	2	1	69	16	288	304						
04:45 PM	64	0	32	17	96	106	68	38	0	0	0	0	0	0	0	64	4	0	68	17	270	287						
<b>Total</b>	<b>277</b>	<b>4</b>	<b>131</b>	<b>70</b>	<b>412</b>	<b>389</b>	<b>239</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>389</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>303</b>	<b>13</b>	<b>3</b>	<b>316</b>	<b>73</b>	<b>1117</b>	<b>1190</b>						
05:00 PM	54	5	40	21	99	96	61	35	0	0	0	0	0	0	0	82	3	0	85	21	280	301						
05:15 PM	61	0	31	16	92	69	44	25	0	0	0	0	0	0	0	61	4	2	65	18	226	244						
05:30 PM	57	5	38	19	100	88	47	41	0	0	0	0	0	0	0	67	7	1	74	20	262	282						
05:45 PM	53	0	38	13	91	60	38	22	0	0	0	0	0	0	0	60	4	1	64	14	215	229						
<b>Total</b>	<b>225</b>	<b>10</b>	<b>147</b>	<b>69</b>	<b>382</b>	<b>313</b>	<b>190</b>	<b>123</b>	<b>0</b>	<b>0</b>	<b>313</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>270</b>	<b>18</b>	<b>4</b>	<b>288</b>	<b>73</b>	<b>983</b>	<b>1056</b>						
<b>Grand Total</b>	<b>502</b>	<b>14</b>	<b>278</b>	<b>139</b>	<b>794</b>	<b>702</b>	<b>429</b>	<b>273</b>	<b>0</b>	<b>0</b>	<b>702</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>573</b>	<b>31</b>	<b>7</b>	<b>604</b>	<b>146</b>	<b>2100</b>	<b>2246</b>						
Approach %	63.2	1.8	35				61.1	38.9	0	0		0	94.9	5.1		94.9	5.1											
Total %	23.9	0.7	13.2				20.4	13	0	0	33.4	0	27.3	1.5		27.3	1.5		28.8	6.5	93.5							
Passenger Vehicles	410	11	235				411	250	0	0	661	0	524	29		524	29		560	0	0	2002						
Large Passenger Vehicles	81.7	78.6	84.5	89.9	83.7	94.2	95.8	91.6	0	0	94.2	0	91.4	93.5	100	91.7	0	0	91.7	0	0	89.1						
2 Axle Vehicles	16	2	12				7	7	0	0	14	0	10	0		10	0		10	0	0	59						
Large 2 Axle Vehicles	3.2	14.3	4.3	3.6	3.8	2	1.6	2.6	0	0	2	0	1.7	0		1.6	0		1.6	0	0	2.6						
3 Axle Vehicles	18	0	5				2	5	0	0	7	0	12	1		12	1		13	0	0	45						
3 Axle Vehicles	3.6	0	1.8	1.4	2.7	1	0.5	1.8	0	0	1	0	2.1	3.2	0	2.1	3.2	0	2.1	0	0	2						
4+ Axle Trucks	58	1	26				9	11	0	0	20	0	27	1		27	1		28	0	0	140						
4+ Axle Trucks	11.6	7.1	9.4	5	9.9	2.8	2.1	4	0	0	4.7	3.2	4.7	3.2	0	4.7	3.2	0	4.6	0	0	6.2						

Start Time	I-215 Southbound Off Ramp							Harley Knox Boulevard Westbound							I-215 Southbound On Ramp Northbound							Harley Knox Boulevard Eastbound						
	Southbound			RTOR				Westbound			RTOR				Northbound			RTOR				Eastbound			RTOR			
	Left	Thru	Right	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total				
04:00 PM	82	0	35			117	48	45	0	0	93	0	0	0	0	97	5	2	102	20	312	332						
04:15 PM	65	0	35			100	38	32	0	0	70	0	0	0	0	75	2	0	77	20	247	267						
04:30 PM	66	4	29			99	85	35	0	0	120	0	0	0	0	67	2	1	69	16	288	304						
04:45 PM	64	0	32			96	68	38	0	0	106	0	0	0	0	64	4	0	68	17	270	287						
<b>Total</b>	<b>277</b>	<b>4</b>	<b>131</b>	<b>70</b>	<b>412</b>	<b>389</b>	<b>239</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>389</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>303</b>	<b>13</b>	<b>3</b>	<b>316</b>	<b>73</b>	<b>1117</b>	<b>1190</b>						
05:00 PM	54	5	40			99	61	35	0	0	96	0	0	0	0	82	3	0	85	21	280	301						
05:15 PM	61	0	31			92	44	25	0	0	69	0	0	0	0	61	4	2	65	18	226	244						
05:30 PM	57	5	38			100	47	41	0	0	88	0	0	0	0	67	7	1	74	20	262	282						
05:45 PM	53	0	38			91	38	22	0	0	60	0	0	0	0	60	4	1	64	14	215	229						
<b>Total</b>	<b>225</b>	<b>10</b>	<b>147</b>	<b>69</b>	<b>382</b>	<b>313</b>	<b>190</b>	<b>123</b>	<b>0</b>	<b>0</b>	<b>313</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>270</b>	<b>18</b>	<b>4</b>	<b>288</b>	<b>73</b>	<b>983</b>	<b>1056</b>						
<b>Grand Total</b>	<b>502</b>	<b>14</b>	<b>278</b>	<b>139</b>	<b>794</b>	<b>702</b>	<b>429</b>	<b>273</b>	<b>0</b>	<b>0</b>	<b>702</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>573</b>	<b>31</b>	<b>7</b>	<b>604</b>	<b>146</b>	<b>2100</b>	<b>2246</b>						
Approach %	63.2	1.8	35				61.1	38.9	0	0		0	94.9	5.1		94.9	5.1											
Total %	23.9	0.7	13.2				20.4	13	0	0	33.4	0	27.3	1.5		27.3	1.5		28.8	6.5	93.5							

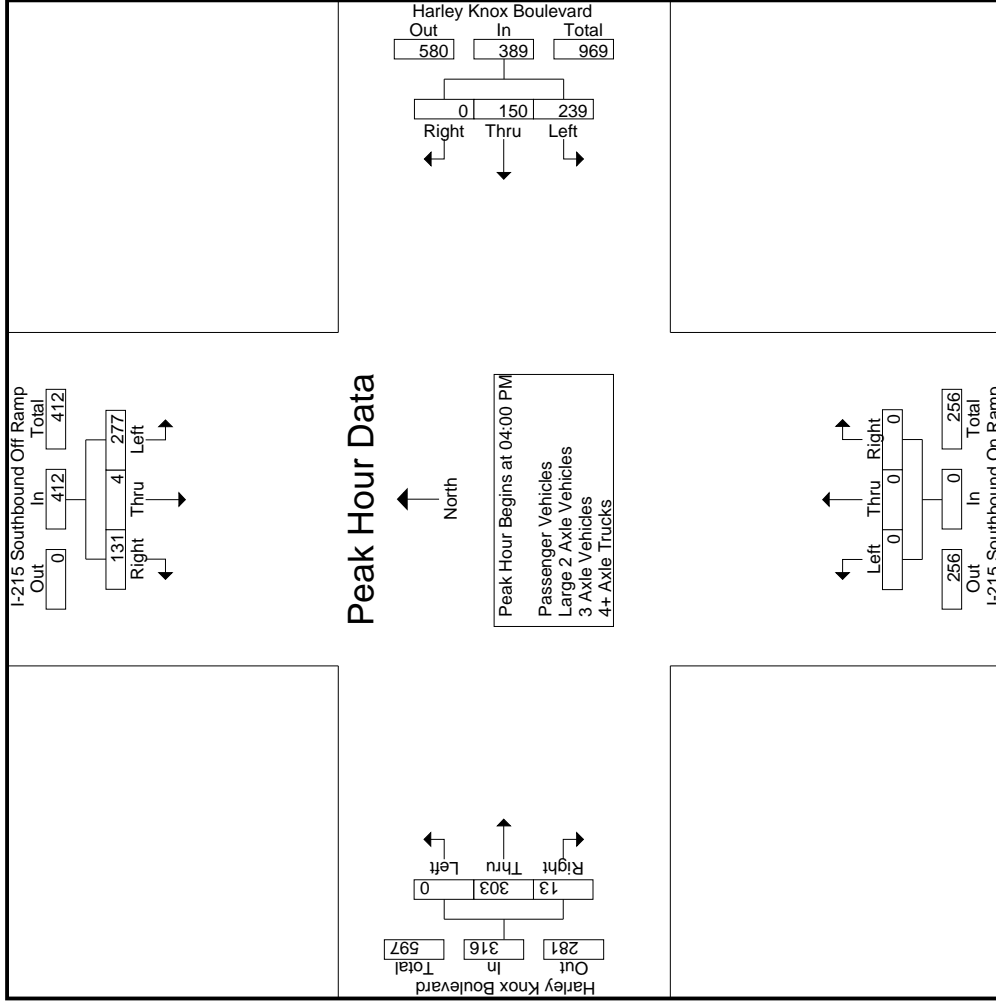
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Start Time	I-215 Southbound Off Ramp							Harley Knox Boulevard Westbound							I-215 Southbound On Ramp Northbound							Harley Knox Boulevard Eastbound						
	Southbound			RTOR				Westbound			RTOR				Northbound			RTOR				Eastbound			RTOR			
	Left	Thru	Right	Thru	Right	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total				
04:00 PM	82	0	35			117	48	45	0	0	93	0	0	0	0	97	5	2	102	20	312	332						
04:15 PM	65	0	35			100	38	32	0	0	70	0	0	0	0	75	2	0	77	20	247	267						
04:30 PM	66	4	29			99	85	35	0	0	120	0	0	0	0	67	2	1	69	16	288	304						
04:45 PM	64	0	32			96	68	38	0	0	106	0	0	0	0	64	4	0	68	17	270	287						
<b>Total</b>	<b>277</b>	<b>4</b>	<b>131</b>	<b>70</b>	<b>412</b>	<b>389</b>	<b>239</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>389</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>303</b>	<b>13</b>	<b>3</b>	<b>316</b>	<b>73</b>	<b>1117</b>	<b>1190</b>						
% App. Total	67.2	1	31.8			880	61.4	38.6	0	0	810	0	0	0	0	95.9	4.1	0	316	0	0	1117						
PHF	.845	.250	.936			.880	.703	.833	.000	.810	.000	.000	.000	.000	.000	.000	.650	.775	.000	.775	.895							

Counts Unlimited  
 PO Box 1178  
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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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County of Riverside  
 N/S: I-215 Southbound Ramps  
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 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:	04:00 PM											
+0 mins.	82	0	35	38	32	0	70	0	0	0	0	97
+15 mins.	65	0	35	85	35	0	120	0	0	0	0	75
+30 mins.	66	4	29	68	38	0	106	0	0	0	0	67
+45 mins.	64	0	32	61	35	0	96	0	0	0	0	64
Total Volume	277	4	131	252	140	0	392	0	0	0	303	13
% App. Total	67.2	1	31.8	64.3	35.7	0	81.7	0	0	0	95.9	4.1
PHF	.845	.250	.936	.741	.921	.000	.817	.000	.000	.000	.781	.650

Groups Printed- Passenger Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	68	0	26	15	94	45	41	0	0	86	0	0	0	0	0	0	89	4	2	93	17	273	290
04:15 PM	46	0	30	19	76	37	30	0	0	67	0	0	0	0	0	0	69	2	0	71	19	214	233
04:30 PM	55	2	26	14	83	82	34	0	0	116	0	0	0	0	0	0	64	2	1	66	15	265	280
04:45 PM	54	0	26	13	80	68	32	0	0	100	0	0	0	0	0	0	58	4	0	62	13	242	255
<b>Total</b>	<b>223</b>	<b>2</b>	<b>108</b>	<b>61</b>	<b>333</b>	<b>232</b>	<b>137</b>	<b>0</b>	<b>0</b>	<b>369</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>280</b>	<b>12</b>	<b>3</b>	<b>292</b>	<b>64</b>	<b>994</b>	<b>1058</b>
05:00 PM	45	4	33	20	82	57	33	0	0	90	0	0	0	0	0	0	73	3	0	76	20	248	268
05:15 PM	45	0	26	14	71	41	21	0	0	62	0	0	0	0	0	0	55	4	2	59	16	192	208
05:30 PM	49	5	35	17	89	46	37	0	0	83	0	0	0	0	0	0	58	6	1	64	18	236	254
05:45 PM	48	0	33	13	81	35	22	0	0	57	0	0	0	0	0	0	58	4	1	62	14	200	214
<b>Total</b>	<b>187</b>	<b>9</b>	<b>127</b>	<b>64</b>	<b>323</b>	<b>179</b>	<b>113</b>	<b>0</b>	<b>0</b>	<b>292</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>17</b>	<b>4</b>	<b>261</b>	<b>68</b>	<b>876</b>	<b>944</b>
<b>Grand Total</b>	<b>410</b>	<b>11</b>	<b>235</b>	<b>125</b>	<b>656</b>	<b>411</b>	<b>250</b>	<b>0</b>	<b>0</b>	<b>661</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>524</b>	<b>29</b>	<b>7</b>	<b>553</b>	<b>132</b>	<b>1870</b>	<b>2002</b>
Approch %	62.5	1.7	35.8			62.2	37.8	0	0		0	0	0	0	0	0	94.8	5.2					
Total %	21.9	0.6	12.6		35.1	22	13.4	0	0	35.3	0	0	0	0	0	0	28	1.6		29.6	6.6	93.4	

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	68	0	26	15	94	45	41	0	0	86	0	0	0	0	0	0	89	4	2	93	17	273	290
04:15 PM	46	0	30	19	76	37	30	0	0	67	0	0	0	0	0	0	69	2	0	71	19	214	233
04:30 PM	55	2	26	14	83	82	34	0	0	116	0	0	0	0	0	0	64	2	1	66	15	265	280
04:45 PM	54	0	26	13	80	68	32	0	0	100	0	0	0	0	0	0	58	4	0	62	13	242	255
<b>Total Volume</b>	<b>223</b>	<b>2</b>	<b>108</b>	<b>61</b>	<b>333</b>	<b>232</b>	<b>137</b>	<b>0</b>	<b>0</b>	<b>369</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>280</b>	<b>12</b>	<b>3</b>	<b>292</b>	<b>64</b>	<b>994</b>	<b>1058</b>
% App. Total	67	0.6	32.4		35.1	62.9	37.1	0	0		0	0	0	0	0	0	95.9	4.1					
PHF	.820	.250	.900		.886	.707	.835	.000	.000	.795	.000	.000	.000	.000	.000	.000	.787	.750					.910

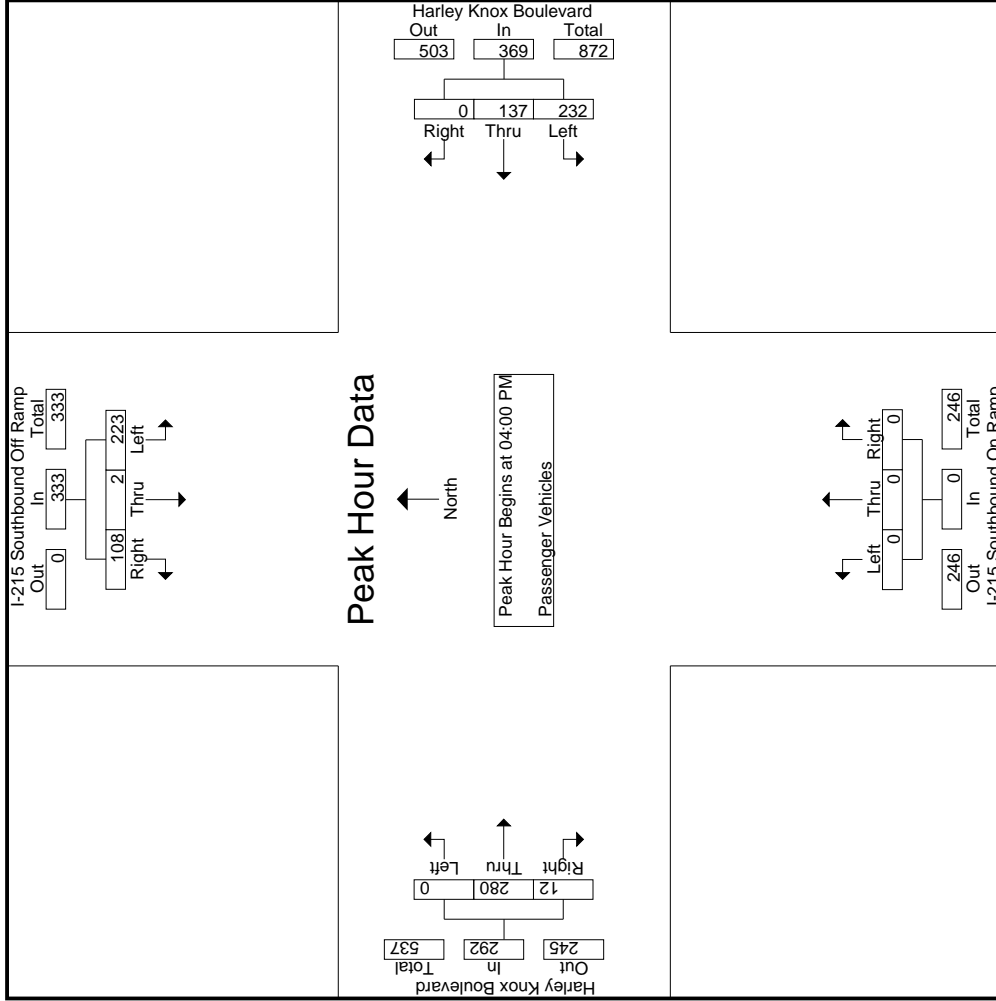
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:	04:00 PM													
+0 mins.	68	0	26	45	41	0	0	0	0	0	0	89	4	93
+15 mins.	46	0	30	37	30	0	0	0	0	0	0	69	2	71
+30 mins.	55	2	26	82	34	0	0	0	0	0	0	64	2	66
+45 mins.	54	0	26	68	32	0	0	0	0	0	0	58	4	62
Total Volume	223	2	108	232	137	0	0	0	0	0	0	280	12	292
% App. Total	67	0.6	32.4	62.9	37.1	0	0	0	0	0	0	95.9	4.1	93
PHF	.820	.250	.900	.707	.835	.000	.000	.000	.000	.000	.787	.750		.785

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	4	0	5	1	9	2	1	0	0	3	0	0	0	0	3	1	15	16
04:15 PM	1	0	2	1	3	1	1	0	0	2	0	0	0	0	1	1	6	7
04:30 PM	2	1	1	0	4	1	0	0	0	1	0	0	0	0	0	0	5	5
04:45 PM	2	0	2	1	4	0	3	0	0	3	0	0	0	0	2	1	9	10
<b>Total</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>20</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>35</b>	<b>38</b>
05:00 PM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0	0	4	4
05:15 PM	3	0	1	1	4	1	1	0	0	2	0	2	0	0	2	1	8	9
05:30 PM	3	0	1	1	4	1	0	0	0	1	0	1	0	0	1	1	6	7
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>Total</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>19</b>	<b>21</b>
<b>Grand Total</b>	<b>16</b>	<b>2</b>	<b>12</b>	<b>5</b>	<b>30</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>54</b>	<b>59</b>
Approch %	53.3	6.7	40			50	50	0	0	25.9	0	0	0	0	18.5	8.5	91.5	
Total %	29.6	3.7	22.2		55.6	13	13	0	0		0	0	0	0				

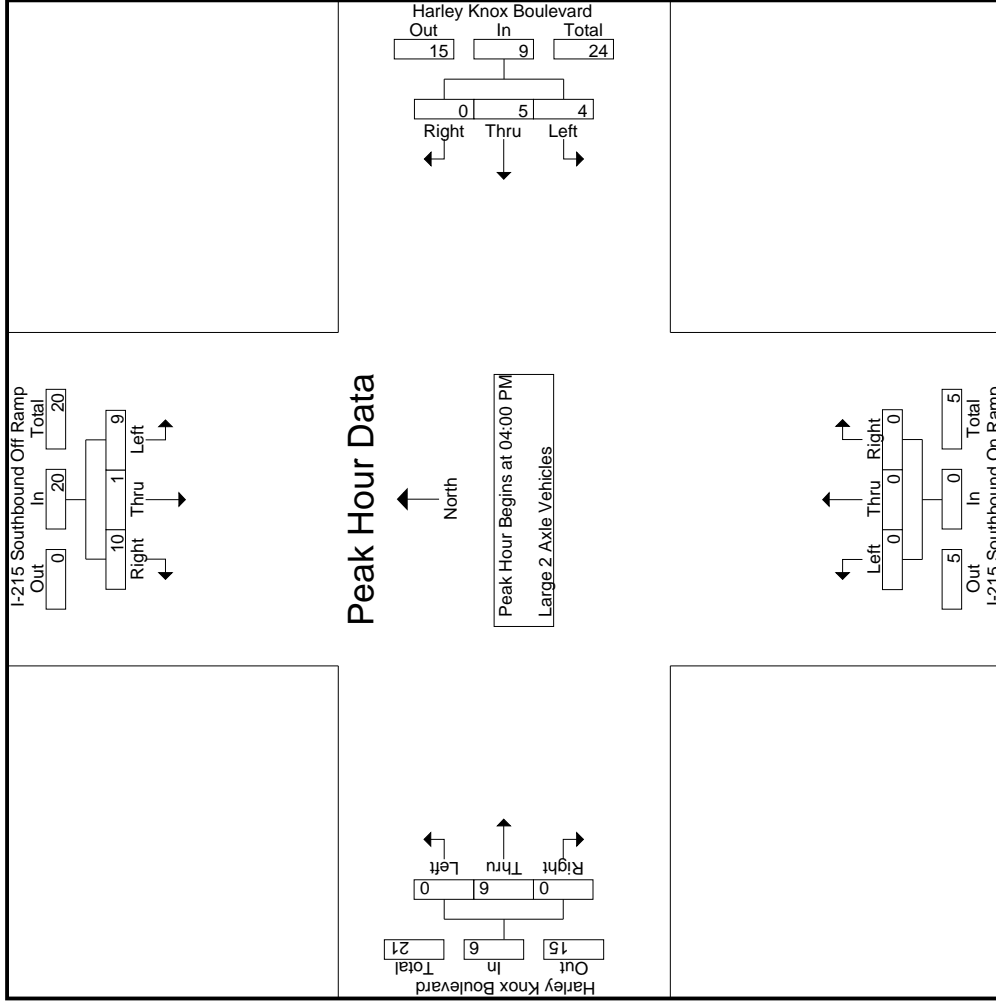
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	4	0	0	0	9	2	1	0	0	3	0	0	0	0	3	0	3	15
04:15 PM	1	0	2	1	3	1	1	0	0	2	0	0	0	0	1	0	1	6
04:30 PM	2	1	1	0	4	1	0	0	0	1	0	0	0	0	0	0	0	5
04:45 PM	2	0	2	1	4	0	3	0	0	3	0	0	0	0	2	1	9	10
<b>Total Volume</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>20</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>35</b>	<b>38</b>
% App. Total	45	5	50			44.4	55.6	0	0	44.4	0	0	0	0	100	0	100	
PHF	.563	.250	.500		.556	.500	.417	.000	.000	.750	.000	.000	.000	.000	.500	.000	.583	

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
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File Name : 01\_CRV\_215S\_Harley Knox PM  
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County of Riverside  
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File Name : 01\_CRV\_215S\_Harley Knox PM  
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 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	4	0	5	2	1	0	3	0	0	0	3	0
+15 mins.	1	0	2	1	1	0	2	0	0	0	1	0
+30 mins.	2	1	1	1	0	0	1	0	0	0	0	0
+45 mins.	2	0	2	0	3	0	3	0	0	0	2	0
Total Volume	9	1	10	4	5	0	9	0	0	0	6	0
% App. Total	45	5	50	44.4	55.6	0	75.0	0	0	0	100	0
PHF	.563	.250	.500	.500	.417	.000	.750	.000	.000	.000	.500	.000

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	2
04:15 PM	3	0	1	0	4	0	1	0	0	1	0	0	0	0	1	0	6	6
04:30 PM	2	0	1	1	3	0	0	0	0	0	0	2	0	0	2	1	5	6
04:45 PM	3	0	1	1	4	0	1	0	0	1	0	0	0	0	1	1	6	7
Total	9	0	3	2	12	0	2	0	0	2	0	4	1	0	5	2	19	21
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	6	0	0	6	0	7	7
05:15 PM	5	0	0	0	5	0	1	0	0	1	0	1	0	0	1	0	7	7
05:30 PM	1	0	1	0	2	0	2	0	0	2	0	1	0	0	1	0	5	5
05:45 PM	2	0	1	0	3	2	2	0	0	2	0	0	0	0	0	0	5	5
Total	9	0	2	0	11	2	3	0	0	5	0	8	0	0	8	0	24	24
Grand Total	18	0	5	2	23	2	5	0	0	7	0	12	1	0	13	2	43	45
Approch %	78.3	0	21.7		28.6	71.4	0			16.3	0	92.3	7.7		30.2	4.4	95.6	
Total %	41.9	0	11.6		53.5	4.7	11.6				0	27.9	2.3					

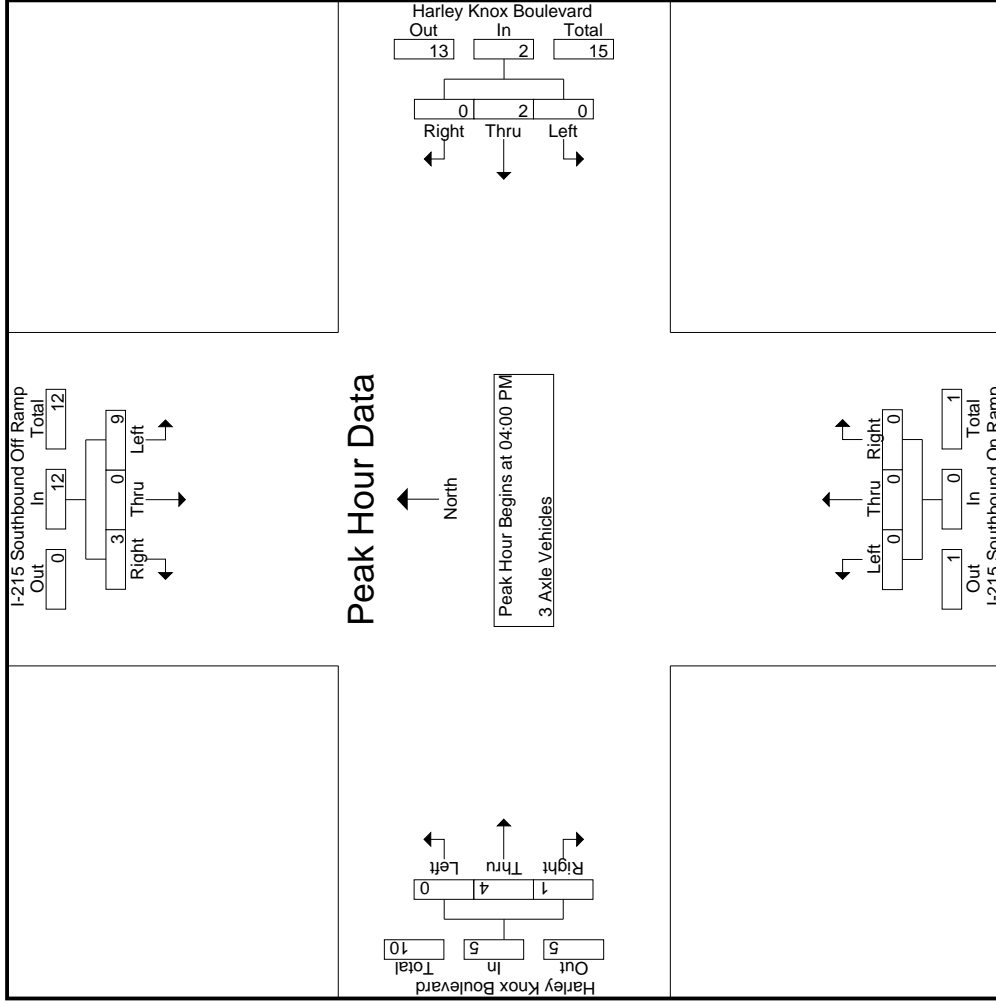
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
04:15 PM	3	0	1	0	4	0	1	0	0	1	0	0	0	0	1	0	6	6
04:30 PM	2	0	1	1	3	0	0	0	0	0	0	2	0	0	2	1	5	6
04:45 PM	3	0	1	1	4	0	1	0	0	1	0	0	0	0	1	1	6	7
Total Volume	9	0	3	2	12	0	2	0	0	2	0	4	1	0	5	2	19	21
% App. Total	.750	.000	.750		.750	.000	.500	.000	.000	.500	.000	.800	.250	.000	.625	.000	.792	
PHF	.750	.000	.750		.750	.000	.500	.000	.000	.500	.000	.800	.250	.000	.625	.000	.792	

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	1	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	3	0	1	0	0	0	0	0	0	0	0	1
+30 mins.	2	0	1	0	0	0	0	0	0	0	2	0
+45 mins.	3	0	1	0	0	1	0	0	0	0	1	0
Total Volume	9	0	3	0	2	0	0	0	0	0	4	1
% App. Total	.75	0	.25	0	100	0	0	0	0	0	80	20
PHF	.750	.000	.750	.000	.500	.000	.500	.000	.000	.000	.500	.250



Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	9	0	4	2	13	1	3	0	0	4	0	0	0	0	0	5	2	22	24
04:15 PM	15	0	2	0	17	0	0	0	0	0	0	0	0	0	0	4	0	21	21
04:30 PM	7	1	1	0	9	2	1	0	0	3	0	0	0	0	0	1	0	13	13
04:45 PM	5	0	3	2	8	0	2	0	0	2	0	0	0	0	0	3	2	13	15
<b>Total</b>	<b>36</b>	<b>1</b>	<b>10</b>	<b>4</b>	<b>47</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>4</b>	<b>69</b>	<b>73</b>	
05:00 PM	7	0	7	1	14	3	1	0	0	4	0	0	0	0	0	3	1	21	22
05:15 PM	8	0	4	1	12	2	2	0	0	4	0	0	0	0	0	3	1	19	20
05:30 PM	4	0	1	1	5	0	2	0	0	2	0	0	0	0	0	7	1	15	16
05:45 PM	3	0	4	0	7	1	0	0	0	1	0	0	0	0	0	1	0	9	9
<b>Total</b>	<b>22</b>	<b>0</b>	<b>16</b>	<b>3</b>	<b>38</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>3</b>	<b>64</b>	<b>67</b>	
<b>Grand Total</b>	<b>58</b>	<b>1</b>	<b>26</b>	<b>7</b>	<b>85</b>	<b>9</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>7</b>	<b>133</b>	<b>140</b>	
Approch %	68.2	1.2	30.6			45	55	0			0	0	0		96.4	3.6			
Total %	43.6	0.8	19.5		63.9	6.8	8.3	0		15	0	0	0		20.3	0.8			

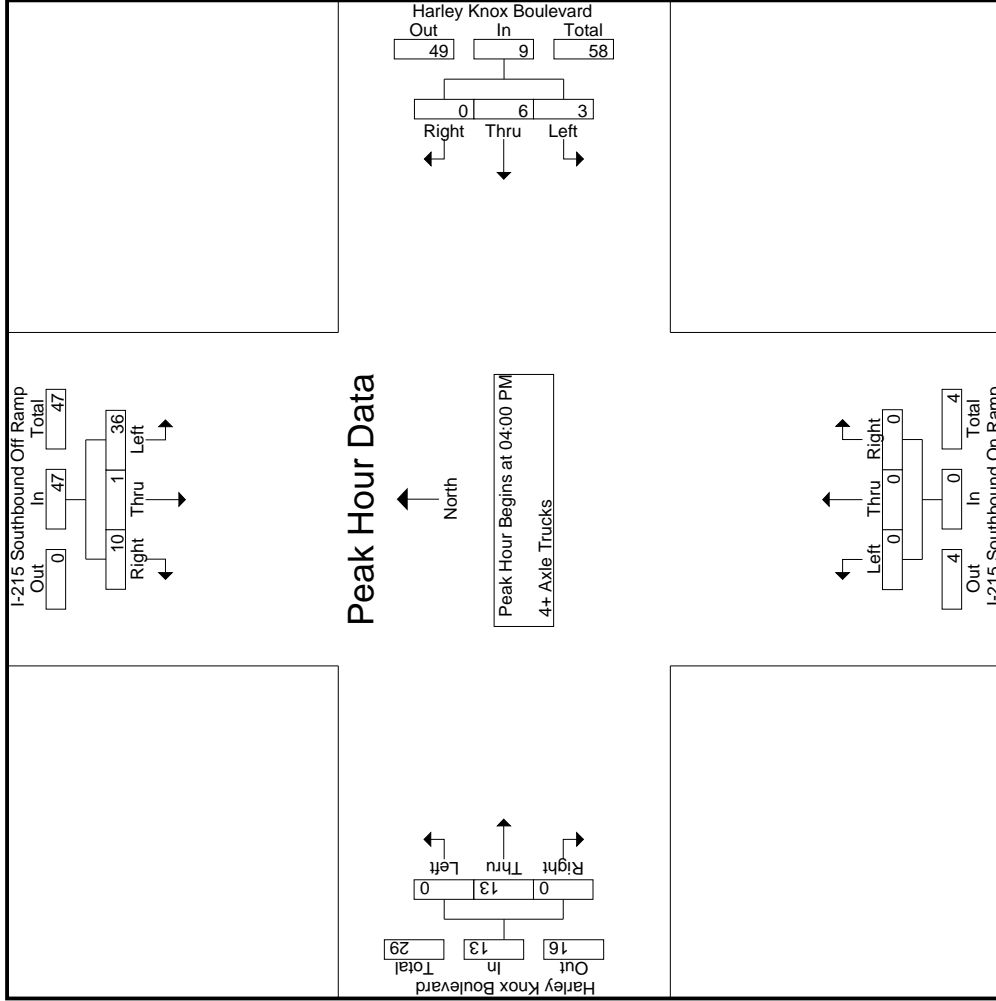
Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	9	0	4	2	13	1	3	0	0	4	0	0	0	0	0	5	2	22	24
04:15 PM	15	0	2	0	17	0	0	0	0	0	0	0	0	0	0	4	0	21	21
04:30 PM	7	1	1	0	9	2	1	0	0	3	0	0	0	0	0	1	0	13	13
04:45 PM	5	0	3	2	8	0	2	0	0	2	0	0	0	0	0	3	2	13	15
<b>Total Volume</b>	<b>36</b>	<b>1</b>	<b>10</b>	<b>4</b>	<b>47</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>4</b>	<b>69</b>	<b>73</b>	
% App. Total	76.6	2.1	21.3			33.3	66.7	0			0	0	0		100	0			
PHF	.600	.250	.625		.691	.375	.500	.000		.563	.000	.000	.000		.650	.000	.650	.784	

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 01\_CRV\_215S\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Southbound Off Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Southbound On Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	9	0	4	13	04:00 PM	3	0	4	04:00 PM	0	0	5
+15 mins.	15	0	2	17	04:00 PM	0	0	0	04:00 PM	0	0	4
+30 mins.	7	1	1	9	04:00 PM	1	0	3	04:00 PM	0	1	0
+45 mins.	5	0	3	8	04:00 PM	2	0	2	04:00 PM	0	3	0
Total Volume	36	1	10	47	04:00 PM	6	0	9	04:00 PM	0	13	0
% App. Total	76.6	2.1	21.3		33.3	66.7	0		0	0	100	0
PHF	.600	.250	.625	.691	.375	.500	.000	.563	.000	.000	.650	.000

Location: County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg I-215 Southbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Southbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	1	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg I-215 Southbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Southbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Location: County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound I-215 Southbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Southbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-215 Southbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Southbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp										I-215 Southbound On Ramp										Cajalco Expressway Eastbound									
	Southbound					Westbound					Northbound					Northbound					Eastbound					Eastbound				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total		
07:00 AM	120	0	38	19	158	53	211	0	0	264	0	0	0	0	0	0	136	61	11	197	30	619	649							
07:15 AM	132	1	42	17	175	70	222	0	0	292	0	0	0	0	0	0	136	74	17	210	34	677	711							
07:30 AM	118	0	35	21	153	61	212	0	0	273	0	0	0	0	0	0	157	87	20	244	41	670	711							
07:45 AM	136	0	39	22	175	68	213	0	0	281	0	0	0	0	0	0	173	75	10	248	32	704	736							
Total	506	1	154	79	661	252	858	0	0	1110	0	0	0	0	0	0	602	297	58	899	137	2670	2807							
08:00 AM	103	1	27	9	131	65	217	0	0	282	0	0	0	0	0	0	127	75	12	202	21	615	636							
08:15 AM	97	0	31	12	128	63	216	0	0	279	0	0	0	0	0	0	128	54	6	182	18	589	607							
08:30 AM	104	0	37	11	141	52	181	0	0	233	0	0	0	0	0	0	109	51	15	160	26	534	560							
08:45 AM	94	2	36	17	132	46	176	0	0	222	0	0	0	0	0	0	103	51	14	154	31	508	539							
Total	398	3	131	49	532	226	790	0	0	1016	0	0	0	0	0	0	467	231	47	698	96	2246	2342							
Grand Total	904	4	285	128	1193	478	1648	0	0	2126	0	0	0	0	0	0	1069	528	105	1597	233	4916	5149							
Approch %	75.8	0.3	23.9			22.5	77.5	0	0	43.2	0	0	0	0	0	0	66.9	33.1		32.5	4.5	95.5								
Total %	18.4	0.1	5.8			9.7	33.5	0	0	43.2	0	0	0	0	0	0	21.7	10.7		32.5	4.5	95.5								
Passenger Vehicles	776	3	234		1119	439	1533	0	0	1972	0	0	0	0	0	0	964	479		1542	0	0	4633							
Large Passenger Vehicles	85.8	75	82.1		84.7	91.8	93	0	0	92.8	0	0	0	0	0	0	90.2	90.7		94.3	0	0	90							
Large 2 Axle Vehicles	47	1	24		82	22	61	0	0	83	0	0	0	0	0	0	46	26		74	0	0	239							
3 Axle Vehicles	5.2	25	8.4		7.8	4.6	3.7	0	0	3.9	0	0	0	0	0	0	4.3	4.9		4.3	0	0	4.6							
% 3 Axle Vehicles	21	0	2		24	7	6	0	0	13	0	0	0	0	0	0	9	5		14	0	0	51							
4+ Axle Trucks	2.3	0	0.7		0.8	1.5	0.4	0	0	0.6	0	0	0	0	0	0	0.8	0.9		0.8	0	0	1							
% 4+ Axle Trucks	60	0	25		96	10	48	0	0	58	0	0	0	0	0	0	50	18		72	0	0	226							
	6.6	0	8.8		7.3	2.1	2.9	0	0	2.7	0	0	0	0	0	0	4.7	3.4		4.2	0	0	4.4							

Start Time	I-215 Southbound Off Ramp										Ramona Expressway Westbound										I-215 Southbound On Ramp										Cajalco Expressway Eastbound									
	Southbound					Westbound					Northbound					Northbound					Eastbound					Eastbound					Eastbound									
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total							
07:00 AM	120	0	38	19	158	53	211	0	0	264	0	0	0	0	0	0	136	61	11	197	30	619	649																	
07:15 AM	132	1	42	17	175	70	222	0	0	292	0	0	0	0	0	0	136	74	17	210	34	677	711																	
07:30 AM	118	0	35	21	153	61	212	0	0	273	0	0	0	0	0	0	157	87	20	244	41	670	711																	
07:45 AM	136	0	39	22	175	68	213	0	0	281	0	0	0	0	0	0	173	75	10	248	32	704	736																	
Total	506	1	154	79	661	252	858	0	0	1110	0	0	0	0	0	0	602	297	58	899	137	2670	2807																	
PHF	.930		.250		.917	.944	.900		.966	.000	.950	.000		.000	.000	.000	.000		.870	.853	.906																			

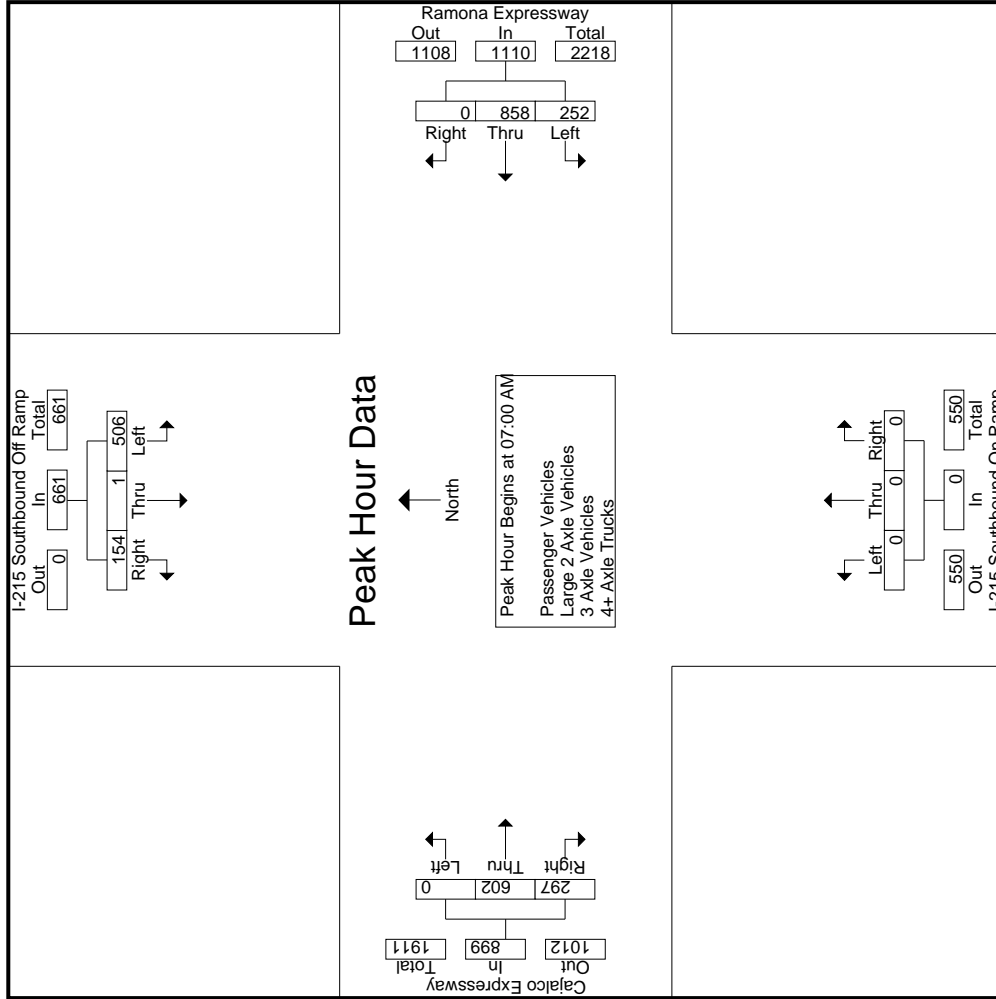
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
07:00 AM	120	0	38	158	53	211	0	264	0	0	0	0	0	0	0	136	61	197
07:15 AM	132	1	42	175	70	222	0	292	0	0	0	0	0	0	0	136	74	210
07:30 AM	118	0	35	153	61	212	0	273	0	0	0	0	0	0	0	157	87	244
07:45 AM	136	0	39	175	68	213	0	281	0	0	0	0	0	0	0	173	75	704
Total Volume	506	1	154	661	252	858	0	1110	0	0	0	0	0	0	0	602	297	2670
% App. Total	76.6	0.2	23.3		22.7	77.3	0	43.2	0	0	0	0	0	0	0	67	33	948

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM														
+0 mins.	120	0	38	70	222	0	292	0	0	0	0	0	0	136	74
+15 mins.	132	1	42	61	212	0	273	0	0	0	0	0	0	157	87
+30 mins.	118	0	35	68	213	0	281	0	0	0	0	0	0	173	75
+45 mins.	136	0	39	65	217	0	282	0	0	0	0	0	0	127	75
Total Volume	506	1	154	264	864	0	1128	0	0	0	0	0	0	593	311
% App. Total	76.6	0.2	23.3	23.4	76.6	0	966	0	0	0	0	0	0	65.6	34.4
PHF	.930	.250	.917	.943	.973	.000	.966	.000	.000	.000	.000	.000	.000	.857	.894



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Ramona Expressway Westbound					I-215 Southbound On Ramp Northbound					Cajalco Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	110	0	31	13	141	51	193	0	0	244	0	0	0	0	0	0	121	51	9	172	22	557	579
07:15 AM	115	1	34	14	150	63	205	0	0	268	0	0	0	0	0	0	123	70	16	193	30	611	641
07:30 AM	108	0	32	19	140	56	199	0	0	255	0	0	0	0	0	0	147	80	19	227	38	622	660
07:45 AM	122	0	32	19	154	64	203	0	0	267	0	0	0	0	0	0	158	71	10	229	29	650	679
<b>Total</b>	<b>455</b>	<b>1</b>	<b>129</b>	<b>65</b>	<b>585</b>	<b>234</b>	<b>800</b>	<b>0</b>	<b>0</b>	<b>1034</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>549</b>	<b>272</b>	<b>54</b>	<b>821</b>	<b>119</b>	<b>2440</b>	<b>2559</b>
08:00 AM	88	0	20	7	108	62	196	0	0	258	0	0	0	0	0	0	117	70	10	187	17	553	570
08:15 AM	80	0	25	9	105	58	205	0	0	263	0	0	0	0	0	0	109	45	6	154	15	522	537
08:30 AM	79	0	27	9	106	45	164	0	0	209	0	0	0	0	0	0	101	44	15	145	24	460	484
08:45 AM	74	2	33	16	109	40	168	0	0	208	0	0	0	0	0	0	88	48	14	136	30	453	483
<b>Total</b>	<b>321</b>	<b>2</b>	<b>105</b>	<b>41</b>	<b>428</b>	<b>205</b>	<b>733</b>	<b>0</b>	<b>0</b>	<b>938</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>415</b>	<b>207</b>	<b>45</b>	<b>622</b>	<b>86</b>	<b>1988</b>	<b>2074</b>
<b>Grand Total</b>	<b>776</b>	<b>3</b>	<b>234</b>	<b>106</b>	<b>1013</b>	<b>439</b>	<b>1533</b>	<b>0</b>	<b>0</b>	<b>1972</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>964</b>	<b>479</b>	<b>99</b>	<b>1443</b>	<b>205</b>	<b>4428</b>	<b>4633</b>
Apprch %	76.6	0.3	23.1		22.3	77.7	0			44.5	0	0	0			0	66.8	33.2		32.6			
Total %	17.5	0.1	5.3		22.9	9.9	34.6	0			0	0	0			0	21.8	10.8			4.4	95.6	

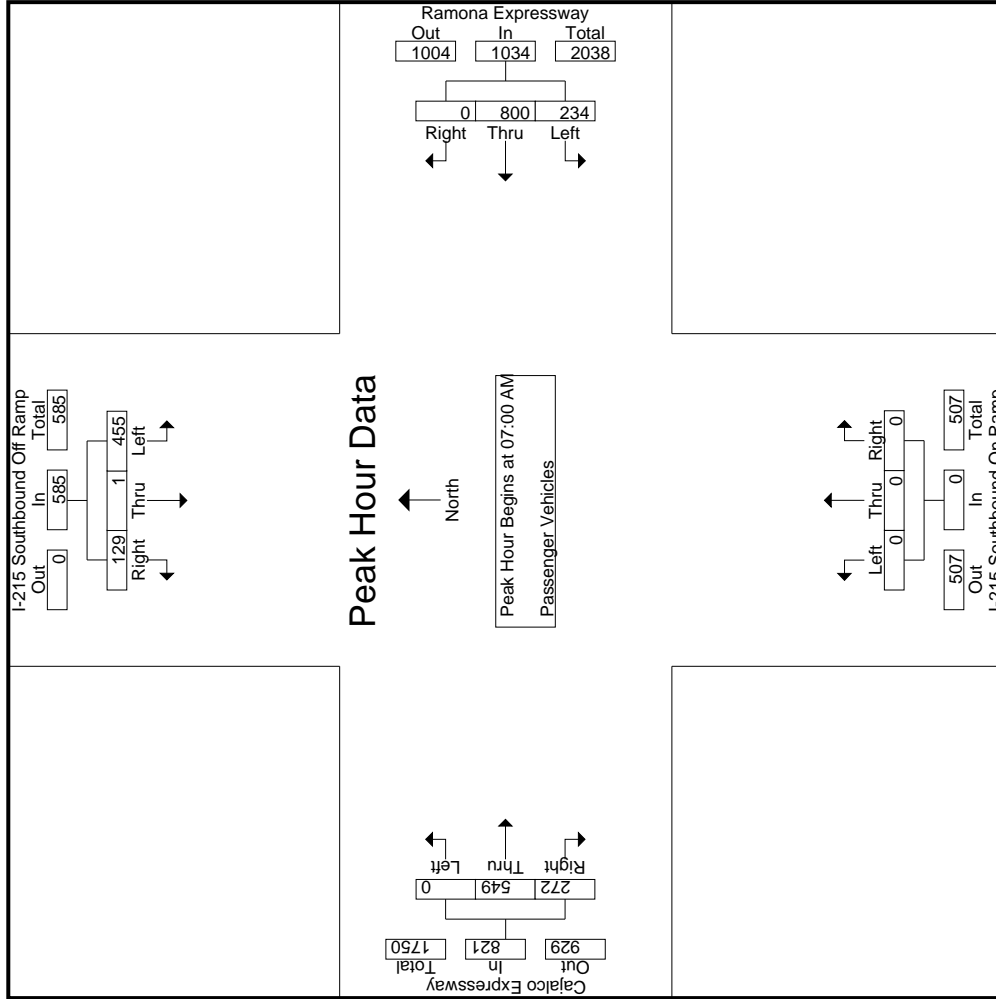
Start Time	I-215 Southbound Off Ramp Southbound					Ramona Expressway Westbound					I-215 Southbound On Ramp Northbound					Cajalco Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	110	0	31	13	141	51	193	0	0	244	0	0	0	0	0	0	121	51	9	172	22	557	579
07:15 AM	115	1	34	14	150	63	205	0	0	268	0	0	0	0	0	0	123	70	16	193	30	611	641
07:30 AM	108	0	32	19	140	56	199	0	0	255	0	0	0	0	0	0	147	80	19	227	38	622	660
07:45 AM	122	0	32	19	154	64	203	0	0	267	0	0	0	0	0	0	158	71	10	229	29	650	679
<b>Total Volume</b>	<b>455</b>	<b>1</b>	<b>129</b>	<b>65</b>	<b>585</b>	<b>234</b>	<b>800</b>	<b>0</b>	<b>0</b>	<b>1034</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>549</b>	<b>272</b>	<b>54</b>	<b>821</b>	<b>119</b>	<b>2440</b>	<b>2559</b>
% App. Total	77.8	0.2	22.1		22.1	22.6	77.4	0		96.5	0	0	0			0	66.9	33.1		32.6			
PHF	.932	.250	.949		.950	.914	.976	.000		.965	.000	.000	.000			.000	.869	.850		.896		.938	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	110	0	31	51	193	0	244	0	0	0	0	0	121	51	172
+15 mins.	115	1	34	63	205	0	268	0	0	0	0	0	123	70	193
+30 mins.	108	0	32	56	199	0	255	0	0	0	0	0	147	80	227
+45 mins.	122	0	32	64	203	0	267	0	0	0	0	0	158	71	229
Total Volume	455	1	129	234	800	0	1034	0	0	0	0	0	549	272	821
% App. Total	77.8	0.2	22.1	22.6	77.4	0	965	0	0	0	0	0	66.9	33.1	896
PHF	.932	.250	.949	.914	.976	.000	.965	.000	.000	.000	.000	.000	.869	.850	.896

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	3	3	6	0	6	0	0	6	0	0	0	0	13	3	25	28
07:15 AM	8	0	5	3	13	4	11	0	0	15	0	0	0	0	8	4	36	40
07:30 AM	3	0	0	0	3	1	6	0	0	7	0	0	0	0	9	1	19	20
07:45 AM	9	0	3	1	12	2	8	0	0	10	0	0	0	0	7	1	29	30
<b>Total</b>	<b>23</b>	<b>0</b>	<b>11</b>	<b>7</b>	<b>34</b>	<b>7</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>37</b>	<b>9</b>	<b>109</b>	<b>118</b>
08:00 AM	8	1	6	2	15	0	13	0	0	13	0	0	0	0	9	2	37	39
08:15 AM	7	0	2	0	9	4	7	0	0	11	0	0	0	0	12	0	32	32
08:30 AM	3	0	5	1	8	6	8	0	0	14	0	0	0	0	7	1	29	30
08:45 AM	6	0	0	0	6	5	2	0	0	7	0	0	0	0	7	0	20	20
<b>Total</b>	<b>24</b>	<b>1</b>	<b>13</b>	<b>3</b>	<b>38</b>	<b>15</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>3</b>	<b>118</b>	<b>121</b>
<b>Grand Total</b>	<b>47</b>	<b>1</b>	<b>24</b>	<b>10</b>	<b>72</b>	<b>22</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>72</b>	<b>12</b>	<b>227</b>	<b>239</b>
Apprch %	65.3	1.4	33.3		26.5	73.5	0			36.6	0	0	0		31.7	5	95	
Total %	20.7	0.4	10.6		31.7	9.7	26.9	0			0	0	0					

3.1-52

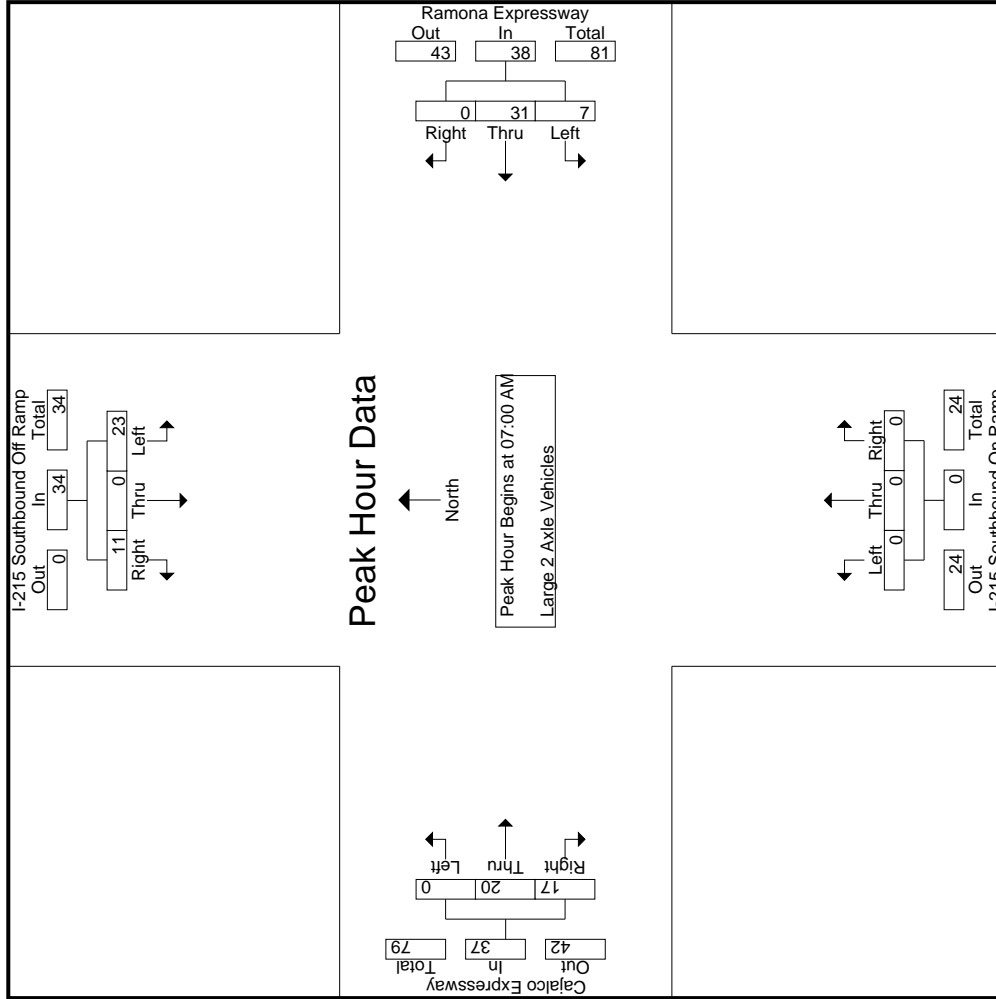
Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	3	0	3	3	6	0	6	0	0	6	0	0	0	0	0	0	6	13	25
07:15 AM	8	0	5	3	13	4	11	0	0	15	0	0	0	0	8	4	36	36	36
07:30 AM	3	0	0	0	3	1	6	0	0	7	0	0	0	0	9	1	19	19	19
07:45 AM	9	0	3	1	12	2	8	0	0	10	0	0	0	0	7	1	29	29	29
<b>Total Volume</b>	<b>23</b>	<b>0</b>	<b>11</b>	<b>7</b>	<b>34</b>	<b>7</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>37</b>	<b>9</b>	<b>109</b>	<b>109</b>	
% App. Total	67.6	0	32.4		65.4	18.4	81.6	0		63.3	0	0	0		45.9	0	71.2	71.2	71.2
PHF	.639	.000	.550		.654	.438	.705	.000		.633	.000	.000	.000		.714	.708	.712	.712	.757

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:	07:00 AM														
+0 mins.	3	0	3	0	6	0	0	6	0	0	0	0	0	7	6
+15 mins.	8	0	5	4	11	0	0	15	0	0	0	0	0	5	3
+30 mins.	3	0	0	1	6	0	0	7	0	0	0	0	0	3	6
+45 mins.	9	0	3	2	8	0	0	10	0	0	0	0	0	5	2
Total Volume	23	0	11	7	31	0	0	38	0	0	0	0	0	20	17
% App. Total	67.6	0	32.4	18.4	81.6	0	0	0	0	0	0	0	0	54.1	45.9
PHF	.639	.000	.550	.438	.705	.000	.633	.000	.000	.000	.000	.000	.000	.714	.708

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	0	0	3	1	3	0	0	4	0	0	0	0	0	0	0	9
07:15 AM	2	0	1	0	3	1	1	0	0	2	0	0	0	0	0	0	5	5
07:30 AM	1	0	1	1	2	1	0	0	0	1	0	0	0	0	3	1	6	7
07:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3	3
<b>Total</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>23</b>	<b>24</b>
08:00 AM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0	0	4	4
08:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	3	0	5	5
08:30 AM	6	0	0	0	6	1	0	0	0	2	0	0	0	0	4	0	12	12
08:45 AM	4	0	0	0	4	0	1	0	0	1	0	0	0	0	1	0	6	6
<b>Total</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>27</b>	<b>27</b>
<b>Grand Total</b>	<b>21</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>23</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>50</b>	<b>51</b>
Apprch %	91.3	0	8.7		53.8	46.2	0			26	0	0	0	0	64.3	35.7		
Total %	42	0	4		14	12	0			0	0	0	0	0	18	10		98

3.1-55

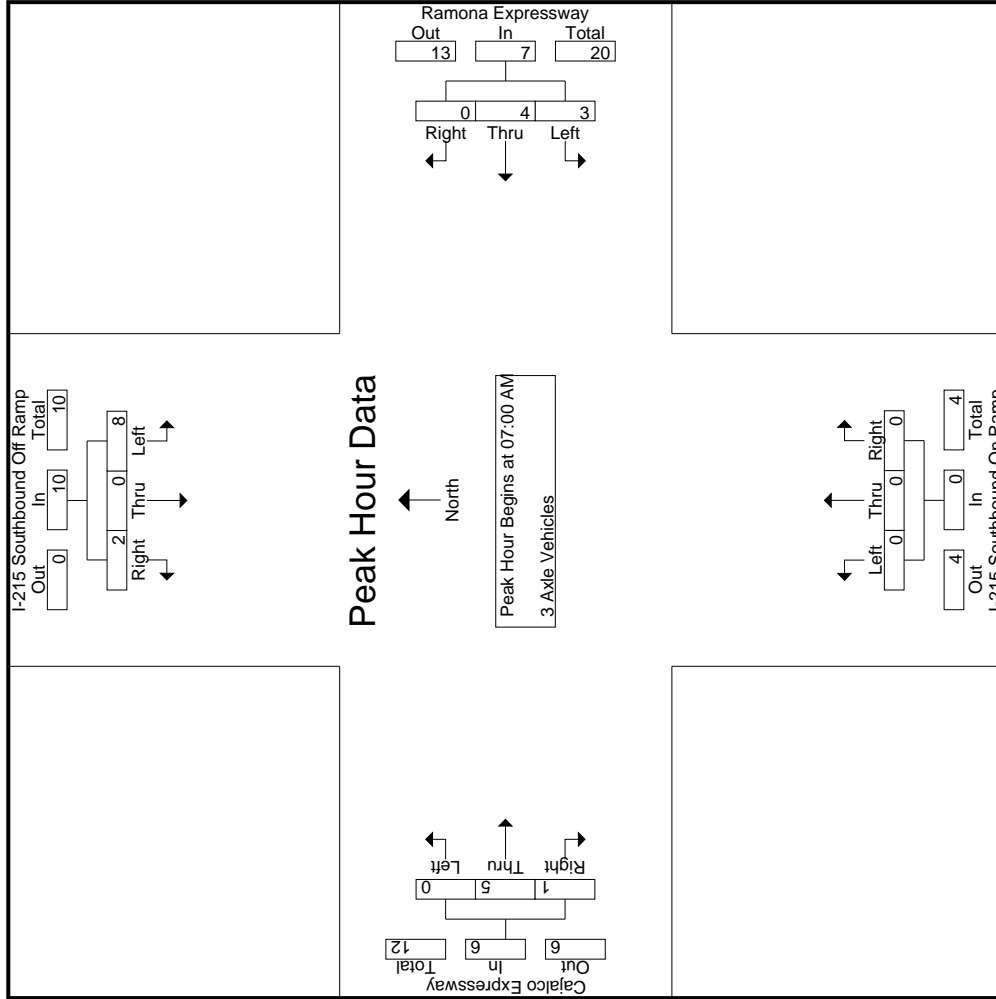
Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	0	0	3	1	3	0	0	4	0	0	0	0	0	0	0	9
07:15 AM	2	0	1	0	3	1	1	0	0	2	0	0	0	0	0	0	5	5
07:30 AM	1	0	1	1	2	1	0	0	0	1	0	0	0	0	3	1	6	7
07:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3	3
<b>Total Volume</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>23</b>	<b>24</b>
% App. Total	.667	.000	.500	.833	.833	.750	.333	.000	.438	.000	.000	.000	.000	.000	.250	.500		.639
PHF																		

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	3	0	0	1	3	0	4	0	0	0	0	0
+15 mins.	2	0	1	1	1	0	2	0	0	0	0	0
+30 mins.	1	0	1	1	0	0	1	0	0	0	0	0
+45 mins.	2	0	0	0	0	0	0	0	0	0	0	0
Total Volume	8	0	2	3	4	0	7	0	0	0	0	0
% App. Total	.80	.00	.20	.429	.571	.000	.438	.000	.000	.000	.833	.167
PHF	.667	.000	.500	.750	.333	.000	.438	.000	.000	.000	.417	.250

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	4	0	4	3	8	1	9	0	0	10	0	0	0	0	10	5	28	33
07:15 AM	7	0	2	0	9	2	5	0	0	7	0	0	0	0	9	0	25	25
07:30 AM	6	0	2	1	8	3	7	0	0	10	0	0	0	0	5	1	23	24
07:45 AM	3	0	4	2	7	2	2	0	0	4	0	0	0	0	11	2	22	24
<b>Total</b>	<b>20</b>	<b>0</b>	<b>12</b>	<b>6</b>	<b>32</b>	<b>8</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>35</b>	<b>8</b>	<b>98</b>	<b>106</b>
08:00 AM	5	0	1	0	6	1	8	0	0	9	0	0	0	2	6	2	21	23
08:15 AM	9	0	4	3	13	0	4	0	0	4	0	0	0	4	13	3	30	33
08:30 AM	16	0	5	1	21	0	8	0	0	8	0	0	0	3	4	1	33	34
08:45 AM	10	0	3	1	13	1	5	0	0	6	0	0	0	2	10	1	29	30
<b>Total</b>	<b>40</b>	<b>0</b>	<b>13</b>	<b>5</b>	<b>53</b>	<b>2</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>7</b>	<b>113</b>	<b>120</b>	
<b>Grand Total</b>	<b>60</b>	<b>0</b>	<b>25</b>	<b>11</b>	<b>85</b>	<b>10</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>68</b>	<b>15</b>	<b>211</b>	<b>226</b>
Apprch %	70.6	0	29.4			17.2	82.8	0	0	27.5	0	0	0	26.5	32.2	6.6	93.4	
Total %	28.4	0	11.8		40.3	4.7	22.7	0	0		0	0	0	8.5				

3.1-58

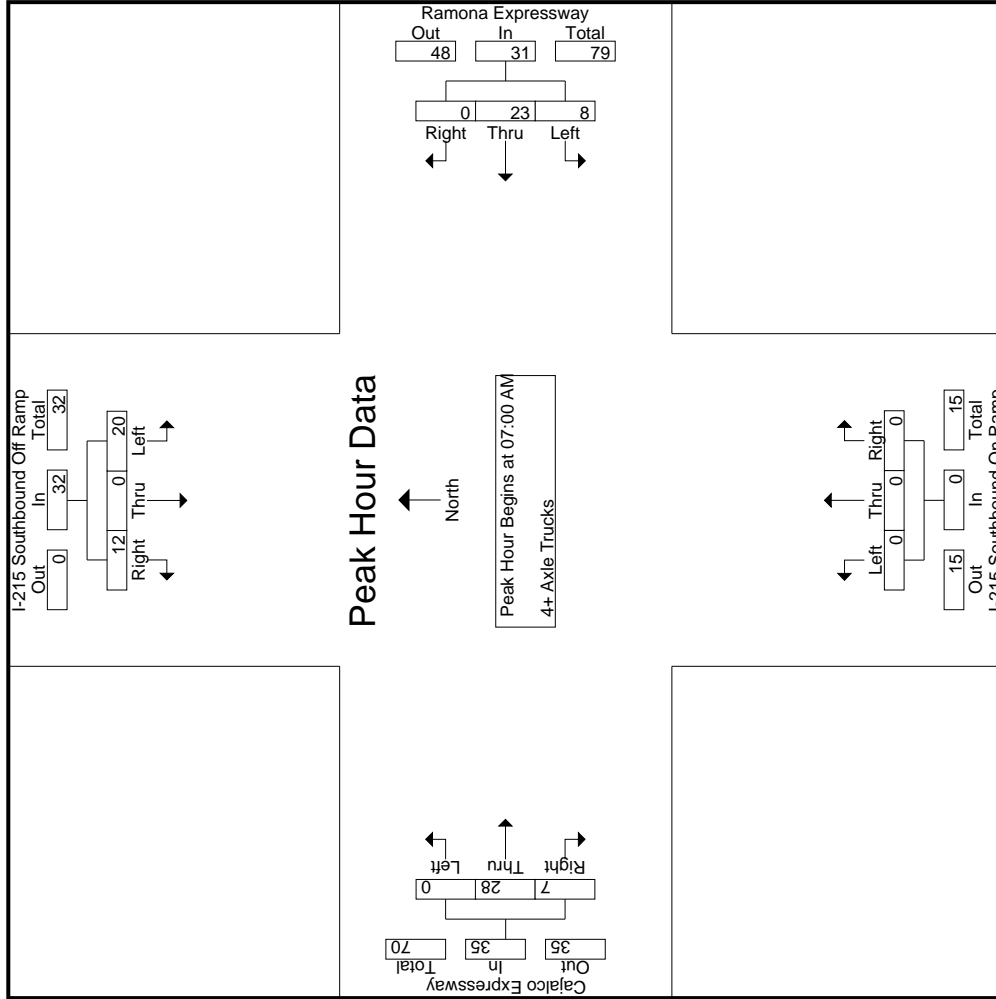
Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	4	0	0	0	4	1	9	0	0	10	0	0	0	0	10	5	28	33
07:15 AM	7	0	2	0	9	2	5	0	0	7	0	0	0	0	9	0	25	25
07:30 AM	6	0	2	1	8	3	7	0	0	10	0	0	0	0	5	1	23	24
07:45 AM	3	0	4	2	7	2	2	0	0	4	0	0	0	0	11	2	22	24
<b>Total Volume</b>	<b>20</b>	<b>0</b>	<b>12</b>	<b>6</b>	<b>32</b>	<b>8</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>35</b>	<b>8</b>	<b>98</b>	<b>106</b>
<b>% App. Total</b>	<b>62.5</b>	<b>0</b>	<b>37.5</b>			<b>25.8</b>	<b>74.2</b>	<b>0</b>	<b>0</b>	<b>.775</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.778</b>	<b>.583</b>	<b>.795</b>	<b>.875</b>
PHF	.714	.000	.750		.889	.667	.639	.000	.000	.775	.000	.000	.000	.000	.778	.583	.795	.875

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
+0 mins.	4	0	4	1	9	0	0	0	0	0	0	0	0	0
+15 mins.	7	0	2	2	5	0	0	0	0	0	0	0	0	0
+30 mins.	6	0	2	3	7	0	0	0	0	0	0	0	0	0
+45 mins.	3	0	4	2	2	0	0	0	0	0	0	0	0	0
Total Volume	20	0	12	8	23	0	0	0	0	0	0	0	0	0
% App. Total	62.5	0	37.5	25.8	74.2	0	0	0	0	0	0	0	0	0
PHF	.714	.000	.750	.667	.639	.000	.775	.000	.000	.000	.778	.583	.795	.795

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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound							Ramona Expressway Westbound							I-215 Southbound On Ramp Northbound							Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	174	2	35	15	211	76	191	0	0	267	0	0	0	0	0	0	172	69	22	241	37	719	756					
04:15 PM	159	0	42	23	201	90	174	0	0	264	0	0	0	0	0	0	192	75	12	267	35	732	767					
04:30 PM	149	1	40	20	190	82	216	0	0	298	0	0	0	0	0	0	182	77	18	259	38	747	785					
04:45 PM	167	0	32	19	199	69	168	0	0	237	0	0	0	0	0	0	187	78	12	265	31	701	732					
<b>Total</b>	<b>649</b>	<b>3</b>	<b>149</b>	<b>77</b>	<b>801</b>	<b>317</b>	<b>749</b>	<b>0</b>	<b>0</b>	<b>1066</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>733</b>	<b>299</b>	<b>64</b>	<b>1032</b>	<b>141</b>	<b>2899</b>	<b>3040</b>					
05:00 PM	169	0	36	19	205	89	167	0	0	256	0	0	0	0	0	0	187	91	19	278	38	739	777					
05:15 PM	181	0	49	20	230	94	179	0	0	273	0	0	0	0	0	0	182	78	20	260	40	763	803					
05:30 PM	182	2	29	15	213	90	166	1	0	257	0	0	0	0	0	0	178	76	19	254	34	724	758					
05:45 PM	187	1	41	21	229	79	173	0	0	252	0	0	0	0	0	0	183	90	13	273	34	754	788					
<b>Total</b>	<b>719</b>	<b>3</b>	<b>155</b>	<b>75</b>	<b>877</b>	<b>352</b>	<b>685</b>	<b>1</b>	<b>0</b>	<b>1038</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>730</b>	<b>335</b>	<b>71</b>	<b>1065</b>	<b>146</b>	<b>2980</b>	<b>3126</b>					
<b>Grand Total</b>	<b>1368</b>	<b>6</b>	<b>304</b>	<b>152</b>	<b>1678</b>	<b>669</b>	<b>1434</b>	<b>1</b>	<b>0</b>	<b>2104</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1463</b>	<b>634</b>	<b>135</b>	<b>2097</b>	<b>287</b>	<b>5879</b>	<b>6166</b>					
<b>Approach % Total</b>	<b>81.5</b>	<b>0.4</b>	<b>18.1</b>			<b>31.8</b>	<b>68.2</b>	<b>0</b>			<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>69.8</b>	<b>30.2</b>			<b>4.7</b>	<b>95.3</b>						
<b>Total %</b>	<b>23.3</b>	<b>0.1</b>	<b>5.2</b>			<b>11.4</b>	<b>24.4</b>	<b>0</b>			<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>24.9</b>	<b>10.8</b>			<b>0</b>	<b>0</b>						
Passenger Vehicles	1267	6	265		1679	648	1356	1		2005	0	0	0		0	0	1394	606		2131	0	0	5815					
Large 2 Axle Vehicles	92.6	100	87.2	92.8	91.7	96.9	94.6	100	0	95.3	0	0	0	0	0	0	95.3	95.6	97	95.5	0	0	94.3					
3 Axle Vehicles	32	0	12		49	13	38	0	0	51	0	0	0	0	0	0	35	17		54	0	0	154					
4+ Axle Trucks	2.3	0	3.9	3.3	2.7	1.9	2.6	0	0	2.4	0	0	0	0	0	0	2.4	2.7	1.5	2.4	0	0	2.5					
% 3 Axle Vehicles	14	0	5		19	1	12	0	0	13	0	0	0	0	0	0	3	1		4	0	0	36					
% 4+ Axle Trucks	1	0	1.6	0	1	0.1	0.8	0	0	0.6	0	0	0	0	0	0	0.2	0.2	0	0.2	0	0	0.6					
% App. Total	55	0	22		83	7	28	0	0	35	0	0	0	0	0	0	31	10		43	0	0	161					
PHF	4	0	7.2	3.9	4.5	1	2	0	0	1.7	0	0	0	0	0	0	2.1	1.6	1.5	1.9	0	0	2.6					

Start Time	I-215 Southbound Off Ramp Southbound							Ramona Expressway Westbound							I-215 Southbound On Ramp Northbound							Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
05:00 PM	169	0	36		205	89	167	0	0	256	0	0	0	0	0	0	187	91		278	37	719	756					
05:15 PM	181	0	49		230	94	179	0	0	273	0	0	0	0	0	0	182	78		260	40	763	803					
05:30 PM	182	2	29		213	90	166	1	0	257	0	0	0	0	0	0	178	76		254	34	724	758					
05:45 PM	187	1	41		229	79	173	0	0	252	0	0	0	0	0	0	183	90		273	34	754	788					
<b>Total Volume</b>	<b>719</b>	<b>3</b>	<b>155</b>		<b>877</b>	<b>352</b>	<b>685</b>	<b>1</b>		<b>1038</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>730</b>	<b>335</b>		<b>1065</b>	<b>141</b>	<b>2899</b>	<b>3040</b>					
<b>% App. Total</b>	<b>82</b>	<b>0.3</b>	<b>17.7</b>		<b>17.7</b>	<b>33.9</b>	<b>66</b>	<b>0.1</b>		<b>0.6</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>68.5</b>	<b>31.5</b>		<b>31.5</b>	<b>0</b>	<b>0</b>	<b>0</b>					
PHF	.961		.375		.791	.936	.957	.250		.951	.000	.000	.000		.000	.000	.976	.920		.958								

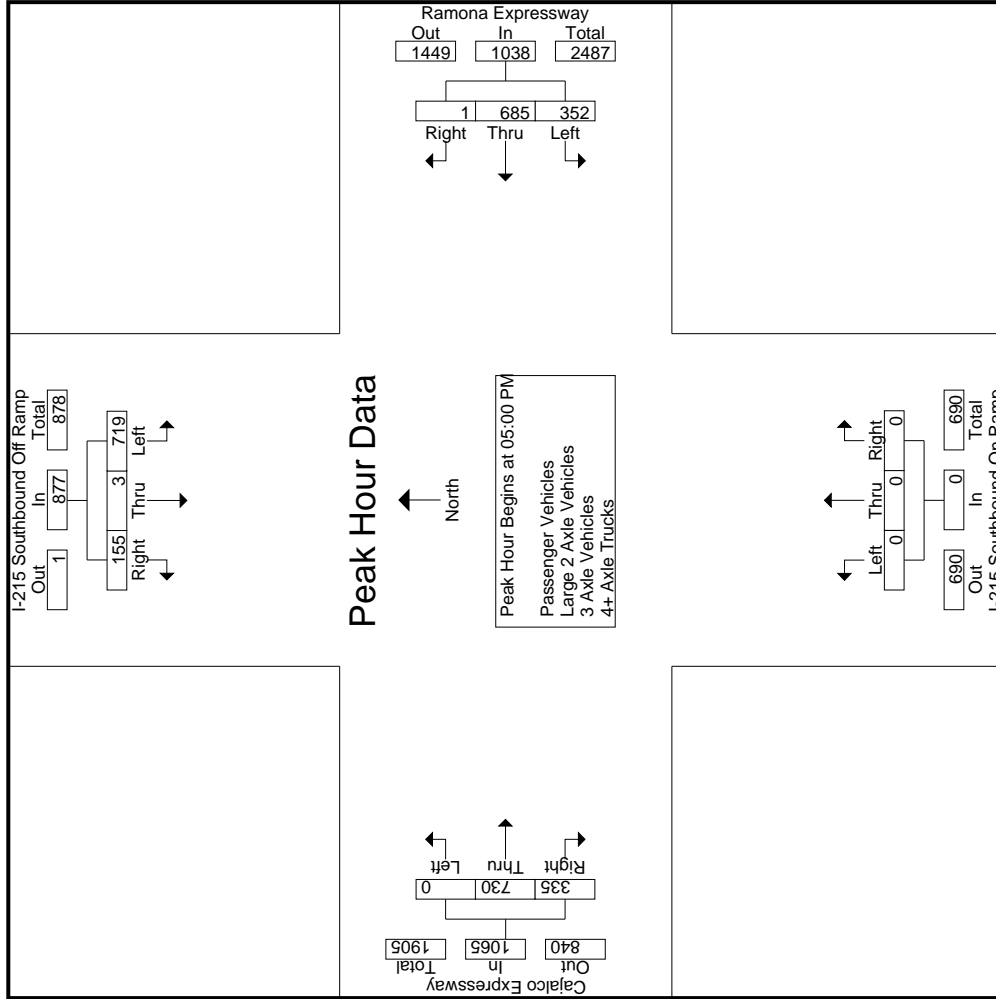
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	05:00 PM														
+0 mins.	169	0	36	76	191	0	267	0	0	0	0	0	0	192	75
+15 mins.	181	0	49	90	174	0	264	0	0	0	0	0	0	182	77
+30 mins.	182	2	29	82	216	0	298	0	0	0	0	0	0	187	78
+45 mins.	187	1	41	69	168	0	237	0	0	0	0	0	0	187	91
Total Volume	719	3	155	317	749	0	1066	0	0	0	0	0	0	748	321
% App. Total	82	0.3	17.7	29.7	70.3	0	894	0	0	0	0	0	0	70	30
PHF	.961	.375	.791	.881	.867	.000	.894	.000	.000	.000	.974	.882	.000	.974	.961

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 PO Box 1178  
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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Ramona Expressway Westbound					I-215 Southbound On Ramp Northbound					Cajalco Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	147	2	33	15	182	73	171	0	0	244	0	0	0	0	0	0	164	65	21	229	36	655	691
04:15 PM	147	0	35	20	182	85	167	0	0	252	0	0	0	0	0	0	183	74	12	257	32	691	723
04:30 PM	138	1	34	19	173	80	202	0	0	282	0	0	0	0	0	0	169	74	17	243	36	698	734
04:45 PM	154	0	30	18	184	67	154	0	0	221	0	0	0	0	0	0	177	69	11	246	29	651	680
<b>Total</b>	<b>586</b>	<b>3</b>	<b>132</b>	<b>72</b>	<b>721</b>	<b>305</b>	<b>694</b>	<b>0</b>	<b>0</b>	<b>999</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>693</b>	<b>282</b>	<b>61</b>	<b>975</b>	<b>133</b>	<b>2695</b>	<b>2828</b>
05:00 PM	158	0	30	18	188	87	165	0	0	252	0	0	0	0	0	0	176	86	18	262	36	702	738
05:15 PM	172	0	42	18	214	92	170	0	0	262	0	0	0	0	0	0	177	77	20	254	38	730	768
05:30 PM	174	2	24	13	200	88	162	1	0	251	0	0	0	0	0	0	170	73	19	243	32	694	726
05:45 PM	177	1	37	20	215	76	165	0	0	241	0	0	0	0	0	0	178	88	13	266	33	722	755
<b>Total</b>	<b>681</b>	<b>3</b>	<b>133</b>	<b>69</b>	<b>817</b>	<b>343</b>	<b>662</b>	<b>1</b>	<b>0</b>	<b>1006</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>701</b>	<b>324</b>	<b>70</b>	<b>1025</b>	<b>139</b>	<b>2848</b>	<b>2987</b>
<b>Grand Total</b>	<b>1267</b>	<b>6</b>	<b>265</b>	<b>141</b>	<b>1538</b>	<b>648</b>	<b>1356</b>	<b>1</b>	<b>0</b>	<b>2005</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1394</b>	<b>606</b>	<b>131</b>	<b>2000</b>	<b>272</b>	<b>5543</b>	<b>5815</b>
Apprch %	82.4	0.4	17.2			32.3	67.6	0		36.2	0	0	0			0	69.7	30.3		36.1	4.7	95.3	
Total %	22.9	0.1	4.8		27.7	11.7	24.5	0			0	0	0			0	25.1	10.9					

Start Time	I-215 Southbound Off Ramp Southbound					Ramona Expressway Westbound					I-215 Southbound On Ramp Northbound					Cajalco Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
05:00 PM	158	0	30		188	87	165	0		252	0	0	0			0	176	86		262	36	655	691
05:15 PM	172	0	42		214	92	170	0		262	0	0	0			0	177	77		254	38	730	768
05:30 PM	174	2	24		200	88	162	1		251	0	0	0			0	170	73		243	32	694	726
05:45 PM	177	1	37		215	76	165	0		241	0	0	0			0	178	88		266	33	722	755
<b>Total Volume</b>	<b>681</b>	<b>3</b>	<b>133</b>		<b>817</b>	<b>343</b>	<b>662</b>	<b>1</b>		<b>1006</b>	<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>701</b>	<b>324</b>		<b>1025</b>	<b>139</b>	<b>2848</b>	<b>2987</b>
% App. Total	83.4	0.4	16.3			34.1	65.8	0.1		0.1	0	0	0			0	68.4	31.6					
PHF	.962	.375	.792		.950	.932	.974	.250		.960	.000	.000	.000			.000	.985	.920		.963			.975

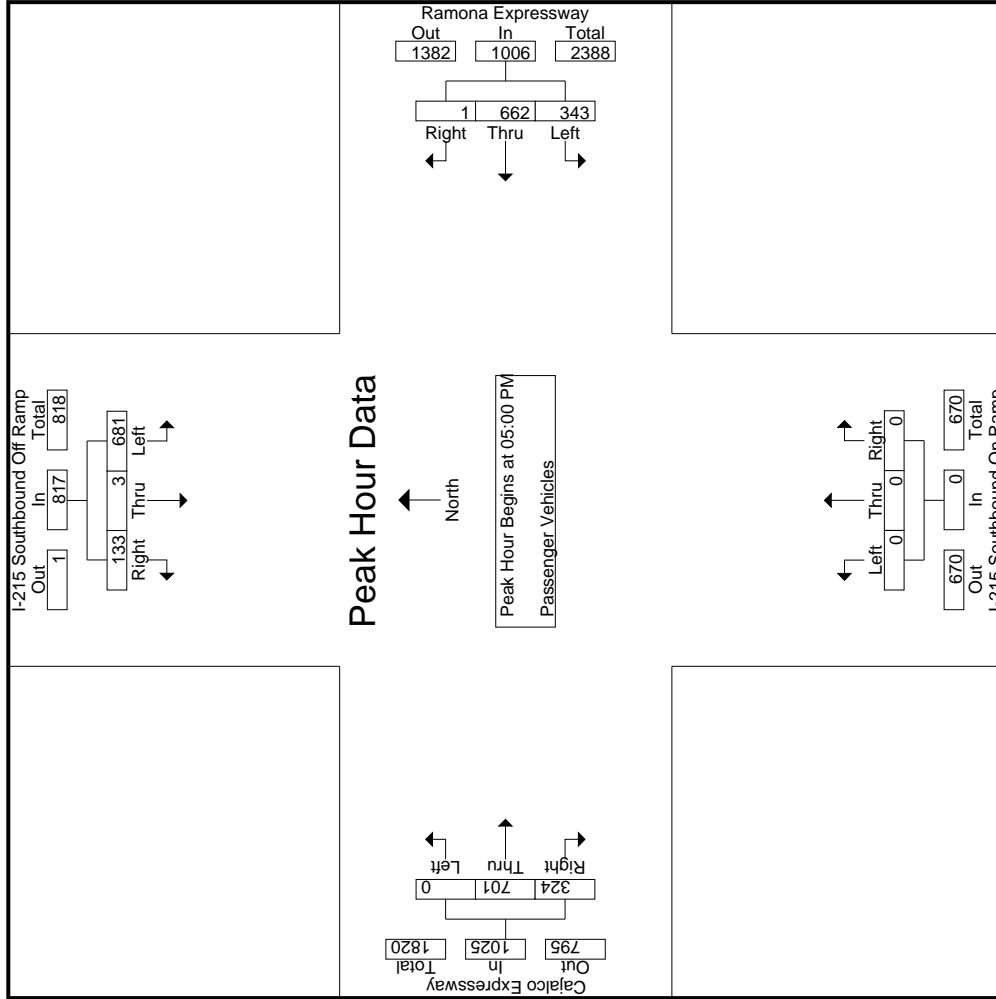
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



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County of Riverside  
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 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
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County of Riverside  
 N/S: I-215 Southbound Ramps  
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File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
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Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	05:00 PM												
+0 mins.	158	0	30	87	165	0	252	0	0	0	176	86	262
+15 mins.	172	0	42	92	170	0	262	0	0	0	177	77	254
+30 mins.	174	2	24	88	162	1	251	0	0	0	170	73	243
+45 mins.	177	1	37	76	165	0	241	0	0	0	178	88	266
Total Volume	681	3	133	343	662	1	1006	0	0	0	701	324	1025
% App. Total	83.4	0.4	16.3	34.1	65.8	0.1	.960	.000	.000	.000	68.4	31.6	.963
PHF	.962	.375	.792	.932	.974	.250	.960	.000	.000	.000	.985	.920	.963

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	9	0	0	0	9	2	8	0	0	10	0	0	0	0	0	1	27	28
04:15 PM	3	0	4	2	7	3	3	0	0	6	0	6	1	0	7	2	20	22
04:30 PM	3	0	4	1	7	0	6	0	0	6	0	3	3	1	11	2	24	26
04:45 PM	4	0	1	1	5	1	8	0	0	9	0	0	0	0	10	1	24	25
<b>Total</b>	<b>19</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>28</b>	<b>6</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>36</b>	<b>6</b>	<b>95</b>	<b>101</b>
05:00 PM	2	0	2	0	4	2	0	0	0	2	0	0	0	0	7	0	13	13
05:15 PM	6	0	0	0	6	1	7	0	0	8	0	2	1	0	3	0	17	17
05:30 PM	2	0	0	1	2	2	2	0	0	4	0	4	1	0	5	0	11	11
05:45 PM	3	0	1	1	4	2	4	0	0	6	0	1	0	0	1	1	11	12
<b>Total</b>	<b>13</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>16</b>	<b>7</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>1</b>	<b>52</b>	<b>53</b>
<b>Grand Total</b>	<b>32</b>	<b>0</b>	<b>12</b>	<b>5</b>	<b>44</b>	<b>13</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>52</b>	<b>7</b>	<b>147</b>	<b>154</b>
Apprch %	72.7	0	27.3		25.5	74.5	0			34.7	0	0	0		35.4	4.5	95.5	
Total %	21.8	0	8.2		29.9	8.8	25.9	0			0	23.8	11.6					

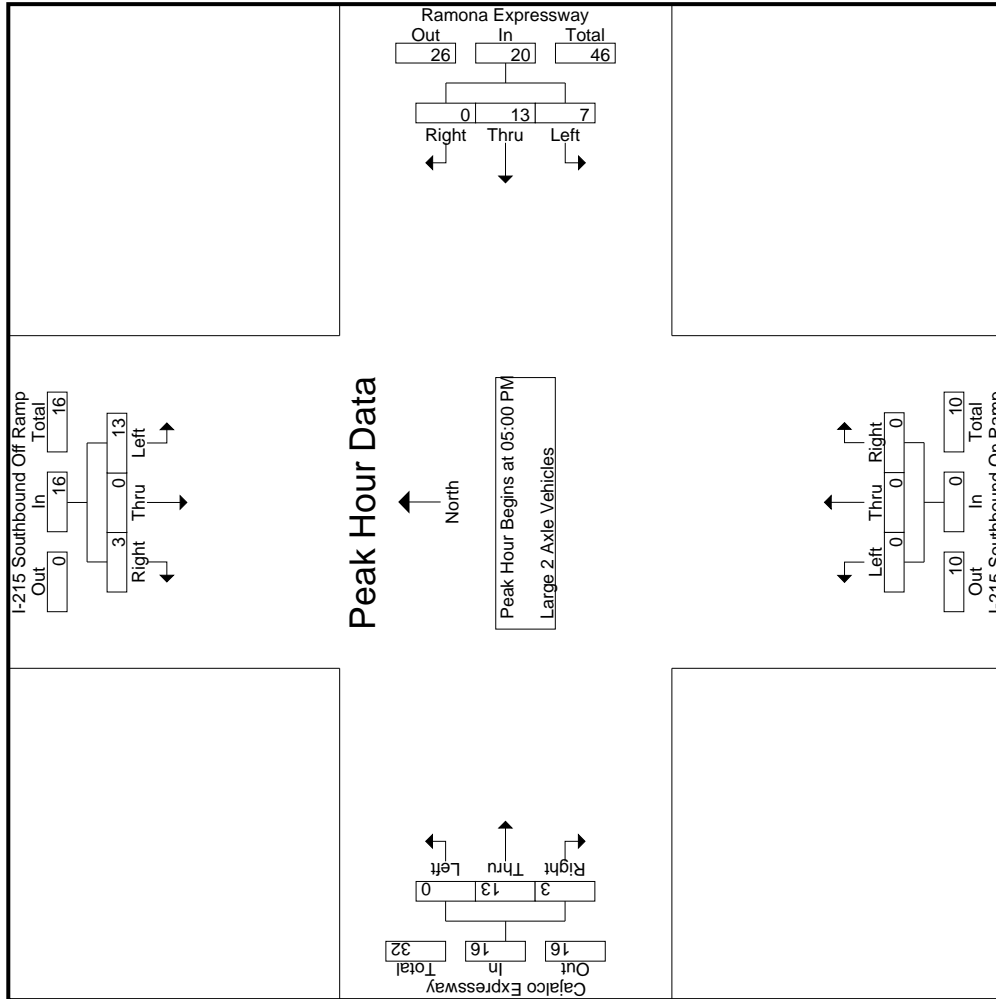
Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
05:00 PM	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	7	7
05:15 PM	6	0	0	0	6	1	7	0	0	8	0	2	1	0	3	0	17	17
05:30 PM	2	0	0	0	2	2	2	0	0	4	0	4	1	0	5	0	11	11
05:45 PM	3	0	0	1	4	2	4	0	0	6	0	1	0	0	1	1	11	12
<b>Total Volume</b>	<b>13</b>	<b>0</b>	<b>3</b>	<b>16</b>	<b>16</b>	<b>7</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>3</b>	<b>52</b>	<b>52</b>
% App. Total	81.2	0	18.8		66.7	35	65	0		62.5	0	0	0		18.8	18.8	76.5	
PHF	.542	.000	.375	.667	.667	.875	.464	.000	.625	.000	.000	.000	.000	.542	.750	.571	.765	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:	05:00 PM														
+0 mins.	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	6	0	0	7	0	8	0	0	0	0	0	0	2	2	1
+30 mins.	2	0	0	2	0	4	0	0	0	0	0	0	4	4	1
+45 mins.	3	0	1	4	0	6	0	0	0	0	0	0	1	0	0
Total Volume	13	0	3	13	0	20	0	0	0	0	0	0	13	3	16
% App. Total	81.2	0	18.8	35	65	0	0	0	0	0	0	0	81.2	18.8	0
PHF	.542	.000	.375	.875	.464	.625	.000	.000	.000	.000	.542	.750	.571		

Counts Unlimited  
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County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	2	0	0	0	2	0	6	0	0	6	0	0	0	0	0	0	0	9	9
04:15 PM	3	0	2	0	5	1	1	0	0	2	0	0	0	0	0	0	0	7	7
04:30 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	2	0	0	5	5
04:45 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	1	0	0	5	5
<b>Total</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>26</b>
05:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	4
<b>Total</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>
<b>Grand Total</b>	<b>14</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>19</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>36</b>
Approch %	73.7	0	26.3			7.7	92.3	0			0	0	0		11.1	0	0		
Total %	38.9	0	13.9		52.8	2.8	33.3	0		36.1	0	0	0		8.3	2.8	0	100	

3.1-70

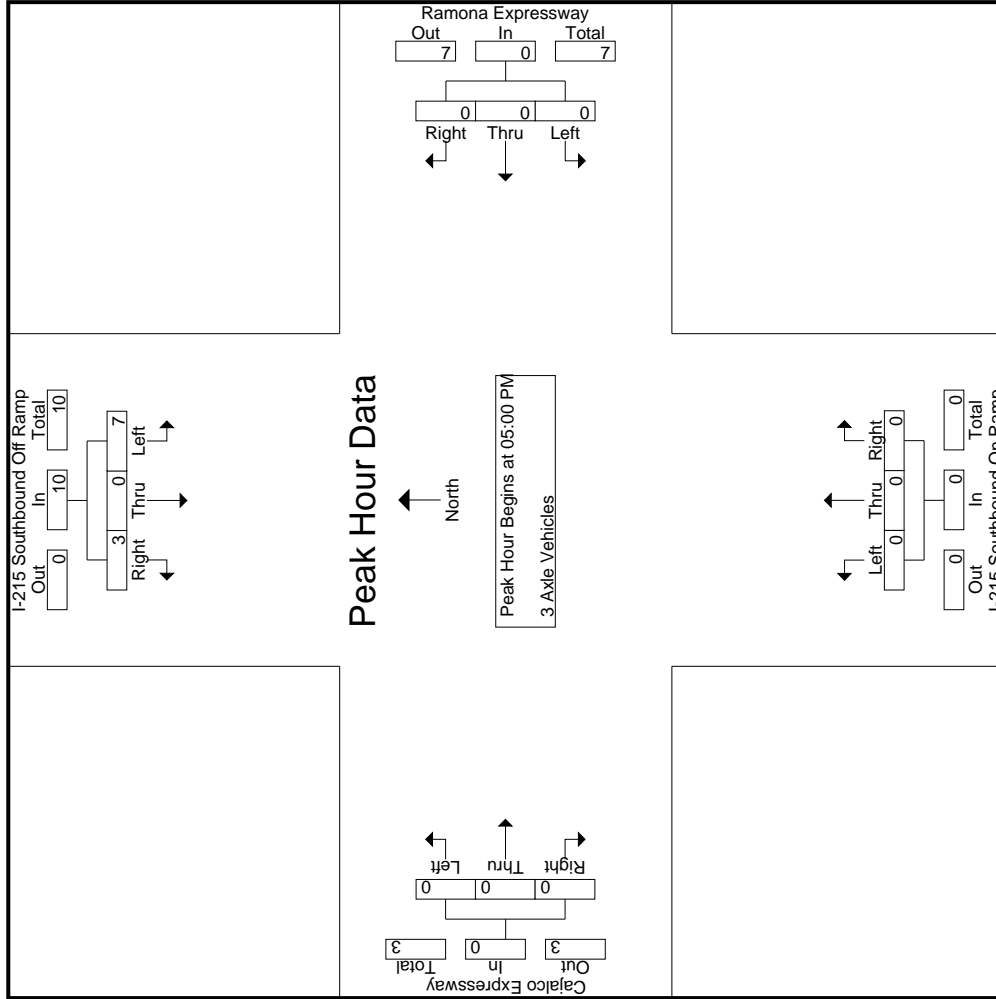
Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
<b>Total Volume</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>
% App. Total	.70	0	.30		.625	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.625	
PHF	.583	.000	.375		.625	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.625	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	3	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	1	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	2	0	2	0	0	0	0	0	0	0	0	0
Total Volume	7	0	3	0	0	0	0	0	0	0	0	0
% App. Total	.70	0	.30	0	0	0	0	0	0	0	0	0
PHF	.583	.000	.375	.625	.000	.000	.000	.000	.000	.000	.000	.000



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	16	0	2	0	18	1	6	0	0	7	0	0	0	0	0	3	0	28	28
04:15 PM	6	0	1	1	7	1	3	0	0	4	0	0	0	0	0	3	1	14	15
04:30 PM	7	0	2	0	9	2	6	0	0	8	0	0	0	0	0	3	0	20	20
04:45 PM	8	0	1	0	9	1	3	0	0	4	0	0	0	1	8	1	21	22	22
<b>Total</b>	<b>37</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>43</b>	<b>5</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>2</b>	<b>83</b>	<b>85</b>	<b>85</b>
05:00 PM	6	0	4	1	10	0	2	0	0	2	0	0	0	0	0	5	2	21	23
05:15 PM	2	0	6	2	8	1	2	0	0	3	0	0	0	0	3	2	14	16	16
05:30 PM	5	0	5	2	10	2	0	0	0	2	0	0	0	2	6	2	18	20	20
05:45 PM	5	0	1	0	6	1	4	0	0	5	0	0	0	2	6	0	17	17	17
<b>Total</b>	<b>18</b>	<b>0</b>	<b>16</b>	<b>5</b>	<b>34</b>	<b>2</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>24</b>	<b>6</b>	<b>70</b>	<b>76</b>	<b>76</b>
<b>Grand Total</b>	<b>55</b>	<b>0</b>	<b>22</b>	<b>6</b>	<b>77</b>	<b>7</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>41</b>	<b>8</b>	<b>153</b>	<b>161</b>	<b>161</b>
Approch %	71.4	0	28.6			20	80	0	0	22.9	0	0	0	75.6	24.4	5	95		
Total %	35.9	0	14.4		50.3	4.6	18.3	0	0		0	0	0	20.3	6.5				

3.1-73

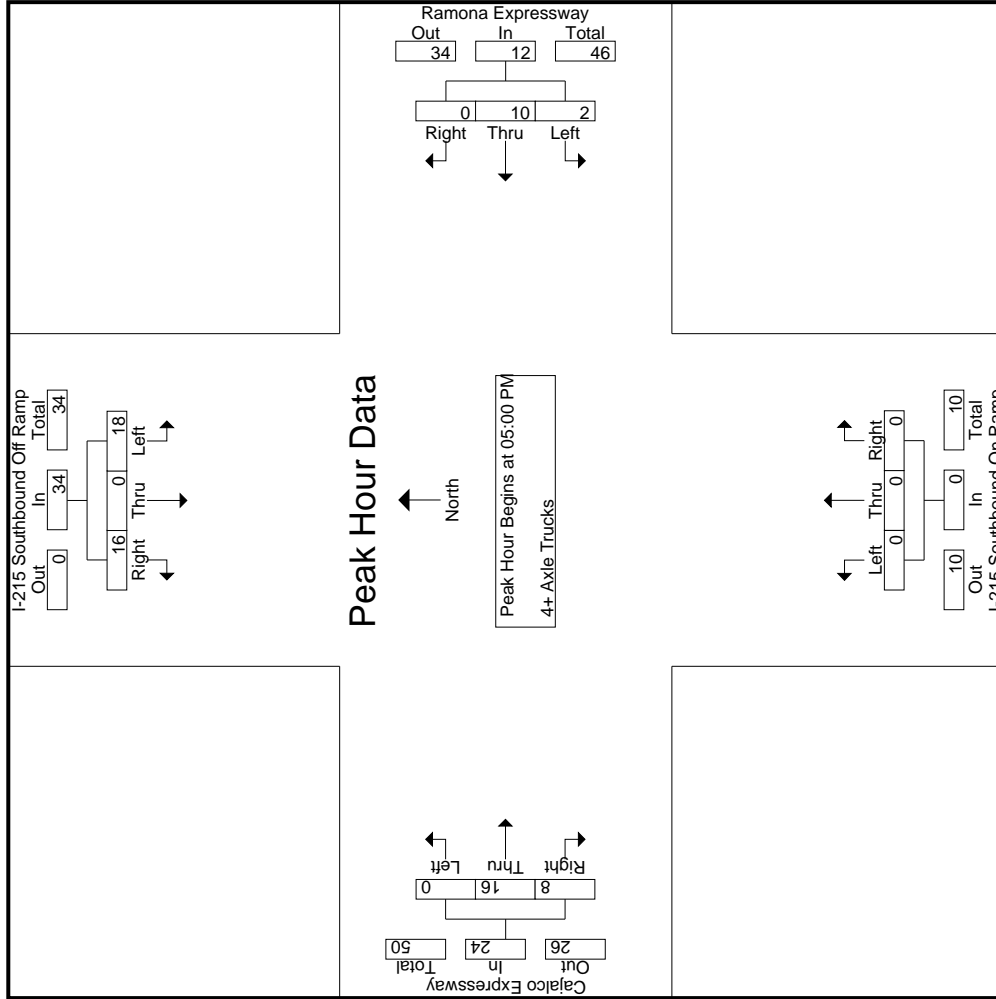
Start Time	I-215 Southbound Off Ramp Southbound				Ramona Expressway Westbound				I-215 Southbound On Ramp Northbound				Cajalco Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	6	0	4		10	0	2	0	0	2	0	0	0	0	0	4	9	21	21
05:15 PM	2	0	6		8	1	2	0	0	3	0	0	0	0	3	0	3	14	14
05:30 PM	5	0	5		10	0	2	0	0	2	0	0	0	0	4	2	6	18	18
05:45 PM	5	0	1		6	1	4	0	0	5	0	0	0	0	4	2	6	17	17
<b>Total Volume</b>	<b>18</b>	<b>0</b>	<b>16</b>		<b>34</b>	<b>2</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>8</b>	<b>24</b>	<b>70</b>	<b>70</b>
% App. Total	52.9	0	47.1			16.7	83.3	0	0	33.3	0	0	0	66.7	33.3				
PHF	.750	.000	.667		.850	.500	.625	.000	.600	.000	.000	.000	.000	.000	.800	.500	.667	.833	.833

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 (951) 268-6268

County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy  
 Weather: Clear

File Name : 09\_CRV\_215S\_Cajalco\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound			Ramona Expressway Westbound			I-215 Southbound On Ramp Northbound			Cajalco Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	6	0	4	0	2	0	0	0	0	0	0	0
+15 mins.	2	0	6	1	2	0	0	0	0	0	0	0
+30 mins.	5	0	5	0	2	0	0	0	0	0	0	0
+45 mins.	5	0	1	1	4	0	0	0	0	0	0	0
Total Volume	18	0	16	2	10	0	0	0	0	0	0	0
% App. Total	52.9	0	47.1	16.7	83.3	0	0	0	0	0	66.7	33.3
PHF	.750	.000	.667	.500	.625	.000	.600	.000	.000	.000	.800	.500

Location: County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg I-215 Southbound Ramps	East Leg Ramona Expressway	South Leg I-215 Southbound Ramps	West Leg Cajalco Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	0	1	0	1

	North Leg I-215 Southbound Ramps	East Leg Ramona Expressway	South Leg I-215 Southbound Ramps	West Leg Cajalco Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	2	0	0	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	2

Location: County of Riverside  
 N/S: I-215 Southbound Ramps  
 E/W: Cajalco Expy/Ramona Expy



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound I-215 Southbound Ramps			Westbound Ramona Expressway			Northbound I-215 Southbound Ramps			Eastbound Cajalco Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-215 Southbound Ramps			Westbound Ramona Expressway			Northbound I-215 Southbound Ramps			Eastbound Cajalco Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound						Harley Knox Boulevard Westbound						I-215 Northbound Off Ramp Northbound						Harley Knox Boulevard Eastbound					
	Left		Thru		RTOR		Left		Thru		RTOR		Left		Thru		RTOR		Left		Thru		RTOR	
		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total
07:00 AM	0	0	0	0	0	0	0	0	7	4	60	128	0	188	9	449	9	458	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	15	14	44	114	0	158	34	408	0	442	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	20	16	61	150	0	211	33	420	0	453	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	31	26	61	116	0	177	43	389	0	432	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>73</b>	<b>60</b>	<b>226</b>	<b>508</b>	<b>0</b>	<b>734</b>	<b>119</b>	<b>1666</b>	<b>0</b>	<b>1785</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00 AM	0	0	0	0	0	0	3	0	23	16	36	102	0	138	24	301	0	325	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	3	1	18	12	33	93	0	126	19	264	0	283	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	5	2	25	15	32	94	0	125	27	256	0	283	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	8	1	34	22	43	26	0	111	31	246	0	277	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>100</b>	<b>65</b>	<b>126</b>	<b>374</b>	<b>0</b>	<b>500</b>	<b>101</b>	<b>1067</b>	<b>0</b>	<b>1168</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>4</b>	<b>173</b>	<b>125</b>	<b>352</b>	<b>882</b>	<b>0</b>	<b>1234</b>	<b>220</b>	<b>2733</b>	<b>0</b>	<b>2953</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Approach %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14.1</b>	<b>1.9</b>	<b>84</b>	<b>0</b>	<b>28.5</b>	<b>71.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.1</b>	<b>0.1</b>	<b>6.3</b>	<b>7.5</b>	<b>12.9</b>	<b>32.3</b>	<b>0</b>	<b>45.2</b>	<b>7.5</b>	<b>92.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Passenger Vehicles	0	0	0	0	0	0	24	3	149	287	314	680	0	994	0	0	2444	0	0	0	0	0	0	0
Large Passenger Vehicles	0	0	0	0	0	0	82.8	75	86.1	88.8	89.2	77.1	0	80.6	0	0	82.8	0	0	0	0	0	0	0
Large 2 Axle Vehicles	0	0	0	0	0	0	1	1	13	23	7	72	0	79	0	0	170	0	0	0	0	0	0	0
Large 3 Axle Vehicles	0	0	0	0	0	0	3.4	25	7.5	6.4	2	8.2	0	6.4	0	0	5.8	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	3	0	5	10	9	39	0	48	0	0	118	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	10.3	0	2.9	1.6	2.6	4.4	0	3.9	0	0	4	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	1	0	6	11	22	91	0	113	0	0	221	0	0	0	0	0	0	0

Start Time	I-215 Northbound On Ramp Southbound						Harley Knox Boulevard Westbound						I-215 Northbound Off Ramp Northbound						Harley Knox Boulevard Eastbound					
	Left		Thru		RTOR		Left		Thru		RTOR		Left		Thru		RTOR		Left		Thru		RTOR	
		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	7	4	60	128	0	188	9	449	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	15	14	44	114	0	158	34	408	0	442	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	20	16	61	150	0	211	33	420	0	453	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	31	26	61	116	0	177	43	389	0	432	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>73</b>	<b>60</b>	<b>226</b>	<b>508</b>	<b>0</b>	<b>734</b>	<b>119</b>	<b>1666</b>	<b>0</b>	<b>1785</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>4</b>	<b>173</b>	<b>125</b>	<b>352</b>	<b>882</b>	<b>0</b>	<b>1234</b>	<b>220</b>	<b>2733</b>	<b>0</b>	<b>2953</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Approach %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14.1</b>	<b>1.9</b>	<b>84</b>	<b>0</b>	<b>28.5</b>	<b>71.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.1</b>	<b>0.1</b>	<b>6.3</b>	<b>7.5</b>	<b>12.9</b>	<b>32.3</b>	<b>0</b>	<b>45.2</b>	<b>7.5</b>	<b>92.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Passenger Vehicles	0	0	0	0	0	0	24	3	149	287	314	680	0	994	0	0	2444	0	0	0	0	0	0	0
Large Passenger Vehicles	0	0	0	0	0	0	82.8	75	86.1	88.8	89.2	77.1	0	80.6	0	0	82.8	0	0	0	0	0	0	0
Large 2 Axle Vehicles	0	0	0	0	0	0	1	1	13	23	7	72	0	79	0	0	170	0	0	0	0	0	0	0
Large 3 Axle Vehicles	0	0	0	0	0	0	3.4	25	7.5	6.4	2	8.2	0	6.4	0	0	5.8	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	3	0	5	10	9	39	0	48	0	0	118	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	0	10.3	0	2.9	1.6	2.6	4.4	0	3.9	0	0	4	0	0	0	0	0	0	0
% 4+ Axle Trucks	0	0	0	0	0	0	1	0	6	11	22	91	0	113	0	0	221	0	0	0	0	0	0	0

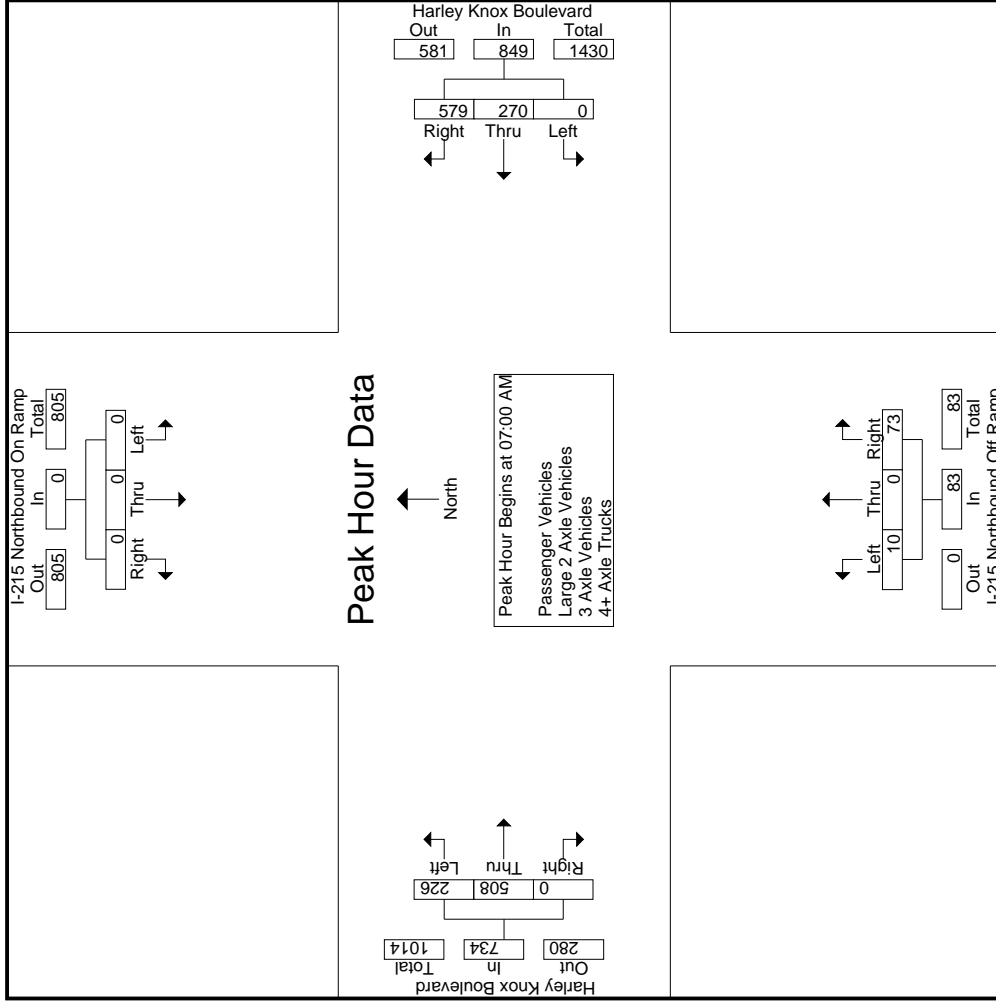
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Start Time	I-215 Northbound On Ramp Southbound						Harley Knox Boulevard Westbound						I-215 Northbound Off Ramp Northbound						Harley Knox Boulevard Eastbound					
	Left		Thru		RTOR		Left		Thru		RTOR		Left		Thru		RTOR		Left		Thru		RTOR	
		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total		App. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	7	4	60	128	0	188	9	449	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	15	14	44	114	0	158	34	408	0	442	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	20	16	61	150	0	211	33	420	0	453	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	31	26	61	116	0	177	43	389	0	432	0	0	0	0	0	0
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>73</b>	<b>60</b>	<b>226</b>	<b>508</b>	<b>0</b>	<b>734</b>	<b>119</b>	<b>1666</b>	<b>0</b>	<b>1785</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>88</b>	<b>0</b>	<b>30.8</b>	<b>69.2</b>	<b>0</b>	<b>9.2</b>	<b>0</b>	<b>0</b>	<b>7.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
PHF	.000	.000	.000	.000	.000	.000	.836	.857	.599	.589	.576	.847	.000	.870	.188	.449	.158	.408	.211	.420	.177	.389	.1666	.1785

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	0	0	0	26	128	0
+15 mins.	0	0	0	0	0	0	3	1	18	22	114	0
+30 mins.	0	0	0	0	0	0	3	1	25	44	150	0
+45 mins.	0	0	0	0	0	0	5	2	34	61	176	0
Total Volume	0	0	0	0	0	0	19	4	100	226	508	0
% App. Total	0	0	0	0	0	0	15.4	3.3	81.3	30.8	69.2	0
PHF	.000	.000	.000	.000	.000	.000	.594	.500	.735	.926	.847	.000



Groups Printed- Passenger Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	77	147	4	224	0	0	7	4	7	55	105	0	0	160	8	391	399
07:15 AM	0	0	0	0	0	0	65	143	19	208	2	0	12	11	14	43	95	0	0	138	30	360	390
07:30 AM	0	0	0	0	0	0	51	104	15	155	2	0	19	15	21	52	122	0	0	174	30	350	380
07:45 AM	0	0	0	0	0	0	50	103	17	153	5	0	28	25	33	53	100	0	0	153	42	339	381
Total	0	0	0	0	0	0	243	497	55	740	9	0	66	55	75	203	422	0	0	625	110	1440	1550
08:00 AM	0	0	0	0	0	0	44	60	6	104	3	0	18	13	21	35	74	0	0	109	19	234	253
08:15 AM	0	0	0	0	0	0	35	58	4	93	3	1	16	12	20	29	66	0	0	95	16	208	224
08:30 AM	0	0	0	0	0	0	33	44	10	77	3	1	21	11	25	26	66	0	0	92	21	194	215
08:45 AM	0	0	0	0	0	0	24	43	7	67	6	1	28	20	35	21	52	0	0	73	27	175	202
Total	0	0	0	0	0	0	136	205	27	341	15	3	83	56	101	111	258	0	0	369	83	811	894
Grand Total	0	0	0	0	0	0	379	702	82	1081	24	3	149	111	176	314	680	0	0	994	193	2251	2444
Approch %	0	0	0	0	0	0	35.1	64.9		48	13.6	1.7	84.7	7.8	31.6	68.4	0	0	44.2	7.9	92.1		
Total %	0	0	0	0	0	0	16.8	31.2		48	1.1	0.1	6.6	7.8	13.9	30.2	0	0	44.2	7.9	92.1		

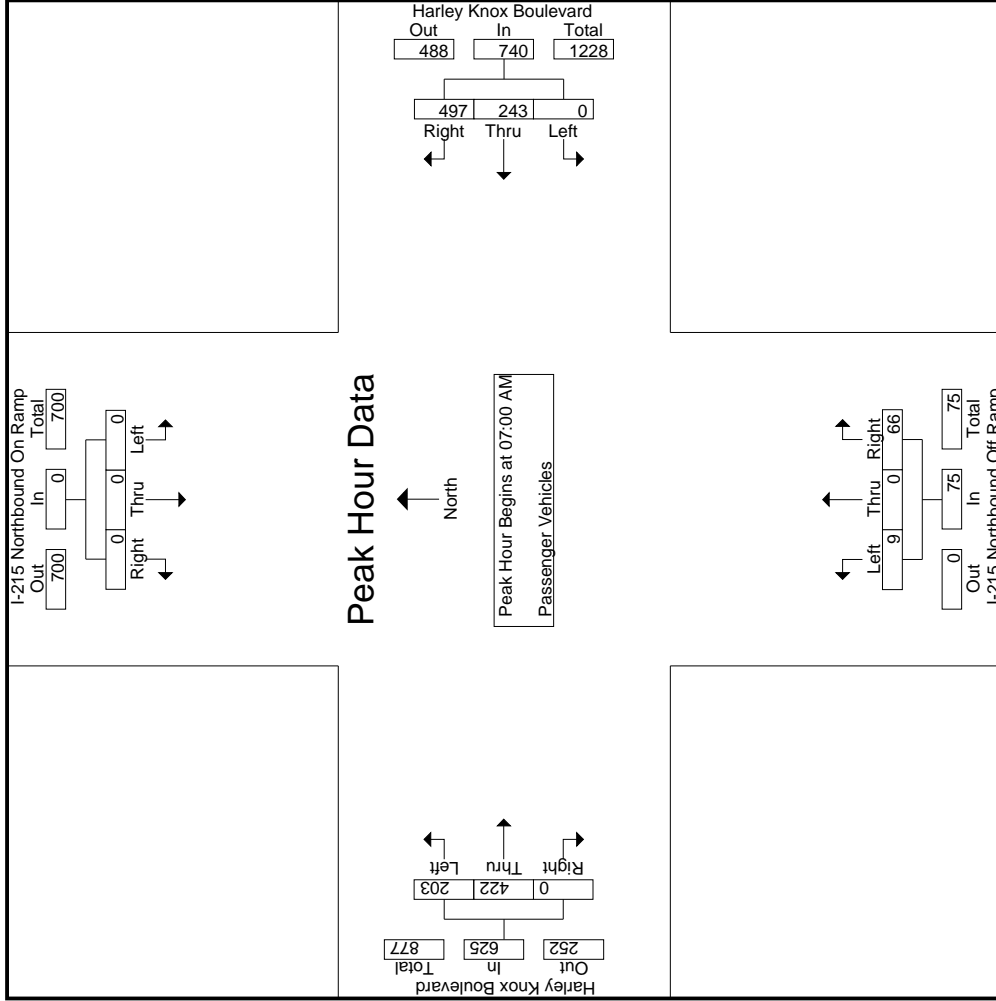
Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	77	147	4	224	0	0	7	4	7	55	105	0	0	160	8	391	399
07:15 AM	0	0	0	0	0	0	65	143	19	208	2	0	12	11	14	43	95	0	0	138	30	360	390
07:30 AM	0	0	0	0	0	0	51	104	15	155	2	0	19	15	21	52	122	0	0	174	30	350	380
07:45 AM	0	0	0	0	0	0	50	103	17	153	5	0	28	25	33	53	100	0	0	153	42	339	381
Total Volume	0	0	0	0	0	0	243	497	55	740	9	0	66	55	75	203	422	0	0	625	110	1440	1550
% App. Total	0	0	0	0	0	0	32.8	67.2		48	13.6	1.7	84.7	7.8	31.6	68.4	0	0	44.2	7.9	92.1		
PHF	.000	.000	.000	.000	.000	.000	.789	.845		.826	.450	.000	.589	.568	.865	.923	.000	.000	.898	.921			

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:											
	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	77	147	224	0	0	7	105	160
+15 mins.	0	0	0	0	65	143	208	2	0	12	95	138
+30 mins.	0	0	0	0	51	104	155	2	0	19	122	174
+45 mins.	0	0	0	0	50	103	153	5	0	28	100	153
Total Volume	0	0	0	0	243	497	740	9	0	66	422	625
% App. Total	0	0	0	0	32.8	67.2	826	12	0	88	67.5	67.5
PHF	.000	.000	.000	.000	.789	.845	.826	.450	.000	.589	.865	.898

Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	6	7	0	13	0	0	0	0	0	1	9	0	0	10	0	23	23
07:15 AM	0	0	0	0	0	0	4	2	0	6	0	0	1	1	1	0	9	0	0	9	1	16	17
07:30 AM	0	0	0	0	0	0	2	4	1	6	0	0	1	1	1	3	7	0	0	10	2	17	19
07:45 AM	0	0	0	0	0	0	2	3	0	5	0	0	2	1	2	0	6	0	0	6	1	13	14
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>16</b>	<b>1</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>4</b>	<b>69</b>	<b>73</b>
08:00 AM	0	0	0	0	0	0	7	2	1	9	0	0	2	1	2	0	8	0	0	8	2	19	21
08:15 AM	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	1	11	0	0	12	0	17	17
08:30 AM	0	0	0	0	0	0	5	5	1	10	0	1	3	3	4	1	10	0	0	11	4	25	29
08:45 AM	0	0	0	0	0	0	3	7	2	10	1	0	3	1	4	1	12	0	0	13	3	27	30
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>15</b>	<b>4</b>	<b>33</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>5</b>	<b>11</b>	<b>3</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>9</b>	<b>88</b>	<b>97</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>31</b>	<b>5</b>	<b>63</b>	<b>1</b>	<b>1</b>	<b>13</b>	<b>8</b>	<b>15</b>	<b>7</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>13</b>	<b>157</b>	<b>170</b>
Approch %	0	0	0	0	0	0	50.8	49.2		40.1	6.7	6.7	86.7		9.6	8.9	91.1	0	0	50.3	7.6	92.4	
Total %	0	0	0	0	0	0	20.4	19.7			0.6	0.6	8.3			4.5	45.9	0	0				

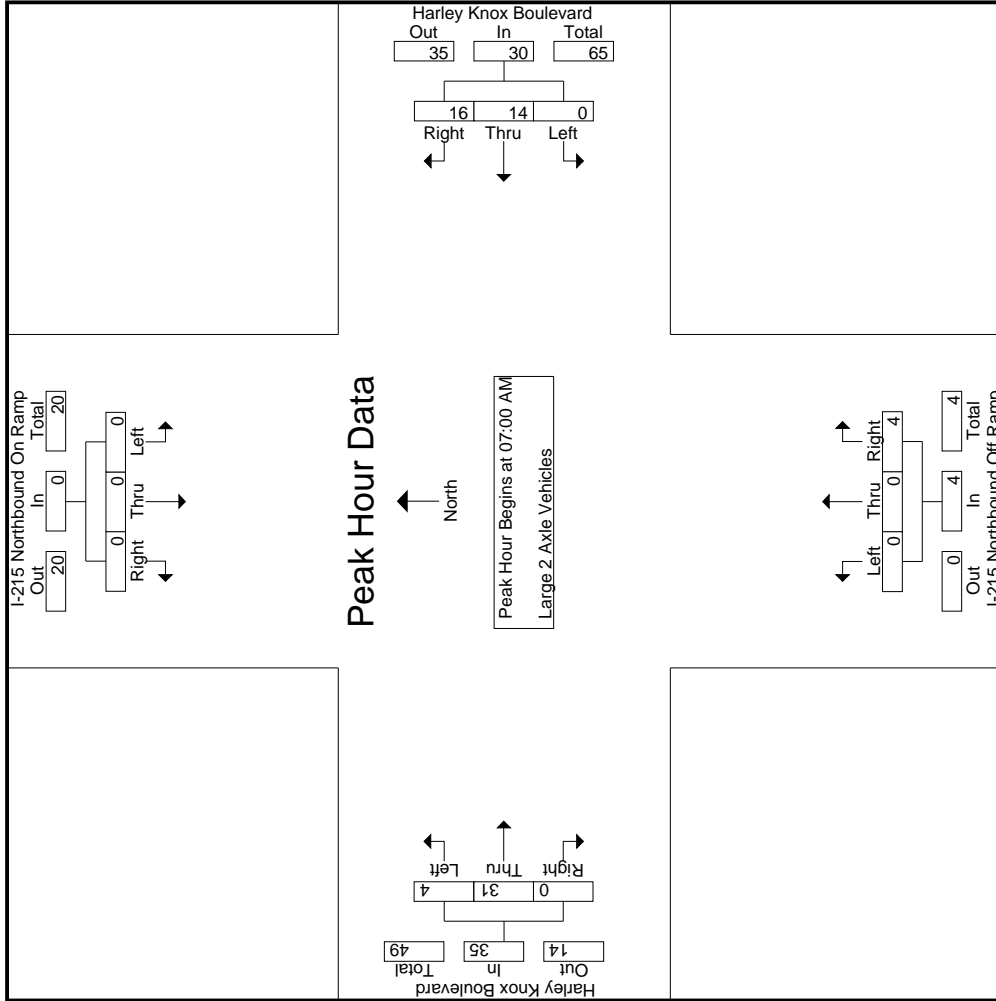
Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	6	7	0	13	0	0	0	0	0	1	9	0	0	10	0	23	23
07:15 AM	0	0	0	0	0	0	4	2	0	6	0	0	1	1	1	0	9	0	0	9	1	16	17
07:30 AM	0	0	0	0	0	0	2	4	1	6	0	0	1	1	1	3	7	0	0	10	2	17	19
07:45 AM	0	0	0	0	0	0	2	3	0	5	0	0	2	1	2	0	6	0	0	6	1	13	14
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>16</b>	<b>1</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>4</b>	<b>69</b>	<b>73</b>
08:00 AM	0	0	0	0	0	0	7	2	1	9	0	0	2	1	2	0	8	0	0	8	2	19	21
08:15 AM	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	1	11	0	0	12	0	17	17
08:30 AM	0	0	0	0	0	0	5	5	1	10	0	1	3	3	4	1	10	0	0	11	4	25	29
08:45 AM	0	0	0	0	0	0	3	7	2	10	1	0	3	1	4	1	12	0	0	13	3	27	30
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>15</b>	<b>4</b>	<b>33</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>5</b>	<b>11</b>	<b>3</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>9</b>	<b>88</b>	<b>97</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>31</b>	<b>5</b>	<b>63</b>	<b>1</b>	<b>1</b>	<b>13</b>	<b>8</b>	<b>15</b>	<b>7</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>13</b>	<b>157</b>	<b>170</b>
Approch %	0	0	0	0	0	0	50.8	49.2		40.1	6.7	6.7	86.7		9.6	8.9	91.1	0	0	50.3	7.6	92.4	
Total %	0	0	0	0	0	0	20.4	19.7			0.6	0.6	8.3			4.5	45.9	0	0				

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	6	7	0	13	0	0	0	0	0	1	9	0	0	10	0	23	23
07:15 AM	0	0	0	0	0	0	4	2	0	6	0	0	1	1	1	0	9	0	0	9	1	16	17
07:30 AM	0	0	0	0	0	0	2	4	1	6	0	0	1	1	1	3	7	0	0	10	2	17	19
07:45 AM	0	0	0	0	0	0	2	3	0	5	0	0	2	1	2	0	6	0	0	6	1	13	14
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>16</b>	<b>1</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>4</b>	<b>69</b>	<b>73</b>
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46.7</b>	<b>53.3</b>		<b>40.1</b>	<b>6.7</b>	<b>6.7</b>	<b>86.7</b>		<b>9.6</b>	<b>8.9</b>	<b>91.1</b>	<b>0</b>	<b>0</b>	<b>50.3</b>	<b>7.6</b>	<b>92.4</b>	
PHF	.000	.000	.000	.000	.000	.000	.583	.571		.577	.000	.000	.500		.500	.333	.861	.000	.000	.875		.750	

Counts Unlimited  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:											
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	14	16	30	0	0	4	4
% App. Total	0	0	0	0	0	46.7	53.3	57.7	0	0	100	0
PHF	.000	.000	.000	.000	.000	.583	.571	.577	.000	.000	.500	.500
					07:00 AM				07:00 AM			07:00 AM
					0	6	7	13	0	0	0	0
					0	4	2	6	0	0	0	0
					0	2	4	6	0	0	1	1
					0	2	3	5	0	0	2	2
					0	14	16	30	0	0	4	4
					0	46.7	53.3	57.7	0	0	100	0
					.000	.583	.571	.577	.000	.000	.500	.500
									11.4	88.6	0	0
									.333	.861	.000	.875

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	7	1	7	0	0	0	0	0	3	3	0	0	6	1	13	14
07:15 AM	0	0	0	0	0	0	7	7	1	7	1	0	1	1	2	2	2	0	0	2	2	11	13
07:30 AM	0	0	0	0	0	2	8	10	1	10	0	0	0	0	0	2	9	0	0	11	1	21	22
07:45 AM	0	0	0	0	0	0	1	6	0	6	0	0	0	0	0	1	5	0	0	6	0	12	12
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>27</b>	<b>30</b>	<b>3</b>	<b>30</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>4</b>	<b>57</b>	<b>61</b>
08:00 AM	0	0	0	0	0	0	7	7	1	7	0	0	1	0	1	0	6	0	0	6	1	14	15
08:15 AM	0	0	0	0	0	0	10	10	3	10	0	0	1	0	1	0	5	0	0	5	3	16	19
08:30 AM	0	0	0	0	0	1	2	3	0	3	1	0	0	1	2	3	0	0	0	5	0	9	9
08:45 AM	0	0	0	0	0	0	3	3	0	3	1	0	2	1	3	1	6	0	0	7	1	13	14
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>22</b>	<b>23</b>	<b>4</b>	<b>23</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>5</b>	<b>52</b>	<b>57</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>49</b>	<b>53</b>	<b>7</b>	<b>53</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>8</b>	<b>9</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>9</b>	<b>109</b>	<b>118</b>
Approch %	0	0	0	0	0	7.5	92.5	48.6	37.5	0	18.8	81.2	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	3.7	45	48.6	2.8	0	8.3	35.8	0	0	0	0	0	0	0	44	7.6	92.4	0

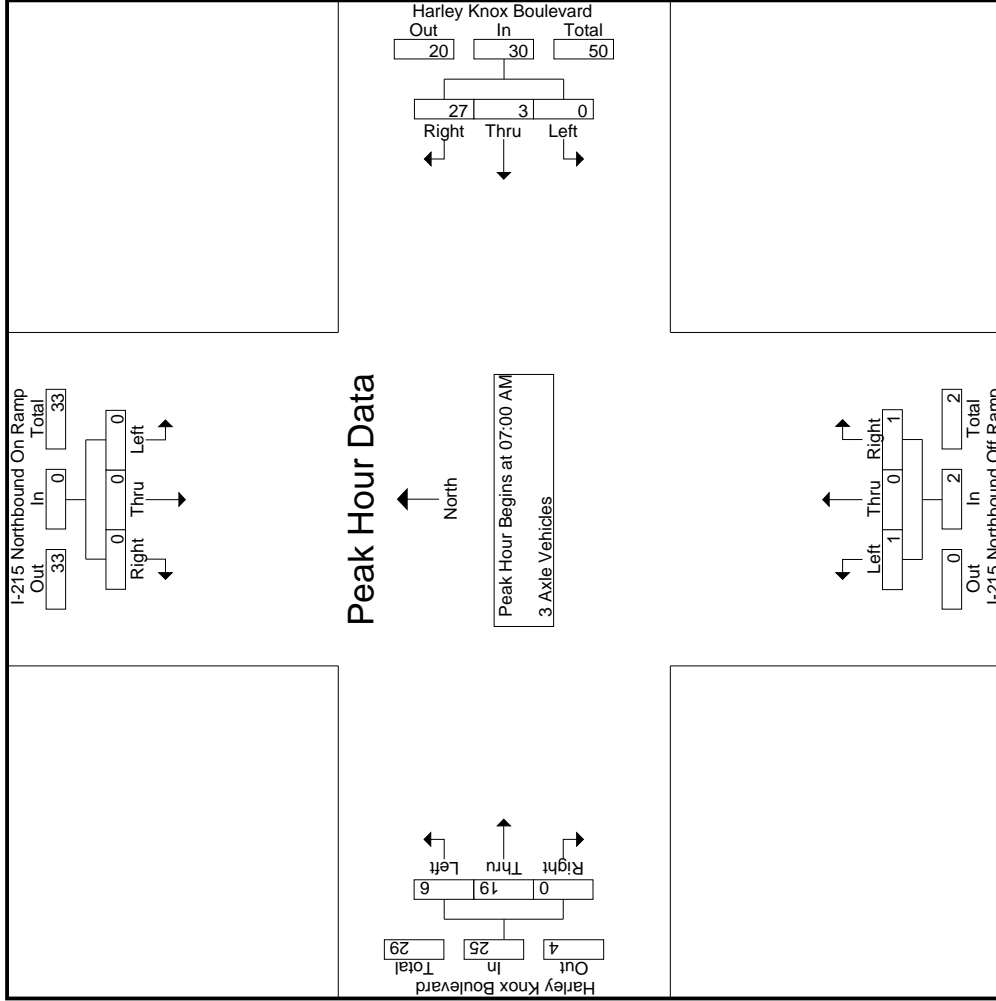
  

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	7	0	7	0	0	0	0	0	3	3	0	0	6	0	6	6
07:15 AM	0	0	0	0	0	0	7	7	1	7	1	0	1	1	2	2	2	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	8	10	1	10	0	0	0	0	0	2	9	0	0	11	1	21	21
07:45 AM	0	0	0	0	0	0	1	6	0	6	0	0	0	0	0	1	5	0	0	6	0	12	12
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>27</b>	<b>30</b>	<b>3</b>	<b>30</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>4</b>	<b>57</b>	<b>57</b>
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>90</b>	<b>0</b>	<b>50</b>	<b>50</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>24</b>	<b>76</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>76</b>	<b>0</b>	<b>25</b>	<b>57</b>
PHF	.000	.000	.000	.000	.000	.000	.375	.844	.750	.250	.250	.000	.250	.000	.500	.528	.000	.000	.568	.679			

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
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File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	7	0	0	0	0	3	0
+15 mins.	0	0	0	0	0	7	1	0	1	0	2	0
+30 mins.	0	0	0	0	2	8	0	0	0	2	9	0
+45 mins.	0	0	0	0	1	5	0	0	0	1	5	0
Total Volume	0	0	0	0	3	27	1	0	1	6	19	0
% App. Total	0	0	0	0	10	90	50	0	50	24	76	0
PHF	.000	.000	.000	.000	.375	.844	.250	.000	.250	.500	.528	.000
						.750	.250	.250	.250			

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	8	0	10	0	0	0	0	0	1	11	0	0	12	0	22	22
07:15 AM	0	0	0	0	0	0	2	9	0	11	0	0	1	1	1	1	8	0	0	9	1	21	22
07:30 AM	0	0	0	0	0	0	4	12	0	16	0	0	0	0	0	4	12	0	0	16	0	32	32
07:45 AM	0	0	0	0	0	0	2	10	0	12	0	0	1	0	1	7	5	0	0	12	0	25	25
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>13</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>1</b>	<b>100</b>	<b>101</b>
08:00 AM	0	0	0	0	0	0	1	16	0	17	0	0	2	2	2	1	14	0	0	15	2	34	36
08:15 AM	0	0	0	0	0	0	3	6	0	9	0	0	0	0	0	3	11	0	0	14	0	23	23
08:30 AM	0	0	0	0	0	0	3	6	1	9	1	0	1	1	2	2	15	0	0	17	2	28	30
08:45 AM	0	0	0	0	0	0	2	10	0	12	0	0	1	0	1	3	15	0	0	18	0	31	31
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>38</b>	<b>1</b>	<b>47</b>	<b>47</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>4</b>	<b>116</b>	<b>120</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>77</b>	<b>1</b>	<b>96</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>22</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>113</b>	<b>5</b>	<b>216</b>	<b>221</b>
Approch %	0	0	0	0	0	0	19.8	80.2		44.4	14.3	0	85.7		3.2	19.5	80.5	0	0	52.3	2.3	97.7	
Total %	0	0	0	0	0	0	8.8	35.6		44.4	0.5	0	2.8		3.2	10.2	42.1	0	0	52.3	2.3	97.7	

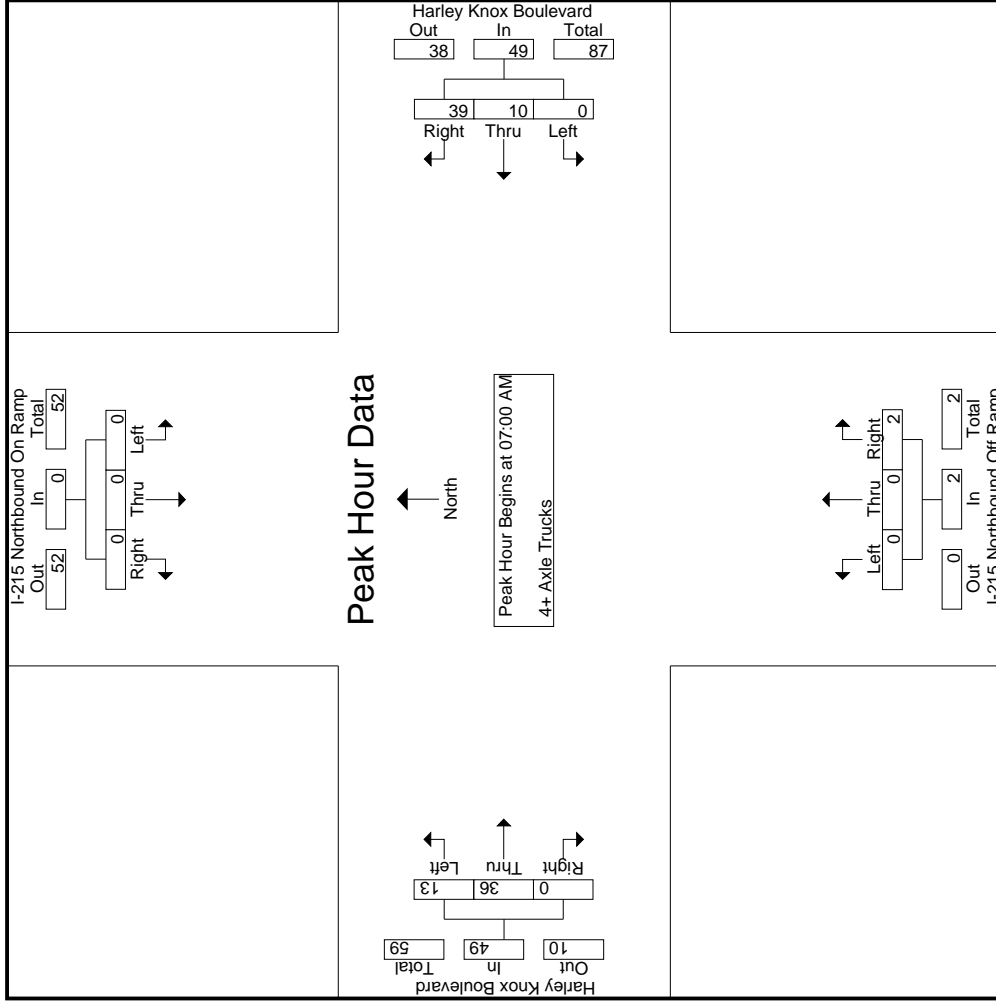
Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	8	0	10	0	0	0	0	0	1	11	0	0	12	0	22	22
07:15 AM	0	0	0	0	0	0	2	9	0	11	0	0	1	1	1	1	8	0	0	9	1	21	22
07:30 AM	0	0	0	0	0	0	4	12	0	16	0	0	0	0	0	4	12	0	0	16	0	32	32
07:45 AM	0	0	0	0	0	0	2	10	0	12	0	0	1	0	1	7	5	0	0	12	0	25	25
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>39</b>	<b>0</b>	<b>49</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>13</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>1</b>	<b>100</b>	<b>101</b>
% App. Total	0	0	0	0	0	0	20.4	79.6		44.4	14.3	0	85.7		3.2	19.5	80.5	0	0	52.3	2.3	97.7	
PHF	.000	.000	.000	.000	.000	.000	.625	.813		.766	.000	.000	.500		.500	.464	.750	.000	.000	.766		.781	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	8	0	0	0	0	11	0
+15 mins.	0	0	0	0	0	9	0	0	1	1	8	0
+30 mins.	0	0	0	0	0	12	16	0	0	4	12	0
+45 mins.	0	0	0	0	0	10	12	0	1	7	5	0
Total Volume	0	0	0	0	10	39	49	0	2	13	36	0
% App. Total	0	0	0	0	20.4	79.6	766	0	100	26.5	73.5	0
PHF	.000	.000	.000	.000	.000	.813	.766	.000	.500	.464	.750	.000

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City of Perris  
N/S: I-215 Northbound Ramps  
E/W: Harley Knox Boulevard  
Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
Site Code : 05118431  
Start Date : 5/24/2018  
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

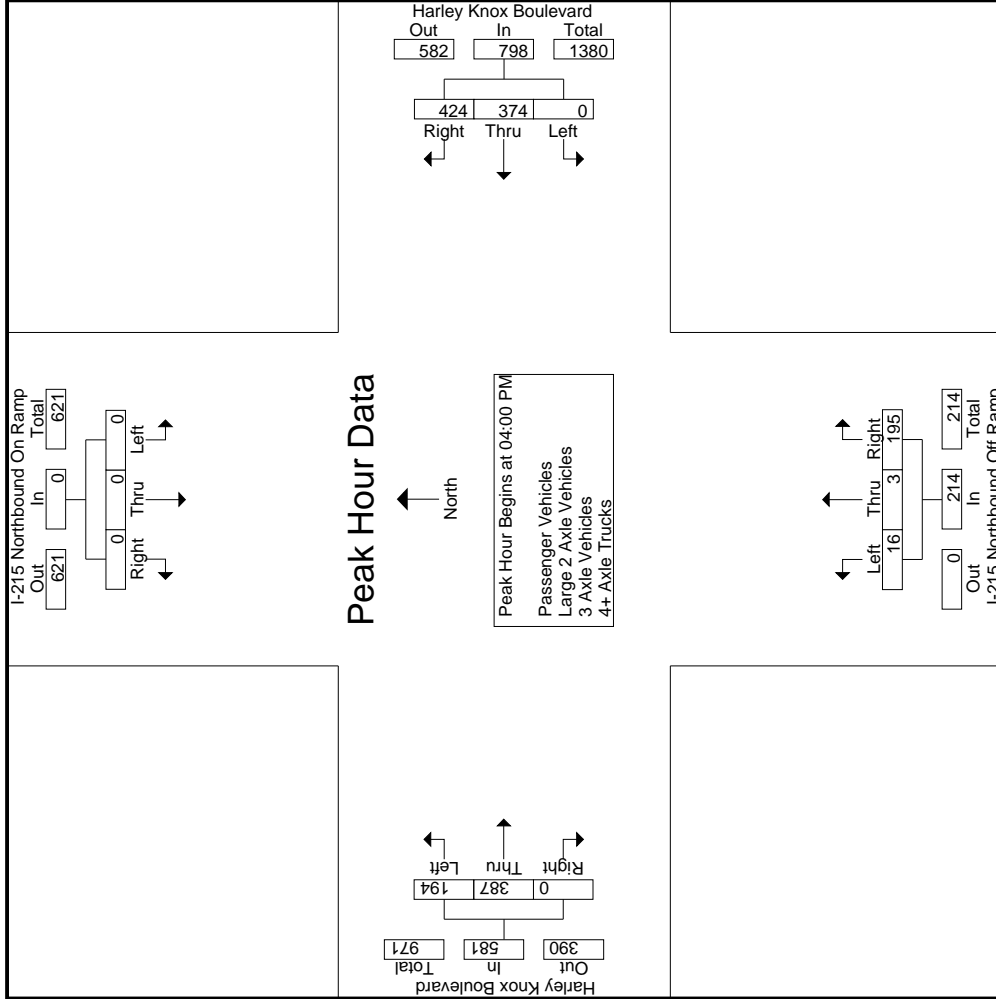
Start Time	I-215 Northbound On Ramp Southbound							Harley Knox Boulevard Westbound							I-215 Northbound Off Ramp Northbound							Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	0	0	0	0	0	85	93	15	178	9	0	48	40	57	58	111	0	0	169	55	404	459					
04:15 PM	0	0	0	0	0	0	70	71	3	141	1	0	47	39	48	41	103	0	0	144	42	333	375					
04:30 PM	0	0	0	0	0	0	124	143	13	267	2	2	57	48	61	51	87	0	0	138	61	466	527					
04:45 PM	0	0	0	0	0	0	95	117	12	212	4	1	43	38	48	44	86	0	0	130	50	390	440					
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>374</b>	<b>424</b>	<b>43</b>	<b>798</b>	<b>16</b>	<b>3</b>	<b>195</b>	<b>165</b>	<b>214</b>	<b>194</b>	<b>387</b>	<b>0</b>	<b>0</b>	<b>581</b>	<b>208</b>	<b>1593</b>	<b>1801</b>					
05:00 PM	0	0	0	0	0	0	88	74	9	162	5	0	29	24	34	43	81	0	0	124	33	320	353					
05:15 PM	0	0	0	0	0	0	67	67	2	134	1	2	43	32	46	42	81	0	0	123	34	303	337					
05:30 PM	0	0	0	0	0	0	86	77	8	163	6	1	33	27	40	33	87	0	0	120	35	323	358					
05:45 PM	0	0	0	0	0	0	56	56	8	112	2	0	30	20	32	36	80	0	0	116	28	260	288					
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>297</b>	<b>274</b>	<b>27</b>	<b>571</b>	<b>14</b>	<b>3</b>	<b>135</b>	<b>103</b>	<b>152</b>	<b>154</b>	<b>329</b>	<b>0</b>	<b>0</b>	<b>483</b>	<b>130</b>	<b>1206</b>	<b>1336</b>					
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>671</b>	<b>698</b>	<b>70</b>	<b>1369</b>	<b>30</b>	<b>6</b>	<b>330</b>	<b>268</b>	<b>366</b>	<b>348</b>	<b>716</b>	<b>0</b>	<b>0</b>	<b>1064</b>	<b>338</b>	<b>2799</b>	<b>3137</b>					
<b>Approach %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>51</b>	<b>0</b>	<b>48.9</b>	<b>8.2</b>	<b>1.6</b>	<b>90.2</b>	<b>0</b>	<b>32.7</b>	<b>67.3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>					
<b>Total %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>24.9</b>	<b>0</b>	<b>48.9</b>	<b>1.1</b>	<b>0.2</b>	<b>11.8</b>	<b>0</b>	<b>13.1</b>	<b>12.4</b>	<b>25.6</b>	<b>0</b>	<b>38</b>	<b>10.8</b>	<b>89.2</b>	<b>0</b>						
Passenger Vehicles	0	0	0	0	0	0	632	581	91.4	1277	26	5	264	81	512	317	608	0	0	925	0	0	2714					
Large Passenger Vehicles	0	0	0	0	0	0	94.2	83.2	88.7	86.7	83.3	80	81	80.8	91.1	84.9	0	0	86.9	0	0	86.5						
Large 2 Axle Vehicles	0	0	0	0	0	0	16	27	46	46	1	1	21	36	6	6	23	0	0	29	0	0	111					
Large 3 Axle Vehicles	0	0	0	0	0	0	2.4	3.9	4.3	3.2	3.3	16.7	6.4	4.9	5.7	1.7	3.2	0	0	2.7	0	0	0					
3 Axle Vehicles	0	0	0	0	0	0	8	18	26	26	0	0	39	71	4	28	0	0	32	0	0	129						
% 3 Axle Vehicles	0	0	0	0	0	0	1.2	2.6	1.8	1.8	0	0	11.8	11.9	11.2	1.1	3.9	0	0	3	0	0	4.1					
4+ Axle Trucks	0	0	0	0	0	0	15	72	90	90	3	0	6	15	21	57	0	0	78	0	0	183						
% 4+ Axle Trucks	0	0	0	0	0	0	2.2	10.3	4.3	6.3	10	0	1.8	2.2	2.4	6	8	0	0	7.3	0	0	5.8					
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																												
Peak Hour for Entire Intersection Begins at 04:00 PM																												
04:00 PM	0	0	0	0	0	0	0	85	93	178	9	0	48	0	48	57	111	0	0	169	58	111	0	404				
04:15 PM	0	0	0	0	0	0	70	71	141	141	1	0	47	0	47	48	103	0	0	144	41	103	0	333				
04:30 PM	0	0	0	0	0	0	124	143	267	267	2	2	57	2	57	61	87	0	0	138	51	87	0	466				
04:45 PM	0	0	0	0	0	0	95	117	212	212	4	1	43	4	43	48	86	0	0	130	44	86	0	390				
Total Volume	0	0	0	0	0	0	374	424	798	798	16	3	195	3	195	214	387	0	0	581	194	387	0	1593				
% App. Total	0	0	0	0	0	0	46.9	53.1	53.1	53.1	7.5	1.4	91.1	1.4	91.1	33.4	66.6	0	0	66.6	33.4	66.6	0	85.5				
PHF	.000	.000	.000	.000	.000	.000	.000	.754	.741	.747	.444	.375	.855	.375	.855	.877	.872	.000	.000	.859	.836	.872	.000	.855				

Start Time	I-215 Northbound On Ramp Southbound							Harley Knox Boulevard Westbound							I-215 Northbound Off Ramp Northbound							Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	0	0	0	0	0	0	85	93	178	9	0	48	0	48	57	111	0	0	169	58	111	0	404				
04:15 PM	0	0	0	0	0	0	70	71	141	141	1	0	47	0	47	48	103	0	0	144	41	103	0	333				
04:30 PM	0	0	0	0	0	0	124	143	267	267	2	2	57	2	57	61	87	0	0	138	51	87	0	466				
04:45 PM	0	0	0	0	0	0	95	117	212	212	4	1	43	4	43	48	86	0	0	130	44	86	0	390				
Total Volume	0	0	0	0	0	0	374	424	798	798	16	3	195	3	195	214	387	0	0	581	194	387	0	1593				
% App. Total	0	0	0	0	0	0	46.9	53.1	53.1	53.1	7.5	1.4	91.1	1.4	91.1	33.4	66.6	0	0	66.6	33.4	66.6	0	85.5				
PHF	.000	.000	.000	.000	.000	.000	.000	.754	.741	.747	.444	.375	.855	.375	.855	.877	.872	.000	.000	.859	.836	.872	.000	.855				

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
N/S: I-215 Northbound Ramps  
E/W: Harley Knox Boulevard  
Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
Site Code : 05118431  
Start Date : 5/24/2018  
Page No : 3

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	0	0	0	0	85	93	178	0	48	57	111	0
+0 mins.	0	0	0	0	70	71	141	0	47	48	103	0
+15 mins.	0	0	0	0	124	143	267	2	57	61	87	0
+30 mins.	0	0	0	0	95	117	212	4	43	48	86	0
+45 mins.	0	0	0	0	374	424	798	16	195	214	387	0
Total Volume	0	0	0	0	46.9	53.1	91.1	7.5	91.1	33.4	66.6	0
% App. Total	.000	.000	.000	.000	.754	.741	.747	.444	.855	.877	.872	.000
PHF												
				04:00 PM				04:00 PM		04:00 PM		
				0			178	9		57	111	169
				0			141	1		48	103	144
				0			267	2		61	87	138
				0			212	4		48	86	130
				0			798	16		214	387	581
				0			91.1	7.5		33.4	66.6	85.9

Groups Printed- Passenger Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	80	77	13	157	8	0	43	36	51	53	93	0	0	146	49	354	403
04:15 PM	0	0	0	0	0	0	67	50	3	117	1	0	32	27	33	38	83	0	0	121	30	271	301
04:30 PM	0	0	0	0	0	0	118	128	12	246	2	1	44	37	47	49	72	0	0	121	49	414	463
04:45 PM	0	0	0	0	0	0	89	98	11	187	3	1	34	30	38	39	77	0	0	116	41	341	382
Total	0	0	0	0	0	0	354	353	39	707	14	2	153	130	169	179	325	0	0	504	169	1380	1549
05:00 PM	0	0	0	0	0	0	83	65	8	148	4	0	25	21	29	39	68	0	0	107	29	284	313
05:15 PM	0	0	0	0	0	0	60	52	2	112	1	2	33	25	36	38	64	0	0	102	27	250	277
05:30 PM	0	0	0	0	0	0	82	67	7	149	5	1	30	24	35	27	76	0	0	103	31	288	319
05:45 PM	0	0	0	0	0	0	53	44	8	97	2	0	23	17	24	34	75	0	0	109	25	231	256
Total	0	0	0	0	0	0	278	228	25	506	12	3	111	87	126	138	283	0	0	421	112	1053	1165
Grand Total	0	0	0	0	0	0	632	581	64	1213	26	5	264	217	295	317	608	0	0	925	281	2433	2714
Approch %	0	0	0	0	0	0	52.1	47.9		49.9	8.8	1.7	89.5		12.1	34.3	65.7	0	0	38	10.4	89.6	
Total %	0	0	0	0	0	0	26	23.9			1.1	0.2	10.9			13	25	0	0				

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	80	77		77	8	0	43		43	53	93	0		146	0	146	354
04:15 PM	0	0	0	0	0	0	67	50		50	1	0	32		32	38	83	0		121	0	121	271
04:30 PM	0	0	0	0	0	0	118	128		128	2	1	44		44	49	72	0		121	0	121	414
04:45 PM	0	0	0	0	0	0	89	98		98	3	1	34		34	39	77	0		116	0	116	341
Total Volume	0	0	0	0	0	0	354	353		707	14	2	153		169	179	325	0		504	0	504	1380
% App. Total	0	0	0	0	0	0	50.1	49.9		49.9	8.3	1.2	90.5		12.1	35.5	64.5	0		38	10.4	89.6	
PHF	.000	.000	.000	.000	.000	.000	.750	.689		.718	.438	.500	.869		.828	.844	.874	.000		.863		.863	.833

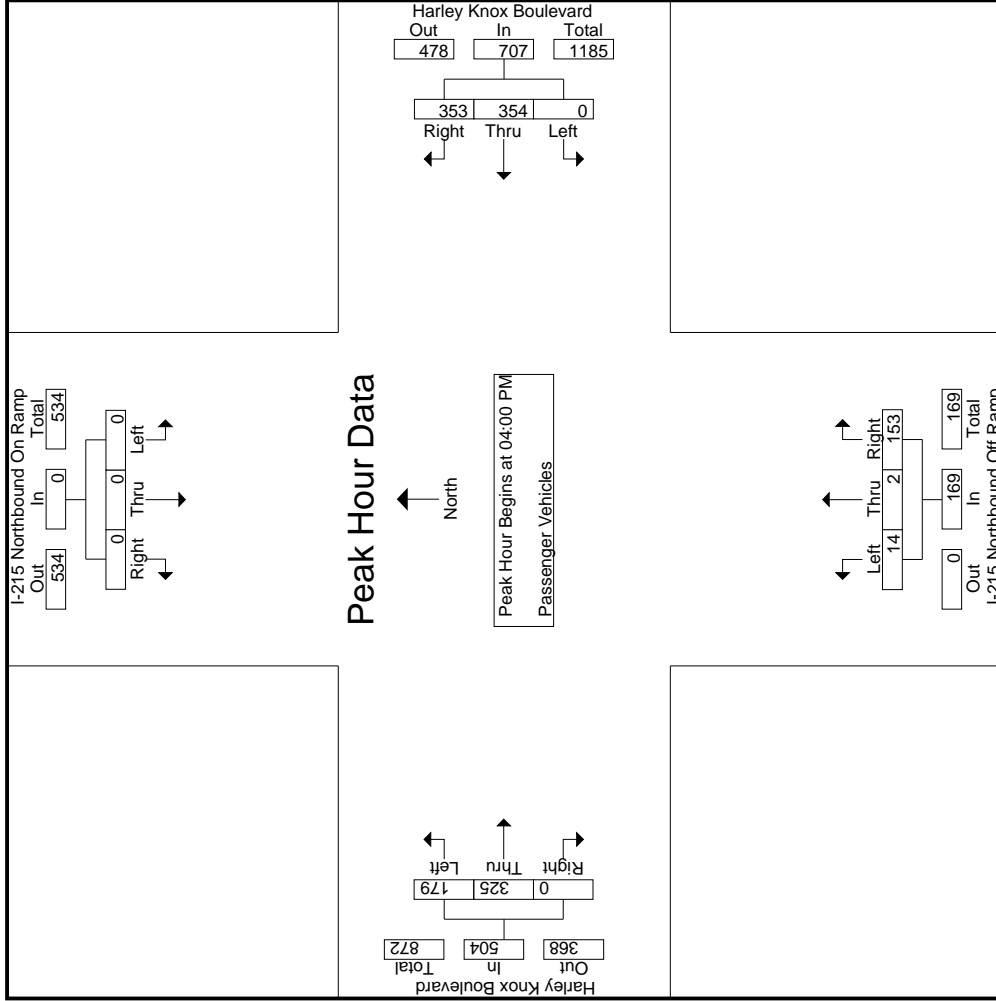
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



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File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear



Counts Unlimited  
 PO Box 1178  
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File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	8	0	43	51	93	0
+15 mins.	0	0	0	0	0	0	1	0	32	33	83	0
+30 mins.	0	0	0	118	246	128	2	1	44	47	72	0
+45 mins.	0	0	0	89	187	98	3	1	34	38	77	0
Total Volume	0	0	0	354	707	353	14	2	153	169	325	0
% App. Total	0	0	0	50.1	49.9	49.9	8.3	1.2	90.5	35.5	64.5	0
PHF	.000	.000	.000	.750	.718	.689	.438	.500	.869	.844	.874	.000

Groups Printed- Large 2 Axle Vehicles

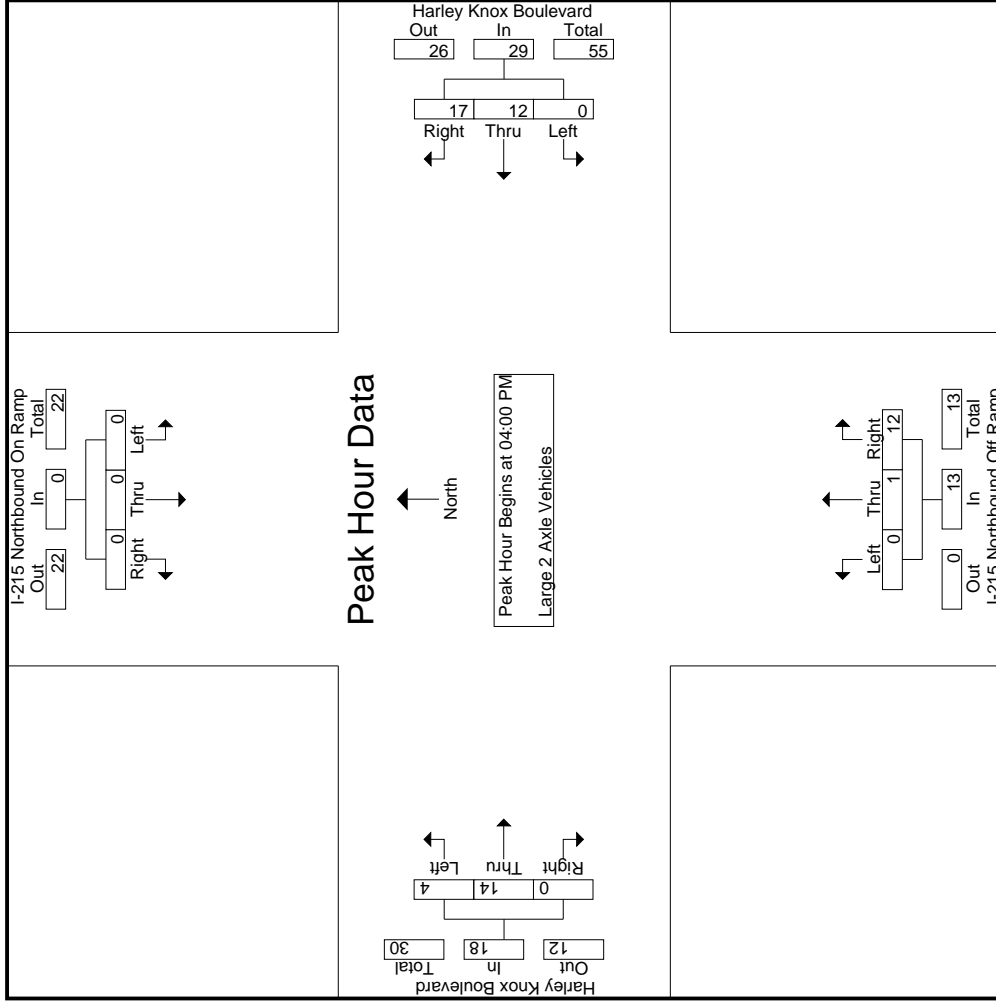
Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	3	2	8	0	0	2	2	6	0	0	4	18	22
04:15 PM	0	0	0	0	0	2	3	0	5	0	5	3	0	2	0	0	3	12	15
04:30 PM	0	0	0	0	0	3	1	0	4	0	4	3	0	4	0	0	3	13	16
04:45 PM	0	0	0	0	0	4	8	0	12	0	1	1	2	2	0	0	1	17	18
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>17</b>	<b>2</b>	<b>29</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>9</b>	<b>4</b>	<b>14</b>	<b>0</b>	<b>11</b>	<b>60</b>	<b>71</b>
05:00 PM	0	0	0	0	0	2	3	0	5	0	0	2	1	1	0	0	1	8	9
05:15 PM	0	0	0	0	0	2	3	0	5	0	2	1	2	3	0	0	1	11	12
05:30 PM	0	0	0	0	0	0	2	1	2	1	0	1	2	4	0	0	2	8	10
05:45 PM	0	0	0	0	0	0	0	2	2	0	4	1	4	1	1	0	2	8	9
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>1</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>5</b>	<b>35</b>	<b>40</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>27</b>	<b>3</b>	<b>43</b>	<b>1</b>	<b>1</b>	<b>21</b>	<b>13</b>	<b>6</b>	<b>23</b>	<b>0</b>	<b>16</b>	<b>95</b>	<b>111</b>
Approch %	0	0	0	0	0	37.2	62.8		45.3	4.3	4.3	91.3	23	20.7	79.3	0	30.5	14.4	85.6
Total %	0	0	0	0	0	16.8	28.4		45.3	1.1	1.1	22.1	24.2	6.3	24.2	0	30.5	14.4	85.6

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	3	5	2	8	0	0	2	2	6	0	0	4	18	22
04:15 PM	0	0	0	0	0	2	3	0	5	0	5	3	0	2	0	0	3	12	15
04:30 PM	0	0	0	0	0	3	1	0	4	0	4	3	0	4	0	0	3	13	16
04:45 PM	0	0	0	0	0	4	8	0	12	0	1	1	2	2	0	0	1	17	18
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>17</b>	<b>2</b>	<b>29</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>9</b>	<b>4</b>	<b>14</b>	<b>0</b>	<b>11</b>	<b>60</b>	<b>71</b>
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41.4</b>	<b>58.6</b>		<b>45.3</b>	<b>4.3</b>	<b>4.3</b>	<b>91.3</b>	<b>23</b>	<b>22.2</b>	<b>77.8</b>	<b>0</b>	<b>30.5</b>	<b>14.4</b>	<b>85.6</b>
PHF	.000	.000	.000	.000	.000	.750	.531		.604	.000	.250	.600	.650	.500	.583	.000	.563	.833	

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	3	5	8	8	0	0	2	2	2
+30 mins.	0	0	0	0	2	3	5	5	0	0	5	5	2
+45 mins.	0	0	0	0	3	1	4	4	0	1	4	4	0
	0	0	0	0	4	8	12	12	0	0	1	1	4
Total Volume	0	0	0	0	12	17	29	29	1	1	12	13	14
% App. Total	0	0	0	0	41.4	58.6	92.3	92.3	7.7	7.7	92.3	92.3	77.8
PHF	.000	.000	.000	.000	.000	.750	.531	.604	.000	.250	.600	.650	.500
													.000
													.563

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total						
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	1	0	0					
04:15 PM	0	0	0	0	0	0	1	4	0	5	0	0	0	0	10	5	0	0	5					
04:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	6	4	0	0	5					
04:45 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	7	3	0	0	3					
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>24</b>	<b>28</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>24</b>	<b>53</b>	<b>77</b>	
05:00 PM	0	0	0	0	0	0	1	2	0	3	0	0	1	1	1	2	5	0	0	7	1	11	12	
05:15 PM	0	0	0	0	0	0	1	2	0	3	0	0	8	6	8	1	7	0	0	8	6	19	25	
05:30 PM	0	0	0	0	0	0	2	0	0	4	0	0	0	0	0	0	2	0	0	2	0	6	6	
05:45 PM	0	0	0	0	0	0	2	3	0	5	0	0	2	1	2	0	0	0	0	1	1	1	8	9
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>11</b>	<b>3</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>8</b>	<b>44</b>	<b>52</b>	
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>18</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>32</b>	<b>39</b>	<b>4</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>32</b>	<b>97</b>	<b>129</b>	
<b>Approch %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30.8</b>	<b>69.2</b>	<b>0</b>	<b>26.8</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>32</b>	<b>40.2</b>	<b>12.5</b>	<b>87.5</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>24.8</b>	<b>75.2</b>	<b>0</b>	
<b>Total %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8.2</b>	<b>18.6</b>	<b>0</b>	<b>26.8</b>	<b>0</b>	<b>0</b>	<b>40.2</b>	<b>4.1</b>	<b>28.9</b>	<b>4.1</b>	<b>28.9</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>24.8</b>	<b>75.2</b>	<b>0</b>	

3.1-102

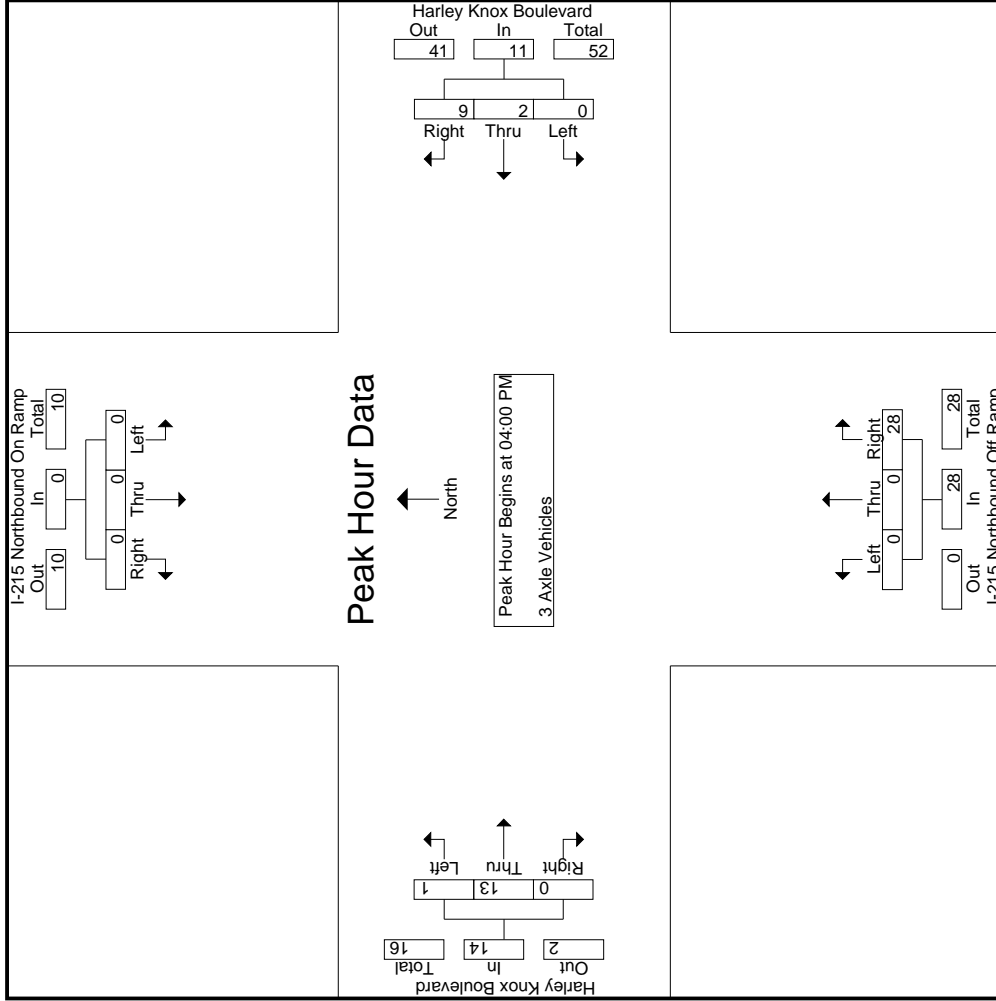
Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound										
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	1	0	0	1	0	1	6
04:15 PM	0	0	0	0	0	0	1	4	0	5	0	0	0	0	10	5	0	0	0	5	0	5	20
04:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	7	4	0	0	0	4	0	5	14
04:45 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	8	3	0	0	0	3	0	7	13
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>24</b>	<b>28</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>24</b>	<b>53</b>	<b>77</b>
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18.2</b>	<b>81.8</b>	<b>0</b>	<b>26.8</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>32</b>	<b>40.2</b>	<b>12.5</b>	<b>87.5</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>24.8</b>	<b>75.2</b>	<b>0</b>
<b>PHF</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.500</b>	<b>.563</b>	<b>.000</b>	<b>.550</b>	<b>.000</b>	<b>.000</b>	<b>.700</b>	<b>.000</b>	<b>.700</b>	<b>.250</b>	<b>.650</b>	<b>.000</b>	<b>.000</b>	<b>.700</b>	<b>.700</b>	<b>.663</b>	<b>.663</b>

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	2	0	0	3	0	1	0
+15 mins.	0	0	0	0	1	5	0	0	10	0	5	0
+30 mins.	0	0	0	0	2	2	0	0	7	1	4	0
+45 mins.	0	0	0	0	1	2	0	0	8	0	3	0
Total Volume	0	0	0	0	2	11	0	0	28	1	13	0
% App. Total	0	0	0	0	18.2	81.8	0	0	100	7.1	92.9	0
PHF	.000	.000	.000	.000	.500	.563	.000	.000	.700	.250	.650	.000



Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	2	9	0	11	1	0	0	0	1	3	11	0	14
04:15 PM	0	0	0	0	0	0	0	14	0	14	0	0	0	0	0	3	13	0	16
04:30 PM	0	0	0	0	0	3	12	1	15	2	0	0	2	2	2	1	7	0	8
04:45 PM	0	0	0	0	0	0	1	10	1	11	1	0	0	0	1	3	4	0	7
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>45</b>	<b>2</b>	<b>51</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>35</b>	<b>0</b>	<b>45</b>
05:00 PM	0	0	0	0	0	2	4	1	6	2	1	0	1	1	2	2	7	0	9
05:15 PM	0	0	0	0	0	4	10	0	14	0	0	0	0	0	0	2	7	0	9
05:30 PM	0	0	0	0	0	2	6	0	8	2	0	2	2	2	6	5	5	0	11
05:45 PM	0	0	0	0	0	0	1	7	0	8	0	0	1	1	1	1	3	0	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>27</b>	<b>1</b>	<b>36</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>11</b>	<b>22</b>	<b>0</b>	<b>33</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>72</b>	<b>3</b>	<b>87</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>21</b>	<b>57</b>	<b>0</b>	<b>78</b>
Approch %	0	0	0	0	0	17.2	82.8			5.2	66.7	0	3.4	0	26.9	73.1	0	0	0
Total %	0	0	0	0	0	8.6	41.4		50		3.4	0	3.4	0	12.1	32.8	0	44.8	4.9

3.1-105

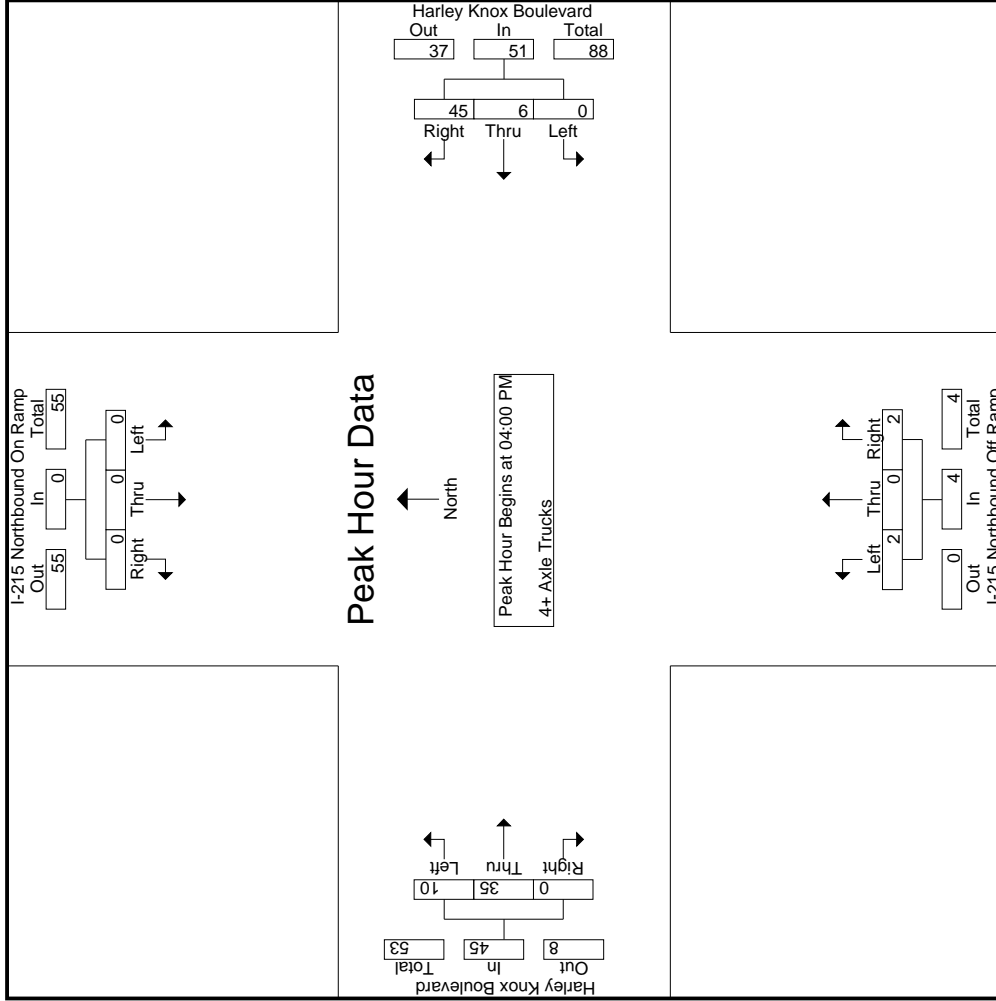
Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	2	9	0	11	1	0	0	0	1	3	11	0	14
04:15 PM	0	0	0	0	0	0	0	14	0	14	0	0	0	0	0	3	13	0	16
04:30 PM	0	0	0	0	0	3	12	1	15	2	0	0	2	2	2	1	7	0	8
04:45 PM	0	0	0	0	0	0	1	10	1	11	1	0	0	0	1	3	4	0	7
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>45</b>	<b>2</b>	<b>51</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>35</b>	<b>0</b>	<b>45</b>
% App. Total	0	0	0	0	0	11.8	88.2		88.2		50	0	50	0	22.2	77.8	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.804	.500	.850	.250	.500	.000	.250	.000	.500	.833	.673	.000	.703

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 02\_PER\_215N\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Harley Knox Boulevard Westbound			I-215 Northbound Off Ramp Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	0	1	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	0	0	0	0
Total Volume	0	0	0	0	6	45	51	0	2	0	35	0
% App. Total	0	0	0	0	11.8	88.2	88.2	0	50	0	77.8	0
PHF	.000	.000	.000	.000	.500	.804	.850	.000	.250	.500	.673	.000

Location: Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg I-215 Northbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Northbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg I-215 Northbound Ramps	East Leg Harley Knox Boulevard	South Leg I-215 Northbound Ramps	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	1	0	0	0	1

Location: Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound I-215 Northbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Northbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-215 Northbound Ramps			Westbound Harley Knox Boulevard			Northbound I-215 Northbound Ramps			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

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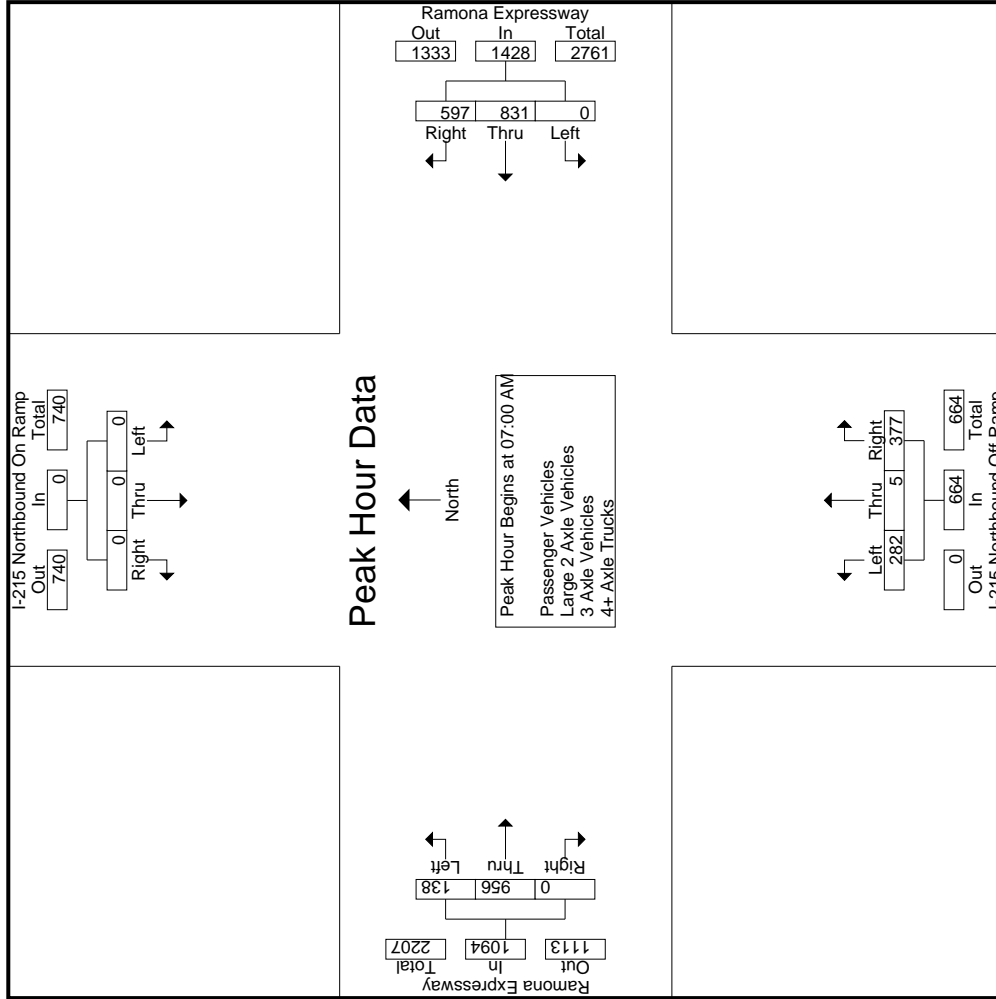
File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound						Ramona Expressway Westbound						I-215 Northbound Off Ramp Northbound						Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total					
07:00 AM	0	0	0	0	0		0	208	144	33	352		56	0	85	54	141		45	205	0	0	250		87	743	830	
07:15 AM	0	0	0	0	0		0	212	156	35	368		75	1	92	41	168		28	233	0	0	261		76	797	873	
07:30 AM	0	0	0	0	0		0	205	141	41	346		77	4	105	45	186		28	256	0	0	284		86	816	902	
07:45 AM	0	0	0	0	0		0	206	156	42	362		74	0	95	36	169		37	262	0	0	299		78	830	908	
Total	0	0	0	0	0		0	831	597	151	1428		282	5	377	176	664		138	956	0	0	1094		327	3186	3513	
08:00 AM	0	0	0	0	0		0	184	137	46	321		88	0	108	43	196		27	197	0	0	224		89	741	830	
08:15 AM	0	0	0	0	0		0	179	145	43	324		96	1	88	56	185		31	186	0	0	217		99	726	825	
08:30 AM	0	0	0	0	0		0	156	142	31	298		75	0	85	33	160		34	179	0	0	213		64	671	735	
08:45 AM	0	0	0	0	0		0	149	150	35	299		78	1	54	25	133		40	146	0	0	186		60	618	678	
Total	0	0	0	0	0		0	668	574	155	1242		337	2	335	157	674		132	708	0	0	840		312	2756	3068	
Grand Total	0	0	0	0	0		0	1499	1171	306	2670		619	7	712	333	1338		270	1664	0	0	1934		639	5942	6581	
Approach %	0	0	0	0	0		0	56.1	43.9		46.3	0.5	53.2		14	86	0	0	22.5	4.5	28	0	32.5	9.7	90.3			
Total %	0	0	0	0	0		0	25.2	19.7		44.9	10.4	0.1	12														
Passenger Vehicles	0	0	0	0	0		0	1389	1058		2715		576	5	656		1544		224	1484			1708		0	0	5967	
% Passenger Vehicles	0	0	0	0	0		0	92.7	90.4		87.6		93.1	71.4	92.1		92.2		83	89.2			88.3		0	0	90.7	
Large 2 Axle Vehicles	0	0	0	0	0		0	55	42		113		27	1	36		81		14	74			88		0	0	282	
% Large 2 Axle Vehicles	0	0	0	0	0		0	3.7	3.6		5.2		4.4	14.3	5.1		4.8		5.2	4.4			4.6		0	0	4.3	
3 Axle Vehicles	0	0	0	0	0		0	11	7		20		2	0	5		9		8	23			31		0	0	60	
% 3 Axle Vehicles	0	0	0	0	0		0	0.7	0.6		0.7		0.3	0	0.7		0.6		3	1.4			1.6		0	0	0.9	
4+ Axle Trucks	0	0	0	0	0		0	44	64		128		14	1	15		37		24	83			107		0	0	272	
% 4+ Axle Trucks	0	0	0	0	0		0	2.9	5.5		4.3		2.3	14.3	2.1		2.2		8.9	5			5.5		0	0	4.1	

Start Time	I-215 Northbound On Ramp Southbound						Ramona Expressway Westbound						I-215 Northbound Off Ramp Northbound						Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total						
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1	0	0	0	0	0		0	0	0	0	0		56	0	85		141	0	205		45	205	0	0	250		250	743	
07:00 AM	0	0	0	0	0		0	0	0	0	0		75	1	92		168	0	233		28	233	0	0	261		261	797	
07:15 AM	0	0	0	0	0		0	0	0	0	0		77	4	105		186	0	256		28	256	0	0	284		284	816	
07:30 AM	0	0	0	0	0		0	0	0	0	0		74	0	95		169	0	262		37	262	0	0	299		299	830	
07:45 AM	0	0	0	0	0		0	0	0	0	0		282	5	377		664	0	1094		138	956	0	0	3186		3186	3186	
Total Volume	0	0	0	0	0		0	0	0	0	0		282	5	377		664	0	1094		138	956	0	0	3186		3186	3186	
% App. Total	0	0	0	0	0		0	0	0	0	0		42.5	0.8	56.8		12.6	87.4	0	0	27.6	87.4	0	0	100.0	100.0			
PHF	.000	.000	.000	.000	.000		.000	.980	.957	.970	.898		.916	.313	.898		.892	.912	.000	.000	.767	.912	.000	.000	.915	.960			



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File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:30 AM			07:00 AM				
+0 mins.	0	0	0	0	208	144	352	77	4	105	186	205	0	250
+15 mins.	0	0	0	0	212	156	368	74	0	95	169	233	0	261
+30 mins.	0	0	0	0	205	141	346	88	0	108	196	256	0	284
+45 mins.	0	0	0	0	206	156	362	96	1	88	185	262	0	299
Total Volume	0	0	0	0	831	597	1428	335	5	396	736	956	0	1094
% App. Total	0	0	0	0	58.2	41.8	45.5	45.5	0.7	53.8	12.6	87.4	0	0
PHF	.000	.000	.000	.000	.980	.957	.970	.872	.313	.917	.939	.912	.000	.915



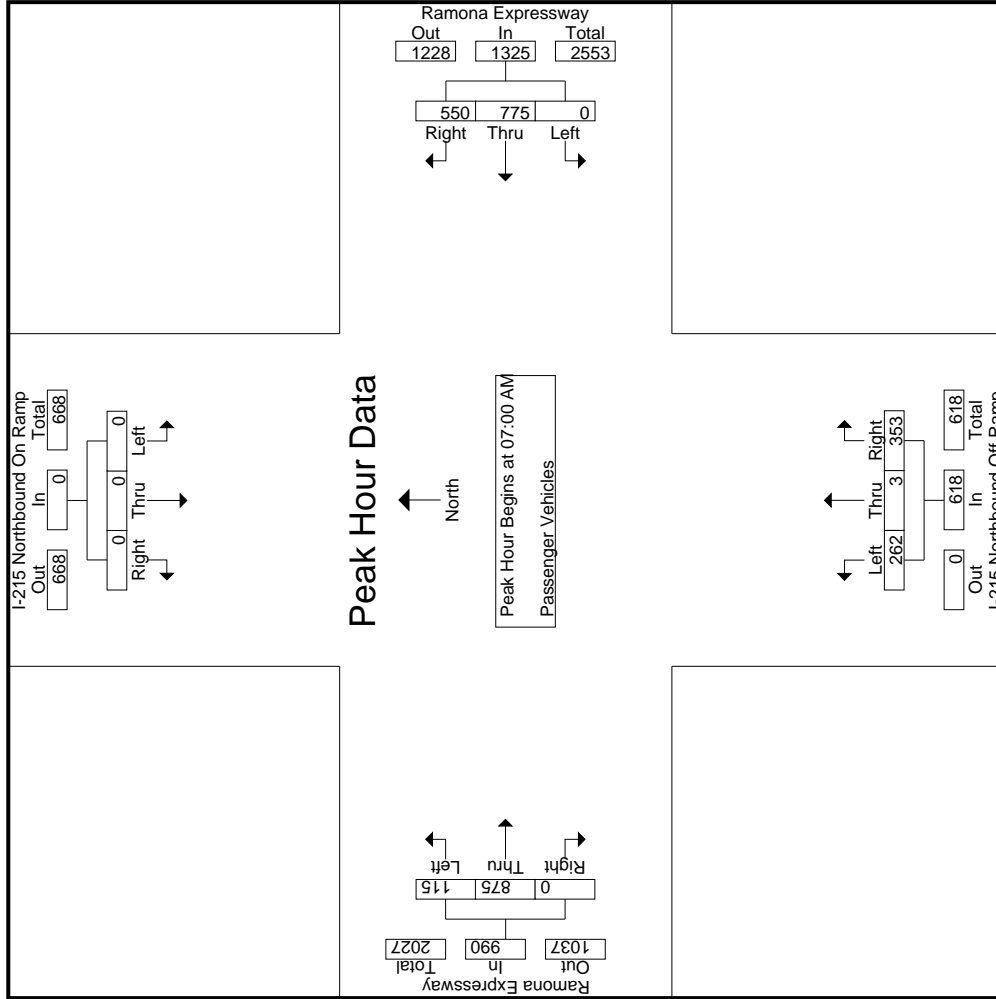
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File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Passenger Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Ramona Expressway Westbound					I-215 Northbound Off Ramp Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	192	134	30	326	52	0	79	50	131	38	189	0	0	227	80	684	764	
07:15 AM	0	0	0	0	0	0	195	144	32	339	67	1	84	38	152	22	210	0	0	232	70	723	793	
07:30 AM	0	0	0	0	0	0	188	128	35	316	74	2	103	43	179	23	238	0	0	261	78	756	834	
07:45 AM	0	0	0	0	0	0	200	144	38	344	69	0	87	33	156	32	238	0	0	270	71	770	841	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>775</b>	<b>550</b>	<b>135</b>	<b>1325</b>	<b>262</b>	<b>3</b>	<b>353</b>	<b>164</b>	<b>618</b>	<b>115</b>	<b>875</b>	<b>0</b>	<b>0</b>	<b>990</b>	<b>299</b>	<b>2933</b>	<b>3232</b>	
08:00 AM	0	0	0	0	0	0	170	125	40	295	81	0	96	38	177	21	180	0	0	201	78	673	751	
08:15 AM	0	0	0	0	0	0	167	126	38	293	90	1	78	51	169	27	160	0	0	187	89	649	738	
08:30 AM	0	0	0	0	0	0	139	125	28	264	69	0	79	30	148	31	146	0	0	177	58	589	647	
08:45 AM	0	0	0	0	0	0	138	132	27	270	74	1	50	24	125	30	123	0	0	153	51	548	599	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>614</b>	<b>508</b>	<b>133</b>	<b>1122</b>	<b>314</b>	<b>2</b>	<b>303</b>	<b>143</b>	<b>619</b>	<b>109</b>	<b>609</b>	<b>0</b>	<b>0</b>	<b>718</b>	<b>276</b>	<b>2459</b>	<b>2735</b>	
Grand Total	0	0	0	0	0	0	1389	1058	268	2447	576	5	656	307	1237	224	1484	0	0	1708	575	5392	5967	
Approch %	0	0	0	0	0	0	56.8	43.2		45.4	46.6	0.4	53		22.9	13.1	86.9	0	0	31.7	9.6	90.4		
Total %	0	0	0	0	0	0	25.8	19.6			10.7	0.1	12.2			4.2	27.5	0	0					
3.1-113																								
Start Time	I-215 Northbound On Ramp Southbound					Ramona Expressway Westbound					I-215 Northbound Off Ramp Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 07:00 AM																								
07:00 AM	0	0	0	0	0	0	192	134	326	52	0	79	50	131	38	189	0	0	227	80	684	764		
07:15 AM	0	0	0	0	0	0	195	144	339	67	1	84	38	152	22	210	0	0	232	70	723	793		
07:30 AM	0	0	0	0	0	0	188	128	316	74	2	103	43	179	23	238	0	0	261	78	756	834		
07:45 AM	0	0	0	0	0	0	200	144	344	69	0	87	33	156	32	238	0	0	270	71	770	841		
Total Volume	0	0	0	0	0	0	775	550	1325	262	3	353	164	618	115	875	0	0	990	299	2933	3232		
% App. Total	0	0	0	0	0	0	58.5	41.5	.963	.885	.375	.857			11.6	88.4	0	0	990					
PHF	.000	.000	.000	.000	.000	.000	.969	.955	.963	.885	.375	.857			.757	.919	.000	.000	.917			.952		



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File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			07:30 AM			07:00 AM				
+0 mins.	0	0	0	0	192	134	326	74	2	103	179	189	0	227
+15 mins.	0	0	0	0	195	144	339	69	0	87	156	210	0	232
+30 mins.	0	0	0	0	188	128	316	81	0	96	177	238	0	261
+45 mins.	0	0	0	0	200	144	344	90	1	78	169	238	0	270
Total Volume	0	0	0	0	775	550	1325	314	3	364	681	875	0	990
% App. Total	0	0	0	0	58.5	41.5	963	46.1	0.4	53.5	951	88.4	0	917
PHF	.000	.000	.000	.000	.969	.955	.963	.872	.375	.883	.951	.919	.000	.917

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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
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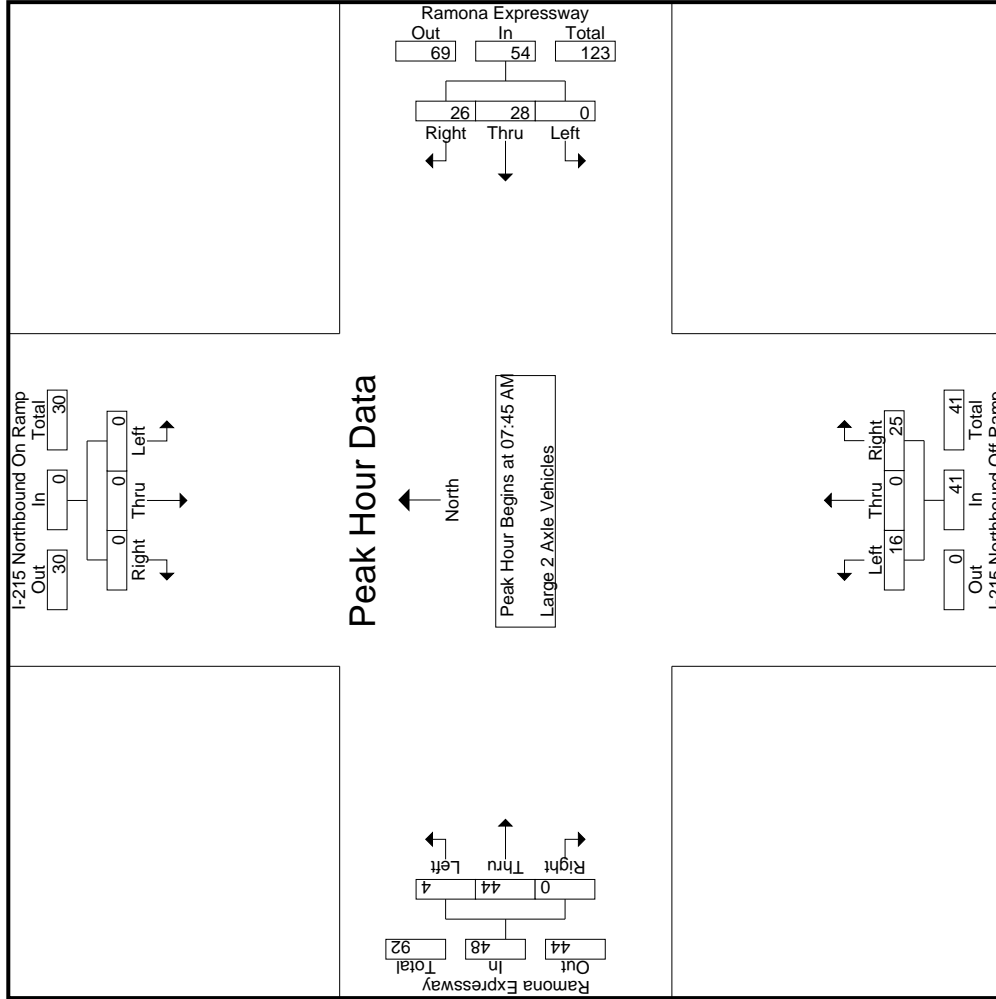
Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound				Int. Total						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total		Inclu. Total					
07:00 AM	0	0	0	0	0	4	1	0	5	2	0	3	2	0	5	3	3	0	0	6	2	16	18
07:15 AM	0	0	0	0	0	11	5	3	16	5	0	5	3	10	10	1	12	0	0	13	6	39	45
07:30 AM	0	0	0	0	0	7	3	1	10	2	1	2	2	0	5	2	7	0	0	9	3	24	27
07:45 AM	0	0	0	0	0	3	2	1	5	3	0	8	3	11	11	0	12	0	0	12	4	28	32
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>11</b>	<b>5</b>	<b>36</b>	<b>12</b>	<b>1</b>	<b>18</b>	<b>10</b>	<b>31</b>	<b>31</b>	<b>6</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>15</b>	<b>107</b>	<b>122</b>
08:00 AM	0	0	0	0	0	7	4	2	11	4	0	6	2	10	10	2	11	0	0	13	4	34	38
08:15 AM	0	0	0	0	0	8	11	4	19	4	0	7	4	11	11	0	13	0	0	13	8	43	51
08:30 AM	0	0	0	0	0	10	9	1	19	5	0	4	1	9	9	2	8	0	0	10	2	38	40
08:45 AM	0	0	0	0	0	5	7	4	12	2	0	1	0	3	3	4	8	0	0	12	4	27	31
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>31</b>	<b>11</b>	<b>61</b>	<b>15</b>	<b>0</b>	<b>18</b>	<b>7</b>	<b>33</b>	<b>33</b>	<b>8</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>18</b>	<b>142</b>	<b>160</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>42</b>	<b>16</b>	<b>97</b>	<b>27</b>	<b>1</b>	<b>36</b>	<b>17</b>	<b>64</b>	<b>64</b>	<b>14</b>	<b>74</b>	<b>0</b>	<b>0</b>	<b>88</b>	<b>33</b>	<b>249</b>	<b>282</b>
Apprch %	0	0	0	0	0	56.7	43.3		42.2	10.8	1.6	56.2		25.7	15.9	84.1	0	0	0	35.3	11.7	88.3	
Total %	0	0	0	0	0	22.1	16.9		39	10.8	0.4	14.5		25.7	5.6	29.7	0	0	0	35.3	11.7	88.3	

3.1-116

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound				Int. Total						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total		Inclu. Total					
07:45 AM	0	0	0	0	0	0	3	2	5	3	0	0	0	8	11	0	12	0	0	12	0	12	28
08:00 AM	0	0	0	0	0	0	7	4	11	4	4	0	6	6	10	2	11	0	0	11	0	13	34
08:15 AM	0	0	0	0	0	0	8	11	19	4	4	0	7	7	11	0	11	0	0	13	0	13	43
08:30 AM	0	0	0	0	0	0	10	9	19	5	5	0	4	4	9	2	8	0	0	8	0	10	38
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>26</b>	<b>54</b>	<b>16</b>	<b>0</b>	<b>25</b>	<b>41</b>	<b>41</b>	<b>41</b>	<b>4</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>48</b>	<b>143</b>
% App. Total	0	0	0	0	0	0	51.9	48.1	71.1	8.0	0.0	61		8.3	91.7	0	0	0	0	0	0	0	831
PHF	.000	.000	.000	.000	.000	.000	.700	.591	.711	.800	.000	.781		.932	.846	.000	.923	.000	.000	.000	.000	.923	.831

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:45 AM



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File Name : 10\_PER\_215N\_Ramona AM  
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 Start Date : 5/24/2018  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			Int. Total			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right				
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:															
	07:00 AM			08:00 AM			07:45 AM			07:45 AM						
+0 mins.	0	0	0	0	0	0	7	4	11	3	0	8	0	12	0	12
+15 mins.	0	0	0	0	0	0	8	11	19	4	0	6	2	11	0	13
+30 mins.	0	0	0	0	0	0	10	9	19	4	0	7	0	13	0	13
+45 mins.	0	0	0	0	0	0	5	7	12	5	0	4	2	8	0	10
Total Volume	0	0	0	0	0	0	30	31	61	16	0	25	4	44	0	48
% App. Total	0	0	0	0	0	0	49.2	50.8	80.3	39	0	61	8.3	91.7	0	92.3
PHF	.000	.000	.000	.000	.000	.000	.750	.705	.803	.800	.000	.781	.500	.846	.000	.923

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

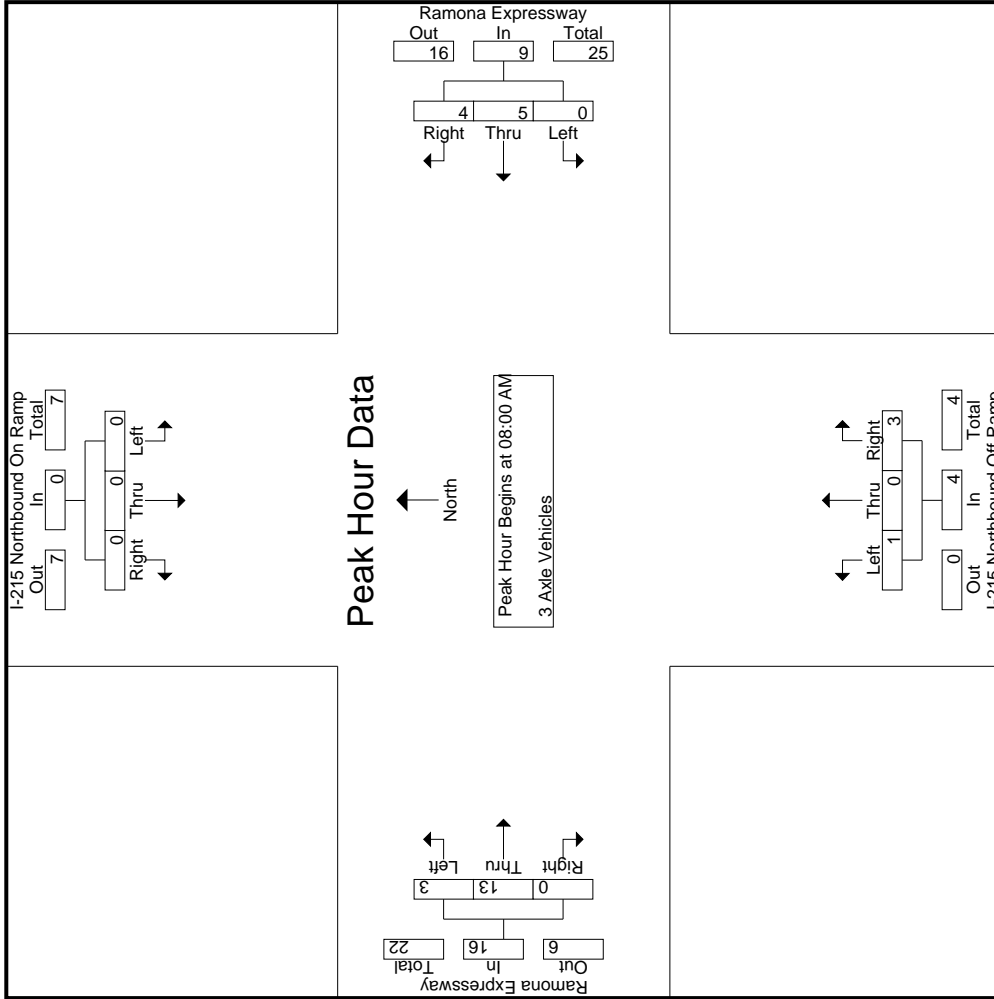
Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
07:00 AM	0	0	0	0	0	3	1	0	0	4	1	0	2	1	3	1	4	0	0	5	1	12	13
07:15 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
07:30 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2	1	0	0	3	0	5	5
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	3	0	0	5	0	6	6
<b>Total</b>	0	0	0	0	0	6	3	0	0	9	1	0	2	1	3	5	10	0	0	15	1	27	28
08:00 AM	0	0	0	0	0	2	0	0	0	2	0	0	2	1	2	0	2	0	0	2	1	6	7
08:15 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2	0	4	4
08:30 AM	0	0	0	0	0	2	1	1	0	3	0	0	0	0	0	1	8	0	0	9	1	12	13
08:45 AM	0	0	0	0	0	0	2	1	0	2	1	0	1	0	2	1	2	0	0	3	1	7	8
<b>Total</b>	0	0	0	0	0	5	4	2	0	9	1	0	3	1	4	3	13	0	0	16	3	29	32
<b>Grand Total</b>	0	0	0	0	0	11	7	2	2	18	2	0	5	2	7	8	23	0	0	31	4	56	60
Apprch %	0	0	0	0	0	61.1	38.9			28.6	0	71.4			12.5	25.8	74.2			55.4	6.7	93.3	
Total %	0	0	0	0	0	19.6	12.5			32.1	3.6	8.9			14.3	41.1							

3.1-119

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound				Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left				Thru	Right	RTOR	App. Total
08:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	2	6
08:15 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	1	0	0	2	0	2	4
08:30 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	9	12
08:45 AM	0	0	0	0	0	0	0	0	0	2	1	0	1	0	2	1	2	0	0	3	1	3	7
<b>Total Volume</b>	0	0	0	0	0	0	5	4	0	9	1	0	3	0	4	3	13	0	0	16	0	16	29
<b>% App. Total</b>	0	0	0	0	0	0	55.6	44.4		75	25	0	75		18.8	81.2							
PHF	.000	.000	.000	.000	.000	.000	.625	.500		.750	.250	.000	.375		.500	.750	.406			.000	.444	.604	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM





Counts Unlimited  
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File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			08:00 AM			07:45 AM				
+0 mins.	0	0	0	0	0	4	0	0	0	2	2	3	0	5
+15 mins.	0	0	0	0	2	2	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	1	2	0	0	0	0	0	1	0	2
+45 mins.	0	0	0	0	0	1	0	1	0	2	1	8	0	9
Total Volume	0	0	0	0	6	9	0	0	3	4	4	14	0	18
% App. Total	0	0	0	0	66.7	33.3	25	0	.75	22.2	77.8	0	0	0
PHF	.000	.000	.000	.000	.500	.563	.250	.000	.375	.500	.438	.000	.000	.500

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

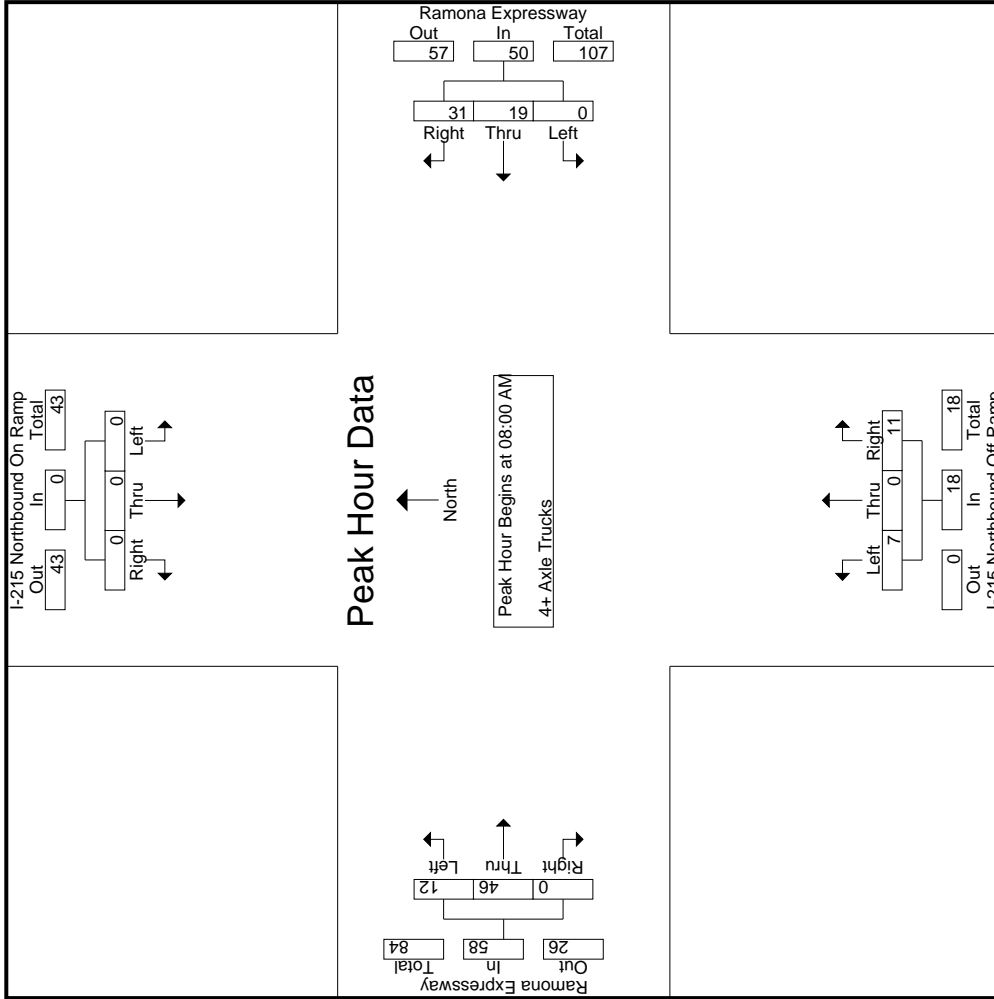
Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR						
07:00 AM	0	0	0	0	0	9	8	3	17	1	0	1	1	2	3	9	0	0	12	4	31	35
07:15 AM	0	0	0	0	0	4	7	0	11	3	0	3	0	6	5	9	0	0	14	0	31	31
07:30 AM	0	0	0	0	0	9	9	5	18	1	1	0	0	2	1	10	0	0	11	5	31	36
07:45 AM	0	0	0	0	0	3	9	3	12	2	0	0	0	2	3	9	0	0	12	3	26	29
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>33</b>	<b>11</b>	<b>58</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>12</b>	<b>12</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>12</b>	<b>119</b>	<b>131</b>
08:00 AM	0	0	0	0	0	5	8	4	13	3	0	4	2	7	4	4	0	0	8	6	28	34
08:15 AM	0	0	0	0	0	3	7	1	10	2	0	3	1	5	3	12	0	0	15	2	30	32
08:30 AM	0	0	0	0	0	5	7	1	12	1	0	2	2	3	0	17	0	0	17	3	32	35
08:45 AM	0	0	0	0	0	6	9	3	15	1	0	2	1	3	5	13	0	0	18	4	36	40
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>31</b>	<b>9</b>	<b>50</b>	<b>7</b>	<b>0</b>	<b>11</b>	<b>6</b>	<b>18</b>	<b>12</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>15</b>	<b>126</b>	<b>141</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>64</b>	<b>20</b>	<b>108</b>	<b>14</b>	<b>1</b>	<b>15</b>	<b>7</b>	<b>30</b>	<b>24</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>107</b>	<b>27</b>	<b>245</b>	<b>272</b>
Apprch %	0	0	0	0	0	40.7	59.3		44.1	46.7	3.3	50		12.2	22.4	77.6			43.7	9.9	90.1	
Total %	0	0	0	0	0	18	26.1		44.1	5.7	0.4	6.1		12.2	9.8	33.9			43.7	9.9	90.1	

3.1-122

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR						
08:00 AM	0	0	0	0	0	5	8	3	17	1	0	1	1	2	3	9	0	0	12	4	31	35
08:15 AM	0	0	0	0	0	4	7	0	11	3	0	3	0	6	5	9	0	0	14	0	31	31
08:30 AM	0	0	0	0	0	9	9	5	18	1	1	0	0	2	1	10	0	0	11	5	31	36
08:45 AM	0	0	0	0	0	3	9	3	12	2	0	0	0	2	3	9	0	0	12	3	26	29
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>33</b>	<b>11</b>	<b>58</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>12</b>	<b>12</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>12</b>	<b>119</b>	<b>131</b>
<b>% App. Total</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>.792</b>	<b>.861</b>	<b>.000</b>	<b>.688</b>	<b>.833</b>	<b>.583</b>	<b>.000</b>	<b>.688</b>	<b>.643</b>	<b>.600</b>	<b>.676</b>	<b>.000</b>	<b>.806</b>	<b>.000</b>	<b>.806</b>	<b>.000</b>	<b>.875</b>
PHF																						

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 08:00 AM



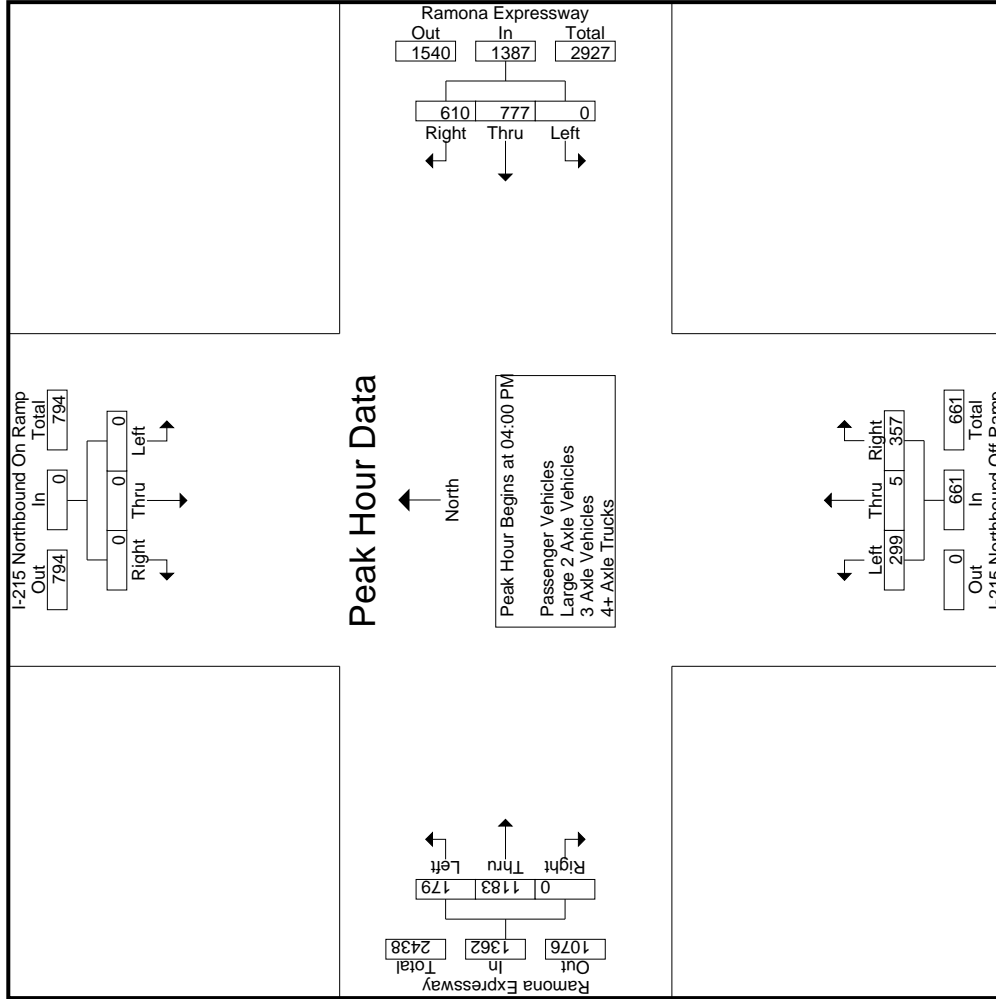
Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 10\_PER\_215N\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			08:00 AM			08:00 AM			
+0 mins.	0	0	0	0	0	8	17	0	0	4	4	0	8
+15 mins.	0	0	0	0	0	7	11	2	0	3	12	0	15
+30 mins.	0	0	0	0	0	9	18	1	0	2	17	0	17
+45 mins.	0	0	0	0	0	3	12	1	0	2	5	0	18
Total Volume	0	0	0	0	0	25	58	7	0	11	12	0	58
% App. Total	0	0	0	0	0	43.1	56.9	38.9	0	61.1	20.7	79.3	0
PHF	.000	.000	.000	.000	.000	.694	.806	.583	.000	.688	.600	.676	.806





Counts Unlimited  
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File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			Int. Total			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right				
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																
	04:00 PM			04:30 PM			04:00 PM			05:00 PM						
+0 mins.	0	0	0	0	0	0	228	164	392	80	1	123	47	306	0	353
+15 mins.	0	0	0	0	0	0	176	181	357	81	0	82	44	310	0	354
+30 mins.	0	0	0	0	0	0	174	147	321	65	0	80	36	324	0	360
+45 mins.	0	0	0	0	0	0	191	142	333	73	4	72	40	326	0	366
Total Volume	0	0	0	0	0	0	769	634	1403	299	5	357	167	1266	0	1433
% App. Total	0	0	0	0	0	0	54.8	45.2	895	45.2	0.8	54	11.7	88.3	0	97.9
PHF	.000	.000	.000	.000	.000	.000	.843	.876	.895	.923	.313	.726	.888	.971	.000	.979

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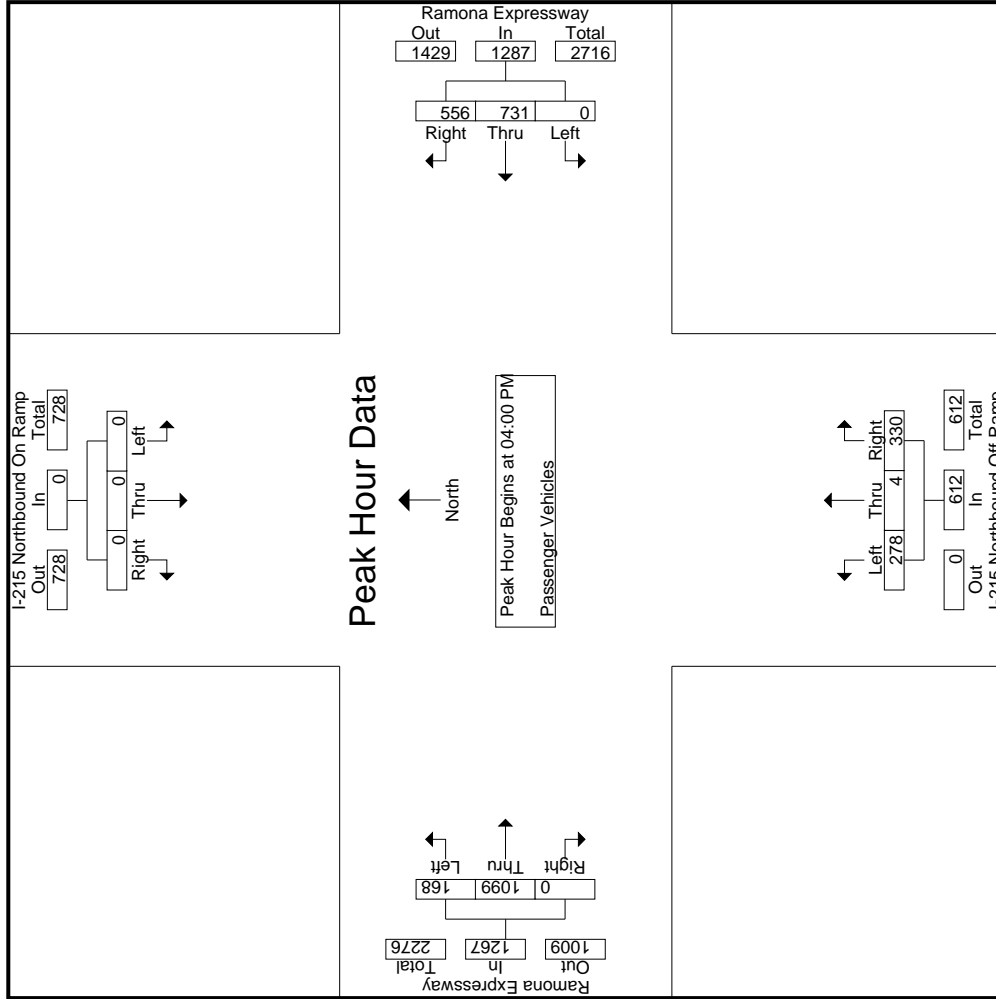
City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	I-215 Northbound On Ramp Southbound						Ramona Expressway Westbound						I-215 Northbound Off Ramp Northbound						Ramona Expressway Eastbound																	
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total													
04:00 PM	0	0	0	0	0	0	164	127	40	291	291	0	75	0	112	25	187	0	48	262	0	0	310	65	788	853										
04:15 PM	0	0	0	0	0	0	182	109	35	291	291	0	77	0	78	23	155	0	39	295	0	0	334	58	780	838										
04:30 PM	0	0	0	0	0	0	219	152	52	371	371	0	60	0	76	24	136	0	37	265	0	0	302	76	809	885										
04:45 PM	0	0	0	0	0	0	166	168	75	334	334	0	66	4	64	22	134	0	44	277	0	0	321	97	789	886										
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>731</b>	<b>556</b>	<b>202</b>	<b>1287</b>	<b>1287</b>	<b>0</b>	<b>278</b>	<b>4</b>	<b>330</b>	<b>94</b>	<b>612</b>	<b>0</b>	<b>168</b>	<b>1099</b>	<b>0</b>	<b>0</b>	<b>1267</b>	<b>296</b>	<b>3166</b>	<b>3462</b>										
05:00 PM	0	0	0	0	0	0	170	134	37	304	304	0	80	0	62	24	142	0	39	293	0	0	332	61	778	839										
05:15 PM	0	0	0	0	0	0	185	132	54	317	317	0	76	0	87	29	163	0	43	297	0	0	340	83	820	903										
05:30 PM	0	0	0	0	0	0	179	111	39	290	290	0	74	0	95	21	169	0	35	313	0	0	348	60	807	867										
05:45 PM	0	0	0	0	0	0	174	124	44	298	298	0	70	0	90	26	160	0	36	312	0	0	348	70	806	876										
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>708</b>	<b>501</b>	<b>174</b>	<b>1209</b>	<b>1209</b>	<b>0</b>	<b>300</b>	<b>0</b>	<b>334</b>	<b>100</b>	<b>634</b>	<b>0</b>	<b>153</b>	<b>1215</b>	<b>0</b>	<b>0</b>	<b>1368</b>	<b>274</b>	<b>3211</b>	<b>3485</b>										
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1439</b>	<b>1057</b>	<b>376</b>	<b>2496</b>	<b>2496</b>	<b>0</b>	<b>578</b>	<b>4</b>	<b>664</b>	<b>194</b>	<b>1246</b>	<b>0</b>	<b>321</b>	<b>2314</b>	<b>0</b>	<b>0</b>	<b>2635</b>	<b>570</b>	<b>6377</b>	<b>6947</b>										
Apprch %	0	0	0	0	0	0	57.7	42.3		39.1			46.4	0.3	53.3		19.5		12.2	87.8	0	0	41.3	8.2	91.8											
Total %	0	0	0	0	0	0	22.6	16.6					9.1	0.1	10.4				5	36.3	0	0														
3.1-128																																				
Start Time	I-215 Northbound On Ramp Southbound						Ramona Expressway Westbound						I-215 Northbound Off Ramp Northbound						Ramona Expressway Eastbound																	
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total													
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	164	127	40	291	291	0	75	0	112	25	187	0	48	262	0	0	310	65	788	853										
04:15 PM	0	0	0	0	0	0	182	109	35	291	291	0	77	0	78	23	155	0	39	295	0	0	334	58	780	838										
04:30 PM	0	0	0	0	0	0	219	152	52	371	371	0	60	0	76	24	136	0	37	265	0	0	302	76	809	885										
04:45 PM	0	0	0	0	0	0	166	168	75	334	334	0	66	4	64	22	134	0	44	277	0	0	321	97	789	886										
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>731</b>	<b>556</b>	<b>202</b>	<b>1287</b>	<b>1287</b>	<b>0</b>	<b>278</b>	<b>4</b>	<b>330</b>	<b>94</b>	<b>612</b>	<b>0</b>	<b>168</b>	<b>1099</b>	<b>0</b>	<b>0</b>	<b>1267</b>	<b>296</b>	<b>3166</b>											
% App. Total	0	0	0	0	0	0	56.8	43.2		39.1			45.4	0.7	53.9		19.5		13.3	86.7	0	0	41.3	8.2	91.8											
PHF	.000	.000	.000	.000	.000	.000	.834	.827	.867	.867	.867	.867	.903	.250	.737	.818	.818	.875	.931	.000	.000	.948	.948	.978												





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:00 PM													
+0 mins.	0	0	0	0	164	127	291	75	0	112	0	262	0	310
+15 mins.	0	0	0	0	182	109	291	77	0	78	0	295	0	334
+30 mins.	0	0	0	0	219	152	371	60	0	76	0	265	0	302
+45 mins.	0	0	0	0	166	168	334	66	4	64	4	277	0	321
Total Volume	0	0	0	0	731	556	1287	278	4	330	4	1099	0	1267
% App. Total	0	0	0	0	56.8	43.2	86.7	45.4	0.7	53.9	0.7	86.7	0	94.8
PHF	.000	.000	.000	.000	.834	.827	.867	.903	.250	.737	.250	.931	.000	.948

Counts Unlimited  
 PO Box 1178  
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File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

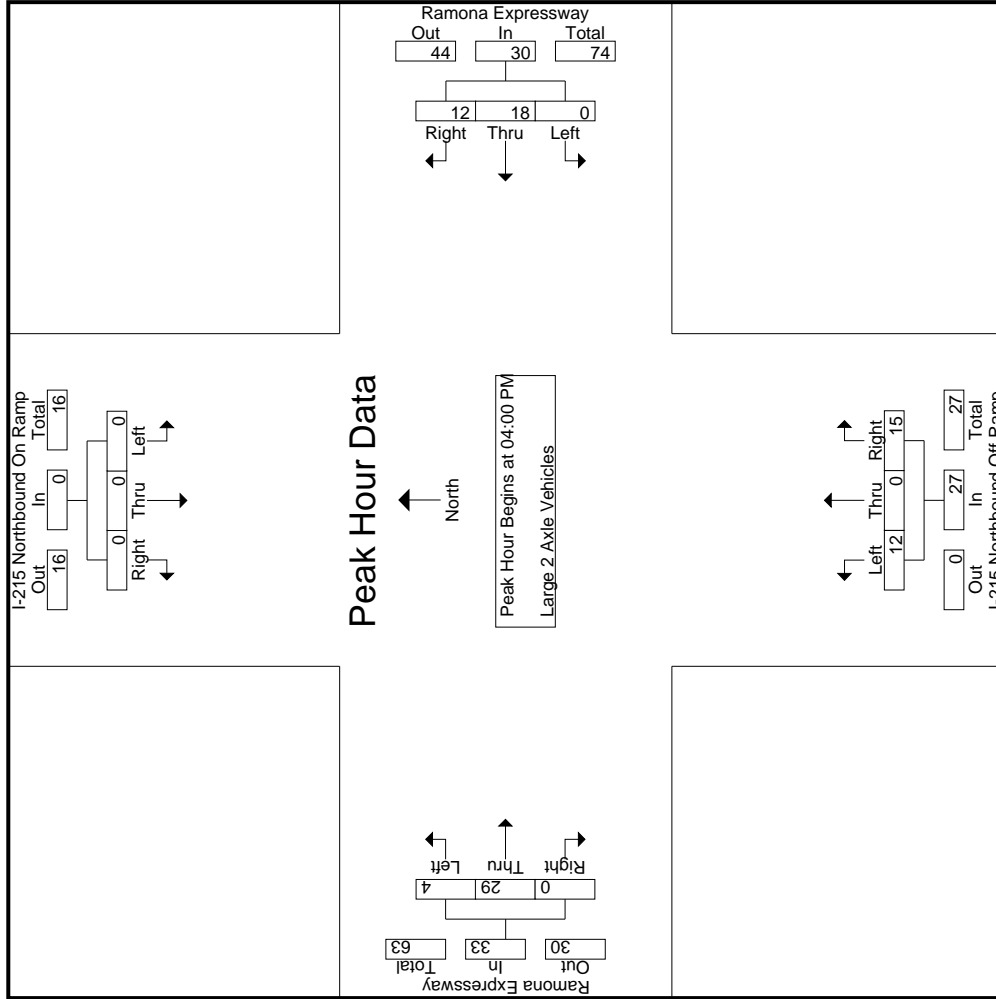
Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound				Int. Total				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR					
04:00 PM	0	0	0	0	0	7	3	2	10	3	0	7	4	10	0	10	0	10	6	30	36
04:15 PM	0	0	0	0	0	4	3	2	7	3	0	2	0	5	1	7	0	8	2	20	22
04:30 PM	0	0	0	0	0	2	3	2	5	3	0	2	0	5	3	7	0	10	2	20	22
04:45 PM	0	0	0	0	0	5	3	2	8	3	0	4	1	7	0	5	0	5	3	20	23
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>12</b>	<b>8</b>	<b>30</b>	<b>30</b>	<b>12</b>	<b>0</b>	<b>15</b>	<b>5</b>	<b>27</b>	<b>4</b>	<b>29</b>	<b>0</b>	<b>33</b>	<b>13</b>	<b>90</b>	<b>103</b>
05:00 PM	0	0	0	0	0	2	4	1	6	0	0	2	0	2	2	4	0	6	1	14	15
05:15 PM	0	0	0	0	0	4	2	1	6	0	0	1	1	1	0	6	0	6	2	13	15
05:30 PM	0	0	0	0	0	3	1	0	4	1	0	1	0	2	0	3	0	3	0	9	9
05:45 PM	0	0	0	0	0	5	2	1	7	0	0	1	0	1	0	4	0	4	1	12	13
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>9</b>	<b>3</b>	<b>23</b>	<b>23</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>17</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>48</b>	<b>52</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>21</b>	<b>11</b>	<b>53</b>	<b>53</b>	<b>13</b>	<b>0</b>	<b>20</b>	<b>6</b>	<b>33</b>	<b>6</b>	<b>46</b>	<b>0</b>	<b>52</b>	<b>17</b>	<b>138</b>	<b>155</b>
Apprch %	0	0	0	0	60.4	39.6				39.4	0	60.6			11.5	88.5	0				
Total %	0	0	0	0	23.2	15.2				9.4	0	14.5			4.3	33.3	0	37.7	11	89	

3.1-131

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound				Int. Total				
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR					
04:00 PM	0	0	0	0	0	7	3	2	10	3	0	7	4	10	0	10	0	10	6	30	36
04:15 PM	0	0	0	0	0	4	3	2	7	3	0	2	0	5	1	7	0	8	2	20	22
04:30 PM	0	0	0	0	0	2	3	2	5	3	0	2	0	5	3	7	0	10	2	20	22
04:45 PM	0	0	0	0	0	5	3	2	8	3	0	4	1	7	0	5	0	5	3	20	23
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>12</b>	<b>8</b>	<b>30</b>	<b>30</b>	<b>12</b>	<b>0</b>	<b>15</b>	<b>5</b>	<b>27</b>	<b>4</b>	<b>29</b>	<b>0</b>	<b>33</b>	<b>13</b>	<b>90</b>	<b>103</b>
% App. Total	0	0	0	0	0	60	40			44.4	0	55.6			12.1	87.9	0				
PHF	.000	.000	.000	.000	.000	.643	1.00			1.00	.000	.536			.333	.725	.000	.825			.750

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	I-215 Northbound Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:00 PM			04:00 PM			04:00 PM			04:00 PM					
+0 mins.	0	0	0	7	3	10	3	0	7	0	0	10	0	0	10
+15 mins.	0	0	0	4	3	7	3	0	2	0	1	5	7	0	8
+30 mins.	0	0	0	2	3	5	3	0	2	0	3	5	7	0	10
+45 mins.	0	0	0	5	3	8	3	0	4	0	0	7	5	0	5
Total Volume	0	0	0	18	12	30	12	0	15	0	4	27	29	0	33
% App. Total	0	0	0	60	40	44.4	44.4	0	55.6	0	12.1	87.9	87.9	0	0
PHF	.000	.000	.000	.643	1.000	.750	1.000	.000	.536	.000	.333	.675	.725	.000	.825

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

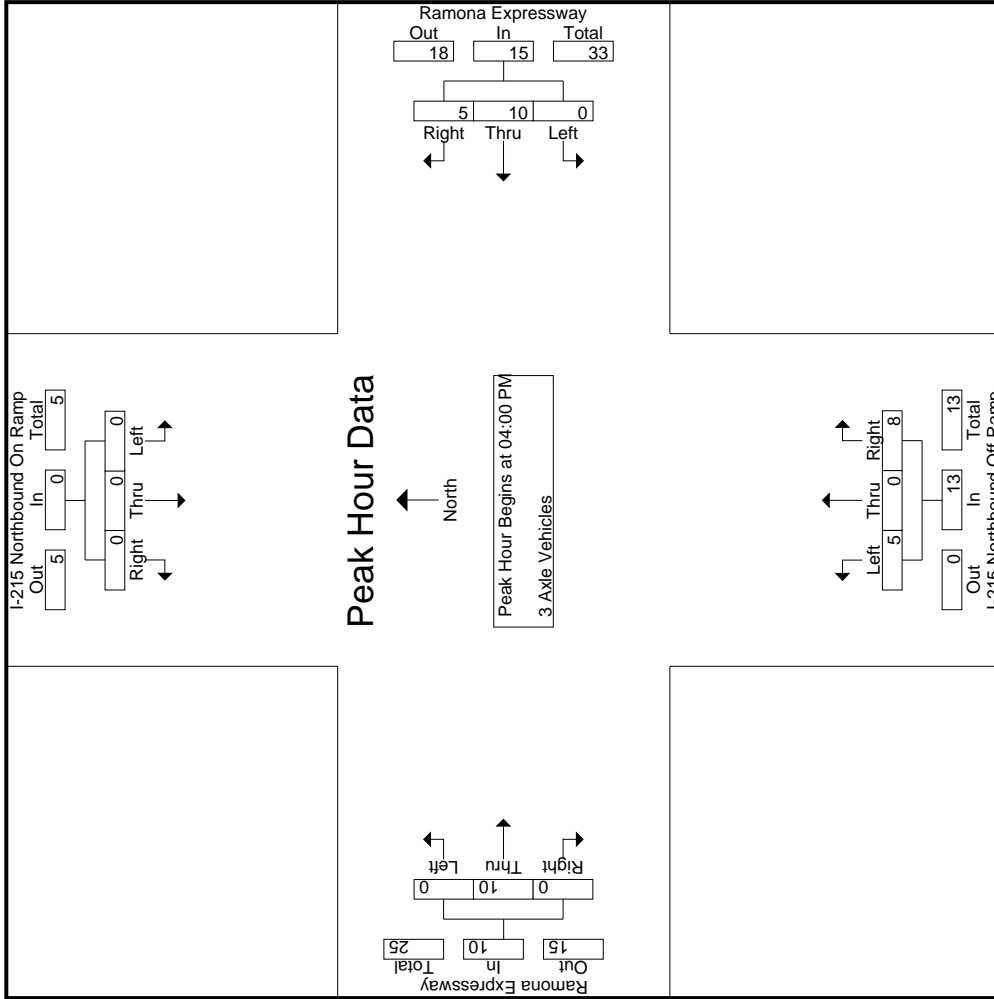
Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR		
04:00 PM	0	0	0	0	0	5	2	1	7	1	0	2	0	3	0	3	0	3
04:15 PM	0	0	0	0	0	2	1	0	3	0	0	1	0	1	0	2	0	2
04:30 PM	0	0	0	0	0	1	0	0	1	1	0	2	1	3	0	3	0	3
04:45 PM	0	0	0	0	0	2	2	0	4	3	0	3	1	6	0	2	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>15</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>
05:00 PM	0	0	0	0	0	0	1	0	1	0	0	1	0	1	2	0	0	3
05:15 PM	0	0	0	0	0	0	3	1	3	0	0	1	0	1	0	2	0	2
05:30 PM	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	1	0
05:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>8</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>10</b>	<b>2</b>	<b>21</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>15</b>	<b>1</b>	<b>17</b>	<b>0</b>	<b>18</b>
Apprch %	0	0	0	0	0	52.4	47.6		33.3	0	66.7	0	18.5	27.8	5.6	94.4	0	33.3
Total %	0	0	0	0	0	20.4	18.5		38.9	9.3	0	18.5		27.8	1.9	31.5	0	6.9

3.1-134

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR		
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	2	1	3	0	0	1	0	1	0	2	0	2
04:30 PM	0	0	0	0	0	0	0	1	1	1	0	2	1	3	0	3	0	3
04:45 PM	0	0	0	0	0	0	2	2	4	3	0	3	1	6	0	2	0	2
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>15</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>10</b>
% App. Total	0	0	0	0	0	66.7	33.3		33.3	0	61.5	0	18.5	27.8	5.6	94.4	0	33.3
PHF	.000	.000	.000	.000	.000	.500	.625		.536	.417	.000	.667		.542	.000	.833	.000	.833

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



Counts Unlimited  
 PO Box 11778  
 Corona, CA 92878  
 (951) 268-6268

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			
+0 mins.	0	0	0	0	0	7	1	0	2	3	0	3	3
+15 mins.	0	0	0	0	0	3	0	0	1	1	0	2	2
+30 mins.	0	0	0	0	0	1	1	0	2	3	0	3	3
+45 mins.	0	0	0	0	0	4	3	0	3	6	0	2	2
Total Volume	0	0	0	0	10	15	5	0	8	13	0	10	10
% App. Total	0	0	0	0	66.7	33.3	38.5	0	61.5	54.2	0	100	0
PHF	.000	.000	.000	.000	.500	.536	.417	.000	.667	.542	.000	.833	.833



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

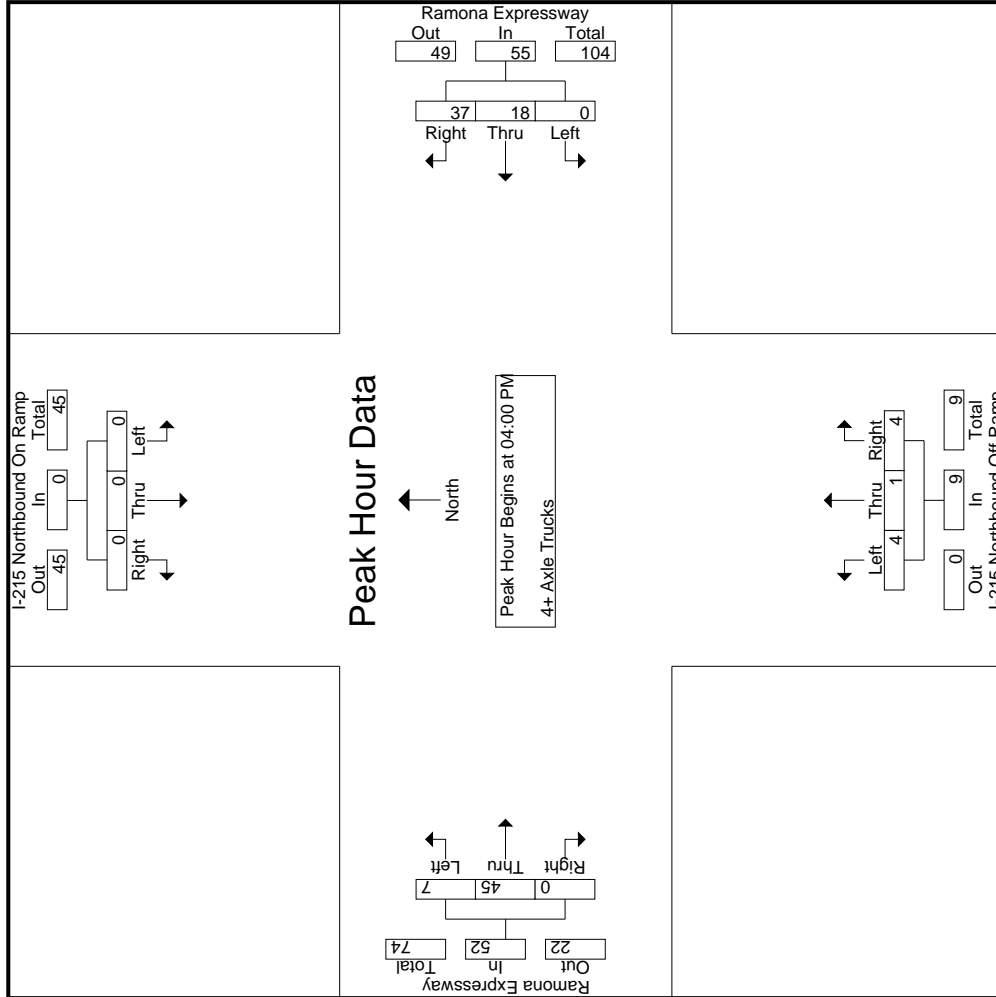
Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR					
04:00 PM	0	0	0	0	0	6	10	4	16	1	1	2	0	4	3	14	0	17	4	37	41
04:15 PM	0	0	0	0	0	3	10	2	13	1	0	1	0	2	3	8	0	11	2	26	28
04:30 PM	0	0	0	0	0	6	9	1	15	1	0	0	0	1	0	12	0	12	1	28	29
04:45 PM	0	0	0	0	0	3	8	2	11	1	0	1	0	2	1	11	0	12	2	25	27
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>37</b>	<b>9</b>	<b>55</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>9</b>	<b>7</b>	<b>45</b>	<b>0</b>	<b>52</b>	<b>9</b>	<b>116</b>	<b>125</b>
05:00 PM	0	0	0	0	0	2	8	3	10	0	0	2	0	2	5	7	0	12	3	24	27
05:15 PM	0	0	0	0	0	2	5	2	7	1	0	0	0	1	1	5	0	6	2	14	16
05:30 PM	0	0	0	0	0	2	10	3	12	0	0	4	2	4	1	7	0	8	5	24	29
05:45 PM	0	0	0	0	0	3	4	1	7	4	0	0	0	4	4	8	0	12	1	23	24
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>27</b>	<b>9</b>	<b>36</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>11</b>	<b>11</b>	<b>27</b>	<b>0</b>	<b>38</b>	<b>11</b>	<b>85</b>	<b>96</b>
Grand Total	0	0	0	0	0	27	64	18	91	9	1	10	2	20	18	72	0	90	20	201	221
Apprch %	0	0	0	0	0	29.7	70.3		45.3	4.5	0.5	5		10	9	35.8	0	44.8	9	91	
Total %	0	0	0	0	0	13.4	31.8		45.3	4.5	0.5	5		10	9	35.8	0	44.8	9	91	

3.1-137

Start Time	I-215 Northbound On Ramp Southbound				Ramona Expressway Westbound				I-215 Northbound Off Ramp Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR					
04:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	4	3	14	0	17	4	37	41
04:15 PM	0	0	0	0	0	3	10	2	13	1	0	1	0	2	3	8	0	11	2	26	28
04:30 PM	0	0	0	0	0	6	9	1	15	1	0	0	0	1	0	12	0	12	1	28	29
04:45 PM	0	0	0	0	0	3	8	2	11	1	0	1	0	2	1	11	0	12	2	25	27
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>37</b>	<b>9</b>	<b>55</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>9</b>	<b>7</b>	<b>45</b>	<b>0</b>	<b>52</b>	<b>9</b>	<b>116</b>	<b>125</b>
% App. Total	0	0	0	0	0	32.7	67.3		45.3	4.5	0.5	5		10	9	35.8	0	44.8	9	91	
PHF	.000	.000	.000	.000	.000	.750	.925		.859	1.00	.250	.500		.563	.583	.804	.000	.765	.000	.784	

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 10\_PER\_215N\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	I-215 Northbound Southbound			Ramona Expressway Westbound			I-215 Northbound Off Ramp Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	0	0	0	0	0	0	04:00 PM	1	1	2	3	14	17
+15 mins.	0	0	0	0	0	0	04:00 PM	1	0	1	3	8	11
+30 mins.	0	0	0	0	0	0	04:00 PM	1	0	0	0	12	12
+45 mins.	0	0	0	0	0	0	04:00 PM	1	0	1	1	11	12
Total Volume	0	0	0	0	0	0	04:00 PM	4	1	4	7	45	52
% App. Total	0	0	0	0	0	0	04:00 PM	44.4	11.1	44.4	13.5	86.5	0
PHF	.000	.000	.000	.000	.000	.000	04:00 PM	1.000	.250	.500	.583	.804	.765

Location: City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg I-215 Northbound Ramps	East Leg Ramona Expressway	South Leg I-215 Northbound Ramps	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	0	0	1	0	1
<b>TOTAL VOLUMES:</b>	1	0	1	0	2

	North Leg I-215 Northbound Ramps	East Leg Ramona Expressway	South Leg I-215 Northbound Ramps	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	1	0	0	0	1
4:30 PM	2	0	0	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	3	0	0	0	3

Location: City of Perris  
 N/S: I-215 Northbound Ramps  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound I-215 Northbound Ramps			Westbound Ramona Expressway			Northbound I-215 Northbound Ramps			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-215 Northbound Ramps			Westbound Ramona Expressway			Northbound I-215 Northbound Ramps			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

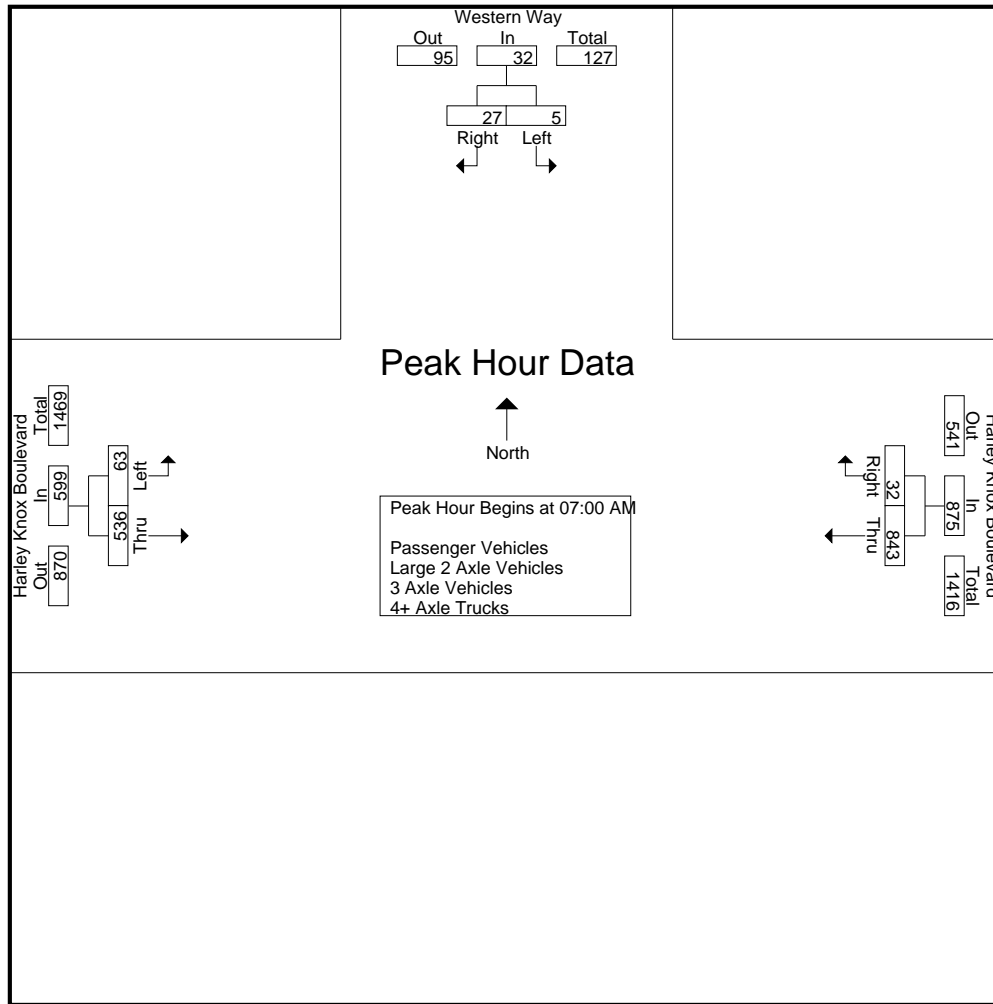
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	6	7	249	8	257	11	130	141	405
07:15 AM	1	9	10	230	3	233	9	123	132	375
07:30 AM	2	4	6	188	8	196	17	162	179	381
07:45 AM	1	8	9	176	13	189	26	121	147	345
Total	5	27	32	843	32	875	63	536	599	1506
08:00 AM	4	10	14	133	7	140	14	110	124	278
08:15 AM	3	14	17	104	12	116	18	96	114	247
08:30 AM	7	15	22	89	6	95	20	93	113	230
08:45 AM	3	6	9	87	6	93	12	111	123	225
Total	17	45	62	413	31	444	64	410	474	980
Grand Total	22	72	94	1256	63	1319	127	946	1073	2486
Apprch %	23.4	76.6		95.2	4.8		11.8	88.2		
Total %	0.9	2.9	3.8	50.5	2.5	53.1	5.1	38.1	43.2	
Passenger Vehicles	19	42	61	1086	56	1142	103	764	867	2070
% Passenger Vehicles	86.4	58.3	64.9	86.5	88.9	86.6	81.1	80.8	80.8	83.3
Large 2 Axle Vehicles	2	18	20	36	5	41	15	46	61	122
% Large 2 Axle Vehicles	9.1	25	21.3	2.9	7.9	3.1	11.8	4.9	5.7	4.9
3 Axle Vehicles	0	5	5	47	1	48	4	38	42	95
% 3 Axle Vehicles	0	6.9	5.3	3.7	1.6	3.6	3.1	4	3.9	3.8
4+ Axle Trucks	1	7	8	87	1	88	5	98	103	199
% 4+ Axle Trucks	4.5	9.7	8.5	6.9	1.6	6.7	3.9	10.4	9.6	8

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	6	7	<b>249</b>	8	<b>257</b>	11	130	141	<b>405</b>
07:15 AM	1	9	<b>10</b>	230	3	233	9	123	132	375
07:30 AM	2	4	6	188	8	196	17	<b>162</b>	<b>179</b>	381
07:45 AM	1	8	9	176	<b>13</b>	189	<b>26</b>	121	147	345
Total Volume	5	27	32	843	32	875	63	536	599	1506
% App. Total	15.6	84.4		96.3	3.7		10.5	89.5		
PHF	.625	.750	.800	.846	.615	.851	.606	.827	.837	.930

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:45 AM			07:00 AM			07:00 AM		
+0 mins.	1	8	9	<b>249</b>	8	<b>257</b>	11	130	141
+15 mins.	4	10	14	230	3	233	9	123	132
+30 mins.	3	14	17	188	8	196	17	<b>162</b>	<b>179</b>
+45 mins.	<b>7</b>	<b>15</b>	<b>22</b>	176	<b>13</b>	189	<b>26</b>	121	147
Total Volume	15	47	62	843	32	875	63	536	599
% App. Total	24.2	75.8		96.3	3.7		10.5	89.5	
PHF	.536	.783	.705	.846	.615	.851	.606	.827	.837

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	1	3	4	224	6	230	9	110	119	353
07:15 AM	1	3	4	213	2	215	6	108	114	333
07:30 AM	1	0	1	162	7	169	13	139	152	322
07:45 AM	0	5	5	155	12	167	26	102	128	300
Total	3	11	14	754	27	781	54	459	513	1308
08:00 AM	4	7	11	107	7	114	9	84	93	218
08:15 AM	3	10	13	84	11	95	15	70	85	193
08:30 AM	7	11	18	74	6	80	16	72	88	186
08:45 AM	2	3	5	67	5	72	9	79	88	165
Total	16	31	47	332	29	361	49	305	354	762
Grand Total	19	42	61	1086	56	1142	103	764	867	2070
Apprch %	31.1	68.9		95.1	4.9		11.9	88.1		
Total %	0.9	2	2.9	52.5	2.7	55.2	5	36.9	41.9	

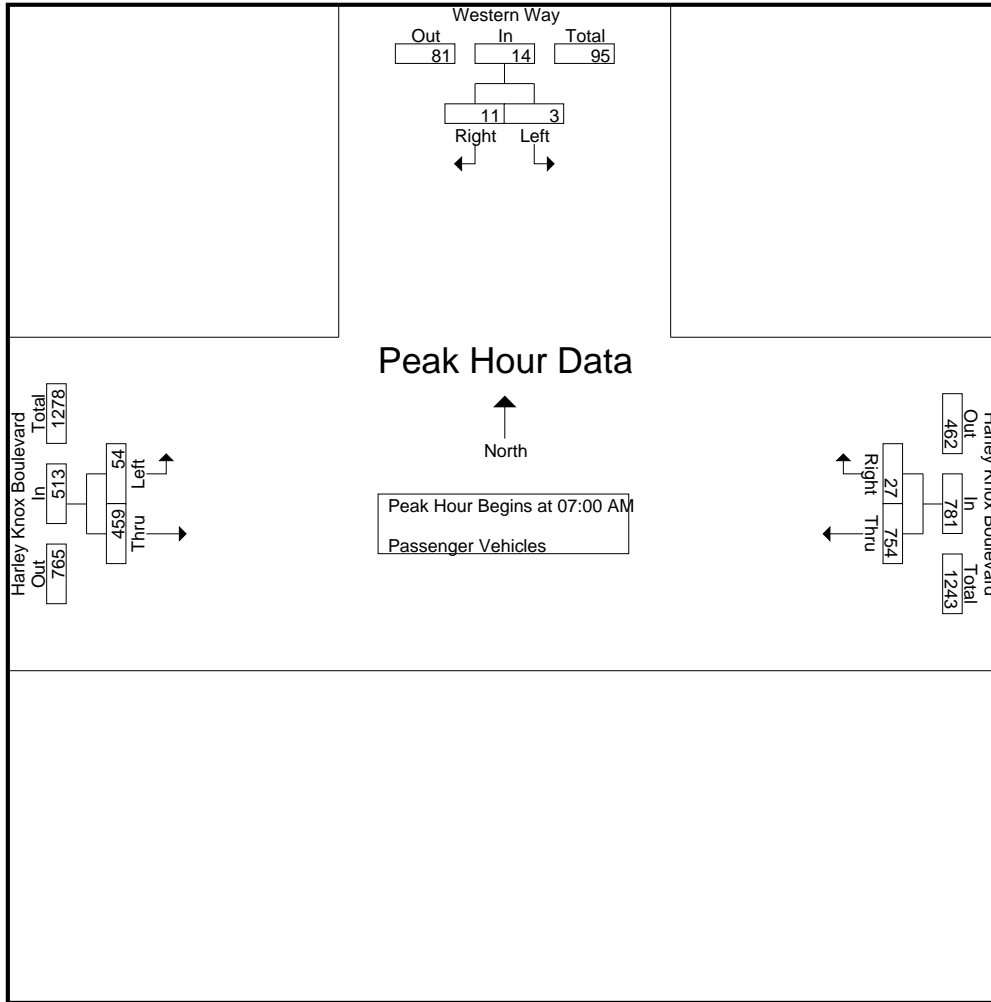
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	<b>1</b>	3	4	<b>224</b>	6	<b>230</b>	9	110	119	<b>353</b>
07:15 AM	1	3	4	213	2	215	6	108	114	333
07:30 AM	1	0	1	162	7	169	13	<b>139</b>	<b>152</b>	322
07:45 AM	0	<b>5</b>	<b>5</b>	155	<b>12</b>	167	<b>26</b>	102	128	300
Total Volume	3	11	14	754	27	781	54	459	513	1308
% App. Total	21.4	78.6		96.5	3.5		10.5	89.5		
PHF	.750	.550	.700	.842	.563	.849	.519	.826	.844	.926

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	1	3	4	<b>224</b>	6	<b>230</b>	9	110	119
+15 mins.	1	3	4	213	2	215	6	108	114
+30 mins.	1	0	1	162	7	169	13	<b>139</b>	<b>152</b>
+45 mins.	0	<b>5</b>	<b>5</b>	155	<b>12</b>	167	<b>26</b>	102	128
Total Volume	3	11	14	754	27	781	54	459	513
% App. Total	21.4	78.6		96.5	3.5		10.5	89.5	
PHF	.750	.550	.700	.842	.563	.849	.519	.826	.844

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

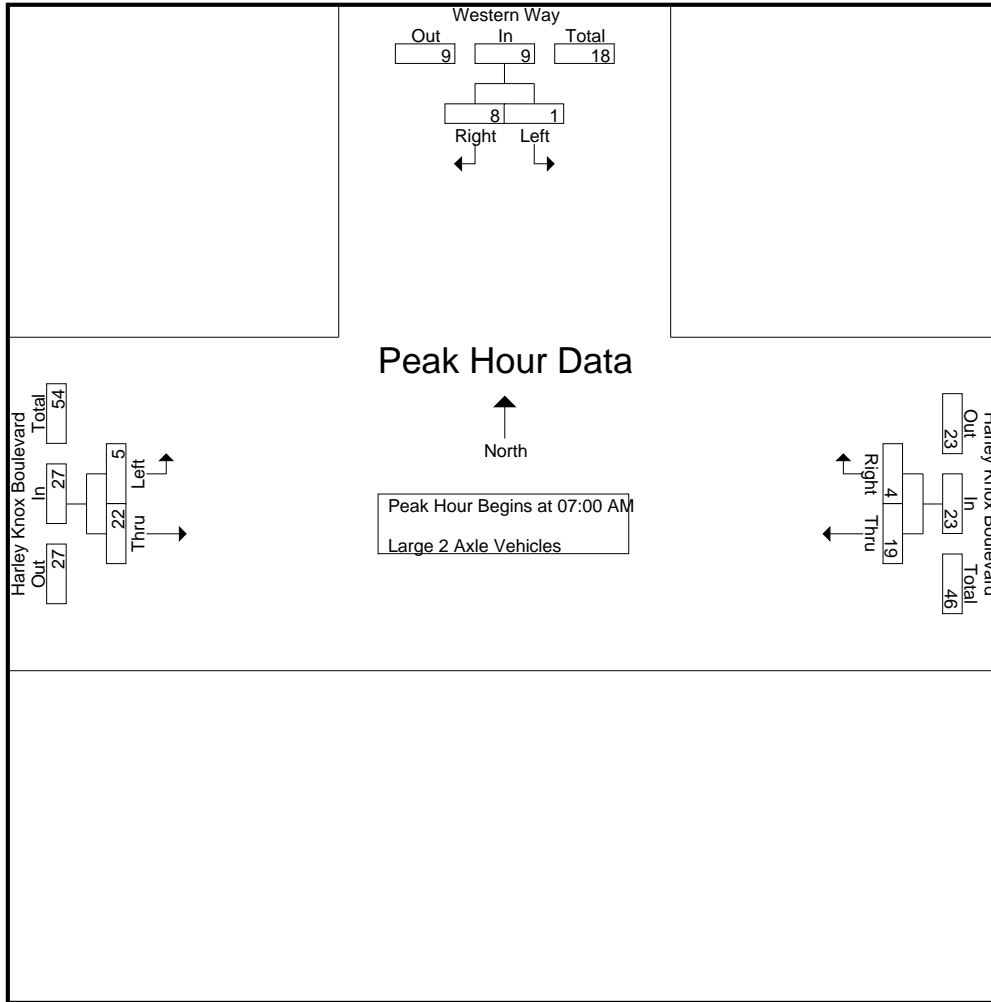
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	3	3	10	2	12	1	6	7	22
07:15 AM	0	3	3	2	1	3	0	7	7	13
07:30 AM	0	0	0	4	0	4	4	2	6	10
07:45 AM	1	2	3	3	1	4	0	7	7	14
Total	1	8	9	19	4	23	5	22	27	59
08:00 AM	0	3	3	4	0	4	3	7	10	17
08:15 AM	0	2	2	3	1	4	2	8	10	16
08:30 AM	0	3	3	4	0	4	3	5	8	15
08:45 AM	1	2	3	6	0	6	2	4	6	15
Total	1	10	11	17	1	18	10	24	34	63
Grand Total	2	18	20	36	5	41	15	46	61	122
Apprch %	10	90		87.8	12.2		24.6	75.4		
Total %	1.6	14.8	16.4	29.5	4.1	33.6	12.3	37.7	50	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	3	3	10	2	12	1	6	7	22
07:15 AM	0	3	3	2	1	3	0	7	7	13
07:30 AM	0	0	0	4	0	4	4	2	6	10
07:45 AM	1	2	3	3	1	4	0	7	7	14
Total Volume	1	8	9	19	4	23	5	22	27	59
% App. Total	11.1	88.9		82.6	17.4		18.5	81.5		
PHF	.250	.667	.750	.475	.500	.479	.313	.786	.964	.670

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	<b>3</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>12</b>	1	6	<b>7</b>
+15 mins.	0	3	3	2	1	3	0	7	7
+30 mins.	0	0	0	4	0	4	4	2	6
+45 mins.	<b>1</b>	2	3	3	1	4	0	7	7
Total Volume	1	8	9	19	4	23	5	22	27
% App. Total	11.1	88.9		82.6	17.4		18.5	81.5	
PHF	.250	.667	.750	.475	.500	.479	.313	.786	.964

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

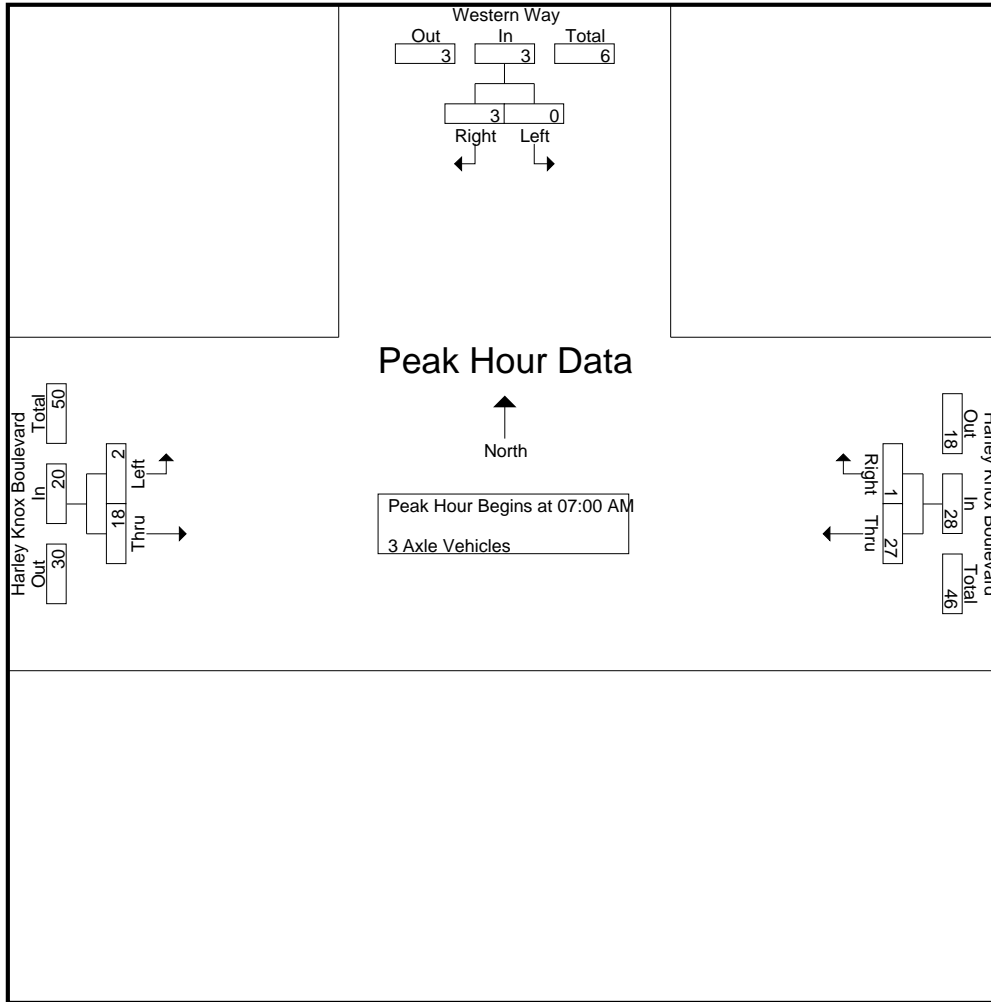
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	7	0	7	1	3	4	11
07:15 AM	0	1	1	6	0	6	1	1	2	9
07:30 AM	0	1	1	9	1	10	0	8	8	19
07:45 AM	0	1	1	5	0	5	0	6	6	12
Total	0	3	3	27	1	28	2	18	20	51
08:00 AM	0	0	0	7	0	7	1	6	7	14
08:15 AM	0	1	1	9	0	9	1	4	5	15
08:30 AM	0	1	1	2	0	2	0	2	2	5
08:45 AM	0	0	0	2	0	2	0	8	8	10
Total	0	2	2	20	0	20	2	20	22	44
Grand Total	0	5	5	47	1	48	4	38	42	95
Apprch %	0	100		97.9	2.1		9.5	90.5		
Total %	0	5.3	5.3	49.5	1.1	50.5	4.2	40	44.2	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	7	0	7	1	3	4	11
07:15 AM	0	1	1	6	0	6	1	1	2	9
07:30 AM	0	1	1	9	1	10	0	8	8	19
07:45 AM	0	1	1	5	0	5	0	6	6	12
Total Volume	0	3	3	27	1	28	2	18	20	51
% App. Total	0	100		96.4	3.6		10	90		
PHF	.000	.750	.750	.750	.250	.700	.500	.563	.625	.671

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	7	0	7	1	3	4
+15 mins.	0	1	1	6	0	6	1	1	2
+30 mins.	0	1	1	9	1	10	0	8	8
+45 mins.	0	1	1	5	0	5	0	6	6
Total Volume	0	3	3	27	1	28	2	18	20
% App. Total	0	100		96.4	3.6		10	90	
PHF	.000	.750	.750	.750	.250	.700	.500	.563	.625

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

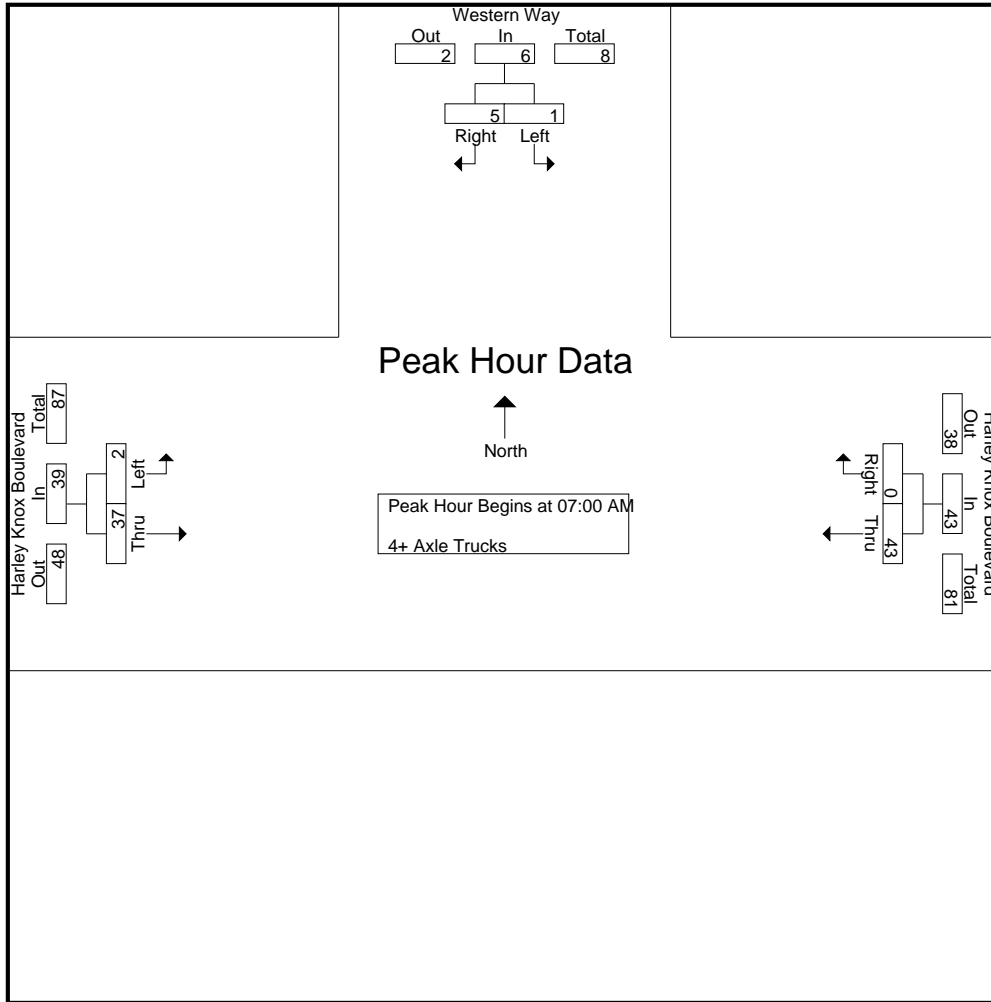
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	8	0	8	0	11	11	19
07:15 AM	0	2	2	9	0	9	2	7	9	20
07:30 AM	1	3	4	13	0	13	0	13	13	30
07:45 AM	0	0	0	13	0	13	0	6	6	19
Total	1	5	6	43	0	43	2	37	39	88
08:00 AM	0	0	0	15	0	15	1	13	14	29
08:15 AM	0	1	1	8	0	8	0	14	14	23
08:30 AM	0	0	0	9	0	9	1	14	15	24
08:45 AM	0	1	1	12	1	13	1	20	21	35
Total	0	2	2	44	1	45	3	61	64	111
Grand Total	1	7	8	87	1	88	5	98	103	199
Apprch %	12.5	87.5		98.9	1.1		4.9	95.1		
Total %	0.5	3.5	4	43.7	0.5	44.2	2.5	49.2	51.8	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	8	0	8	0	11	11	19
07:15 AM	0	2	2	9	0	9	2	7	9	20
07:30 AM	1	3	4	13	0	13	0	13	13	30
07:45 AM	0	0	0	13	0	13	0	6	6	19
Total Volume	1	5	6	43	0	43	2	37	39	88
% App. Total	16.7	83.3		100	0		5.1	94.9		
PHF	.250	.417	.375	.827	.000	.827	.250	.712	.750	.733

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	8	0	8	0	11	11
+15 mins.	0	2	2	9	0	9	2	7	9
+30 mins.	1	3	4	13	0	13	0	13	13
+45 mins.	0	0	0	13	0	13	0	6	6
Total Volume	1	5	6	43	0	43	2	37	39
% App. Total	16.7	83.3		100	0		5.1	94.9	
PHF	.250	.417	.375	.827	.000	.827	.250	.712	.750

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	157	2	159	4	152	156	334
04:15 PM	1	10	11	132	2	134	8	149	157	302
04:30 PM	3	36	39	235	2	237	4	145	149	425
04:45 PM	4	12	16	208	1	209	1	132	133	358
Total	9	76	85	732	7	739	17	578	595	1419
05:00 PM	4	18	22	144	3	147	2	110	112	281
05:15 PM	0	7	7	135	2	137	1	127	128	272
05:30 PM	0	7	7	150	0	150	1	117	118	275
05:45 PM	0	6	6	106	0	106	3	113	116	228
Total	4	38	42	535	5	540	7	467	474	1056
Grand Total	13	114	127	1267	12	1279	24	1045	1069	2475
Apprch %	10.2	89.8		99.1	0.9		2.2	97.8		
Total %	0.5	4.6	5.1	51.2	0.5	51.7	1	42.2	43.2	
Passenger Vehicles	11	106	117	1127	7	1134	14	893	907	2158
% Passenger Vehicles	84.6	93	92.1	89	58.3	88.7	58.3	85.5	84.8	87.2
Large 2 Axle Vehicles	2	6	8	28	5	33	3	26	29	70
% Large 2 Axle Vehicles	15.4	5.3	6.3	2.2	41.7	2.6	12.5	2.5	2.7	2.8
3 Axle Vehicles	0	0	0	22	0	22	2	58	60	82
% 3 Axle Vehicles	0	0	0	1.7	0	1.7	8.3	5.6	5.6	3.3
4+ Axle Trucks	0	2	2	90	0	90	5	68	73	165
% 4+ Axle Trucks	0	1.8	1.6	7.1	0	7	20.8	6.5	6.8	6.7

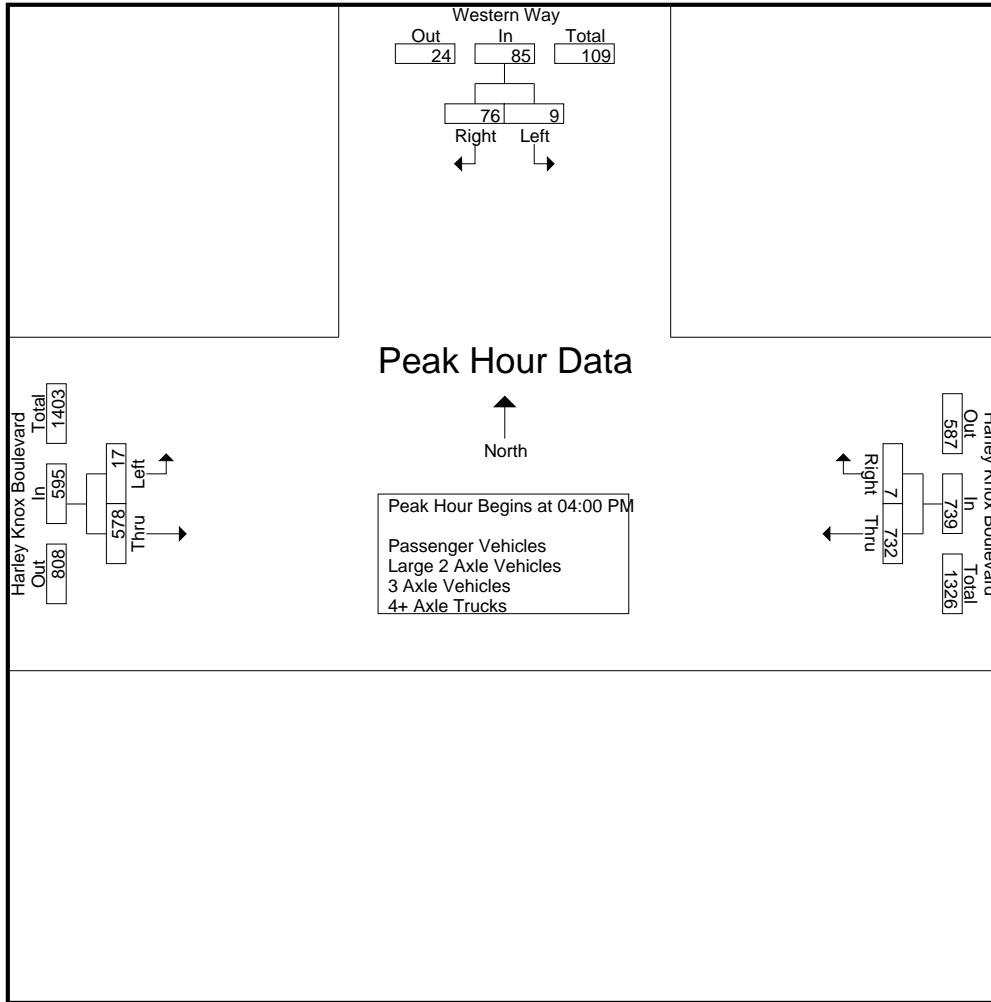
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	157	2	159	4	152	156	334
04:15 PM	1	10	11	132	2	134	8	149	157	302
04:30 PM	3	36	39	235	2	237	4	145	149	425
04:45 PM	4	12	16	208	1	209	1	132	133	358
Total Volume	9	76	85	732	7	739	17	578	595	1419
% App. Total	10.6	89.4		99.1	0.9		2.9	97.1		
PHF	.563	.528	.545	.779	.875	.780	.531	.951	.947	.835

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:00 PM		
+0 mins.	1	10	11	157	2	159	4	<b>152</b>	156
+15 mins.	3	<b>36</b>	<b>39</b>	132	2	134	<b>8</b>	149	<b>157</b>
+30 mins.	<b>4</b>	12	16	<b>235</b>	2	<b>237</b>	4	145	149
+45 mins.	4	18	22	208	1	209	1	132	133
Total Volume	12	76	88	732	7	739	17	578	595
% App. Total	13.6	86.4		99.1	0.9		2.9	97.1	
PHF	.750	.528	.564	.779	.875	.780	.531	.951	.947

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

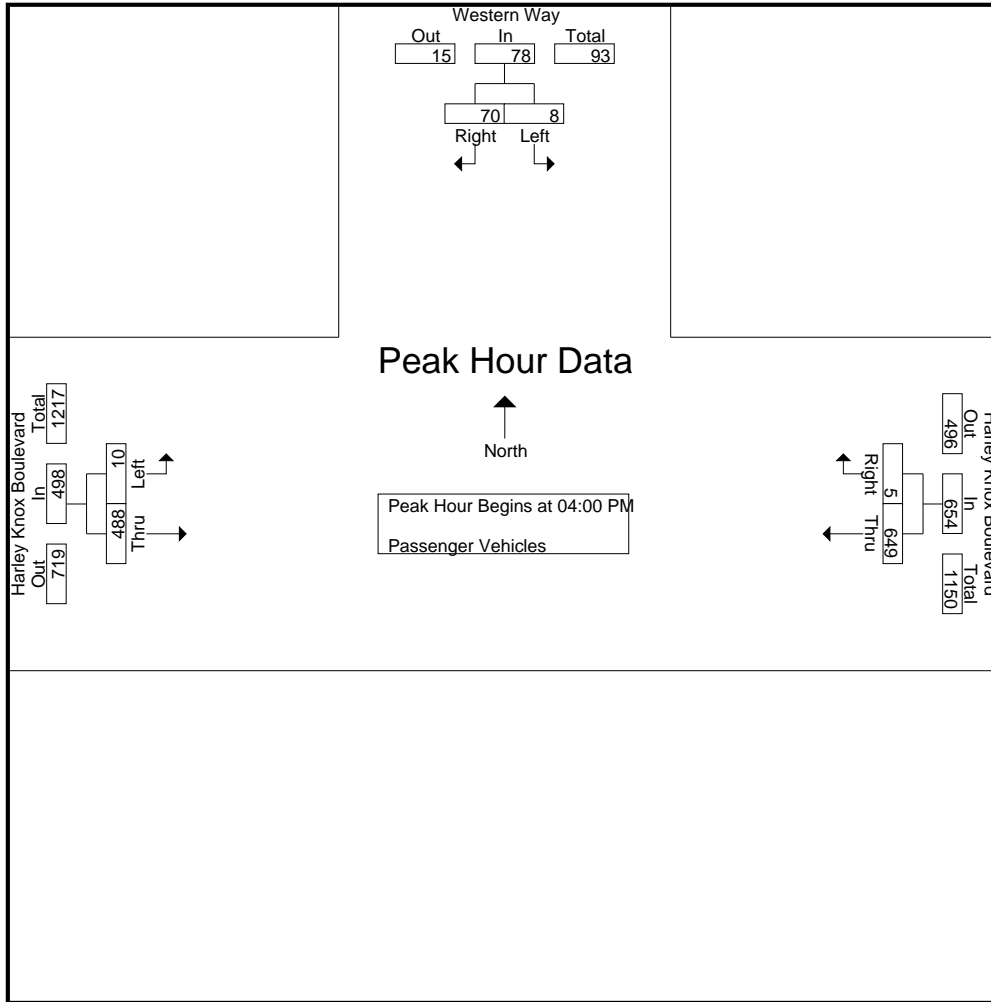
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	139	0	139	3	134	137	295
04:15 PM	0	9	9	109	2	111	4	120	124	244
04:30 PM	3	35	38	215	2	217	2	122	124	379
04:45 PM	4	8	12	186	1	187	1	112	113	312
Total	8	70	78	649	5	654	10	488	498	1230
05:00 PM	3	17	20	133	0	133	1	95	96	249
05:15 PM	0	6	6	116	2	118	0	102	102	226
05:30 PM	0	7	7	137	0	137	0	106	106	250
05:45 PM	0	6	6	92	0	92	3	102	105	203
Total	3	36	39	478	2	480	4	405	409	928
Grand Total	11	106	117	1127	7	1134	14	893	907	2158
Apprch %	9.4	90.6		99.4	0.6		1.5	98.5		
Total %	0.5	4.9	5.4	52.2	0.3	52.5	0.6	41.4	42	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	1	18	19	139	0	139	3	<b>134</b>	<b>137</b>	295
04:15 PM	0	9	9	109	2	111	4	120	124	244
04:30 PM	3	<b>35</b>	<b>38</b>	<b>215</b>	2	<b>217</b>	2	122	124	<b>379</b>
04:45 PM	<b>4</b>	8	12	186	1	187	1	112	113	312
Total Volume	8	70	78	649	5	654	10	488	498	1230
% App. Total	10.3	89.7		99.2	0.8		2	98		
PHF	.500	.500	.513	.755	.625	.753	.625	.910	.909	.811

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	18	19	139	0	139	3	<b>134</b>	<b>137</b>
+15 mins.	0	9	9	109	<b>2</b>	111	<b>4</b>	120	124
+30 mins.	3	<b>35</b>	<b>38</b>	<b>215</b>	2	<b>217</b>	2	122	124
+45 mins.	<b>4</b>	8	12	186	1	187	1	112	113
Total Volume	8	70	78	649	5	654	10	488	498
% App. Total	10.3	89.7		99.2	0.8		2	98	
PHF	.500	.500	.513	.755	.625	.753	.625	.910	.909

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

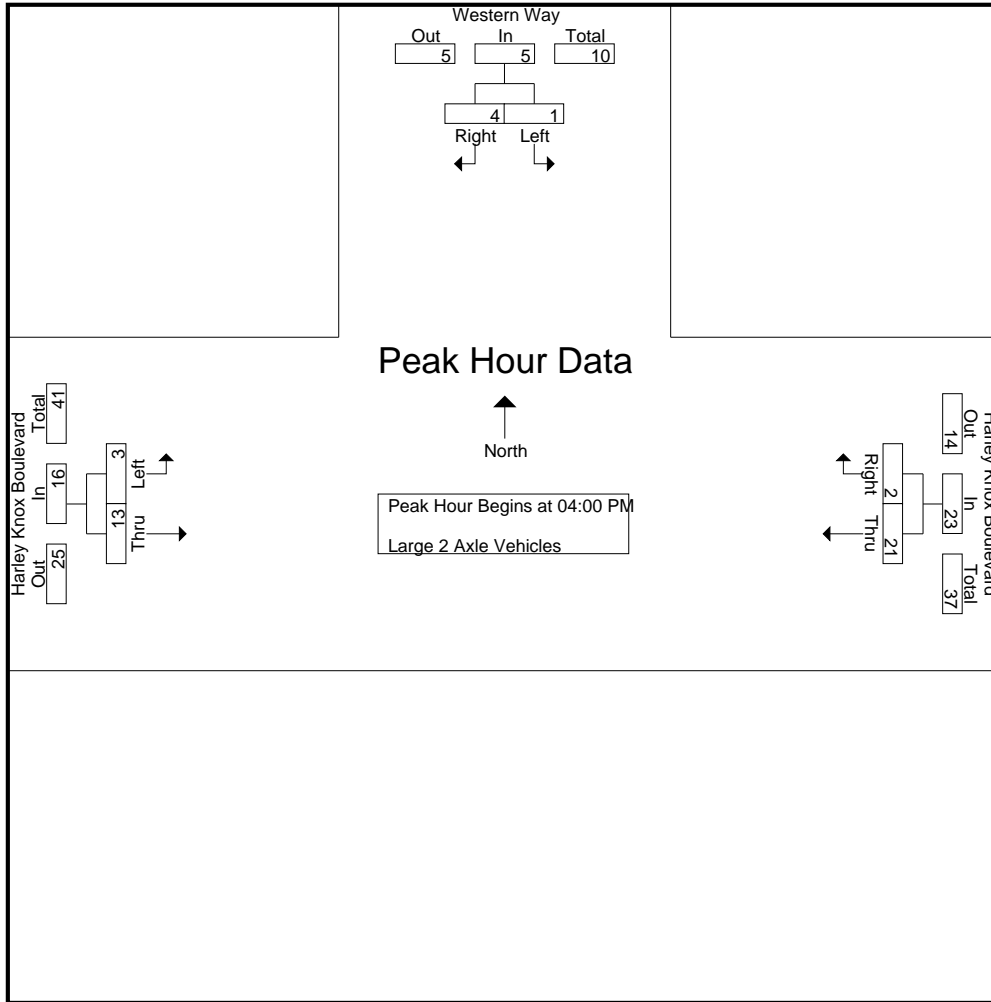
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	6	2	8	0	5	5	13
04:15 PM	1	1	2	4	0	4	1	3	4	10
04:30 PM	0	1	1	3	0	3	2	2	4	8
04:45 PM	0	2	2	8	0	8	0	3	3	13
Total	1	4	5	21	2	23	3	13	16	44
05:00 PM	1	1	2	3	3	6	0	2	2	10
05:15 PM	0	1	1	2	0	2	0	3	3	6
05:30 PM	0	0	0	1	0	1	0	5	5	6
05:45 PM	0	0	0	1	0	1	0	3	3	4
Total	1	2	3	7	3	10	0	13	13	26
Grand Total	2	6	8	28	5	33	3	26	29	70
Apprch %	25	75		84.8	15.2		10.3	89.7		
Total %	2.9	8.6	11.4	40	7.1	47.1	4.3	37.1	41.4	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	6	2	8	0	5	5	13
04:15 PM	1	1	2	4	0	4	1	3	4	10
04:30 PM	0	1	1	3	0	3	2	2	4	8
04:45 PM	0	2	2	8	0	8	0	3	3	13
Total Volume	1	4	5	21	2	23	3	13	16	44
% App. Total	20	80		91.3	8.7		18.8	81.2		
PHF	.250	.500	.625	.656	.250	.719	.375	.650	.800	.846

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	6	2	8	0	5	5
+15 mins.	1	1	2	4	0	4	1	3	4
+30 mins.	0	1	1	3	0	3	2	2	4
+45 mins.	0	2	2	8	0	8	0	3	3
Total Volume	1	4	5	21	2	23	3	13	16
% App. Total	20	80		91.3	8.7		18.8	81.2	
PHF	.250	.500	.625	.656	.250	.719	.375	.650	.800

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

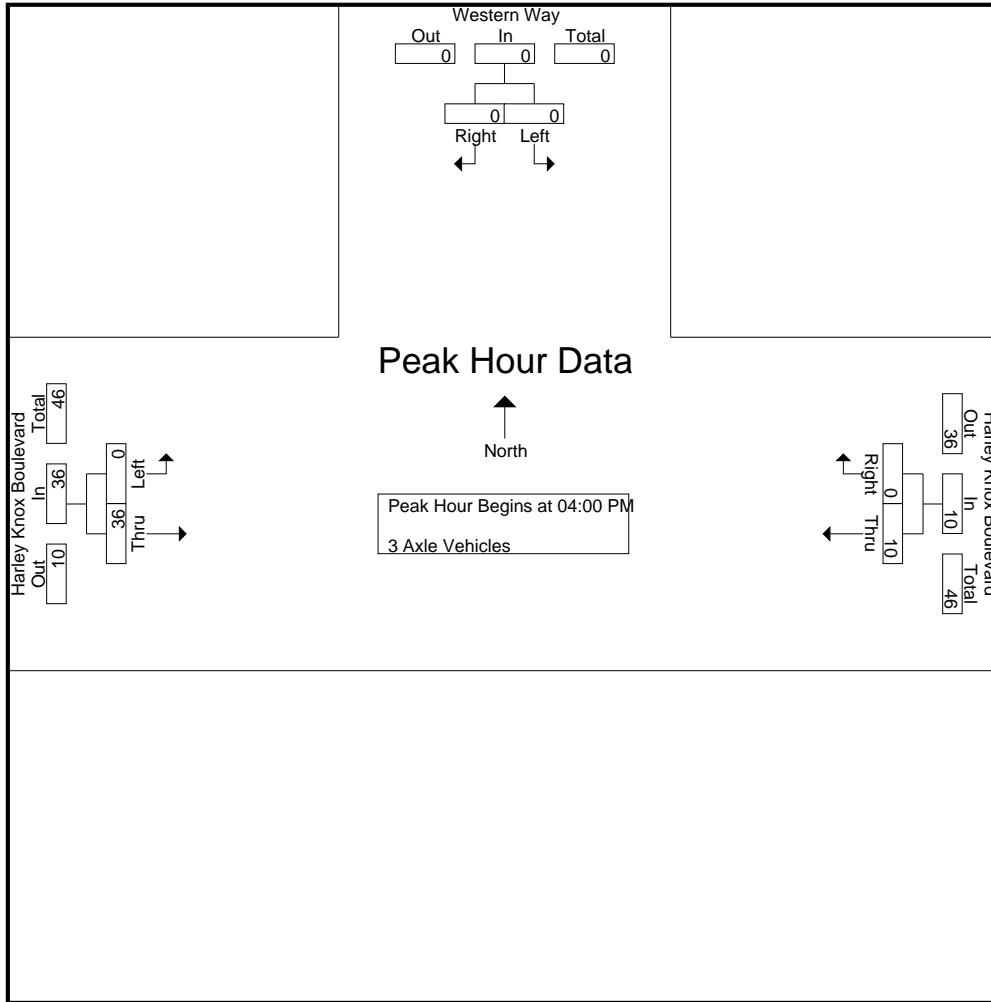
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	1	0	1	0	3	3	4
04:15 PM	0	0	0	4	0	4	0	13	13	17
04:30 PM	0	0	0	2	0	2	0	11	11	13
04:45 PM	0	0	0	3	0	3	0	9	9	12
Total	0	0	0	10	0	10	0	36	36	46
05:00 PM	0	0	0	2	0	2	1	6	7	9
05:15 PM	0	0	0	3	0	3	1	12	13	16
05:30 PM	0	0	0	3	0	3	0	1	1	4
05:45 PM	0	0	0	4	0	4	0	3	3	7
Total	0	0	0	12	0	12	2	22	24	36
Grand Total	0	0	0	22	0	22	2	58	60	82
Apprch %	0	0		100	0		3.3	96.7		
Total %	0	0		26.8	0	26.8	2.4	70.7	73.2	

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	1	0	1	0	3	3	4
04:15 PM	0	0	0	4	0	4	0	13	13	17
04:30 PM	0	0	0	2	0	2	0	11	11	13
04:45 PM	0	0	0	3	0	3	0	9	9	12
Total Volume	0	0	0	10	0	10	0	36	36	46
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.625	.000	.625	.000	.692	.692	.676

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	1	0	1	0	3	3
+15 mins.	0	0	0	4	0	4	0	13	13
+30 mins.	0	0	0	2	0	2	0	11	11
+45 mins.	0	0	0	3	0	3	0	9	9
Total Volume	0	0	0	10	0	10	0	36	36
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.625	.000	.625	.000	.692	.692

City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	11	0	11	1	10	11	22
04:15 PM	0	0	0	15	0	15	3	13	16	31
04:30 PM	0	0	0	15	0	15	0	10	10	25
04:45 PM	0	2	2	11	0	11	0	8	8	21
Total	0	2	2	52	0	52	4	41	45	99
05:00 PM	0	0	0	6	0	6	0	7	7	13
05:15 PM	0	0	0	14	0	14	0	10	10	24
05:30 PM	0	0	0	9	0	9	1	5	6	15
05:45 PM	0	0	0	9	0	9	0	5	5	14
Total	0	0	0	38	0	38	1	27	28	66
Grand Total	0	2	2	90	0	90	5	68	73	165
Apprch %	0	100		100	0		6.8	93.2		
Total %	0	1.2	1.2	54.5	0	54.5	3	41.2	44.2	

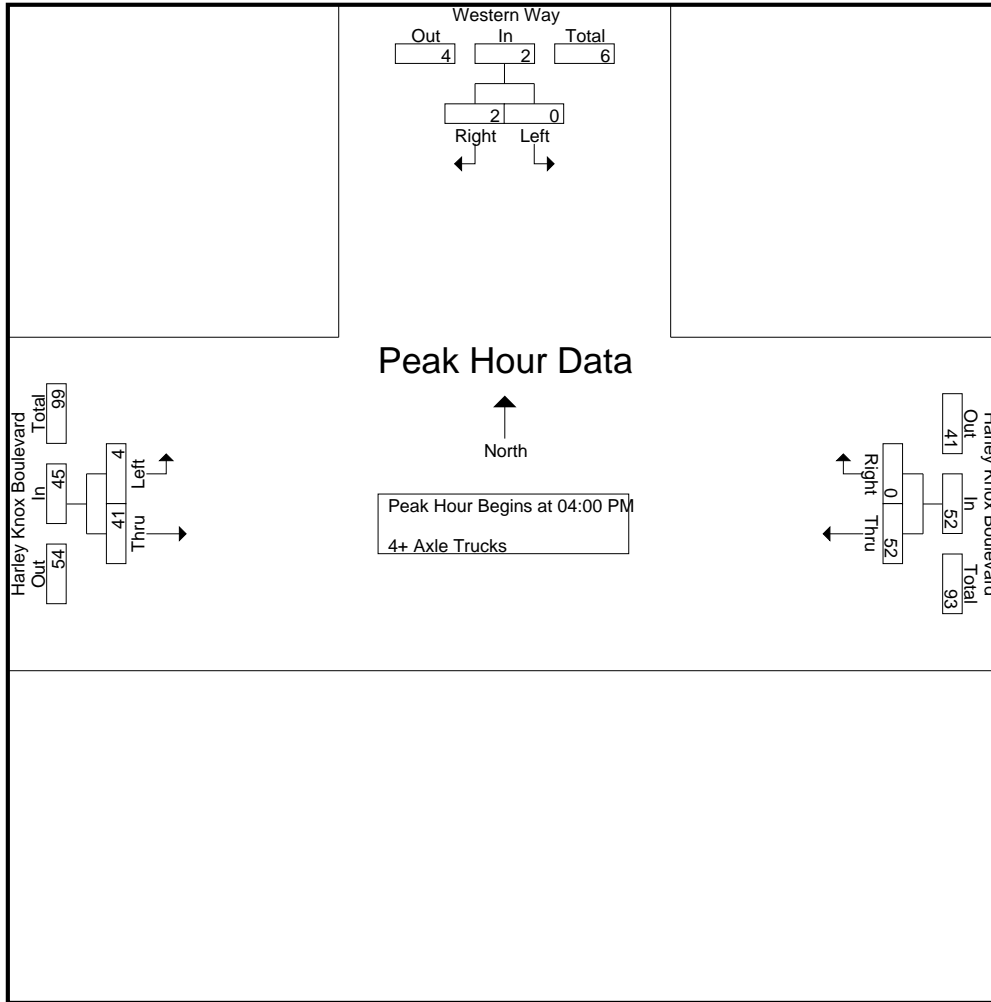
Start Time	Western Way Southbound			Harley Knox Boulevard Westbound			Harley Knox Boulevard Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	11	0	11	1	10	11	22
04:15 PM	0	0	0	15	0	15	3	13	16	31
04:30 PM	0	0	0	15	0	15	0	10	10	25
04:45 PM	0	2	2	11	0	11	0	8	8	21
Total Volume	0	2	2	52	0	52	4	41	45	99
% App. Total	0	100		100	0		8.9	91.1		
PHF	.000	.250	.250	.867	.000	.867	.333	.788	.703	.798

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



City of Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 03\_PER\_Western\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	11	0	11	1	10	11
+15 mins.	0	0	0	15	0	15	3	13	16
+30 mins.	0	0	0	15	0	15	0	10	10
+45 mins.	0	2	2	11	0	11	0	8	8
Total Volume	0	2	2	52	0	52	4	41	45
% App. Total	0	100		100	0		8.9	91.1	
PHF	.000	.250	.250	.867	.000	.867	.333	.788	.703

Location: Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Western Way	East Leg Harley Knox Boulevard	South Leg Western Way	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Western Way	East Leg Harley Knox Boulevard	South Leg Western Way	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Location: Perris  
 N/S: Western Way  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Western Way			Westbound Harley Knox Boulevard			Northbound Western Way			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Western Way			Westbound Harley Knox Boulevard			Northbound Western Way			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound						Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	Exclu. Total			
07:00 AM	5	1	1	0	7		1	223	4	0	228		14	2	2	1	0	17		7	116	1	1	124	1	376	377
07:15 AM	1	1	2	0	4		1	202	3	0	206		12	1	1	1	0	14		1	112	5	0	118	0	342	342
07:30 AM	1	1	1	0	3		4	177	2	0	183		10	3	1	0	0	14		5	139	5	0	149	0	349	349
07:45 AM	4	0	8	3	12		3	161	4	0	168		7	0	3	2	10	123		6	117	0	0	123	5	313	313
<b>Total</b>	<b>11</b>	<b>3</b>	<b>12</b>	<b>3</b>	<b>26</b>		<b>9</b>	<b>763</b>	<b>13</b>	<b>0</b>	<b>785</b>		<b>43</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>55</b>		<b>19</b>	<b>484</b>	<b>11</b>	<b>1</b>	<b>514</b>	<b>6</b>	<b>1380</b>	<b>1386</b>	
08:00 AM	0	2	3	1	5		1	125	5	0	131		8	1	0	0	9		7	98	0	0	105	1	250	251	
08:15 AM	0	0	1	0	1		3	110	7	0	120		6	0	4	1	10		1	86	5	1	92	2	223	225	
08:30 AM	7	0	3	0	10		2	78	4	0	84		6	0	1	1	7		7	1	88	6	0	95	1	196	197
08:45 AM	3	1	3	0	7		2	83	9	0	94		7	3	3	1	13		4	92	8	2	104	3	218	221	
<b>Total</b>	<b>10</b>	<b>3</b>	<b>10</b>	<b>1</b>	<b>23</b>		<b>8</b>	<b>396</b>	<b>25</b>	<b>0</b>	<b>429</b>		<b>27</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>39</b>		<b>13</b>	<b>364</b>	<b>19</b>	<b>3</b>	<b>396</b>	<b>7</b>	<b>887</b>	<b>894</b>	
<b>Grand Total</b>	<b>21</b>	<b>6</b>	<b>22</b>	<b>4</b>	<b>49</b>		<b>17</b>	<b>1159</b>	<b>38</b>	<b>0</b>	<b>1214</b>		<b>70</b>	<b>10</b>	<b>14</b>	<b>5</b>	<b>94</b>		<b>32</b>	<b>848</b>	<b>30</b>	<b>4</b>	<b>910</b>	<b>13</b>	<b>2267</b>	<b>2280</b>	
Approach %	42.9	12.2	44.9				1.4	95.5	3.1			74.5	10.6	14.9					3.5	93.2	3.3						
Total %	0.9	0.3	1		2.2		0.7	51.1	1.7		53.6	3.1	0.4	0.6		4.1			1.4	37.4	1.3		40.1		0.6	99.4	
% Passenger Vehicles	8	2	10		22		4	1021	16		1041		52	6	5		64		21	683	24		729	0	0	1856	
% 2 Axle Vehicles	38.1	33.3	45.5	50	41.5		23.5	88.1	42.1	0	85.7	74.3	60	35.7	20	64.6		65.6	80.5	80	25	79.8	0	0	0	81.4	
% 3 Axle Vehicles	14.3	33.3	9.1	50	17		17.6	3.1	7.9	0	3.5	4.3	30	28.6	20	11.1		15.6	5.3	13.3	25	6	55	0	0	117	
% 4+ Axle Trucks	0	2	1		3		3	36	2		41	6	0	0	0	6		0	0	33	1	35	0	0	0	85	
4+ Axle Trucks	10	0	9		19		7	66	17		90	9	1	5	60	18.2		18.8	10.3	3.3	25	95	0	0	0	222	
% 4+ Axle Trucks	47.6	0	40.9	0	35.8		41.2	5.7	44.7	0	7.4	12.9	10	35.7	60	18.2		18.8	10.3	3.3	25	10.4	0	0	0	9.7	

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound			App. Total	Int. Total												
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right														
07:00 AM	5	1	1	1	223	4	1	228	4	0	228	14	2	2	1	0	17	7	116	1	1	124	1	376	376	
07:15 AM	1	1	1	1	202	3	0	206	12	1	118	12	1	1	1	0	14	1	112	5	0	118	0	342	342	
07:30 AM	1	1	1	0	177	2	0	183	10	3	149	10	3	1	0	0	14	5	139	5	0	149	0	349	349	
07:45 AM	4	0	8	3	161	4	0	168	7	0	123	7	0	3	2	10	123	6	117	0	0	123	5	313	313	
<b>Total</b>	<b>11</b>	<b>3</b>	<b>12</b>	<b>3</b>	<b>763</b>	<b>13</b>	<b>0</b>	<b>785</b>	<b>43</b>	<b>6</b>	<b>55</b>	<b>43</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>55</b>		<b>19</b>	<b>484</b>	<b>11</b>	<b>1</b>	<b>514</b>	<b>6</b>	<b>1380</b>	<b>1386</b>	
<b>Grand Total</b>	<b>21</b>	<b>6</b>	<b>22</b>	<b>4</b>	<b>1159</b>	<b>38</b>	<b>0</b>	<b>1214</b>	<b>70</b>	<b>10</b>	<b>14</b>	<b>70</b>	<b>10</b>	<b>14</b>	<b>5</b>	<b>94</b>		<b>32</b>	<b>848</b>	<b>30</b>	<b>4</b>	<b>910</b>	<b>13</b>	<b>2267</b>	<b>2280</b>	
Approach %	42.9	12.2	44.9						74.5	10.6	14.9	74.5	10.6	14.9				3.5	93.2	3.3						
Total %	0.9	0.3	1		2.2			53.6	3.1	0.4	0.6	3.1	0.4	0.6		4.1		1.4	37.4	1.3		40.1		0.6	99.4	
% Passenger Vehicles	8	2	10		22			1041	52	6	5	52	6	5		64		21	683	24		729	0	0	1856	
% 2 Axle Vehicles	38.1	33.3	45.5	50	41.5		23.5	85.7	74.3	60	35.7	74.3	60	35.7	20	64.6		65.6	80.5	80	25	79.8	0	0	81.4	
% 3 Axle Vehicles	14.3	33.3	9.1	50	17		17.6	3.1	4.3	30	28.6	4.3	30	28.6	20	11.1		15.6	5.3	13.3	25	6	55	0	0	117
% 4+ Axle Trucks	0	2	1		3		3	36	6	0	41	6	0	0	0	6		0	33	1	35	0	0	0	85	
4+ Axle Trucks	10	0	9		19		7	66	9	1	5	9	1	5	60	18.2		18.8	10.3	3.3	25	95	0	0	222	
% 4+ Axle Trucks	47.6	0	40.9	0	35.8		41.2	5.7	12.9	10	35.7	12.9	10	35.7	60	18.2		18.8	10.3	3.3	25	10.4	0	0	9.7	

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound			App. Total	Int. Total												
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right														
07:00 AM	5	1	1	1	223	4	1	228	4	0	228	14	2	2	1	0	17	7	116	1	1	124	1	376	376	
07:15 AM	1	1	1	1	202	3	0	206	12	1	118	12	1	1	1	0	14	1	112	5	0	118	0	342	342	
07:30 AM	1	1	1	0	177	2	0	183	10	3	149	10	3	1	0	0	14	5	139	5	0	149	0	349	349	
07:45 AM	4	0	8	3	161	4	0	168	7	0	123	7	0	3	2	10	123	6	117	0	0	123	5	313	313	
<b>Total</b>	<b>11</b>	<b>3</b>	<b>12</b>	<b>3</b>	<b>763</b>	<b>13</b>	<b>0</b>	<b>785</b>	<b>43</b>	<b>6</b>	<b>55</b>	<b>43</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>55</b>		<b>19</b>	<b>484</b>	<b>11</b>	<b>1</b>	<b>514</b>	<b>6</b>	<b>1380</b>	<b>1386</b>	
% App. Total	42.3	11.5	46.2						78.2	10.9	10.9	78.2	10.9	10.9				3.7	94.2	2.1						
PHF	.550	.750	.375		.542			.861	.768	.500	.500	.809	.500	.500				.679	.871	.550						.918

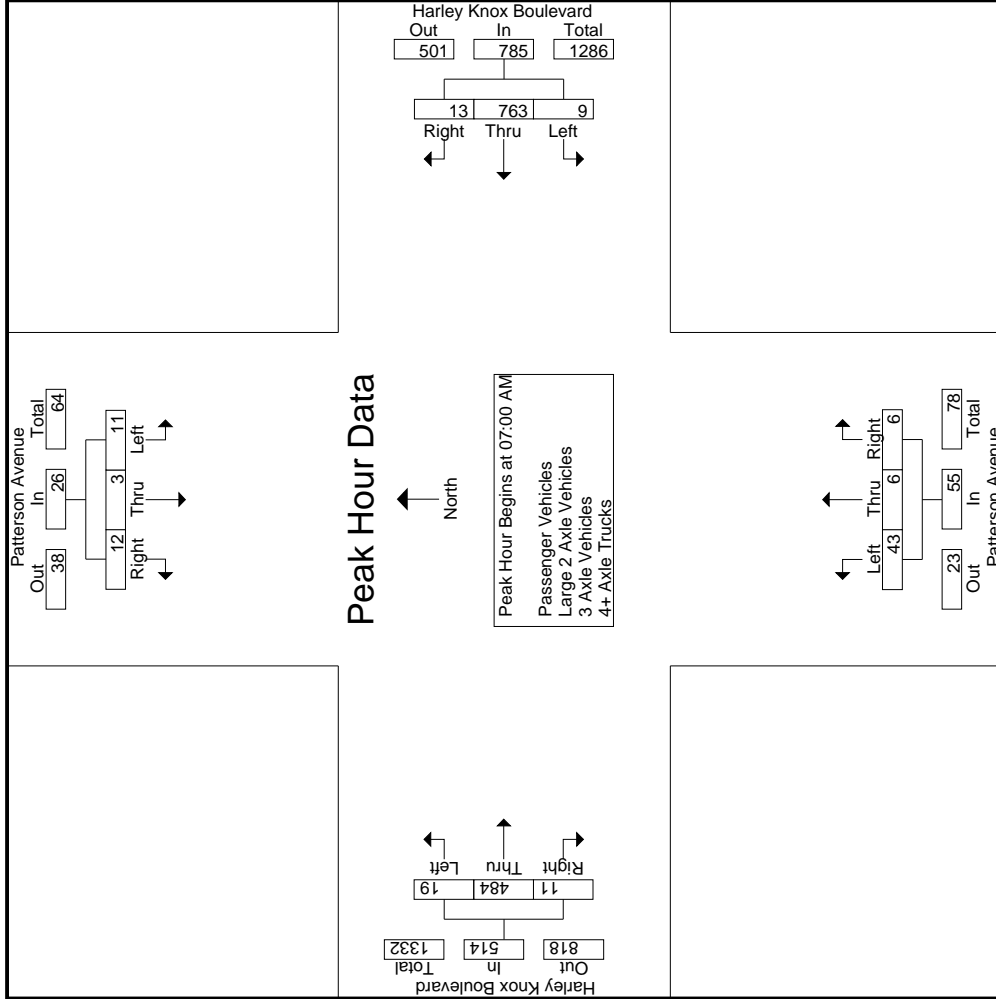
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

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 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
+0 mins.	4	0	8	12	1	223	4	228	14	2	1	17	116	1	124
+15 mins.	0	2	3	5	1	202	3	206	12	1	1	14	112	5	118
+30 mins.	0	0	1	1	4	177	2	183	10	3	1	14	139	5	149
+45 mins.	7	0	3	10	3	161	4	168	7	0	3	10	117	0	123
Total Volume	11	2	15	28	9	763	13	785	43	6	6	55	484	11	514
% App. Total	39.3	7.1	53.6		1.1	97.2	1.7		78.2	10.9	10.9		94.2	2.1	
PHF	.393	.250	.469	.583	.563	.855	.813	.861	.768	.500	.500	.809	.871	.550	.862

Groups Printed- Passenger Vehicles

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	2	0	1	0	3	0	205	0	0	205	9	2	1	0	12	5	95	0	0	100	0	320	0	0	320
07:15 AM	0	1	0	0	1	0	191	2	0	193	10	1	1	0	12	0	98	5	0	103	0	309	0	0	309
07:30 AM	0	0	0	0	0	1	154	1	0	156	7	1	1	0	9	3	119	5	0	127	0	292	0	0	292
07:45 AM	1	0	5	2	6	1	147	2	0	150	6	0	1	1	7	5	100	0	0	105	3	268	0	0	271
<b>Total</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>697</b>	<b>5</b>	<b>0</b>	<b>704</b>	<b>32</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>40</b>	<b>13</b>	<b>412</b>	<b>10</b>	<b>0</b>	<b>435</b>	<b>3</b>	<b>1189</b>	<b>0</b>	<b>0</b>	<b>1192</b>
08:00 AM	0	0	0	0	0	0	102	5	0	107	5	0	0	0	5	4	76	0	0	80	0	192	0	0	192
08:15 AM	0	0	1	0	1	2	94	3	0	99	4	0	0	0	4	1	62	2	0	65	0	169	0	0	169
08:30 AM	3	0	2	0	5	0	63	2	0	65	5	0	0	0	5	1	69	5	0	75	0	150	0	0	150
08:45 AM	2	1	1	0	4	0	65	1	0	66	6	2	1	0	9	2	64	7	1	73	1	152	0	0	153
<b>Total</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>324</b>	<b>11</b>	<b>0</b>	<b>337</b>	<b>20</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>8</b>	<b>271</b>	<b>14</b>	<b>1</b>	<b>293</b>	<b>1</b>	<b>663</b>	<b>0</b>	<b>0</b>	<b>664</b>
<b>Grand Total</b>	<b>8</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>20</b>	<b>4</b>	<b>1021</b>	<b>16</b>	<b>0</b>	<b>1041</b>	<b>52</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>63</b>	<b>21</b>	<b>683</b>	<b>24</b>	<b>1</b>	<b>728</b>	<b>4</b>	<b>1852</b>	<b>0</b>	<b>0</b>	<b>1856</b>
Approch %	40	10	50			0.4	98.1	1.5			82.5	9.5	7.9			2.9	93.8	3.3							
Total %	0.4	0.1	0.5		1.1	0.2	55.1	0.9		56.2	2.8	0.3	0.3		3.4	1.1	36.9	1.3		39.3	0.2	99.8			

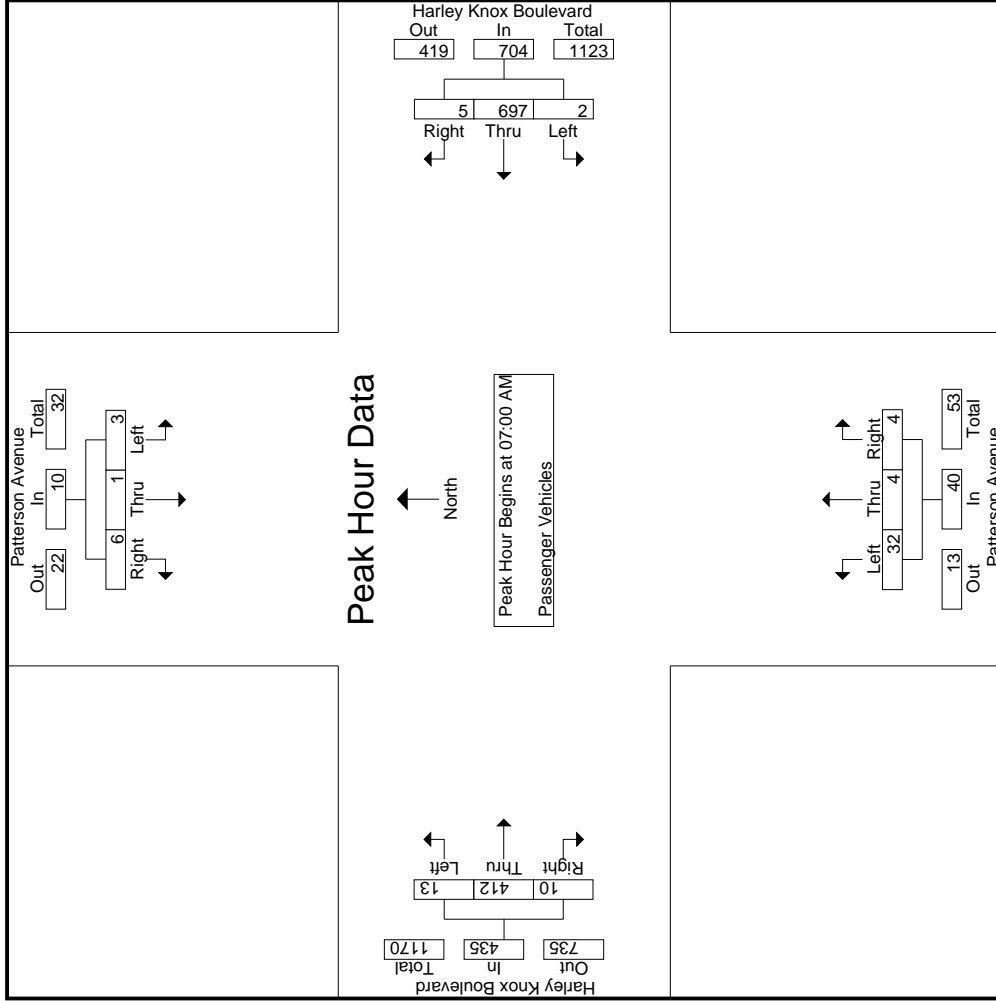
  

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	2	0	1	0	3	0	205	0	0	205	9	2	1	0	12	5	95	0	0	100	0	320	0	0	320
07:15 AM	0	1	0	0	1	0	191	2	0	193	10	1	1	0	12	0	98	5	0	103	0	309	0	0	309
07:30 AM	0	0	0	0	0	1	154	1	0	156	7	1	1	0	9	3	119	5	0	127	0	292	0	0	292
07:45 AM	1	0	5	2	6	1	147	2	0	150	6	0	1	1	7	5	100	0	0	105	3	268	0	0	271
<b>Total</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>697</b>	<b>5</b>	<b>0</b>	<b>704</b>	<b>32</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>40</b>	<b>13</b>	<b>412</b>	<b>10</b>	<b>0</b>	<b>435</b>	<b>3</b>	<b>1189</b>	<b>0</b>	<b>0</b>	<b>1192</b>
08:00 AM	0	0	0	0	0	0	102	5	0	107	5	0	0	0	5	4	76	0	0	80	0	192	0	0	192
08:15 AM	0	0	1	0	1	2	94	3	0	99	4	0	0	0	4	1	62	2	0	65	0	169	0	0	169
08:30 AM	3	0	2	0	5	0	63	2	0	65	5	0	0	0	5	1	69	5	0	75	0	150	0	0	150
08:45 AM	2	1	1	0	4	0	65	1	0	66	6	2	1	0	9	2	64	7	1	73	1	152	0	0	153
<b>Total</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>324</b>	<b>11</b>	<b>0</b>	<b>337</b>	<b>20</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>8</b>	<b>271</b>	<b>14</b>	<b>1</b>	<b>293</b>	<b>1</b>	<b>663</b>	<b>0</b>	<b>0</b>	<b>664</b>
<b>Grand Total</b>	<b>8</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>20</b>	<b>4</b>	<b>1021</b>	<b>16</b>	<b>0</b>	<b>1041</b>	<b>52</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>63</b>	<b>21</b>	<b>683</b>	<b>24</b>	<b>1</b>	<b>728</b>	<b>4</b>	<b>1852</b>	<b>0</b>	<b>0</b>	<b>1856</b>
Approch %	40	10	50			0.4	98.1	1.5			82.5	9.5	7.9			2.9	93.8	3.3							
Total %	0.4	0.1	0.5		1.1	0.2	55.1	0.9		56.2	2.8	0.3	0.3		3.4	1.1	36.9	1.3		39.3	0.2	99.8			

Counts Unlimited  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
+0 mins.	2	0	1	0	205	0	205	0	2	9	12	1	5	95	0
+15 mins.	0	1	0	0	191	2	193	1	1	10	12	1	0	98	5
+30 mins.	0	0	0	1	154	1	156	7	1	7	9	1	3	119	5
+45 mins.	1	0	5	1	147	2	150	6	0	6	7	1	5	100	0
Total Volume	3	1	6	2	697	5	704	32	4	32	40	4	13	412	10
% App. Total	30	10	60	0.3	99	0.7	80	80	10	10	10	10	3	94.7	2.3
PHF	.375	.250	.300	.500	.850	.625	.859	.800	.500	1.000	.833	.500	.650	.866	.500

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound													
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Exclu. Total	Inclu. Total
07:00 AM	0	1	0	0	1	0	9	1	0	10	1	0	0	0	1	2	8	1	1	11	1	23	24									
07:15 AM	1	0	0	0	1	2	0	0	2	0	0	0	0	0	0	8	0	0	8	0	11	11										
07:30 AM	0	1	0	0	1	5	0	0	6	0	1	0	0	1	1	2	0	0	3	0	11	11										
07:45 AM	0	0	1	1	1	3	0	0	4	0	0	1	0	1	1	4	0	0	5	1	11	12										
<b>Total</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>22</b>	<b>1</b>	<b>1</b>	<b>27</b>	<b>2</b>	<b>56</b>	<b>58</b>										
08:00 AM	0	0	1	1	1	4	0	0	4	0	1	0	0	1	1	7	0	0	8	1	14	15										
08:15 AM	0	0	0	0	0	3	2	0	5	0	1	0	1	1	0	7	2	0	9	0	15	15										
08:30 AM	2	0	0	0	2	4	0	0	5	1	0	1	1	2	0	4	1	0	5	1	14	15										
08:45 AM	0	0	0	0	0	6	0	0	6	1	1	1	0	3	0	5	0	0	5	0	14	14										
<b>Total</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>17</b>	<b>2</b>	<b>0</b>	<b>20</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>23</b>	<b>3</b>	<b>0</b>	<b>27</b>	<b>2</b>	<b>57</b>	<b>59</b>										
<b>Grand Total</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>36</b>	<b>3</b>	<b>0</b>	<b>42</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>45</b>	<b>4</b>	<b>1</b>	<b>54</b>	<b>4</b>	<b>113</b>	<b>117</b>										
<b>Approch %</b>	<b>42.9</b>	<b>28.6</b>	<b>28.6</b>		<b>6.2</b>	<b>7.1</b>	<b>85.7</b>	<b>7.1</b>	<b>37.2</b>	<b>30</b>	<b>30</b>	<b>40</b>	<b>8.8</b>	<b>8.8</b>	<b>9.3</b>	<b>83.3</b>	<b>7.4</b>	<b>3.5</b>	<b>47.8</b>	<b>3.4</b>	<b>96.6</b>											
<b>Total %</b>	<b>2.7</b>	<b>1.8</b>	<b>1.8</b>		<b>6.2</b>	<b>2.7</b>	<b>31.9</b>	<b>2.7</b>	<b>37.2</b>	<b>2.7</b>	<b>2.7</b>	<b>3.5</b>	<b>8.8</b>	<b>8.8</b>	<b>4.4</b>	<b>39.8</b>	<b>3.5</b>	<b>47.8</b>	<b>3.4</b>	<b>96.6</b>												

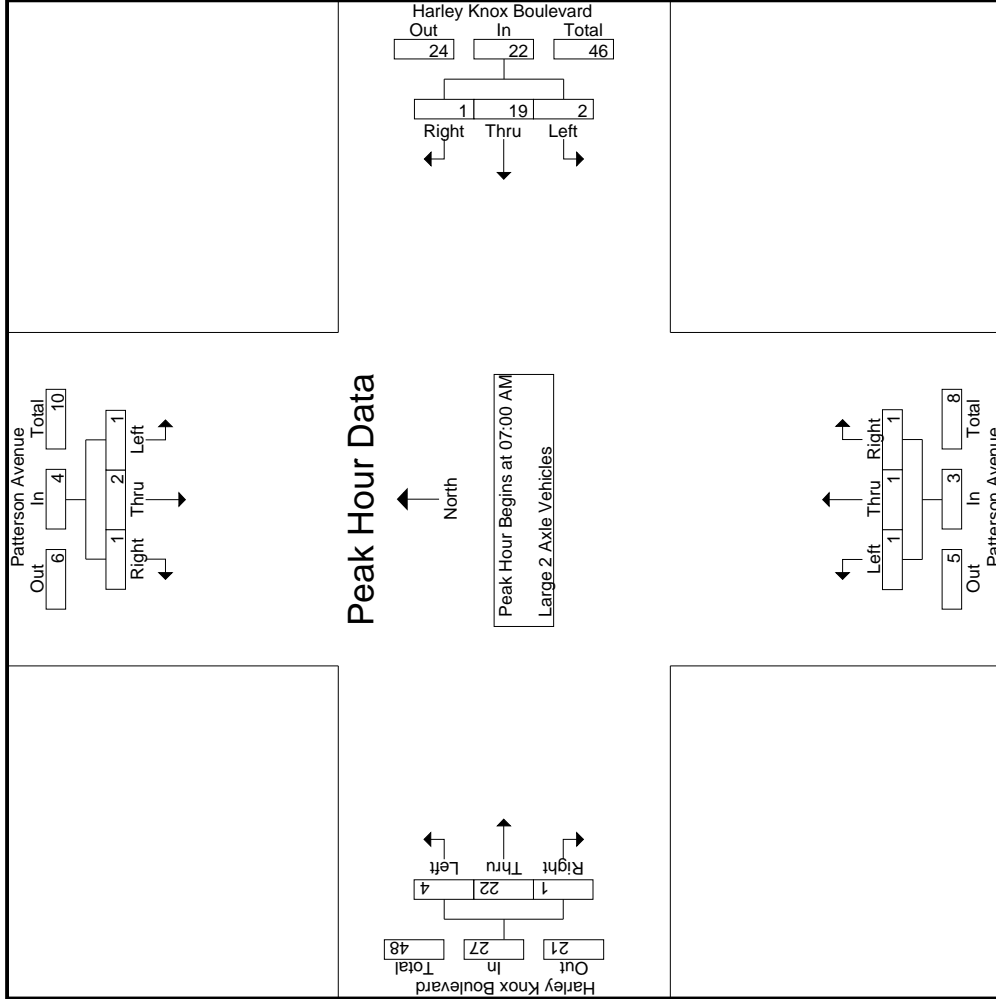
  

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound													
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Exclu. Total	Inclu. Total
07:00 AM	0	1	0	0	1	0	9	1	0	10	1	0	0	0	1	2	8	1	1	11	1	23	24									
07:15 AM	1	0	0	0	1	2	0	0	2	0	0	0	0	0	0	8	0	0	8	0	11	11										
07:30 AM	0	1	0	0	1	5	0	0	6	0	1	0	0	1	1	2	0	0	3	0	11	11										
07:45 AM	0	0	1	1	1	3	0	0	4	0	0	1	0	1	1	4	0	0	5	1	11	12										
<b>Total</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>22</b>	<b>1</b>	<b>1</b>	<b>27</b>	<b>2</b>	<b>56</b>	<b>58</b>										
08:00 AM	0	0	1	1	1	4	0	0	4	0	1	0	0	1	1	7	0	0	8	1	14	15										
08:15 AM	0	0	0	0	0	3	2	0	5	0	1	0	1	1	0	7	2	0	9	0	15	15										
08:30 AM	2	0	0	0	2	4	0	0	5	1	0	1	1	2	0	4	1	0	5	1	14	15										
08:45 AM	0	0	0	0	0	6	0	0	6	1	1	1	0	3	0	5	0	0	5	0	14	14										
<b>Total</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>17</b>	<b>2</b>	<b>0</b>	<b>20</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>23</b>	<b>3</b>	<b>0</b>	<b>27</b>	<b>2</b>	<b>57</b>	<b>59</b>										
<b>Grand Total</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>36</b>	<b>3</b>	<b>0</b>	<b>42</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>45</b>	<b>4</b>	<b>1</b>	<b>54</b>	<b>4</b>	<b>113</b>	<b>117</b>										
<b>Approch %</b>	<b>42.9</b>	<b>28.6</b>	<b>28.6</b>		<b>6.2</b>	<b>7.1</b>	<b>85.7</b>	<b>7.1</b>	<b>37.2</b>	<b>30</b>	<b>30</b>	<b>40</b>	<b>8.8</b>	<b>8.8</b>	<b>9.3</b>	<b>83.3</b>	<b>7.4</b>	<b>3.5</b>	<b>47.8</b>	<b>3.4</b>	<b>96.6</b>											
<b>Total %</b>	<b>2.7</b>	<b>1.8</b>	<b>1.8</b>		<b>6.2</b>	<b>2.7</b>	<b>31.9</b>	<b>2.7</b>	<b>37.2</b>	<b>2.7</b>	<b>2.7</b>	<b>3.5</b>	<b>8.8</b>	<b>8.8</b>	<b>4.4</b>	<b>39.8</b>	<b>3.5</b>	<b>47.8</b>	<b>3.4</b>	<b>96.6</b>												

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	1	0	0	9	1	1	0	0	1	0	0
+15 mins.	1	0	0	0	2	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	5	0	0	1	0	1	2	0
+45 mins.	0	0	1	1	3	0	0	0	1	1	4	0
Total Volume	1	2	1	2	19	1	1	1	1	4	22	1
% App. Total	.250	.500	.250	.500	.528	.250	.333	.250	.250	.148	.815	.37
PHF												

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	1	3	0	0	4	3	0	0	0	3	0	3	0	0	0	0	10	10	10
07:15 AM	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	0	1	0	0	0	0	6	6	6
07:30 AM	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	0	5	0	0	0	0	14	14	14
07:45 AM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	7	0	0	0	0	12	12	12
Total	0	0	1	0	1	2	17	0	0	19	6	0	0	0	6	0	16	0	0	0	0	42	42	42
08:00 AM	0	2	0	0	2	0	8	0	0	8	0	0	0	0	0	0	4	0	0	0	0	14	14	14
08:15 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	4	1	1	1	1	13	14	14
08:30 AM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	2	0	0	0	0	0	5	5	5
08:45 AM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	7	0	0	0	0	10	10	10
Total	0	2	0	0	2	1	19	2	0	22	0	0	0	0	0	0	17	1	1	1	1	42	43	43
Grand Total	0	2	1	0	3	3	36	2	0	41	6	0	0	0	6	0	33	1	1	1	1	84	85	85
Approch %	0	66.7	33.3			7.3	87.8	4.9			100	0	0			0	97.1	2.9			1.2			
Total %	0	2.4	1.2		3.6	3.6	42.9	2.4		48.8	7.1	0	0		7.1	0	39.3	1.2			1.2			98.8

3.1-173

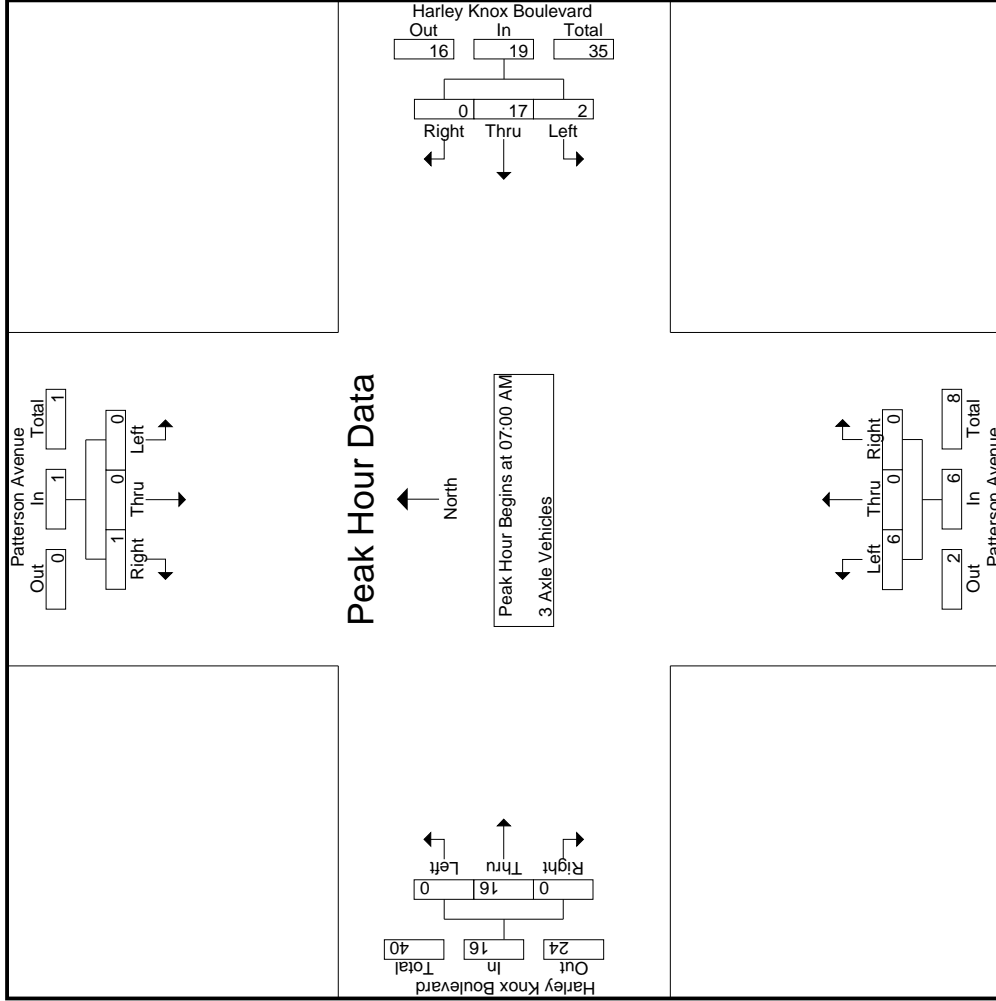
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	1	3	0	0	4	3	0	0	0	3	0	3	0	0	0	0	10	10	10
07:15 AM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	1	0	0	0	0	6	6	6
07:30 AM	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	0	5	0	0	0	0	14	14	14
07:45 AM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	7	0	0	0	0	12	12	12
Total Volume	0	0	0	0	1	2	17	0	0	19	6	0	0	0	6	0	16	0	0	0	0	42	42	42
% App. Total	0	0	0	0	100	10.5	89.5	0	0	100	100	0	0	0	100	0	100	0	0	0	0	.750	.750	.750
PHF	.000	.000	.250	.250	.250	.500	.607	.000	.000	.594	.500	.000	.000	.000	.500	.000	.571	.000	.000	.000	.571	.571	.571	.750

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	3	0	0	0	0	0	0	3
+15 mins.	0	0	1	0	3	0	0	0	0	0	0	1
+30 mins.	0	0	0	1	7	0	1	0	0	0	0	0
+45 mins.	0	0	0	0	4	0	1	0	0	0	0	7
Total Volume	0	0	1	2	17	0	6	0	0	0	16	0
% App. Total	0	0	100	10.5	89.5	0	100	0	0	0	100	0
PHF	.000	.000	.250	.500	.607	.000	.594	.000	.000	.000	.571	.000

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total							
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total									
07:00 AM	3	0	0	0	3		0	6	3	0	9		1	0	0	0	1		0	10	0	0	10		0	23	23			
07:15 AM	0	0	1	0	1		1	6	1	0	8		1	0	0	0	1		1	5	0	0	6		0	16	16			
07:30 AM	1	0	1	0	2		1	11	1	0	13		2	1	0	0	3		1	13	0	0	14		0	32	32			
07:45 AM	3	0	2	0	5		7	7	2	0	10		0	0	1	1	1		0	6	0	0	6		1	22	23			
Total	7	0	4	0	11		3	30	7	0	40		4	1	1	1	6		2	34	0	0	36		1	93	94			
08:00 AM	0	0	2	0	2		1	11	0	0	12		3	0	0	0	3		2	11	0	0	13		0	30	30			
08:15 AM	0	0	0	0	0		1	5	2	0	8		2	0	3	1	5		0	13	0	0	13		1	26	27			
08:30 AM	2	0	1	0	3		1	9	1	0	11		0	0	0	0	0		0	13	0	0	13		0	27	27			
08:45 AM	1	0	2	0	3		1	11	7	0	19		0	0	1	1	1		2	16	1	1	19		2	42	44			
Total	3	0	5	0	8		4	36	10	0	50		5	0	4	2	9		4	53	1	1	58		3	125	128			
Grand Total	10	0	9	0	19		7	66	17	0	90		9	1	5	3	15		6	87	1	1	94		4	218	222			
Approch %	52.6	0	47.4		8.7		7.8	73.3	18.9		41.3		6.0	6.7	33.3		6.9		6.4	92.6	1.1		43.1		1.8	98.2				
Total %	4.6	0	4.1		8.7		3.2	30.3	7.8		41.3		4.1	0.5	2.3		6.9		2.8	39.9	0.5		43.1		1.8	98.2				

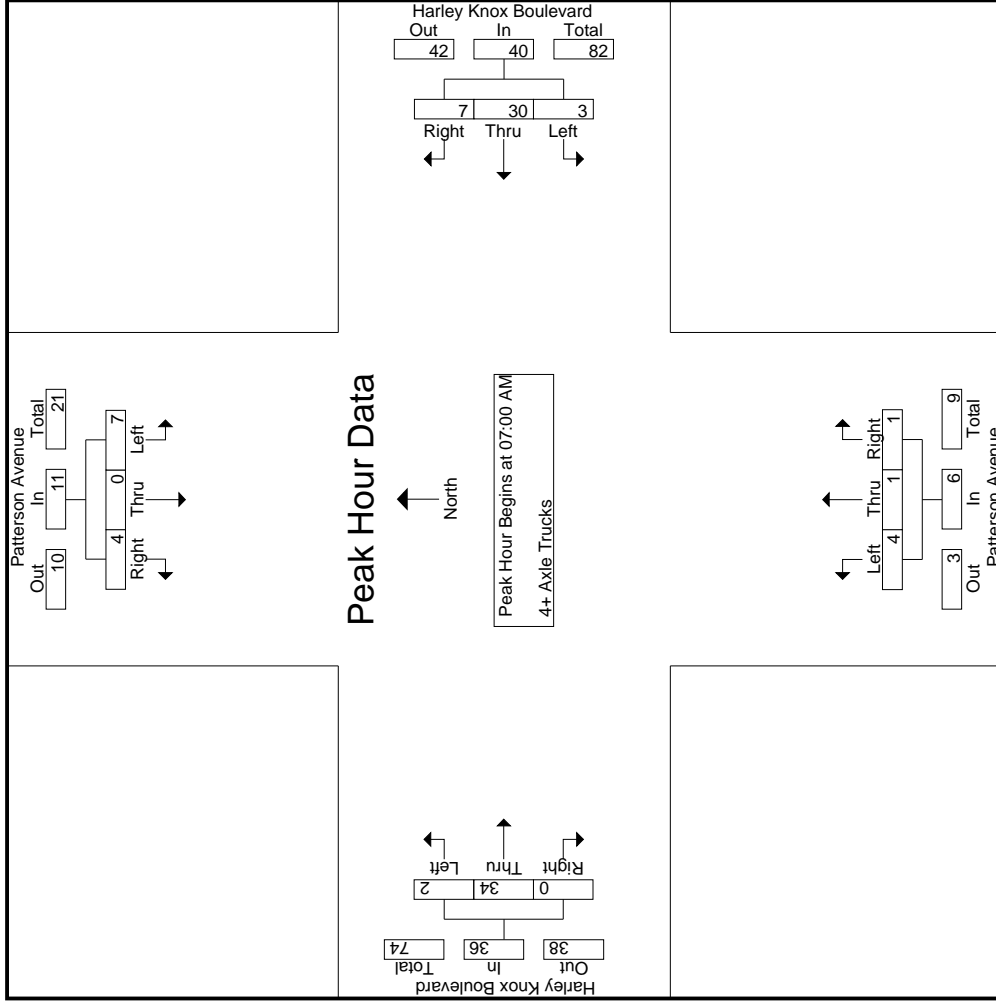
Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total							
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total									
07:00 AM	3	0	0	0	3		0	6	3	0	9		1	0	0	0	1		0	10	0	0	10		0	23	23			
07:15 AM	0	0	1	0	1		1	6	1	0	8		1	0	0	0	1		1	5	0	0	6		0	16	16			
07:30 AM	1	0	1	0	2		1	11	1	0	13		2	1	0	0	3		1	13	0	0	14		0	32	32			
07:45 AM	3	0	2	0	5		7	7	2	0	10		0	0	1	1	1		0	6	0	0	6		1	22	23			
Total	7	0	4	0	11		3	30	7	0	40		4	1	1	1	6		2	34	0	0	36		1	93	94			
08:00 AM	0	0	2	0	2		1	11	0	0	12		3	0	0	0	3		2	11	0	0	13		0	30	30			
08:15 AM	0	0	0	0	0		1	5	2	0	8		2	0	3	1	5		0	13	0	0	13		1	26	27			
08:30 AM	2	0	1	0	3		1	9	1	0	11		0	0	0	0	0		0	13	0	0	13		0	27	27			
08:45 AM	1	0	2	0	3		1	11	7	0	19		0	0	1	1	1		2	16	1	1	19		2	42	44			
Total	3	0	5	0	8		4	36	10	0	50		5	0	4	2	9		4	53	1	1	58		3	125	128			
Grand Total	10	0	9	0	19		7	66	17	0	90		9	1	5	3	15		6	87	1	1	94		4	218	222			
Approch %	52.6	0	47.4		8.7		7.8	73.3	18.9		41.3		6.0	6.7	33.3		6.9		6.4	92.6	1.1		43.1		1.8	98.2				
Total %	4.6	0	4.1		8.7		3.2	30.3	7.8		41.3		4.1	0.5	2.3		6.9		2.8	39.9	0.5		43.1		1.8	98.2				



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	3	0	0	0	6	3	9	0	0	1	0	0
+15 mins.	0	0	1	1	6	1	8	1	0	1	1	5
+30 mins.	1	0	1	1	11	1	13	2	0	1	13	0
+45 mins.	3	0	2	1	7	2	10	0	1	0	6	0
Total Volume	7	0	4	3	30	7	40	4	1	6	2	34
% App. Total	63.6	0	36.4	7.5	75	17.5	66.7	16.7	16.7	5.6	94.4	0
PHF	.583	.000	.500	.750	.682	.583	.769	.500	.250	.500	.654	.000

Counts Unlimited  
PO Box 1178  
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City of Perris  
N/S: Patterson Avenue  
E/W: Harley Knox Boulevard  
Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
Site Code : 05118431  
Start Date : 5/24/2018  
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total		
04:00 PM	5	0	3	0	8	129	1	126	2	0	129	9	8	1	0	0	9	132	0	5	120	7	0	132	278	
04:15 PM	2	1	4	1	7	121	0	118	3	0	121	12	10	0	2	1	12	156	3	6	144	6	1	156	299	
04:30 PM	8	1	11	0	20	225	1	223	1	0	225	5	4	0	1	0	5	143	0	5	134	4	0	143	393	
04:45 PM	3	1	5	0	9	165	0	164	1	0	165	12	10	1	1	0	12	133	0	3	129	1	0	133	319	
<b>Total</b>	<b>18</b>	<b>3</b>	<b>23</b>	<b>1</b>	<b>44</b>	<b>640</b>	<b>2</b>	<b>631</b>	<b>7</b>	<b>0</b>	<b>640</b>	<b>38</b>	<b>32</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>38</b>	<b>564</b>	<b>3</b>	<b>19</b>	<b>527</b>	<b>18</b>	<b>1</b>	<b>564</b>	<b>1289</b>	
05:00 PM	6	0	8	3	14	129	1	128	0	0	129	6	5	0	1	1	6	112	5	1	104	7	1	112	266	
05:15 PM	5	1	8	2	14	113	0	111	2	0	113	5	4	0	1	1	5	124	4	1	117	6	1	124	260	
05:30 PM	1	0	3	0	4	146	4	140	2	0	146	5	4	1	0	0	5	107	0	5	107	7	0	115	270	
05:45 PM	3	0	2	0	5	98	2	94	2	0	98	6	4	2	0	0	6	106	0	0	103	3	0	106	215	
<b>Total</b>	<b>15</b>	<b>1</b>	<b>21</b>	<b>5</b>	<b>37</b>	<b>486</b>	<b>7</b>	<b>473</b>	<b>6</b>	<b>0</b>	<b>486</b>	<b>22</b>	<b>17</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>22</b>	<b>457</b>	<b>9</b>	<b>3</b>	<b>431</b>	<b>23</b>	<b>2</b>	<b>457</b>	<b>1011</b>	
<b>Grand Total</b>	<b>33</b>	<b>4</b>	<b>44</b>	<b>6</b>	<b>81</b>	<b>1126</b>	<b>9</b>	<b>1104</b>	<b>13</b>	<b>0</b>	<b>1126</b>	<b>60</b>	<b>49</b>	<b>5</b>	<b>6</b>	<b>3</b>	<b>60</b>	<b>1021</b>	<b>12</b>	<b>22</b>	<b>958</b>	<b>41</b>	<b>3</b>	<b>1021</b>	<b>2300</b>	
<b>Approach %</b>	<b>40.7</b>	<b>4.9</b>	<b>54.3</b>				<b>0.8</b>	<b>98</b>	<b>1.2</b>				<b>81.7</b>	<b>8.3</b>	<b>10</b>			<b>2.2</b>	<b>93.8</b>	<b>4</b>						
<b>Total %</b>	<b>1.4</b>	<b>0.2</b>	<b>1.9</b>				<b>0.4</b>	<b>48.3</b>	<b>0.6</b>				<b>2.1</b>	<b>0.2</b>	<b>0.3</b>			<b>2.6</b>	<b>1</b>	<b>1.8</b>						
Passenger Vehicles	24	3	38		71	989	6	976	7		989	50	41	2	4		50	830	34	8	830	34		875	1985	
Large 2 Axle Vehicles	72.7	75	86.4	100	81.6	87.8	66.7	88.4	53.8	0	87.8	79.4	83.7	40	66.7	100	79.4	36.4	82.9	100	86.6	82.9	100	85.4	0	
Large 3 Axle Vehicles	9.1	25	2.3	0	5.7	25	0	22	7.7	0	25	8	3	3	2		8	3	19	2	3	19	2		23	0
4+ Axle Trucks	2	0	2		4	18	0	18	0		18	2	2	0	0		2	2	52	4	2	52	4		58	0
% 3 Axle Vehicles	6.1	0	4.5	0	4.6	1.6	0	1.6	0	0	1.6	0	4.1	0	0	0	0	9.1	5.4	9.8	0	5.7	0	0	5.7	0
% 4+ Axle Trucks	4	0	3		7	94	3	86	5		94	3	3	0	0		3	9	58	1	3	58	1		68	0
% 4+ Axle Trucks	12.1	0	6.8	0	8	38.5	33.3	7.8	38.5	0	38.5	4.8	6.1	0	0	0	4.8	40.9	6.1	2.4	0	6.6	0	0	6.6	0

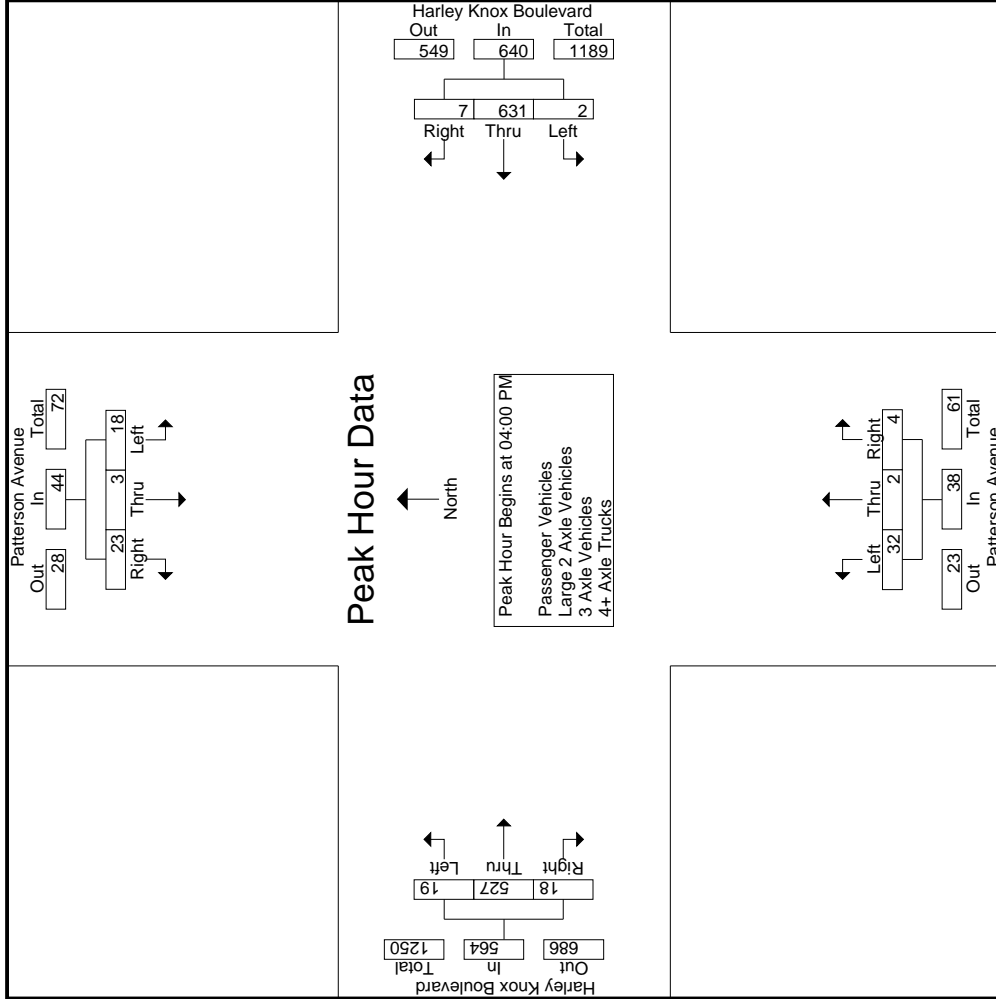
  

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total
<b>Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1</b>	<b>5</b>	<b>0</b>	<b>3</b>		<b>8</b>		<b>1</b>	<b>126</b>	<b>2</b>		<b>129</b>		<b>8</b>	<b>1</b>	<b>0</b>		<b>9</b>		<b>5</b>	<b>120</b>	<b>7</b>		<b>132</b>	
04:00 PM	5	0	3		8		1	126	2		129		8	1	0		9		5	120	7		132	
04:15 PM	2	1	4		7		0	118	3		121		10	0	2		12		6	144	6		156	
04:30 PM	8	1	11		20		1	223	1		225		4	0	1		5		5	134	4		143	
04:45 PM	3	1	5		9		0	164	1		165		10	1	1		12		3	129	1		133	
<b>Total Volume</b>	<b>18</b>	<b>3</b>	<b>23</b>		<b>44</b>		<b>2</b>	<b>631</b>	<b>7</b>		<b>640</b>		<b>32</b>	<b>2</b>	<b>4</b>		<b>38</b>		<b>19</b>	<b>527</b>	<b>18</b>		<b>564</b>	
<b>% App. Total</b>	<b>40.9</b>	<b>6.8</b>	<b>52.3</b>		<b>550</b>		<b>0.3</b>	<b>98.6</b>	<b>1.1</b>		<b>10.5</b>		<b>84.2</b>	<b>5.3</b>	<b>10.5</b>		<b>792</b>		<b>3.4</b>	<b>93.4</b>	<b>3.2</b>		<b>904</b>	
<b>PHF</b>	<b>.563</b>	<b>.750</b>	<b>.523</b>		<b>.550</b>		<b>.500</b>	<b>.707</b>	<b>.583</b>		<b>.711</b>		<b>.800</b>	<b>.500</b>	<b>.500</b>		<b>.792</b>		<b>.792</b>	<b>.915</b>	<b>.643</b>		<b>.904</b>	

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 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	8	1	11	1	126	2	129	1	0	9	5	120	7
+15 mins.	3	1	5	0	118	3	121	0	2	12	6	144	6
+30 mins.	6	0	8	1	223	1	225	0	1	5	5	134	4
+45 mins.	5	1	8	0	164	1	165	1	1	12	3	129	1
Total Volume	22	3	32	2	631	7	640	2	4	38	19	527	18
% App. Total	38.6	5.3	56.1	0.3	98.6	1.1	84.2	5.3	10.5	3.4	3.4	93.4	3.2
PHF	.688	.750	.727	.500	.707	.583	.711	.500	.500	.792	.792	.915	.643
													.904

Groups Printed- Passenger Vehicles

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
04:00 PM	2	0	2	0	4	1	111	2	0	114	6	1	0	0	7	2	109	6	0	117	0	242	242	
04:15 PM	2	0	3	1	5	0	97	2	0	99	9	0	2	1	11	3	116	6	1	125	3	240	243	
04:30 PM	8	1	9	0	18	1	202	0	0	203	4	0	0	0	4	2	115	4	0	121	0	346	346	
04:45 PM	3	1	4	0	8	0	151	0	0	151	9	1	0	0	10	1	115	1	0	117	0	286	286	
<b>Total</b>	<b>15</b>	<b>2</b>	<b>18</b>	<b>1</b>	<b>35</b>	<b>2</b>	<b>561</b>	<b>4</b>	<b>0</b>	<b>567</b>	<b>28</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>32</b>	<b>8</b>	<b>455</b>	<b>17</b>	<b>1</b>	<b>480</b>	<b>3</b>	<b>1114</b>	<b>1117</b>	
05:00 PM	5	0	8	3	13	1	115	0	0	116	4	0	1	1	5	0	88	6	1	94	5	228	233	
05:15 PM	3	1	8	2	12	0	93	0	0	93	4	0	1	1	5	0	97	3	1	100	4	210	214	
05:30 PM	1	0	2	0	3	1	128	1	0	130	3	0	0	0	3	0	97	7	0	104	0	240	240	
05:45 PM	0	0	2	0	2	2	79	2	0	83	2	0	0	0	2	0	93	1	0	94	0	181	181	
<b>Total</b>	<b>9</b>	<b>1</b>	<b>20</b>	<b>5</b>	<b>30</b>	<b>4</b>	<b>415</b>	<b>3</b>	<b>0</b>	<b>422</b>	<b>13</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>15</b>	<b>0</b>	<b>375</b>	<b>17</b>	<b>2</b>	<b>392</b>	<b>9</b>	<b>859</b>	<b>868</b>	
<b>Grand Total</b>	<b>24</b>	<b>3</b>	<b>38</b>	<b>6</b>	<b>65</b>	<b>6</b>	<b>976</b>	<b>7</b>	<b>0</b>	<b>989</b>	<b>41</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>47</b>	<b>8</b>	<b>830</b>	<b>34</b>	<b>3</b>	<b>872</b>	<b>12</b>	<b>1973</b>	<b>1985</b>	
<b>Approch %</b>	<b>36.9</b>	<b>4.6</b>	<b>58.5</b>			<b>0.6</b>	<b>98.7</b>	<b>0.7</b>		<b>50.1</b>	<b>87.2</b>	<b>4.3</b>	<b>8.5</b>		<b>2.4</b>	<b>0.9</b>	<b>95.2</b>	<b>3.9</b>		<b>44.2</b>	<b>0.6</b>	<b>99.4</b>		
<b>Total %</b>	<b>1.2</b>	<b>0.2</b>	<b>1.9</b>		<b>3.3</b>	<b>0.3</b>	<b>49.5</b>	<b>0.4</b>		<b>50.1</b>	<b>2.1</b>	<b>0.1</b>	<b>0.2</b>		<b>2.4</b>	<b>0.4</b>	<b>42.1</b>	<b>1.7</b>		<b>44.2</b>	<b>0.6</b>	<b>99.4</b>		

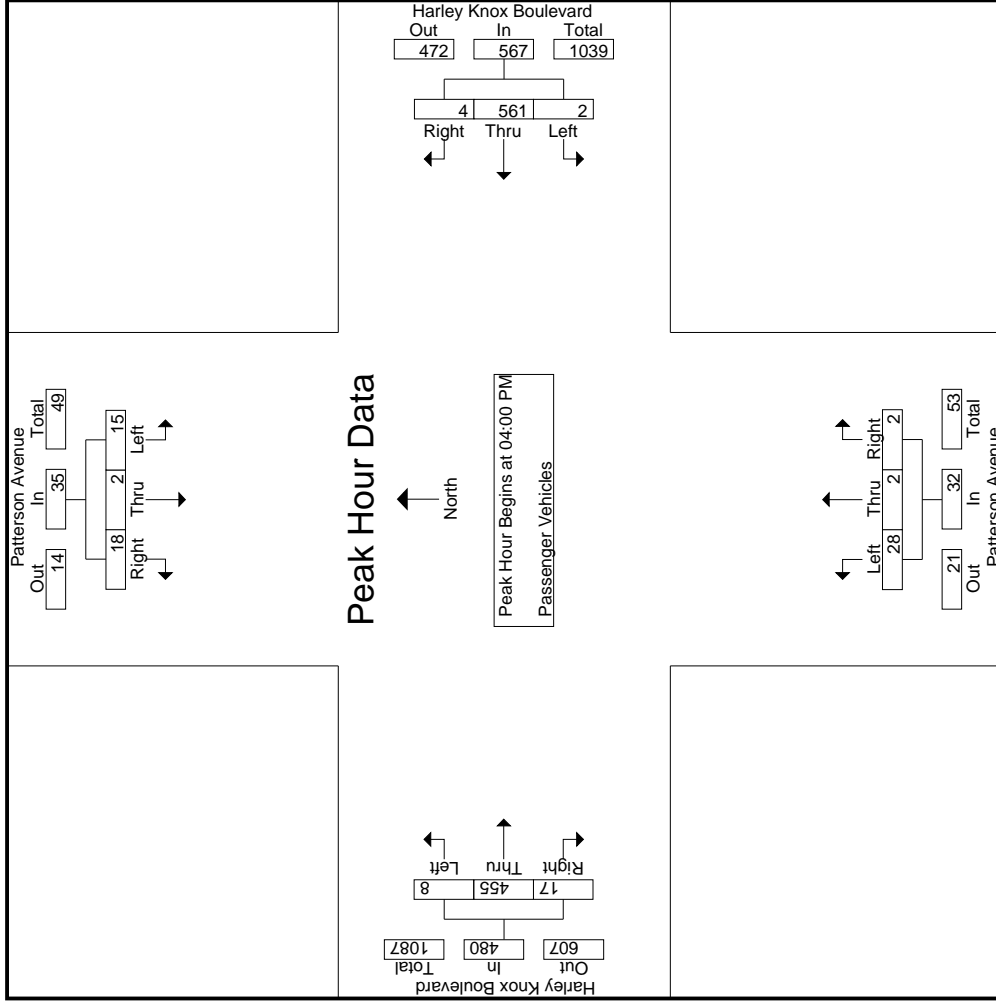
  

Start Time	Patterson Avenue Southbound						Harley Knox Boulevard Westbound						Patterson Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
04:00 PM	2	0	2	0	4	1	111	2	0	114	6	1	0	0	7	2	109	6	0	117	0	242	242	
04:15 PM	2	0	3	1	5	0	97	2	0	99	9	0	2	1	11	3	116	6	1	125	3	240	243	
04:30 PM	8	1	9	0	18	1	202	0	0	203	4	0	0	0	4	2	115	4	0	121	0	346	346	
04:45 PM	3	1	4	0	8	0	151	0	0	151	9	1	0	0	10	1	115	1	0	117	0	286	286	
<b>Total Volume</b>	<b>15</b>	<b>2</b>	<b>18</b>	<b>1</b>	<b>35</b>	<b>2</b>	<b>561</b>	<b>4</b>	<b>0</b>	<b>567</b>	<b>28</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>32</b>	<b>8</b>	<b>455</b>	<b>17</b>	<b>1</b>	<b>480</b>	<b>3</b>	<b>1114</b>	<b>1117</b>	
<b>% App. Total</b>	<b>42.9</b>	<b>5.7</b>	<b>51.4</b>			<b>0.4</b>	<b>98.9</b>	<b>0.7</b>		<b>50.1</b>	<b>87.5</b>	<b>6.2</b>	<b>6.2</b>		<b>6.2</b>	<b>1.7</b>	<b>94.8</b>	<b>3.5</b>		<b>44.2</b>	<b>0.6</b>	<b>99.4</b>		
<b>PHF</b>	<b>.469</b>	<b>.500</b>	<b>.500</b>		<b>.486</b>	<b>.500</b>	<b>.694</b>	<b>.500</b>		<b>.500</b>	<b>.778</b>	<b>.500</b>	<b>.250</b>		<b>.250</b>	<b>.667</b>	<b>.981</b>	<b>.708</b>		<b>.960</b>	<b>.960</b>	<b>.805</b>		

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City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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City of Perris  
 N/S: Patterson Avenue  
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 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
+0 mins.	2	0	2	1	111	2	6	1	0	7	2	109	6	117
+15 mins.	2	0	3	0	97	2	9	0	2	11	3	116	6	125
+30 mins.	8	1	9	1	202	0	4	0	0	4	2	115	4	121
+45 mins.	3	1	4	0	151	0	9	1	0	10	1	115	1	117
Total Volume	15	2	18	2	561	4	28	2	2	32	8	455	17	480
% App. Total	42.9	5.7	51.4	0.4	98.9	0.7	87.5	6.2	6.2	1.7	94.8	3.5		
PHF	.469	.500	.500	.500	.694	.500	.778	.500	.250	.727	.667	.981	.708	.960



Groups Printed- Large 2 Axle Vehicles

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	0	1	0	4	0	4	0	0	4	1	0	0	0	1	1	1	1	0	3	0	12	12
04:15 PM	0	1	0	0	1	0	4	1	0	5	0	0	0	0	0	0	5	0	0	5	0	11	11
04:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	0	0	0	0	0	6	6
04:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	1	0	0	0	1	0	7	7
<b>Total</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>36</b>	<b>36</b>
05:00 PM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	3	0	0	3	0	8	8
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	0	4	4
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	4	0	0	5	0	7	7
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	3	0	0	3	0	6	6
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>25</b>	<b>25</b>
<b>Grand Total</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>24</b>	<b>1</b>	<b>0</b>	<b>25</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>3</b>	<b>18</b>	<b>2</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>61</b>	<b>61</b>
Approch %	60	20	20			0	96	4			37.5	37.5	25			13	78.3	8.7			0	61	61
Total %	4.9	1.6	1.6		8.2	0	39.3	1.6		41	4.9	4.9	3.3		13.1	4.9	29.5	3.3		37.7	0	100	100

3.1-185

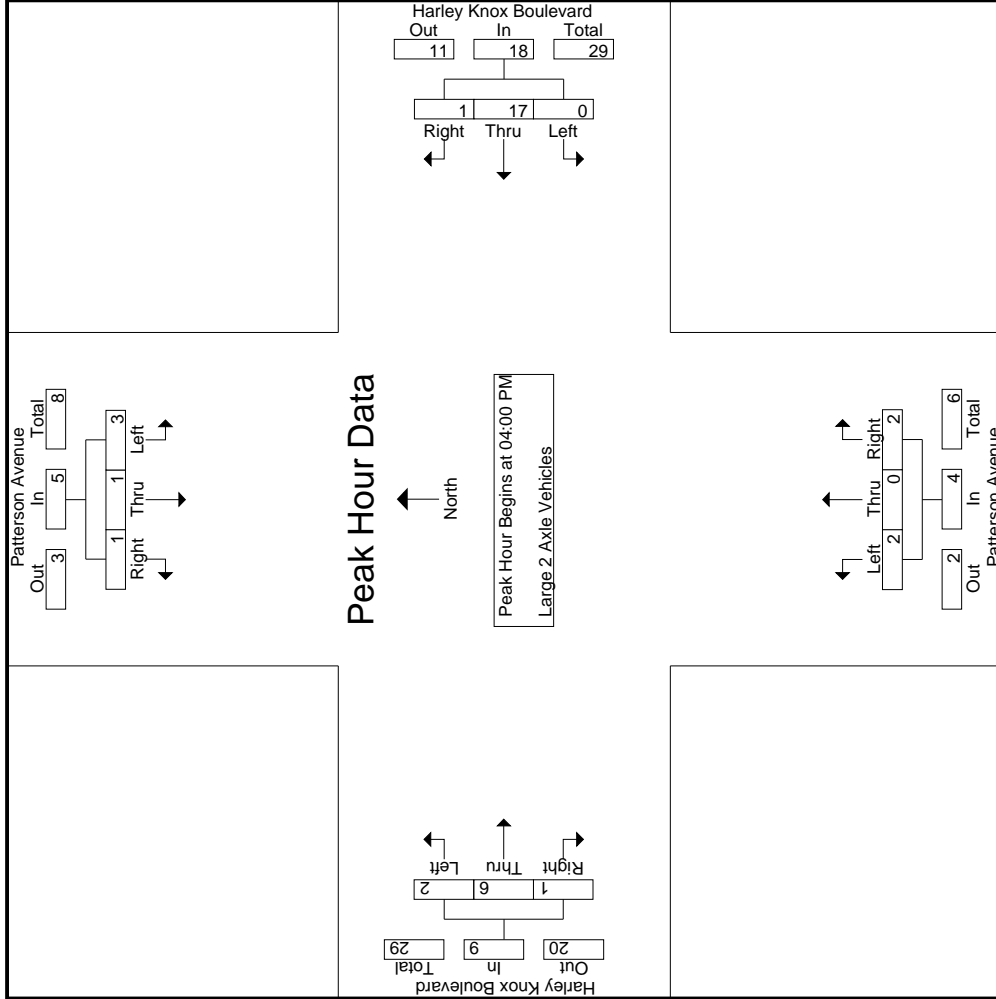
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	0	1	0	4	0	4	0	0	4	1	0	0	0	1	1	1	1	0	3	0	12	12
04:15 PM	0	1	0	0	1	0	4	1	0	5	0	0	0	0	0	0	5	0	0	5	0	11	11
04:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	1	0	1	0	0	0	0	0	0	6	6
04:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	1	0	0	0	1	0	7	7
<b>Total Volume</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>36</b>	<b>36</b>
% App. Total	60	20	20			0	94.4	5.6			50	50	25			22.2	66.7	11.1			0	750	750
PHF	.250	.250	.250		.313	.000	.850	.250		.900	.500	.500	.500		.500	.500	.300	.250		.450		.750	.750

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	3	0	1	4	0	0	4	0	0	1	1	1
+15 mins.	0	1	0	4	0	1	5	0	0	0	5	0
+30 mins.	0	0	0	5	0	0	5	0	1	0	0	0
+45 mins.	0	0	0	4	0	4	4	0	1	1	0	0
Total Volume	3	1	1	17	1	18	2	0	2	2	6	1
% App. Total	60	20	20	94.4	5.6	90	50	0	50	22.2	66.7	11.1
PHF	.250	.250	.250	.850	.250	.900	.500	.000	.500	.500	.300	.250

Groups Printed- 3 Axle Vehicles

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	3
04:15 PM	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	2	10	0	0	12	0	0	16	16
04:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	11	0	0	11	0	0	13	13
04:45 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	11	11
Total	0	0	1	0	1	7	0	0	0	7	0	0	0	0	0	2	33	0	0	35	0	0	43	43
05:00 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5	1	0	6	0	0	8	8
05:15 PM	1	0	0	0	1	3	0	0	0	3	0	0	0	0	0	0	10	2	0	12	0	0	16	16
05:30 PM	0	0	1	0	1	2	0	0	0	2	1	0	0	0	1	0	1	0	0	1	0	0	5	5
05:45 PM	1	0	0	0	1	4	0	0	0	4	1	0	0	0	1	0	3	1	0	4	0	0	10	10
Total	2	0	1	0	3	11	0	0	0	11	2	0	0	0	2	0	19	4	0	23	0	0	39	39
Grand Total	2	0	2	0	4	18	0	0	0	18	2	0	0	0	2	2	52	4	0	58	0	0	82	82
Approch %	50	0	50			100	0	0		100	2.4	0	0		2.4	89.7	6.9		70.7			100		
Total %	2.4	0	2.4		4.9	2.4	0	0		2.4	2.4	0	0		2.4	63.4	4.9							

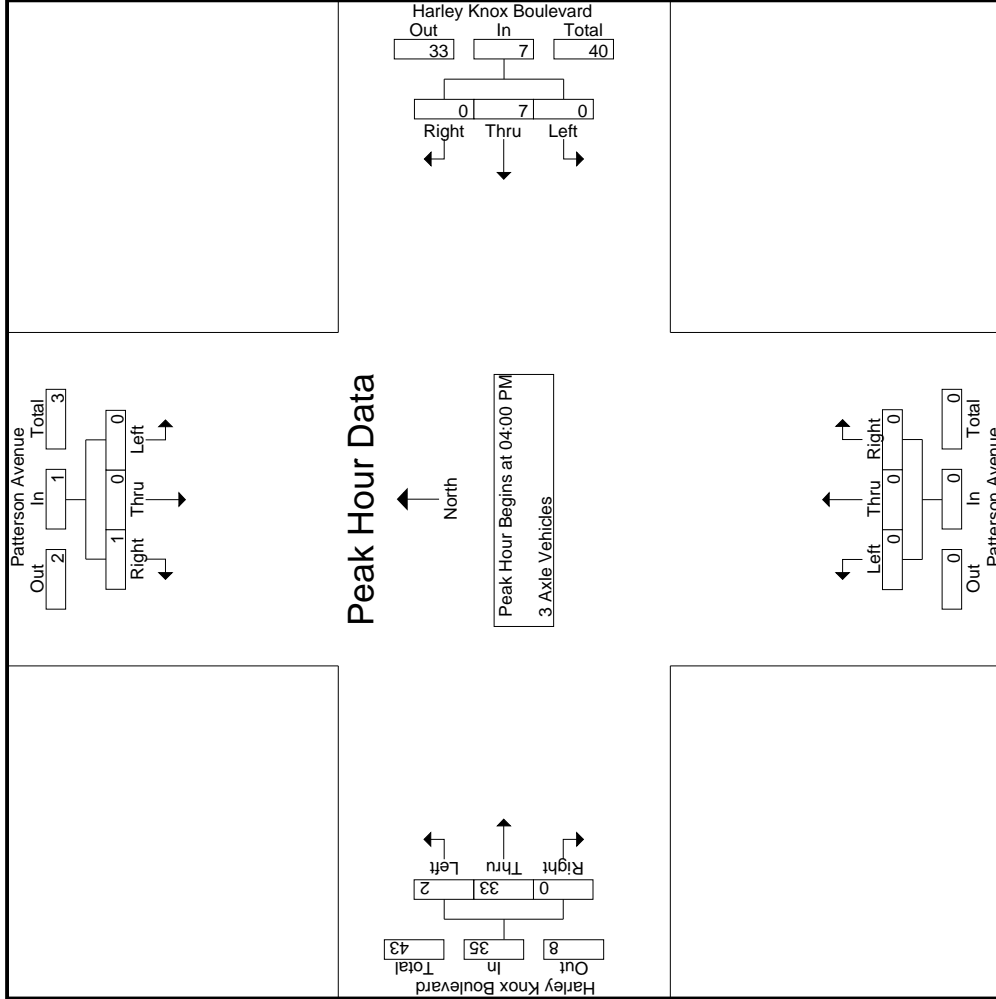
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
04:15 PM	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	2	10	0	0	12	0	0	16	16
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	11	0	0	11	0	0	13	13
04:45 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	11	11
Total Volume	0	0	0	1	1	7	0	0	0	7	0	0	0	0	0	2	33	0	0	35	0	0	43	43
% App. Total	0	0	0	100	.250	0	100	0	0	0	0	0	0	0	0	5.7	94.3	0	0	97.2	0	0	100	100
PHF	.000	.000	.000	.250	.250	.000	.438	.000	.000	.438	.000	.000	.000	.000	.000	.250	.750	.000	.000	.729			.672	.672

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Patterson Avenue Southbound				Harley Knox Boulevard Westbound				Patterson Avenue Northbound				Harley Knox Boulevard Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
	Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:																
	04:00 PM															
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	4	0	0	4	0	0	0	0	2	10	0	12
+30 mins.	0	0	1	1	1	0	0	1	0	0	0	0	0	11	0	11
+45 mins.	0	0	0	0	2	0	0	2	0	0	0	0	0	9	0	9
Total Volume	0	0	1	1	7	0	0	7	0	0	0	0	2	33	0	35
% App. Total	0	0	100	.250	0	100	0	.438	0	0	0	.000	5.7	94.3	0	.729
PHF	.000	.000	.250	.250	.000	.438	.000	.438	.000	.000	.000	.000	.250	.750	.000	.729

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	11	0	0	11	1	0	0	0	1	2	7	0	0	9	0	21	21
04:15 PM	0	0	1	0	1	0	13	0	0	13	1	0	0	0	1	1	13	0	0	14	0	29	29
04:30 PM	0	0	1	0	1	0	15	1	0	16	0	0	0	0	0	3	8	0	0	11	0	28	28
04:45 PM	0	0	1	0	1	0	7	1	0	8	0	0	0	0	0	1	5	0	0	6	0	15	15
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>46</b>	<b>2</b>	<b>0</b>	<b>48</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>93</b>	<b>93</b>
05:00 PM	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	1	8	0	0	9	0	17	17
05:15 PM	1	0	0	0	1	0	14	2	0	16	0	0	0	0	0	1	8	0	0	9	0	26	26
05:30 PM	0	0	0	0	0	3	9	1	0	13	0	0	0	0	0	0	5	0	0	5	0	18	18
05:45 PM	2	0	0	0	2	0	10	0	0	10	1	0	0	0	1	0	4	1	0	5	0	18	18
<b>Total</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>40</b>	<b>3</b>	<b>0</b>	<b>46</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>25</b>	<b>1</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>79</b>	<b>79</b>
<b>Grand Total</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>3</b>	<b>86</b>	<b>5</b>	<b>0</b>	<b>94</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>58</b>	<b>1</b>	<b>0</b>	<b>68</b>	<b>0</b>	<b>172</b>	<b>172</b>
Approach %	57.1	0	42.9			3.2	91.5	5.3			100	0	0		13.2	85.3	1.5						
Total %	2.3	0	1.7		4.1	1.7	50	2.9		54.7	1.7	0	0		5.2	33.7	0.6			39.5	0	100	

3.1-191

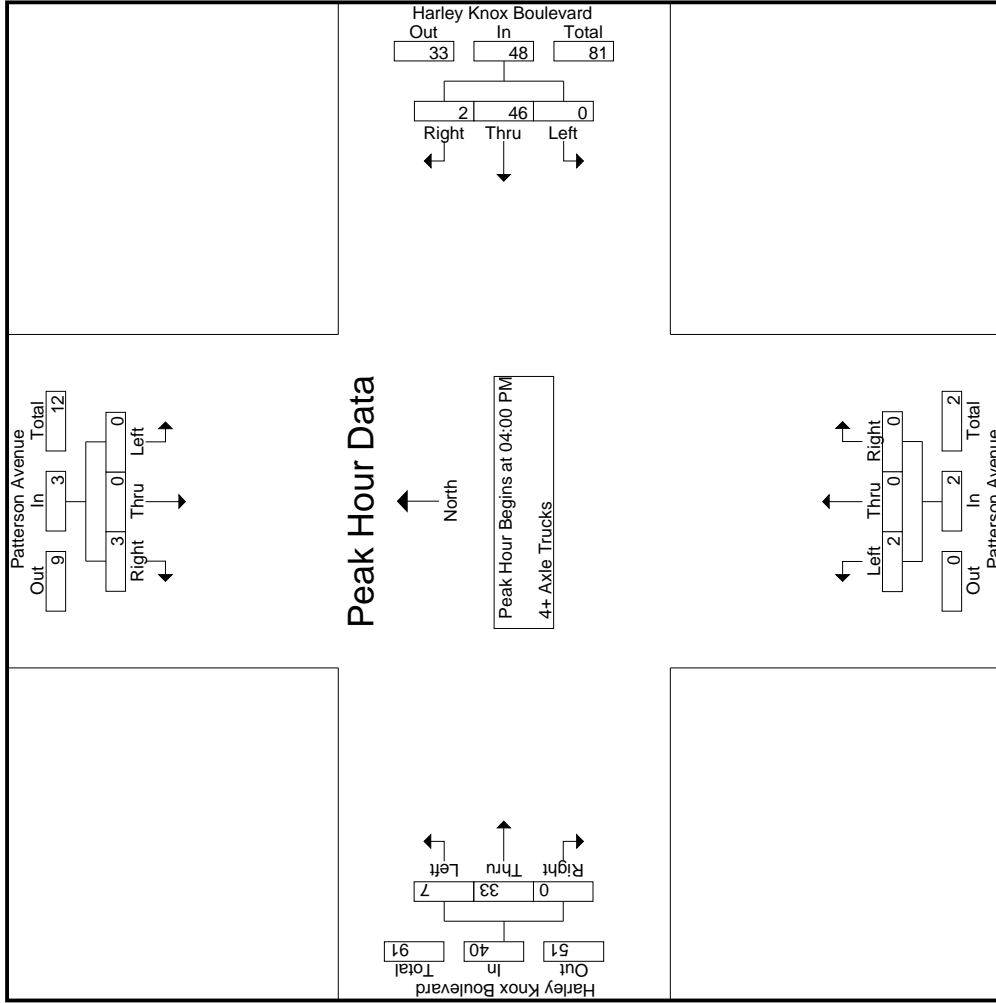
Start Time	Patterson Avenue Southbound					Harley Knox Boulevard Westbound					Patterson Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	11	0	0	11	1	0	0	0	1	2	7	0	0	9	0	21	21
04:15 PM	0	0	1	0	1	0	13	0	0	13	1	0	0	0	1	1	13	0	0	14	0	29	29
04:30 PM	0	0	1	0	1	0	15	1	0	16	0	0	0	0	0	3	8	0	0	11	0	28	28
04:45 PM	0	0	1	0	1	0	7	1	0	8	0	0	0	0	0	1	5	0	0	6	0	15	15
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>46</b>	<b>2</b>	<b>0</b>	<b>48</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>93</b>	<b>93</b>
% App. Total	0.000	0.000	.750		.750	.000	95.8	4.2		.500	100	0	0		17.5	82.5	0						.802
PHF	.000	.000	.750		.750	.000	.767	.500		.750	.500	.000	.000		.500	.583	.635			.000	.714		.802

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 04\_PER\_Patterson\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Harley Knox Boulevard Westbound			Patterson Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	11	0	1	0	0	1	2	7
+15 mins.	0	0	1	0	13	0	1	0	0	1	1	13
+30 mins.	0	0	1	0	15	1	0	0	0	3	8	0
+45 mins.	0	0	1	0	7	1	0	0	0	1	5	0
Total Volume	0	0	3	0	46	2	2	0	0	7	33	0
% App. Total	0	0	100	0	95.8	4.2	100	0	0	17.5	82.5	0
PHF	.000	.000	.750	.000	.767	.500	.500	.000	.000	.583	.635	.000
			.750			.500						.714

Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Patterson Avenue	East Leg Harley Knox Boulevard	South Leg Patterson Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Patterson Avenue	East Leg Harley Knox Boulevard	South Leg Patterson Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	0	0	2

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	0	0	0	0	0		0	351	0	0	351		1	0	19	0	20		0	244	42	0	286	
07:15 AM	0	0	0	0	0		3	355	0	0	358		0	12	12	0	12		0	278	45	0	323	
07:30 AM	0	0	0	0	0		3	345	0	0	348		0	14	14	0	14		0	297	57	0	354	
07:45 AM	0	0	0	0	0		1	348	0	0	349		7	0	17	0	24		0	287	73	0	360	
<b>Total</b>	0	0	0	0	0		7	1399	0	0	1406		8	0	62	0	70		0	1106	217	0	1323	
08:00 AM	0	0	0	0	0		1	314	0	0	315		0	16	16	0	16		0	261	43	0	304	
08:15 AM	0	0	0	0	0		1	308	0	0	309		0	1	1	0	1		0	238	34	0	272	
08:30 AM	0	0	0	0	0		0	297	0	0	297		0	8	8	0	8		0	238	25	0	263	
08:45 AM	0	0	0	0	0		3	296	0	0	299		1	0	5	0	6		1	176	21	0	198	
<b>Total</b>	0	0	0	0	0		5	1215	0	0	1220		1	0	30	0	31		1	913	123	0	1037	
<b>Grand Total</b>	0	0	0	0	0		12	2614	0	0	2626		9	0	92	0	101		1	2019	340	0	2360	
<b>Approch %</b>	0	0	0	0	0		0.5	99.5	0	0	8.9	91.1	0.2	0	1.8	0	2		0	85.6	14.4	0	100	
<b>Total %</b>	0	0	0	0	0		0.2	51.4	0	0	51.6		0.2	0	1.8	0	2		0	39.7	6.7	0	46.4	
Passenger Vehicles	0	0	0	0	0		9	2381	0	0	2390		9	0	89	0	98		1	1779	322	0	2102	
% Passenger Vehicles	0	0	0	0	0		0	91.1	0	0	91		100	0	96.7	0	97		100	88.1	94.7	0	89.1	
Large 2 Axle Vehicles	0	0	0	0	0		3	106	0	0	109		0	0	2	0	2		0	118	9	0	127	
% Large 2 Axle Vehicles	0	0	0	0	0		0	4.1	0	0	4.2		0	2.2	0	0	2		0	5.8	2.6	0	5.4	
3 Axle Vehicles	0	0	0	0	0		0	26	0	0	26		0	1	1	0	1		0	30	4	0	34	
% 3 Axle Vehicles	0	0	0	0	0		0	1	0	0	1		0	1.1	0	0	1		0	1.5	1.2	0	1.4	
4+ Axle Trucks	0	0	0	0	0		0	101	0	0	101		0	0	0	0	0		0	92	5	0	97	
% 4+ Axle Trucks	0	0	0	0	0		0	3.9	0	0	3.8		0	0	0	0	0		0	4.6	1.5	0	4.1	

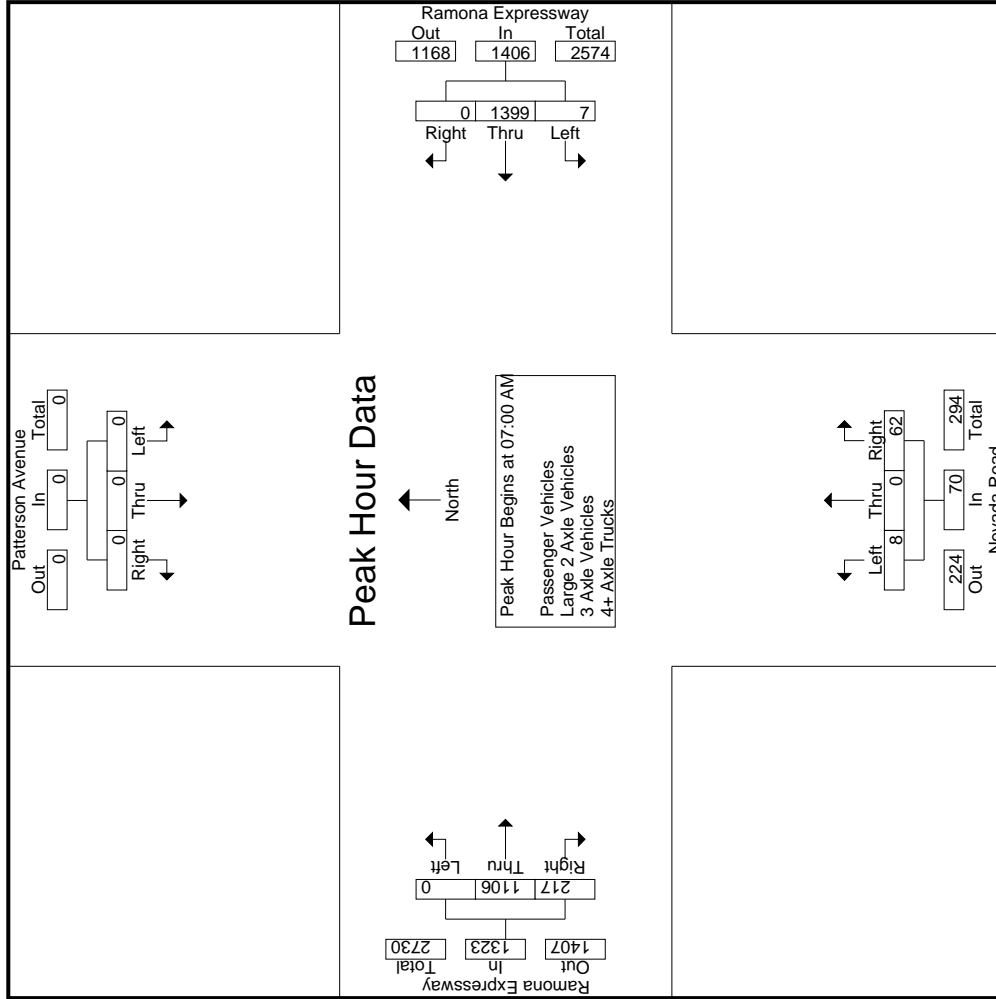
  

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1	0	0	0	0	0		0	0	0	0	0		1	0	0	0	19		0	244	42	0	286	
07:00 AM	0	0	0	0	0		0	351	0	0	351		1	0	0	0	1		0	20	0	0	20	
07:15 AM	0	0	0	0	0		3	355	0	0	358		0	0	0	0	12		0	12	45	0	57	
07:30 AM	0	0	0	0	0		3	345	0	0	348		0	0	0	0	14		0	14	57	0	71	
07:45 AM	0	0	0	0	0		1	348	0	0	349		7	0	17	0	24		0	24	73	0	97	
<b>Total Volume</b>	0	0	0	0	0		7	1399	0	0	1406		8	0	62	0	70		0	1106	217	0	1323	
% App. Total	0	0	0	0	0		0.5	99.5	0	0	88.6		11.4	0	88.6	0	83.6		0	83.6	16.4	0	919	
PHF	.000	.000	.000	.000	.000		.583	.985	.000	.982	.816		.286	.000	.816	.000	.729		.000	.931	.743	.000	.919	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:15 AM					
+0 mins.	0	0	0	0	351	0	351	0	0	19	20	0	278	45	323
+15 mins.	0	0	0	3	355	0	358	0	0	12	12	0	297	57	354
+30 mins.	0	0	0	3	345	0	348	0	0	14	14	0	287	73	360
+45 mins.	0	0	0	1	348	0	349	0	7	17	24	0	261	43	304
Total Volume	0	0	0	7	1399	0	1406	0	8	62	70	0	1123	218	1341
% App. Total	0.000	0.000	0.000	0.583	99.5	0.000	98.2	0.000	11.4	88.6	7.29	0.000	83.7	16.3	93.1
PHF															

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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	0	0	0	0	0		0	322	0	0	322		1	0	18	0	19		0	222	39	0	261	
07:15 AM	0	0	0	0	0		3	322	0	0	325		0	12	12	0	12		0	248	42	0	290	
07:30 AM	0	0	0	0	0		2	318	0	0	320		0	14	14	0	14		0	280	57	0	337	
07:45 AM	0	0	0	0	0		0	325	0	0	325		7	0	17	0	24		0	252	70	0	322	
Total	0	0	0	0	0		5	1287	0	0	1292		8	0	61	0	69		0	1002	208	0	1210	
08:00 AM	0	0	0	0	0		1	287	0	0	288		0	16	16	0	16		0	234	38	0	272	
08:15 AM	0	0	0	0	0		1	279	0	0	280		0	1	1	0	1		0	195	33	0	228	
08:30 AM	0	0	0	0	0		0	263	0	0	263		0	8	8	0	8		0	203	23	0	226	
08:45 AM	0	0	0	0	0		2	265	0	0	267		1	0	3	0	4		1	145	20	0	166	
Total	0	0	0	0	0		4	1094	0	0	1098		1	0	28	0	29		1	777	114	0	892	
Grand Total	0	0	0	0	0		9	2381	0	0	2390		9	0	89	0	98		1	1779	322	0	2102	
Apprch %	0	0	0	0	0		0.4	99.6	0	0	52.1		9.2	0	90.8	0	2.1		0	84.6	15.3	0	45.8	
Total %	0	0	0	0	0		0.2	51.9	0	0	0.2		0.2	0	1.9	0	0.2		0	38.8	7	0	0	

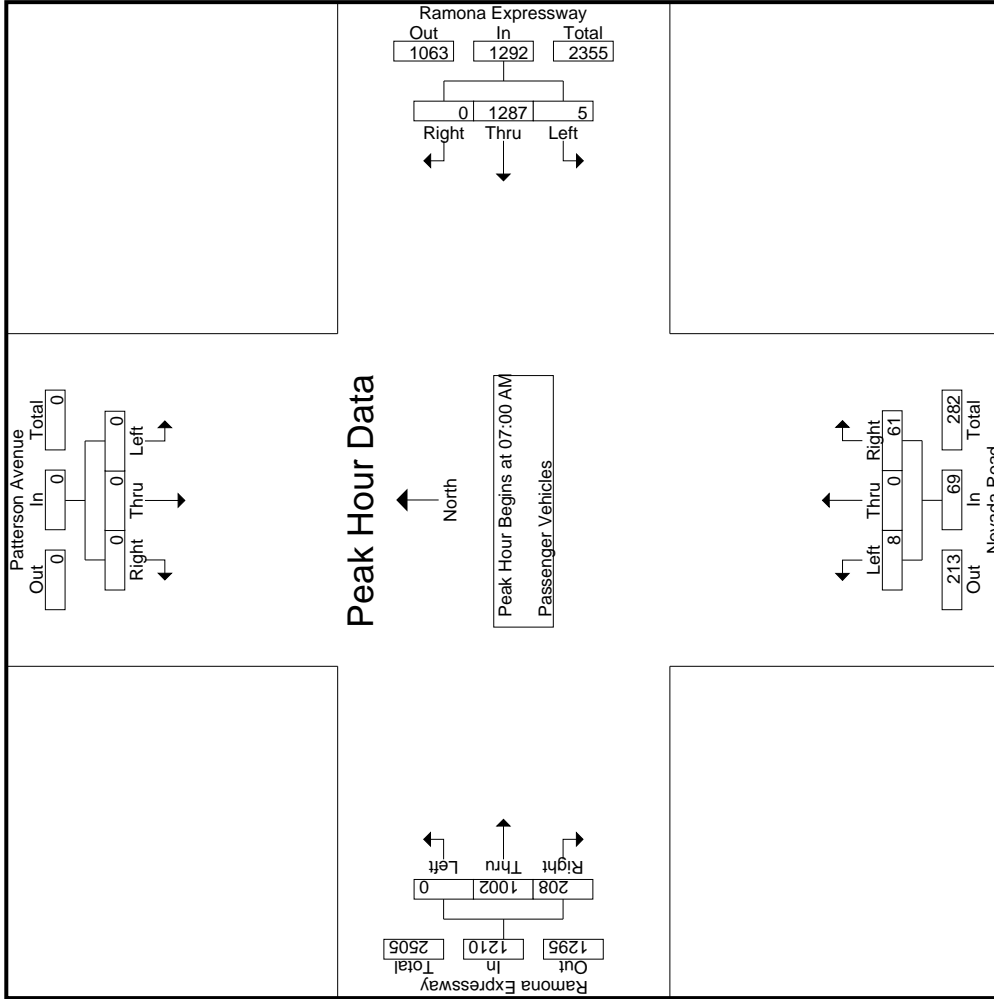
Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	0	0	0	0	0		0	322	0	0	322		1	0	18	0	19		0	222	39	0	261	
07:15 AM	0	0	0	0	0		3	322	0	0	325		0	12	12	0	12		0	248	42	0	290	
07:30 AM	0	0	0	0	0		2	318	0	0	320		0	14	14	0	14		0	280	57	0	337	
07:45 AM	0	0	0	0	0		0	325	0	0	325		7	0	17	0	24		0	252	70	0	322	
Total	0	0	0	0	0		5	1287	0	0	1292		8	0	61	0	69		0	1002	208	0	1210	
08:00 AM	0	0	0	0	0		1	287	0	0	288		0	16	16	0	16		0	234	38	0	272	
08:15 AM	0	0	0	0	0		1	279	0	0	280		0	1	1	0	1		0	195	33	0	228	
08:30 AM	0	0	0	0	0		0	263	0	0	263		0	8	8	0	8		0	203	23	0	226	
08:45 AM	0	0	0	0	0		2	265	0	0	267		1	0	3	0	4		1	145	20	0	166	
Total	0	0	0	0	0		4	1094	0	0	1098		1	0	28	0	29		1	777	114	0	892	
Grand Total	0	0	0	0	0		9	2381	0	0	2390		9	0	89	0	98		1	1779	322	0	2102	
Apprch %	0	0	0	0	0		0.4	99.6	0	0	52.1		9.2	0	90.8	0	2.1		0	84.6	15.3	0	45.8	
Total %	0	0	0	0	0		0.2	51.9	0	0	0.2		0.2	0	1.9	0	0.2		0	38.8	7	0	0	

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	0	0	0	0	0		0	322	0	0	322		1	0	18	0	19		0	222	39	0	261	
07:15 AM	0	0	0	0	0		3	322	0	0	325		0	12	12	0	12		0	248	42	0	290	
07:30 AM	0	0	0	0	0		2	318	0	0	320		0	14	14	0	14		0	280	57	0	337	
07:45 AM	0	0	0	0	0		0	325	0	0	325		7	0	17	0	24		0	252	70	0	322	
Total	0	0	0	0	0		5	1287	0	0	1292		8	0	61	0	69		0	1002	208	0	1210	
08:00 AM	0	0	0	0	0		1	287	0	0	288		0	16	16	0	16		0	234	38	0	272	
08:15 AM	0	0	0	0	0		1	279	0	0	280		0	1	1	0	1		0	195	33	0	228	
08:30 AM	0	0	0	0	0		0	263	0	0	263		0	8	8	0	8		0	203	23	0	226	
08:45 AM	0	0	0	0	0		2	265	0	0	267		1	0	3	0	4		1	145	20	0	166	
Total	0	0	0	0	0		4	1094	0	0	1098		1	0	28	0	29		1	777	114	0	892	
Grand Total	0	0	0	0	0		9	2381	0	0	2390		9	0	89	0	98		1	1779	322	0	2102	
Apprch %	0	0	0	0	0		0.4	99.6	0	0	52.1		9.2	0	90.8	0	2.1		0	84.6	15.3	0	45.8	
Total %	0	0	0	0	0		0.2	51.9	0	0	0.2		0.2	0	1.9	0	0.2		0	38.8	7	0	0	

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	0	0	0	0	0		0	322	0	0	322		1	0	18	0	19		0	222	39	0	261	
07:15 AM	0	0	0	0	0		3	322	0	0	325		0	12	12	0	12		0	248	42	0	290	
07:30 AM	0	0	0	0	0		2	318	0	0	320		0	14	14	0	14		0	280	57	0	337	
07:45 AM	0	0	0	0	0		0	325	0	0	325		7	0	17	0	24		0	252	70	0	322	
Total	0	0	0	0	0		5	1287	0	0	1292		8	0	61	0	69		0	1002	208	0	1210	
08:00 AM	0	0	0	0	0		1	287	0	0	288		0	16	16	0	16		0	234	38	0	272	
08:15 AM	0	0	0	0	0		1	279	0	0	280		0	1	1	0	1		0	195	33	0	228	
08:30 AM	0	0	0	0	0		0	263	0	0	263		0	8	8	0	8		0	203	23	0	226	
08:45 AM	0	0	0	0	0		2	265	0	0	267		1	0	3	0	4		1	145	20	0	166	
Total	0	0	0	0	0		4	1094	0	0	1098		1	0	28	0	29		1	777	114	0	892	
Grand Total	0	0	0	0	0		9	2381	0	0	2390		9	0	89	0	98		1	1779	322	0	2102	
Apprch %	0	0	0	0	0		0.4	99.6	0	0	52.1		9.2	0	90.8	0	2.1		0	84.6	15.3	0	45.8	
Total %	0	0	0	0	0		0.2	51.9	0	0	0.2		0.2	0	1.9	0	0.2		0	38.8	7	0	0	





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	0	0	0	322	0	322	0	19	0	222	39	261
+15 mins.	0	0	0	3	322	0	325	0	12	0	248	42	290
+30 mins.	0	0	0	2	318	0	320	0	14	0	280	57	337
+45 mins.	0	0	0	0	325	0	325	0	17	0	252	70	322
Total Volume	0	0	0	5	1287	0	1292	0	69	0	1002	208	1210
% App. Total	0	0	0	0.4	99.6	0	99.4	0	88.4	0	82.8	17.2	898
PHF	.000	.000	.000	.417	.990	.000	.994	.000	.719	.000	.895	.743	.998

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	20	20
07:15 AM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	36	36
07:30 AM	0	0	0	0	0	1	10	0	0	11	0	0	0	0	0	0	17	17
07:45 AM	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	0	35	35
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>108</b>	<b>108</b>
08:00 AM	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	32	32
08:15 AM	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	40	40
08:30 AM	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	29	29
08:45 AM	0	0	0	0	0	1	15	0	0	16	0	0	0	0	0	0	29	29
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>130</b>	<b>130</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>106</b>	<b>0</b>	<b>0</b>	<b>109</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>238</b>	<b>238</b>
Apprch %	0	0	0	0	0	2.8	97.2	0	0	45.8	0	0	100	0	0.8	0	100	100
Total %	0	0	0	0	0	1.3	44.5	0	0	45.8	0	0	0.8	0	0.8	0	100	100

3.1-202

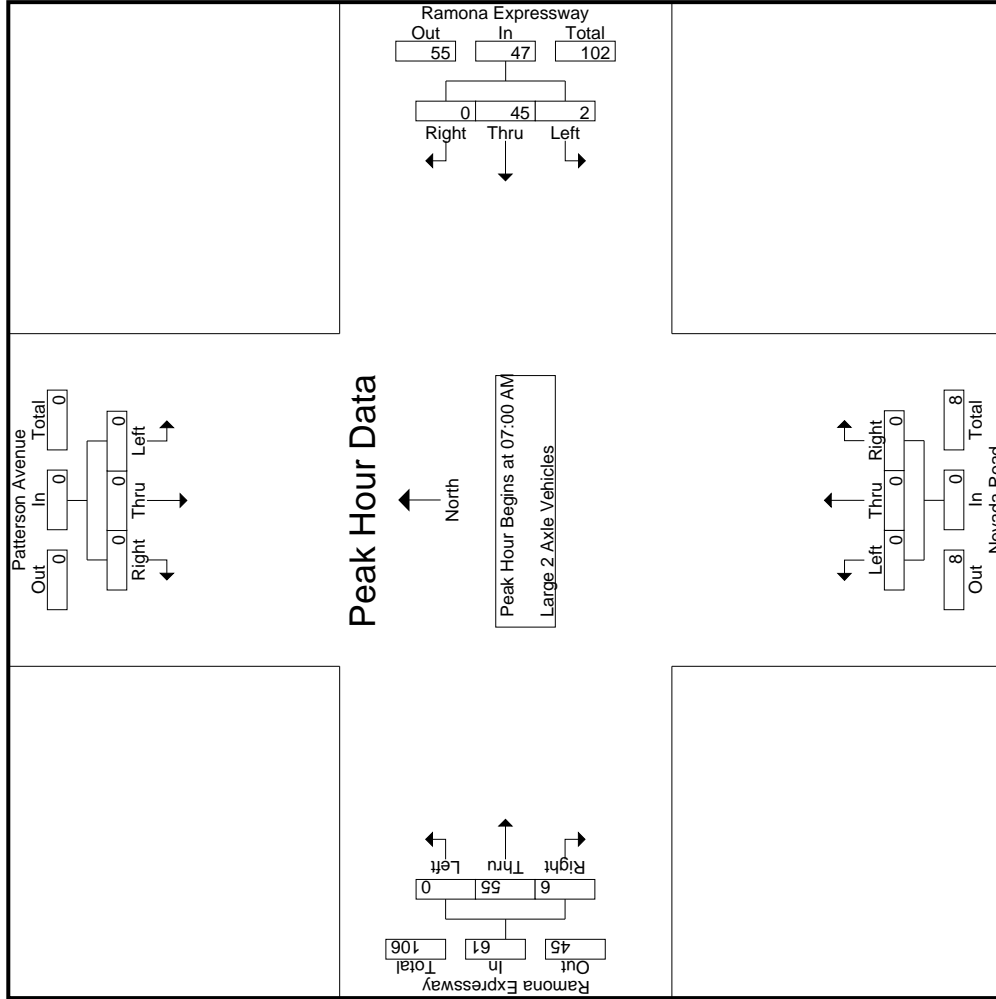
Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	11	11
07:15 AM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	19	19
07:30 AM	0	0	0	0	0	1	10	0	0	11	0	0	0	0	0	0	6	6
07:45 AM	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	0	25	25
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>61</b>
% App. Total	0	0	0	0	0	4.3	95.7	0	0	95.7	0	0	0	0	0	0	90.2	9.8
PHF	.000	.000	.000	.000	.000	.500	.662	.000	.691	.691	.000	.000	.000	.000	.000	.500	.610	.750

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			07:00 AM			07:00 AM				
+0 mins.	0	0	0	0	9	0	9	0	0	0	0	11	0	11
+15 mins.	0	0	0	0	17	0	17	0	0	0	0	16	3	19
+30 mins.	0	0	0	1	10	0	11	0	0	0	0	6	0	6
+45 mins.	0	0	0	1	9	0	10	0	0	0	0	22	3	25
Total Volume	0	0	0	2	45	0	47	0	0	0	0	55	6	61
% App. Total	0	0	0	4.3	95.7	0	0	0	0	0	0	90.2	9.8	61.0
PHF	.000	.000	.000	.500	.662	.000	.691	.000	.000	.000	.000	.625	.500	.610

Counts Unlimited  
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 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed - 3 Axle Vehicles

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR						
07:00 AM	0	0	0	0	0	4	0	0	0	1	0	0	0	5	1	0	0	6	0	0	11	11
07:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	3	0	0	3	0	0	7	7
07:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	3
07:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	3	0	0	5	5
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>26</b>
08:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	1	0	5	0	0	7	7
08:15 AM	0	0	0	0	0	5	0	0	5	0	0	0	0	2	1	0	3	0	0	8	8	8
08:30 AM	0	0	0	0	0	4	0	0	4	0	0	0	0	6	1	0	7	0	0	11	11	11
08:45 AM	0	0	0	0	0	3	0	0	3	0	0	0	0	6	0	0	6	0	0	9	9	9
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>3</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>35</b>	
Grand Total	0	0	0	0	0	26	0	0	26	0	1	0	1	0	30	4	0	34	0	0	61	61
Apprch %	0	0	0	0	0	100	0	0	100	0	0	100	0	0	88.2	11.8	0	55.7	0	0	100	100
Total %	0	0	0	0	0	42.6	0	0	42.6	0	1.6	0	1.6	0	49.2	6.6	0	55.7	0	0	100	100

3.1-205

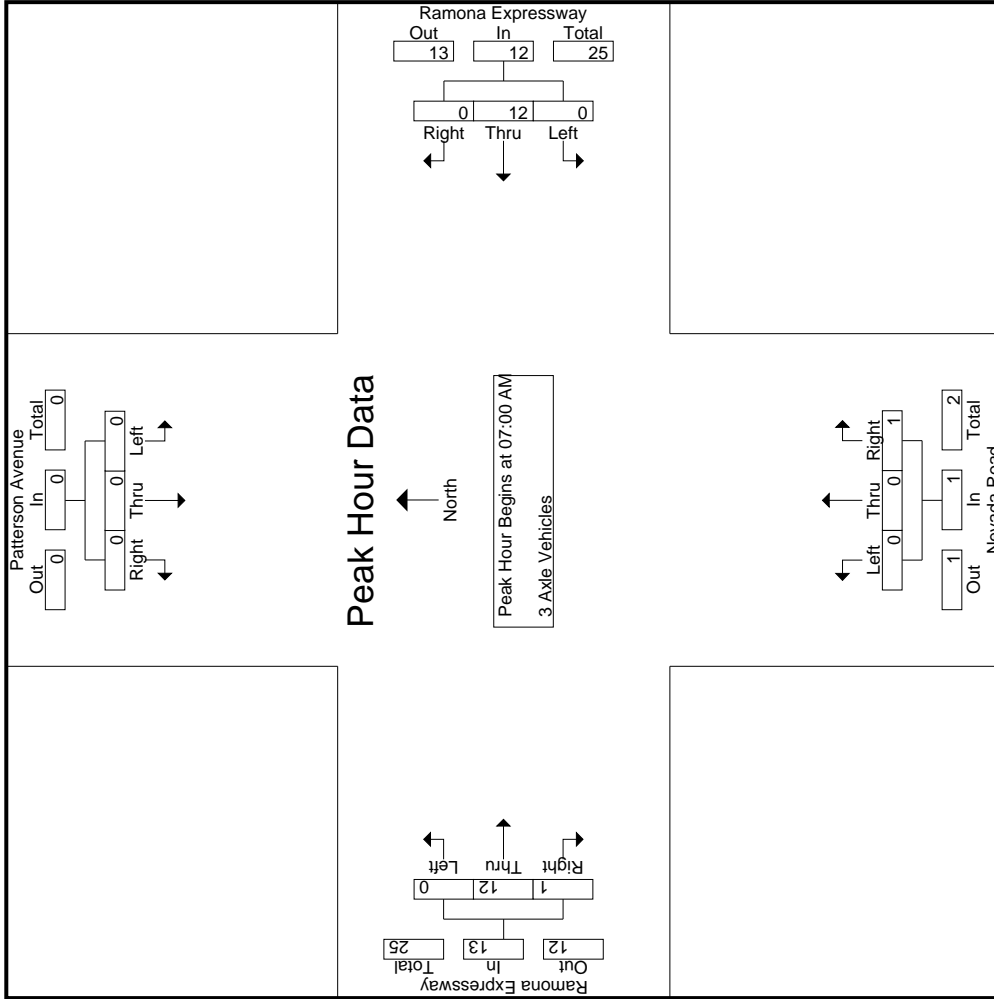
Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR						
07:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	1	0	0	6	6	
07:15 AM	0	0	0	0	0	4	0	0	4	0	0	0	0	0	3	0	0	3	0	0	7	7
07:30 AM	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	1	0	0	3	3
07:45 AM	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0	0	3	0	0	5	5
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>26</b>
% App. Total	0	0	0	0	0	100	0	0	100	0	0	100	0	0	92.3	7.7	0	55.7	0	0	100	100
PHF	.000	.000	.000	.000	.000	.750	.000	.000	.750	.000	.250	.000	.250	.000	.600	.250	.250	.542	.000	.250	.542	.591

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Ramona Expressway Eastbound			Nevada Road Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																		
Peak Hour for Each Approach Begins at:																		
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	1	6	
+15 mins.	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	3	3	
+30 mins.	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	3	
Total Volume	0	0	0	0	12	0	0	12	0	0	0	0	0	1	12	1	13	
% App. Total	0	0	0	0	100	0	0	100	0	0	0	0	0	100	92.3	7.7	100	
PHF	.000	.000	.000	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.600	.250	.250	.542	

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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

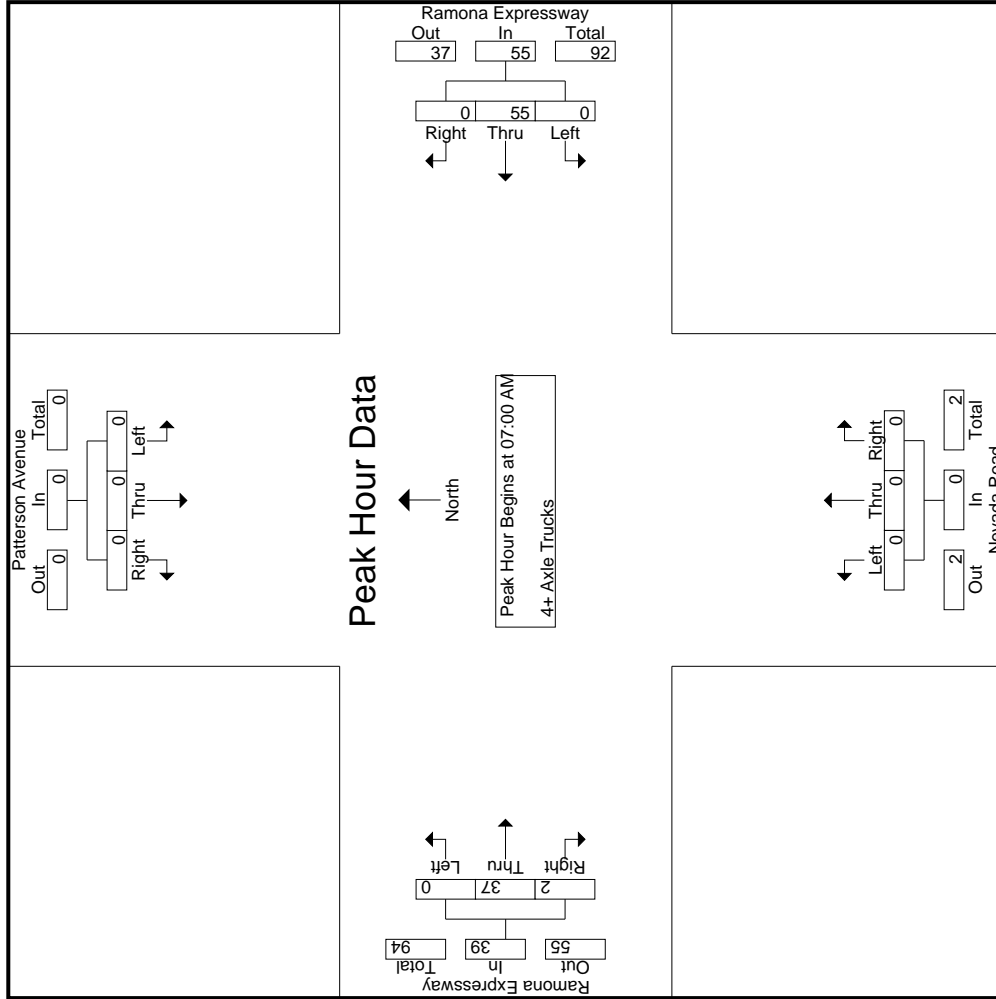
Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total		
07:00 AM	0	0	0	0	0	16	0	0	0	16	0	0	0	0	0	0	6	2	0	8
07:15 AM	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	11	0	0	11
07:30 AM	0	0	0	0	0	15	0	0	0	15	0	0	0	0	0	0	10	0	0	10
07:45 AM	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	10	0	0	10
<b>Total</b>	0	0	0	0	0	55	0	0	0	55	0	0	0	0	0	0	37	2	0	39
08:00 AM	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	6	2	0	8
08:15 AM	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	0	16	0	0	16
08:30 AM	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	19	0	0	19
08:45 AM	0	0	0	0	0	13	0	0	0	13	0	0	0	0	0	0	14	1	0	15
<b>Total</b>	0	0	0	0	0	46	0	0	0	46	0	0	0	0	0	0	55	3	0	58
<b>Grand Total</b>	0	0	0	0	0	101	0	0	0	101	0	0	0	0	0	0	92	5	0	97
Apprch %	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	0	94.8	5.2	0	97
Total %	0	0	0	0	0	51	0	0	0	51	0	0	0	0	0	0	46.5	2.5	0	49

3.1-208

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	16	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	15	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	0	0	0	0	0	55	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.859	.000	.000	.000	.859	.000	.000	.000	.000	.000	.000	.841	.250	.000	.886	.000	.000	.000	.940

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM





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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	16	0	0	0	0	0	0	0	6	2	8
+15 mins.	0	0	0	0	12	0	0	0	0	0	0	0	11	0	11
+30 mins.	0	0	0	0	15	0	0	0	0	0	0	0	10	0	10
+45 mins.	0	0	0	0	12	0	0	0	0	0	0	0	10	0	10
Total Volume	0	0	0	0	55	0	0	0	0	0	0	0	37	2	39
% App. Total	0	0	0	0	100	0	0	0	0	0	0	0	94.9	5.1	86.6
PHF	.000	.000	.000	.000	.859	.000	.000	.000	.000	.000	.000	.000	.841	.250	.886

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 (951) 268-6268

File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
04:00 PM	0	0	0	0	0		4	319	0	0	323		0	0	0	5	0	5		0	343	63	0	406	
04:15 PM	0	0	0	0	0		3	329	0	0	332		0	0	10	0	10		0	321	69	0	390		
04:30 PM	0	0	0	0	0		2	389	0	0	391		1	0	8	0	9		0	299	55	0	354		
04:45 PM	0	0	0	0	0		3	358	0	0	361		1	0	8	0	9		0	302	57	0	359		
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>12</b>	<b>1395</b>	<b>0</b>	<b>0</b>	<b>1407</b>		<b>2</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>33</b>		<b>0</b>	<b>1265</b>	<b>244</b>	<b>0</b>	<b>1509</b>		
05:00 PM	0	0	0	0	0		6	319	0	0	325		0	0	7	0	7		0	311	54	0	365		
05:15 PM	0	0	0	0	0		5	330	0	0	335		1	0	5	0	6		0	330	65	0	395		
05:30 PM	0	0	0	0	0		4	294	0	0	298		1	0	8	0	9		0	366	66	0	432		
05:45 PM	0	0	0	0	0		4	308	0	0	312		2	0	2	0	4		0	343	72	0	415		
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>19</b>	<b>1251</b>	<b>0</b>	<b>0</b>	<b>1270</b>		<b>4</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>26</b>		<b>0</b>	<b>1350</b>	<b>257</b>	<b>0</b>	<b>1607</b>		
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>31</b>	<b>2646</b>	<b>0</b>	<b>0</b>	<b>2677</b>		<b>6</b>	<b>0</b>	<b>53</b>	<b>0</b>	<b>59</b>		<b>0</b>	<b>2615</b>	<b>501</b>	<b>0</b>	<b>3116</b>		
<b>Approch %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>1.2</b>	<b>98.8</b>	<b>0</b>	<b>0</b>	<b>10.2</b>		<b>0</b>	<b>0</b>	<b>89.8</b>	<b>0</b>	<b>16.1</b>		<b>0</b>	<b>83.9</b>	<b>16.1</b>	<b>0</b>	<b>53.2</b>		
<b>Total %</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0.5</b>	<b>45.2</b>	<b>0</b>	<b>0</b>	<b>45.7</b>		<b>0.1</b>	<b>0</b>	<b>0.9</b>	<b>0</b>	<b>1</b>		<b>0</b>	<b>44.7</b>	<b>8.6</b>	<b>0</b>	<b>100</b>		
Passenger Vehicles	0	0	0	0	0		30	2468	0	0	2498		5	0	50	0	55		0	2465	483	0	2948		
% Passenger Vehicles	0	0	0	0	0		96.8	93.3	0	0	93.3		83.3	0	94.3	0	93.2		0	94.3	96.4	0	94.6		
Large 2 Axle Vehicles	0	0	0	0	0		1	63	0	0	64		1	0	1	0	2		0	48	11	0	59		
% Large 2 Axle Vehicles	0	0	0	0	0		3.2	2.4	0	0	2.4		16.7	0	1.9	0	3.4		0	1.8	2.2	0	1.9		
3 Axle Vehicles	0	0	0	0	0		0	26	0	0	26		0	0	0	0	0		0	29	1	0	30		
% 3 Axle Vehicles	0	0	0	0	0		0	1	0	0	1		0	0	0	0	0		0	1.1	0.2	0	1		
4+ Axle Trucks	0	0	0	0	0		0	89	0	0	89		0	0	2	0	2		0	73	6	0	79		
% 4+ Axle Trucks	0	0	0	0	0		0	3.4	0	0	3.3		0	0	3.8	0	3.4		0	2.8	1.2	0	2.5		

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
04:00 PM	0	0	0	0	0		4	319	0	0	323		0	0	5	0	5		0	343	63	0	406	
04:15 PM	0	0	0	0	0		3	329	0	0	332		0	0	10	0	10		0	321	69	0	390	
04:30 PM	0	0	0	0	0		2	389	0	0	391		1	0	8	0	9		0	299	55	0	354	
04:45 PM	0	0	0	0	0		3	358	0	0	361		1	0	8	0	9		0	302	57	0	359	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>12</b>	<b>1395</b>	<b>0</b>	<b>0</b>	<b>1407</b>		<b>2</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>33</b>		<b>0</b>	<b>1265</b>	<b>244</b>	<b>0</b>	<b>1509</b>	
<b>PHF</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>		<b>.750</b>	<b>.897</b>	<b>.000</b>	<b>.000</b>	<b>.900</b>		<b>.500</b>	<b>.000</b>	<b>.775</b>	<b>.000</b>	<b>.922</b>		<b>.000</b>	<b>.884</b>	<b>.929</b>	<b>.000</b>	<b>.929</b>	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

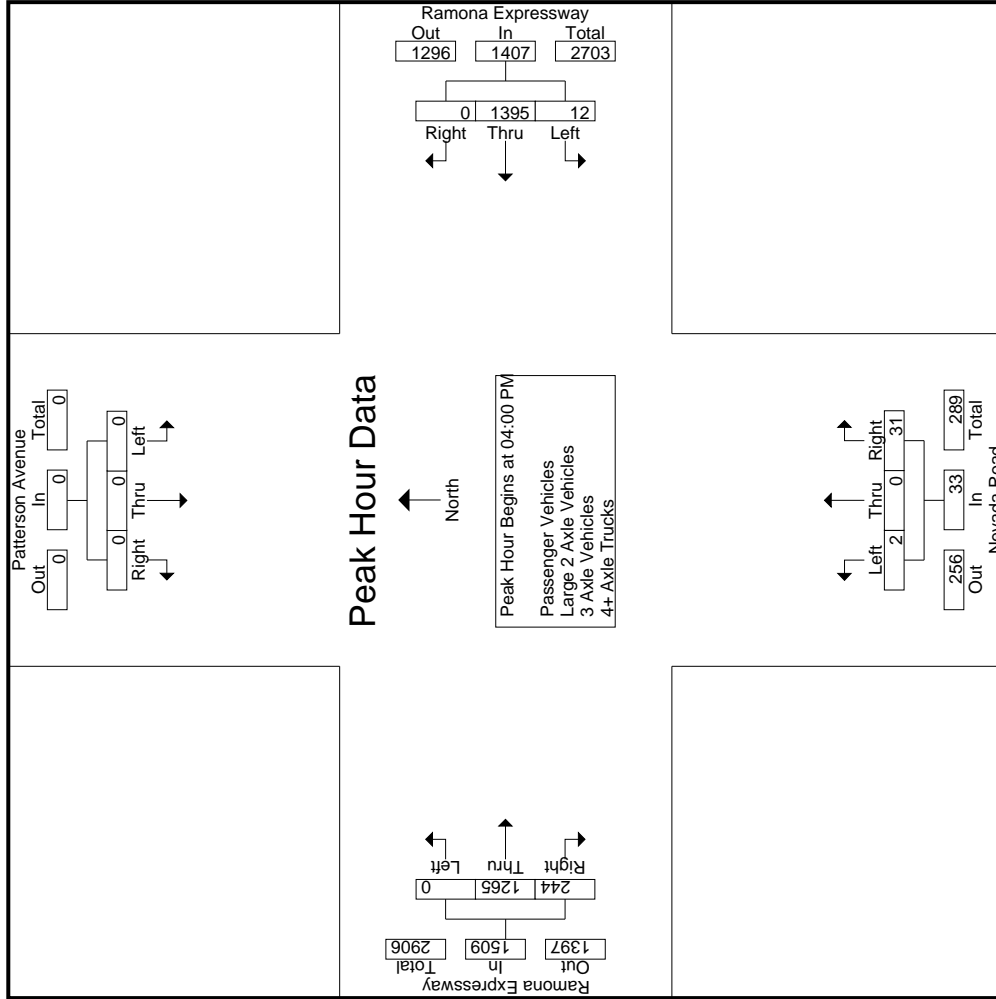
Peak Hour for Entire Intersection Begins at 04:00 PM

Start Time	Patterson Avenue Southbound						Ramona Expressway Westbound						Nevada Road Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
04:00 PM	0	0	0	0	0		4	319	0	0	323		0	0	5	0	5		0	343	63	0	406	
04:15 PM	0	0	0	0	0		3	329	0	0	332		0	0	10	0	10		0	321	69	0	390	
04:30 PM	0	0	0	0	0		2	389	0	0	391		1	0	8	0	9		0	299	55	0	354	
04:45 PM	0	0	0	0	0		3	358	0	0	361		1	0	8	0	9		0	302	57	0	359	
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>12</b>	<b>1395</b>	<b>0</b>	<b>0</b>	<b>1407</b>		<b>2</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>33</b>		<b>0</b>	<b>1265</b>	<b>244</b>	<b>0</b>	<b>1509</b>	
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0.9</b>	<b>99.1</b>	<b>0</b>	<b>0</b>	<b>93.9</b>		<b>6.1</b>	<b>0</b>	<b>93.9</b>	<b>0</b>	<b>83.8</b>		<b>0</b>	<b>83.8</b>	<b>16.2</b>	<b>0</b>	<b>16.2</b>	
<b>PHF</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>	<b>.000</b>		<b>.750</b>	<b>.897</b>	<b>.000</b>	<b>.000</b>	<b>.900</b>		<b>.500</b>	<b>.000</b>	<b>.775</b>	<b>.000</b>	<b>.922</b>		<b>.000</b>	<b>.884</b>	<b>.929</b>	<b>.000</b>	<b>.929</b>	

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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
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 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:00 PM			04:30 PM			04:15 PM			05:00 PM				
+0 mins.	0	0	0	2	389	0	391	0	0	10	0	311	54	365
+15 mins.	0	0	0	3	358	0	361	1	0	9	0	330	65	395
+30 mins.	0	0	0	6	319	0	325	1	0	8	0	366	66	432
+45 mins.	0	0	0	5	330	0	335	0	0	7	0	343	72	415
Total Volume	0	0	0	16	1396	0	1412	2	0	33	0	1350	257	1607
% App. Total	0	0	0	1.1	98.9	0	99.3	5.7	0	94.3	0	84	16	930
PHF	.000	.000	.000	.667	.897	.000	.903	.500	.000	.825	.000	.922	.892	.930

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound				Inclu. Total	Int. Total		
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR			App. Total	Exclu. Total
04:00 PM	0	0	0	0	4	285	0	0	0	0	4	0	0	311	56	0	367	0	660	
04:15 PM	0	0	0	0	2	303	0	0	10	0	10	0	0	301	67	0	368	0	683	
04:30 PM	0	0	0	0	2	359	0	0	1	0	8	0	0	278	53	0	331	0	701	
04:45 PM	0	0	0	0	3	340	0	0	1	0	6	0	7	284	53	0	337	0	687	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>1287</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>1174</b>	<b>229</b>	<b>0</b>	<b>1403</b>	<b>0</b>	<b>2731</b>
05:00 PM	0	0	0	0	6	301	0	0	0	0	7	0	7	295	53	0	348	0	662	
05:15 PM	0	0	0	0	5	313	0	0	1	0	5	0	6	317	65	0	382	0	706	
05:30 PM	0	0	0	0	4	274	0	0	1	0	8	0	9	350	64	0	414	0	701	
05:45 PM	0	0	0	0	4	293	0	0	1	0	2	0	3	329	72	0	401	0	701	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>1181</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>1291</b>	<b>254</b>	<b>0</b>	<b>1545</b>	<b>0</b>	<b>2770</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>2468</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>55</b>	<b>0</b>	<b>2465</b>	<b>483</b>	<b>0</b>	<b>2948</b>	<b>0</b>	<b>5501</b>
Apprch %	0	0	0	0	1.2	98.8	0	0	9.1	0	90.9	0	1	0	83.6	16.4	0	53.6	0	100
Total %	0	0	0	0	0.5	44.9	0	0	0.1	0	0.9	0	1	0	44.8	8.8	0	100	0	100

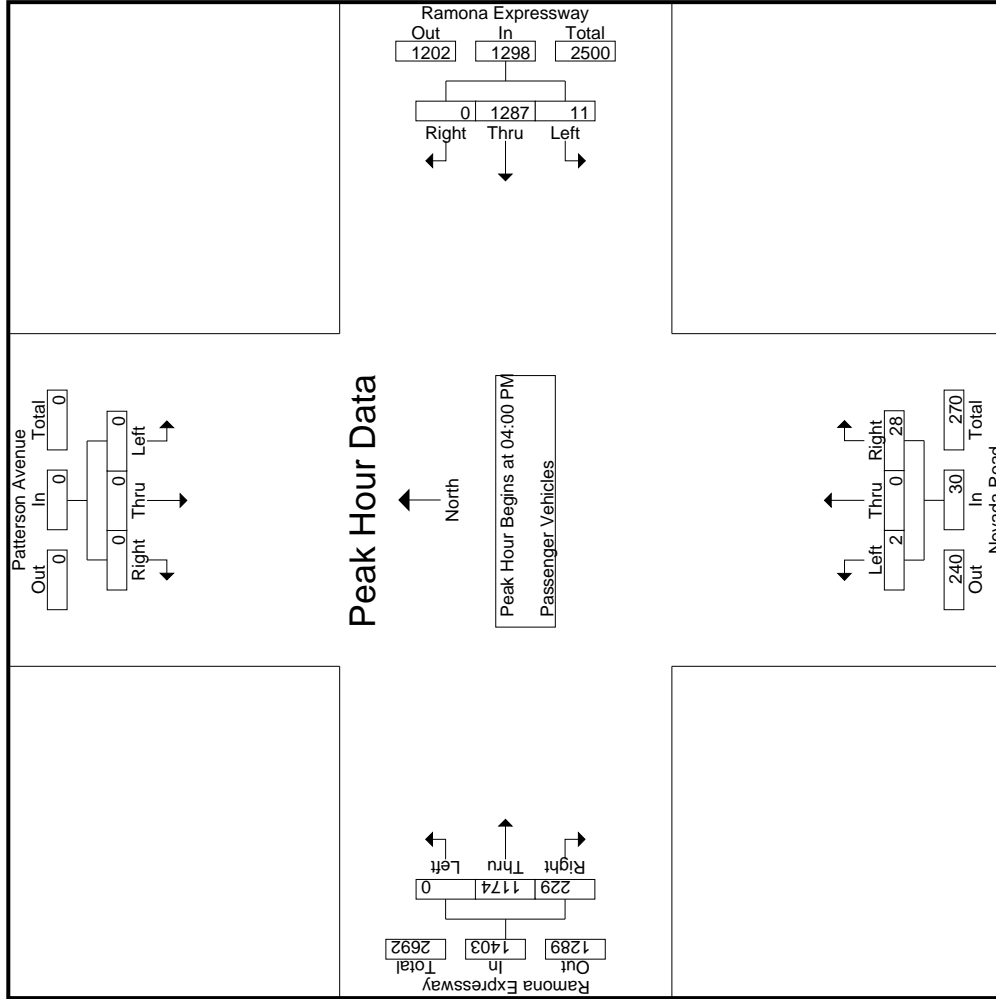
  

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound				Inclu. Total	Int. Total		
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR			App. Total	Exclu. Total
04:00 PM	0	0	0	0	4	285	0	0	0	0	4	0	4	0	311	56	0	367	0	660
04:15 PM	0	0	0	0	2	303	0	0	0	0	10	0	10	0	301	67	0	368	0	683
04:30 PM	0	0	0	0	2	359	0	0	1	0	8	0	9	0	278	53	0	331	0	701
04:45 PM	0	0	0	0	3	340	0	0	1	0	6	0	7	0	284	53	0	337	0	687
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>1287</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>1174</b>	<b>229</b>	<b>0</b>	<b>1403</b>	<b>0</b>	<b>2731</b>
05:00 PM	0	0	0	0	6	301	0	0	0	0	7	0	7	0	295	53	0	348	0	662
05:15 PM	0	0	0	0	5	313	0	0	1	0	5	0	6	0	317	65	0	382	0	706
05:30 PM	0	0	0	0	4	274	0	0	1	0	8	0	9	0	350	64	0	414	0	701
05:45 PM	0	0	0	0	4	293	0	0	1	0	2	0	3	0	329	72	0	401	0	701
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>1181</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>1291</b>	<b>254</b>	<b>0</b>	<b>1545</b>	<b>0</b>	<b>2770</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>2468</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>55</b>	<b>0</b>	<b>2465</b>	<b>483</b>	<b>0</b>	<b>2948</b>	<b>0</b>	<b>5501</b>
Apprch %	0	0	0	0	1.2	98.8	0	0	9.1	0	90.9	0	1	0	83.6	16.4	0	53.6	0	100
Total %	0	0	0	0	0.5	44.9	0	0	0.1	0	0.9	0	1	0	44.8	8.8	0	100	0	100

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2







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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

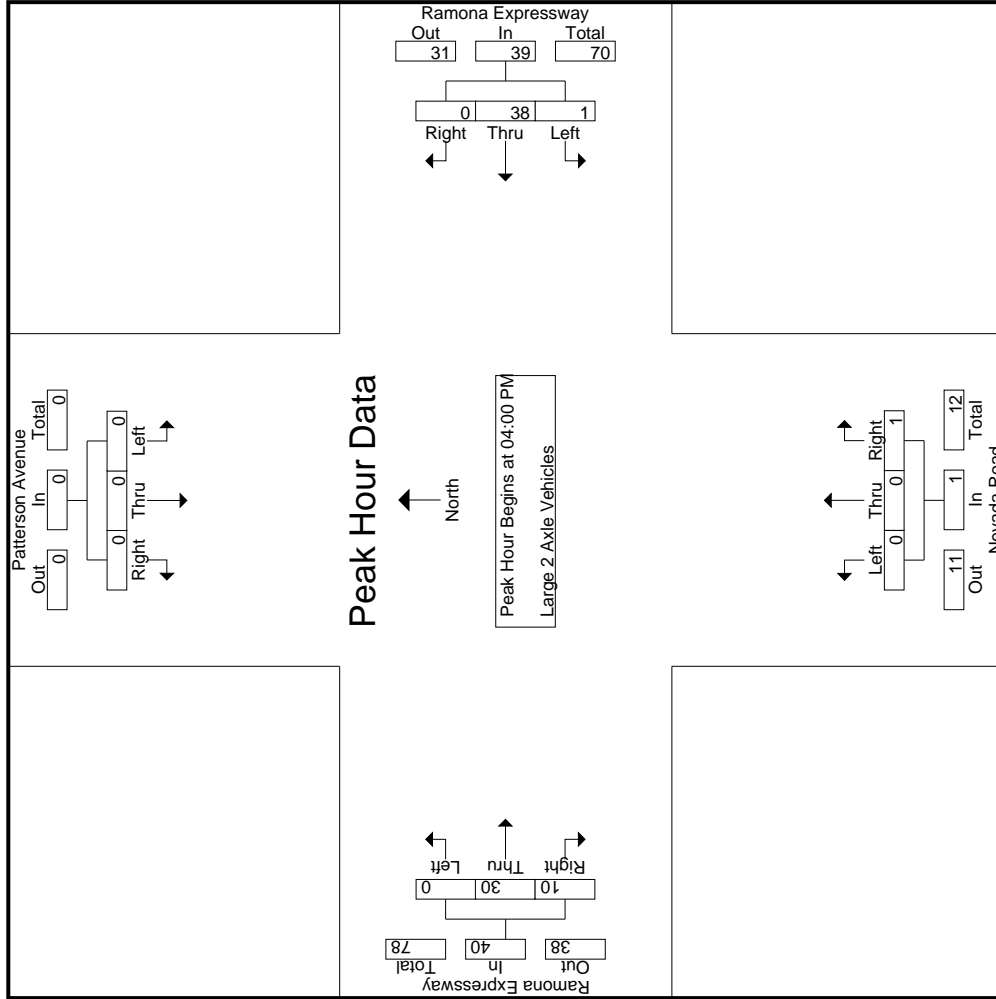
Groups Printed- Large 2 Axle Vehicles

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	12	0	0	1	0	0	1	0	13	6	0	19	0	32
04:15 PM	0	0	0	0	1	8	0	0	0	0	0	0	0	7	2	0	9	0	18
04:30 PM	0	0	0	0	0	13	0	0	0	0	0	0	0	5	1	0	6	0	19
04:45 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	5	1	0	6	0	11
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>30</b>	<b>10</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>80</b>
05:00 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0	0	4	0	10
05:15 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	6	0	0	6	0	12
05:30 PM	0	0	0	0	0	7	0	0	0	0	0	0	0	5	1	0	6	0	13
05:45 PM	0	0	0	0	0	6	0	0	1	0	0	1	0	3	0	0	3	0	10
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>45</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>11</b>	<b>0</b>	<b>59</b>	<b>0</b>	<b>125</b>
Apprch %	0	0	0	0	1.6	98.4	0	0	50	0	0	0	0	81.4	18.6	0	47.2	0	100
Total %	0	0	0	0	0.8	50.4	0	0	0.8	0	0	1.6	0	38.4	8.8	0	0	0	0

3.1-217

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	12	0	0	1	0	0	1	0	1	0	0	13	6	19
04:15 PM	0	0	0	0	1	8	0	0	0	0	0	0	0	7	2	0	9	0	18
04:30 PM	0	0	0	0	0	13	0	0	0	0	0	0	0	5	1	0	6	0	19
04:45 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	5	1	0	6	0	11
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>30</b>	<b>10</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>80</b>
% App. Total	0.00	0.00	0.00	0.00	2.6	97.4	0	0	100	0	0	0	0	75	25	0	0	0	0
PHF	.000	.000	.000	.000	.250	.731	.000	.750	.250	.000	.000	.250	.000	.577	.417	.000	.526	.000	.625

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:00 PM			04:00 PM			04:00 PM			04:00 PM				
+0 mins.	0	0	0	0	12	0	0	0	0	1	0	13	6	19
+15 mins.	0	0	0	0	8	0	0	0	0	0	0	7	2	9
+30 mins.	0	0	0	0	13	0	0	0	0	0	0	5	1	6
+45 mins.	0	0	0	0	5	0	0	0	0	0	0	5	1	6
Total Volume	0	0	0	1	38	0	0	0	0	1	0	30	10	40
% App. Total	0	0	0	2.6	97.4	0	0	0	0	100	0	75	25	
PHF	.000	.000	.000	.250	.731	.000	.750	.250	.000	.250	.000	.577	.417	.526

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City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

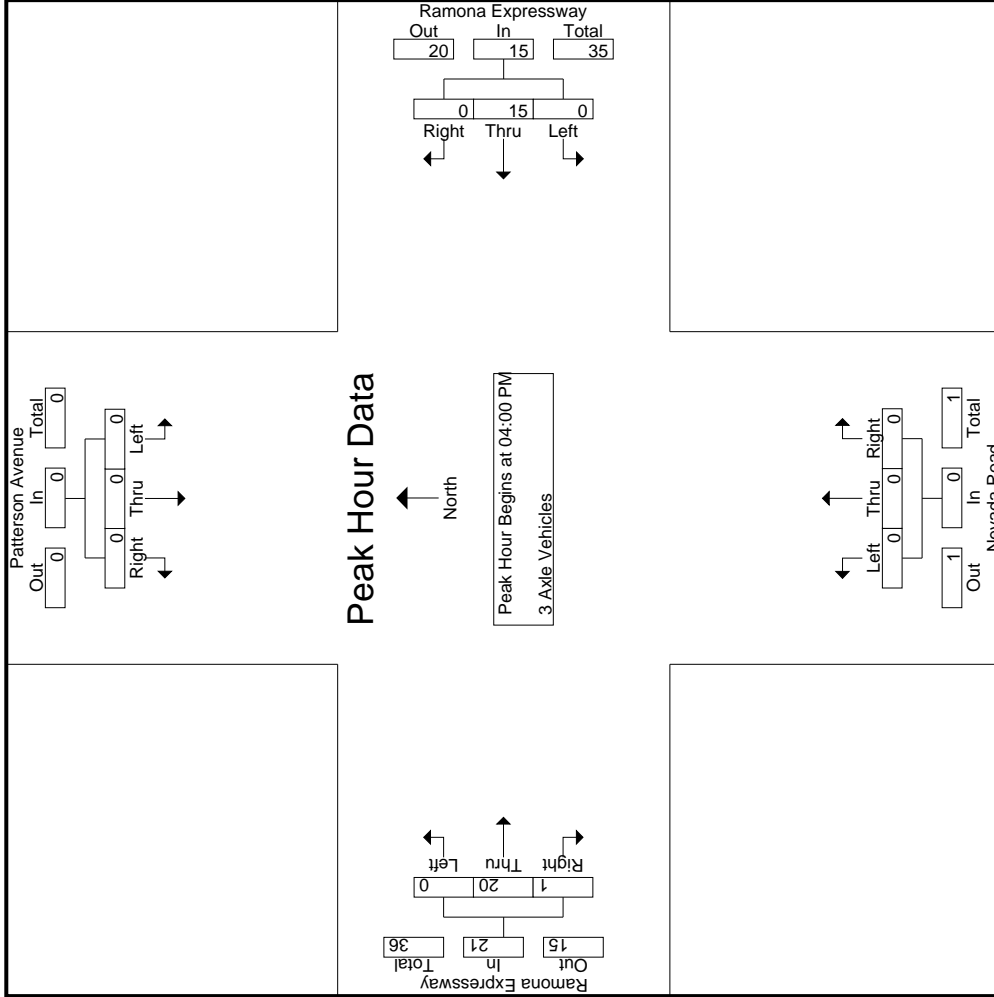
File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed - 3 Axle Vehicles

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	12	12
04:15 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	3	0	5	5
04:30 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	7	0	9	9
04:45 PM	0	0	0	0	0	4	0	0	0	4	0	0	0	0	6	0	10	10
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>36</b>	<b>36</b>
05:00 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	3	0	6	6
05:15 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	3	0	6	6
05:30 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	1	0	3	3
05:45 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	2	0	5	5
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>20</b>	<b>20</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>56</b>	<b>56</b>
Apprch %	0	0	0	0	0	100	0	0	0	46.4	0	0	0	0	96.7	3.3	0	0
Total %	0	0	0	0	0	46.4	0	0	0	46.4	0	0	0	0	51.8	1.8	0	100

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total	
04:00 PM	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	4	1	0	5	12
04:15 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	3	0	0	3	5
04:30 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	7	0	0	7	9
04:45 PM	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	6	0	0	6	10
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>21</b>	<b>36</b>
% App. Total	0	0	0	0	0	100	0	0	0	100	0	0	0	0	0	0	95.2	4.8	0	0	36
PHF	.000	.000	.000	.000	.000	.536	.000	.000	.000	.536	.000	.000	.000	.000	.000	.000	.714	.250	.000	.750	.750



Counts Unlimited  
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City of Perris  
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File Name : 11\_PER\_Patterson\_Nevada\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	7	0	0	0	0	0	0	0	4	1	5
+15 mins.	0	0	0	0	2	0	0	0	0	0	0	0	3	0	3
+30 mins.	0	0	0	0	2	0	0	0	0	0	0	0	7	0	7
+45 mins.	0	0	0	0	4	0	0	0	0	0	0	0	6	0	6
Total Volume	0	0	0	0	15	0	0	0	0	0	0	0	20	1	21
% App. Total	0	0	0	0	100	0	0	0	0	0	0	0	95.2	4.8	100
PHF	.000	.000	.000	.000	.536	.000	.000	.000	.000	.000	.000	.000	.714	.250	.750

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City of Perris  
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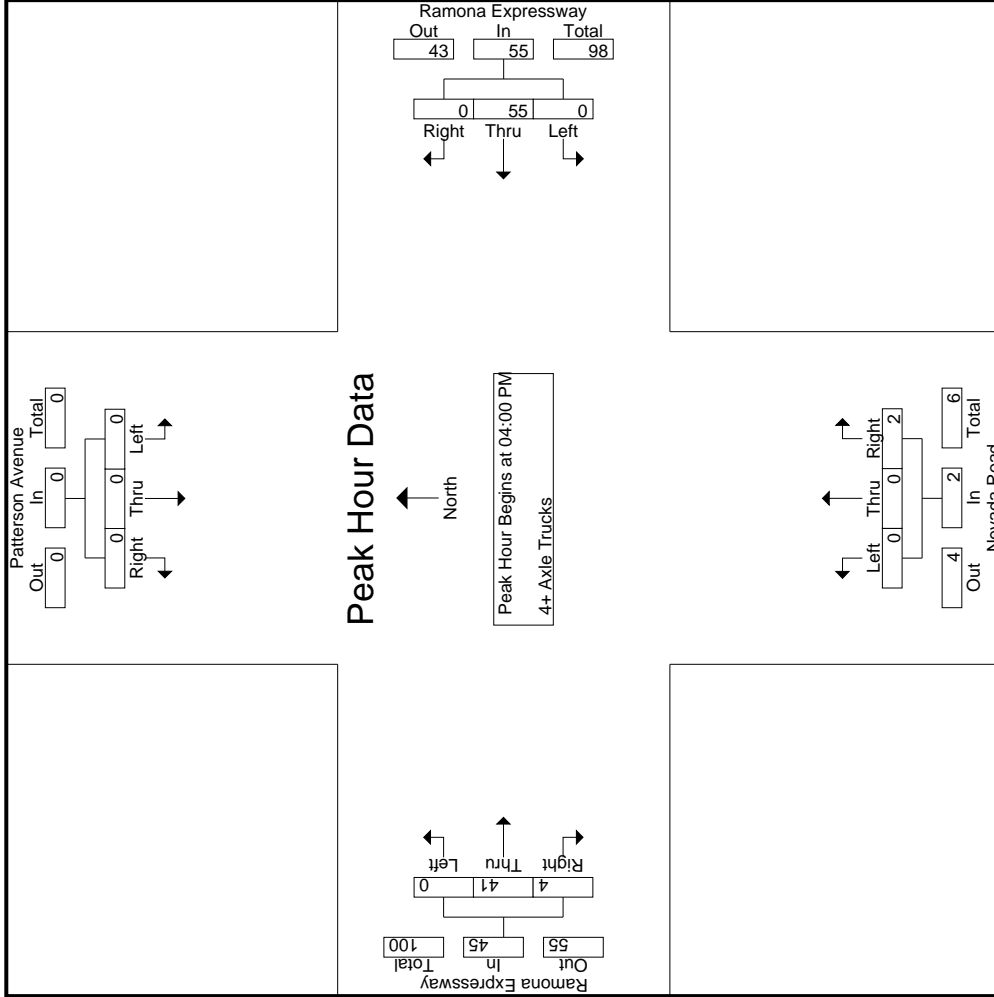
Groups Printed- 4+ Axle Trucks

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	15	0	0	0	15	0	15	0	0	15	0	30	30
04:15 PM	0	0	0	0	16	16	0	0	0	16	0	10	0	0	10	0	26	26
04:30 PM	0	0	0	0	15	15	0	0	0	15	0	9	1	0	10	0	25	25
04:45 PM	0	0	0	0	9	9	0	2	0	2	0	7	3	0	10	0	21	21
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>55</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>41</b>	<b>4</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>102</b>	<b>102</b>
05:00 PM	0	0	0	0	9	9	0	0	0	9	0	9	1	0	10	0	19	19
05:15 PM	0	0	0	0	8	8	0	0	0	8	0	4	0	0	4	0	12	12
05:30 PM	0	0	0	0	11	11	0	0	0	11	0	10	1	0	11	0	22	22
05:45 PM	0	0	0	0	6	6	0	0	0	6	0	9	0	0	9	0	15	15
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>2</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>68</b>	<b>68</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>89</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>73</b>	<b>6</b>	<b>0</b>	<b>79</b>	<b>0</b>	<b>170</b>	<b>170</b>
Apprch %	0	0	0	0	100	100	0	100	0	100	0	92.4	7.6	0	46.5	0	100	100
Total %	0	0	0	0	52.4	52.4	0	1.2	0	1.2	0	42.9	3.5	0	46.5	0	100	100

3.1-223

Start Time	Patterson Avenue Southbound				Ramona Expressway Westbound				Nevada Road Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	15	0	0	0	15	0	15	0	0	15	0	30	30
04:15 PM	0	0	0	0	16	16	0	0	0	16	0	10	0	0	10	0	26	26
04:30 PM	0	0	0	0	15	15	0	0	0	15	0	9	1	0	10	0	25	25
04:45 PM	0	0	0	0	9	9	0	2	0	2	0	7	3	0	10	0	21	21
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>55</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>41</b>	<b>4</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>102</b>	<b>102</b>
% App. Total	0	0	0	0	100	100	0	100	0	100	0	91.1	8.9	0	46.5	0	100	100
PHF	.000	.000	.000	.000	.859	.859	.000	.250	.000	.250	.000	.683	.333	.000	.750	.000	.850	.850

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 11\_PER\_Patterson\_Nevada\_Ramona\_PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Patterson Avenue Southbound			Ramona Expressway Westbound			Nevada Road Northbound			Ramona Expressway Eastbound							
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total			
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			04:00 PM				
+0 mins.	0	0	0	0	15	0	0	0	0	0	0	0	0	15	0	0	15
+15 mins.	0	0	0	0	16	0	0	0	0	0	0	0	0	10	0	0	10
+30 mins.	0	0	0	0	15	0	0	0	0	0	0	0	0	9	1	0	10
+45 mins.	0	0	0	0	9	0	0	0	0	2	0	0	0	7	3	0	10
Total Volume	0	0	0	0	55	0	0	2	2	2	0	0	41	4	4	45	
% App. Total	0	0	0	0	100	0	0	100	250	250	0	0	91.1	8.9	0	750	
PHF	.000	.000	.000	.000	.859	.000	.000	.859	.250	.250	.000	.000	.683	.333	.000	.750	

Location: City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Patterson Avenue Pedestrians	East Leg Ramona Expressway Pedestrians	South Leg Nevada Road Pedestrians	West Leg Ramona Expressway Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
<b>TOTAL VOLUMES:</b>	0	0	1	0	1

	North Leg Patterson Avenue Pedestrians	East Leg Ramona Expressway Pedestrians	South Leg Nevada Road Pedestrians	West Leg Ramona Expressway Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

Location: City of Perris  
 N/S: Patterson Ave/Nevada Road  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Patterson Avenue			Westbound Ramona Expressway			Northbound Nevada Road			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Patterson Avenue			Westbound Ramona Expressway			Northbound Nevada Road			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

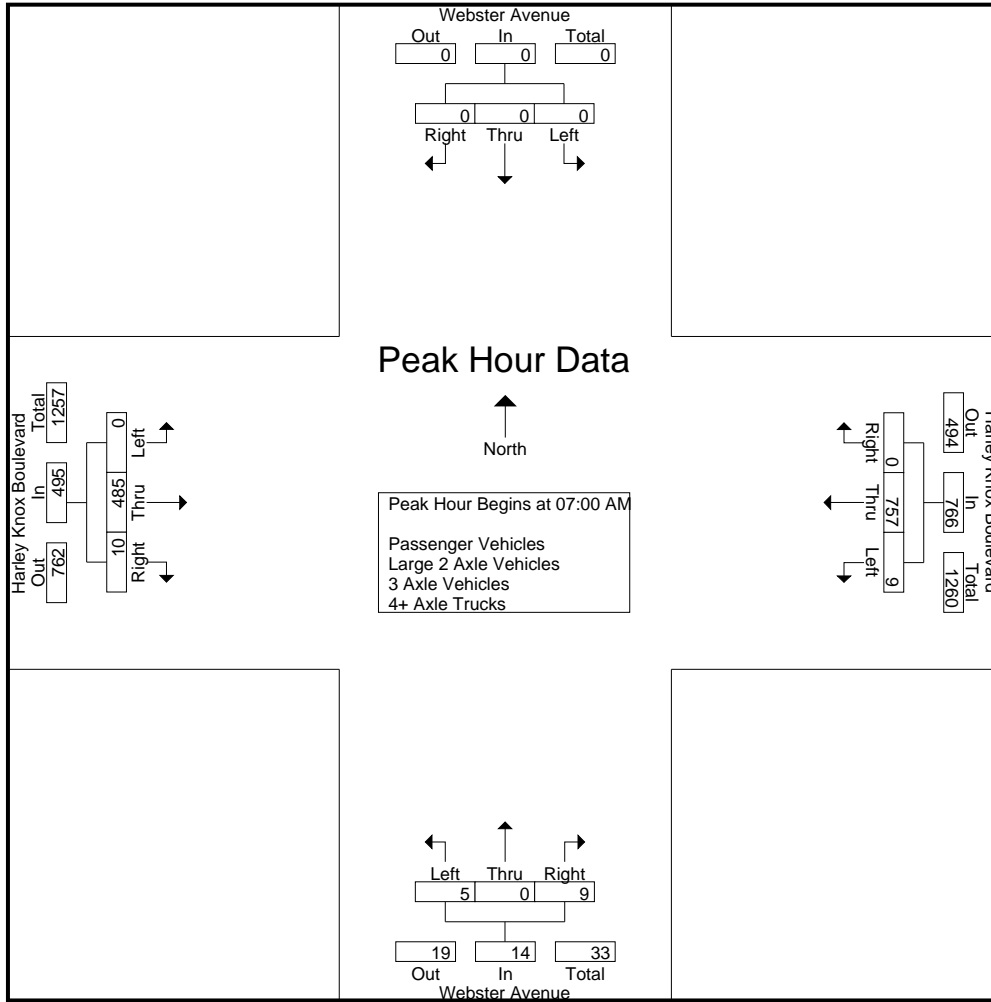
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	226	0	226	0	0	2	2	0	122	1	123	351
07:15 AM	0	0	0	0	7	199	0	206	2	0	5	7	0	114	1	115	328
07:30 AM	0	0	0	0	1	175	0	176	2	0	1	3	0	131	2	133	312
07:45 AM	0	0	0	0	1	157	0	158	1	0	1	2	0	118	6	124	284
Total	0	0	0	0	9	757	0	766	5	0	9	14	0	485	10	495	1275
08:00 AM	0	0	0	0	1	124	0	125	2	0	1	3	0	103	4	107	235
08:15 AM	0	0	0	0	2	111	0	113	1	0	0	1	0	93	0	93	207
08:30 AM	0	0	0	0	0	87	0	87	1	0	1	2	0	84	5	89	178
08:45 AM	0	0	0	0	1	88	0	89	1	0	2	3	0	93	1	94	186
Total	0	0	0	0	4	410	0	414	5	0	4	9	0	373	10	383	806
Grand Total	0	0	0	0	13	1167	0	1180	10	0	13	23	0	858	20	878	2081
Apprch %	0	0	0		1.1	98.9	0		43.5	0	56.5		0	97.7	2.3		
Total %	0	0	0		0.6	56.1	0	56.7	0.5	0	0.6	1.1	0	41.2	1	42.2	
Passenger Vehicles	0	0	0	0	13	1007	0	1020	6	0	10	16	0	682	14	696	1732
% Passenger Vehicles	0	0	0	0	100	86.3	0	86.4	60	0	76.9	69.6	0	79.5	70	79.3	83.2
Large 2 Axle Vehicles	0	0	0	0	0	34	0	34	1	0	1	2	0	47	0	47	83
% Large 2 Axle Vehicles	0	0	0	0	0	2.9	0	2.9	10	0	7.7	8.7	0	5.5	0	5.4	4
3 Axle Vehicles	0	0	0	0	0	38	0	38	1	0	1	2	0	34	0	34	74
% 3 Axle Vehicles	0	0	0	0	0	3.3	0	3.2	10	0	7.7	8.7	0	4	0	3.9	3.6
4+ Axle Trucks	0	0	0	0	0	88	0	88	2	0	1	3	0	95	6	101	192
% 4+ Axle Trucks	0	0	0	0	0	7.5	0	7.5	20	0	7.7	13	0	11.1	30	11.5	9.2

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	<b>226</b>	0	<b>226</b>	0	0	2	2	0	122	1	123	<b>351</b>
07:15 AM	0	0	0	0	7	199	0	206	2	0	5	7	0	114	1	115	328
07:30 AM	0	0	0	0	1	175	0	176	2	0	1	3	0	<b>131</b>	2	<b>133</b>	312
07:45 AM	0	0	0	0	1	157	0	158	1	0	1	2	0	118	<b>6</b>	124	284
Total Volume	0	0	0	0	9	757	0	766	5	0	9	14	0	485	10	495	1275
% App. Total	0	0	0		1.2	98.8	0		35.7	0	64.3		0	98	2		
PHF	.000	.000	.000	.000	.321	.837	.000	.847	.625	.000	.450	.500	.000	.926	.417	.930	.908

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	0	0	0	0	<b>226</b>	0	<b>226</b>	2	0	5	7	0	122	1	123
+15 mins.	0	0	0	0	7	199	0	206	2	0	1	3	0	114	1	115
+30 mins.	0	0	0	0	1	175	0	176	1	0	1	2	0	<b>131</b>	2	<b>133</b>
+45 mins.	0	0	0	0	1	157	0	158	2	0	1	3	0	118	6	124
Total Volume	0	0	0	0	9	757	0	766	7	0	8	15	0	485	10	495
% App. Total	0	0	0	0	1.2	98.8	0		46.7	0	53.3		0	98	2	
PHF	.000	.000	.000	.000	.321	.837	.000	.847	.875	.000	.400	.536	.000	.926	.417	.930

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

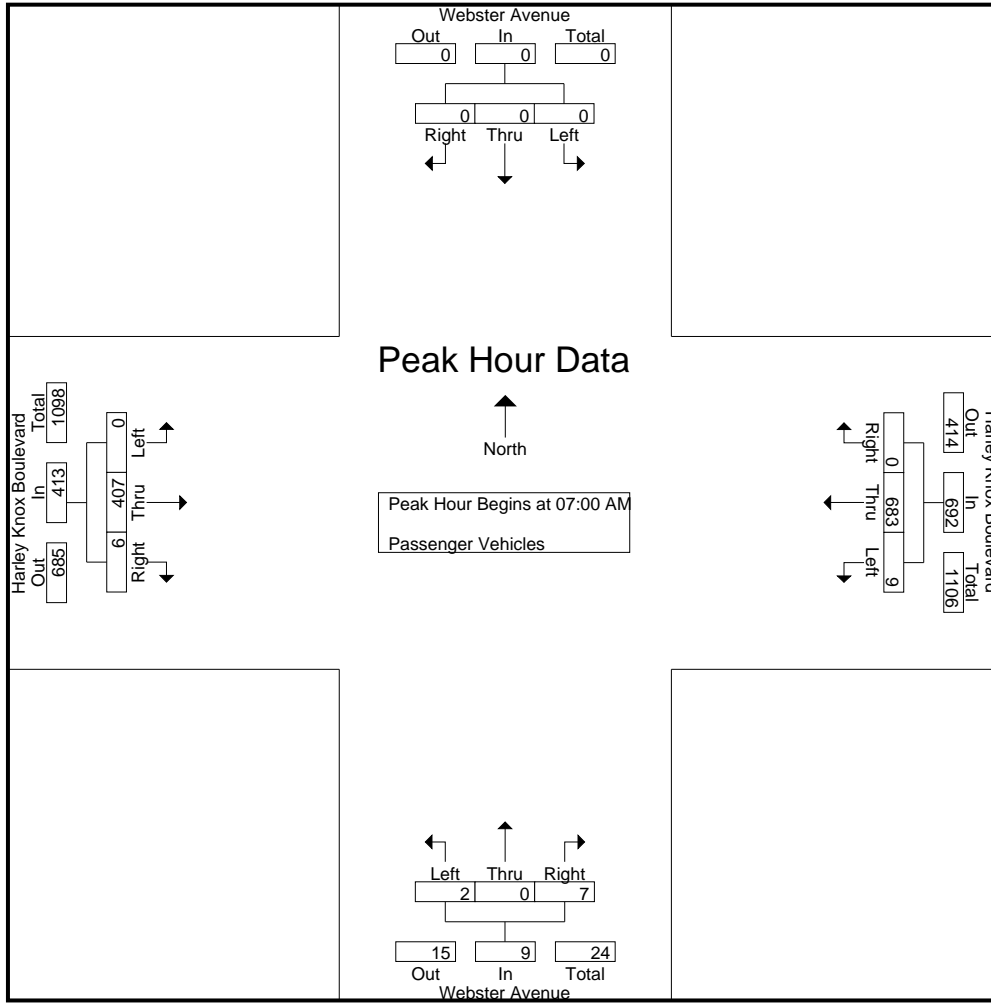
Groups Printed- Passenger Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	205	0	205	0	0	1	1	0	95	1	96	302
07:15 AM	0	0	0	0	7	184	0	191	1	0	4	5	0	103	0	103	299
07:30 AM	0	0	0	0	1	154	0	155	1	0	1	2	0	112	1	113	270
07:45 AM	0	0	0	0	1	140	0	141	0	0	1	1	0	97	4	101	243
Total	0	0	0	0	9	683	0	692	2	0	7	9	0	407	6	413	1114
08:00 AM	0	0	0	0	1	102	0	103	1	0	1	2	0	78	4	82	187
08:15 AM	0	0	0	0	2	91	0	93	1	0	0	1	0	68	0	68	162
08:30 AM	0	0	0	0	0	69	0	69	1	0	1	2	0	63	3	66	137
08:45 AM	0	0	0	0	1	62	0	63	1	0	1	2	0	66	1	67	132
Total	0	0	0	0	4	324	0	328	4	0	3	7	0	275	8	283	618
Grand Total	0	0	0	0	13	1007	0	1020	6	0	10	16	0	682	14	696	1732
Apprch %	0	0	0		1.3	98.7	0		37.5	0	62.5		0	98	2		
Total %	0	0	0		0.8	58.1	0	58.9	0.3	0	0.6	0.9	0	39.4	0.8	40.2	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	<b>205</b>	0	<b>205</b>	0	0	1	1	0	95	1	96	<b>302</b>
07:15 AM	0	0	0	0	<b>7</b>	184	0	191	<b>1</b>	0	<b>4</b>	<b>5</b>	0	103	0	103	299
07:30 AM	0	0	0	0	1	154	0	155	1	0	1	2	0	<b>112</b>	1	<b>113</b>	270
07:45 AM	0	0	0	0	1	140	0	141	0	0	1	1	0	97	<b>4</b>	101	243
Total Volume	0	0	0	0	9	683	0	692	2	0	7	9	0	407	6	413	1114
% App. Total	0	0	0		1.3	98.7	0		22.2	0	77.8		0	98.5	1.5		
PHF	.000	.000	.000	.000	.321	.833	.000	.844	.500	.000	.438	.450	.000	.908	.375	.914	.922

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	<b>205</b>	0	<b>205</b>	0	0	1	1	0	95	1	96
+15 mins.	0	0	0	0	<b>7</b>	184	0	191	<b>1</b>	0	<b>4</b>	<b>5</b>	0	103	0	103
+30 mins.	0	0	0	0	1	154	0	155	1	0	1	2	0	<b>112</b>	1	<b>113</b>
+45 mins.	0	0	0	0	1	140	0	141	0	0	1	1	0	97	<b>4</b>	101
Total Volume	0	0	0	0	9	683	0	692	2	0	7	9	0	407	6	413
% App. Total	0	0	0	0	1.3	98.7	0		22.2	0	77.8		0	98.5	1.5	
PHF	.000	.000	.000	.000	.321	.833	.000	.844	.500	.000	.438	.450	.000	.908	.375	.914

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

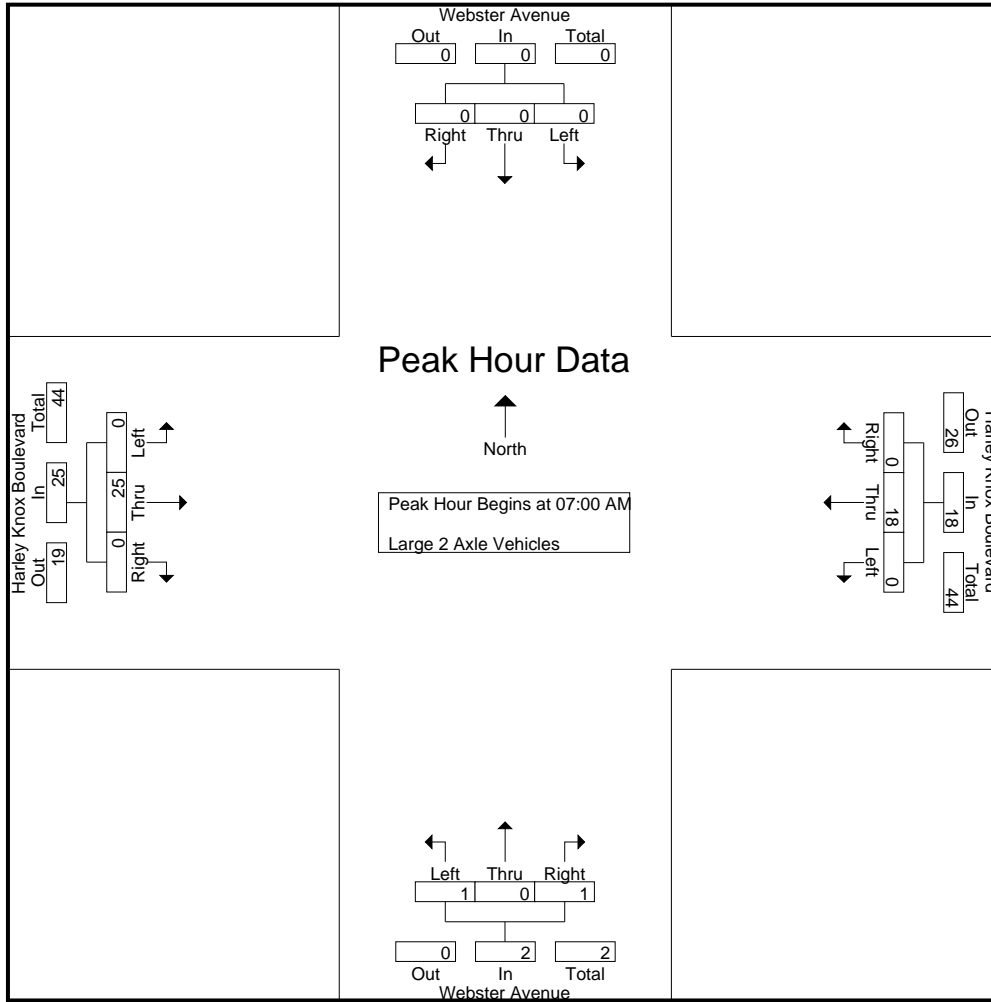
Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	7	0	7	0	0	1	1	0	10	0	10	18
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:45 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	5	0	5	10
Total	0	0	0	0	0	18	0	18	1	0	1	2	0	25	0	25	45
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	7	0	7	11
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	6	0	6	9
08:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
08:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Total	0	0	0	0	0	16	0	16	0	0	0	0	0	22	0	22	38
Grand Total	0	0	0	0	0	34	0	34	1	0	1	2	0	47	0	47	83
Apprch %	0	0	0		0	100	0		50	0	50		0	100	0		
Total %	0	0	0	0	0	41	0	41	1.2	0	1.2	2.4	0	56.6	0	56.6	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	7	0	7	0	0	1	1	0	10	0	10	18
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7	9
07:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:45 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	5	0	5	10
Total Volume	0	0	0	0	0	18	0	18	1	0	1	2	0	25	0	25	45
% App. Total	0	0	0		0	100	0		50	0	50		0	100	0		
PHF	.000	.000	.000	.000	.000	.643	.000	.643	.250	.000	.250	.500	.000	.625	.000	.625	.625



City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	7	0	7	0	0	1	1	0	10	0	10
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	7	0	7
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	4	0	4	1	0	0	1	0	5	0	5
Total Volume	0	0	0	0	0	18	0	18	1	0	1	2	0	25	0	25
% App. Total	0	0	0	0	0	100	0	100	50	0	50	100	0	100	0	100
PHF	.000	.000	.000	.000	.000	.643	.000	.643	.250	.000	.250	.500	.000	.625	.000	.625

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

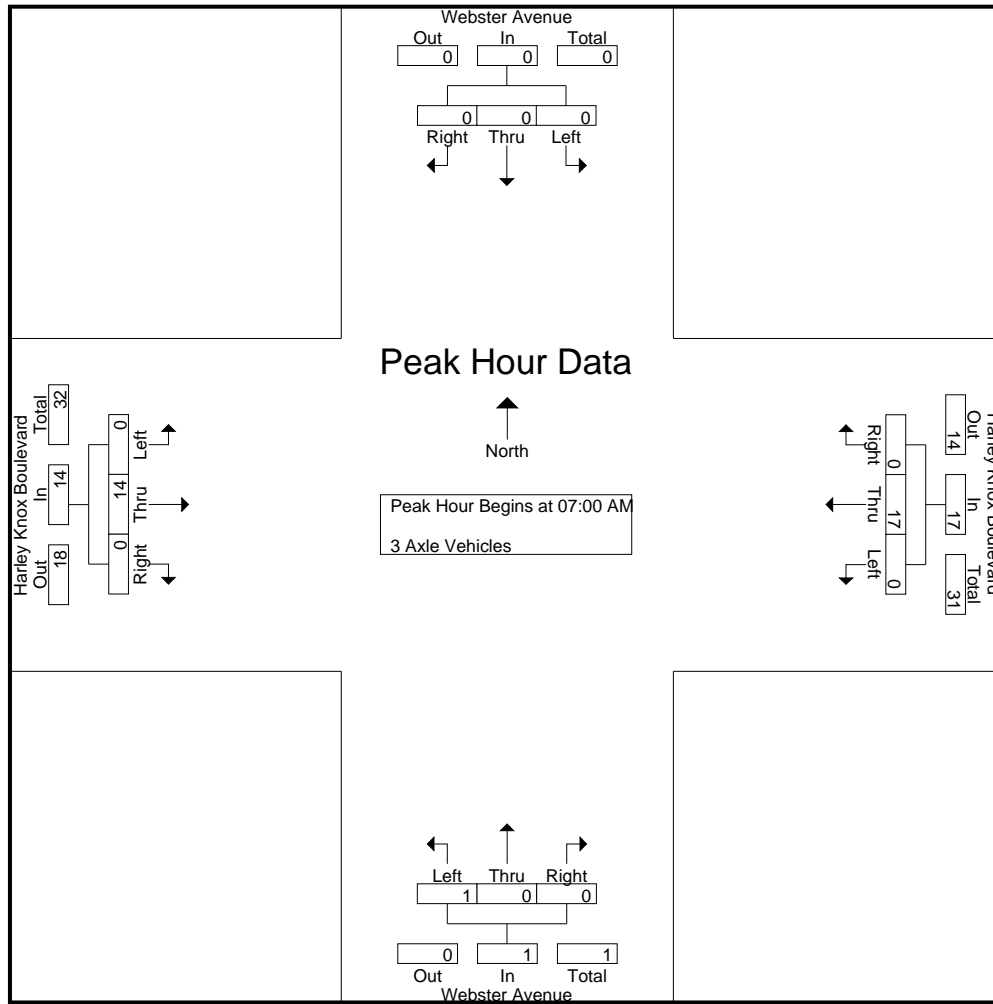
Groups Printed- 3 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	5	0	5	11
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
Total	0	0	0	0	0	17	0	17	1	0	0	1	0	14	0	14	32
08:00 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6	13
08:15 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	3	0	3	11
08:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	7
08:45 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	7	0	7	11
Total	0	0	0	0	0	21	0	21	0	0	1	1	0	20	0	20	42
Grand Total	0	0	0	0	0	38	0	38	1	0	1	2	0	34	0	34	74
Apprch %	0	0	0		0	100	0		50	0	50		0	100	0		
Total %	0	0	0		0	51.4	0	51.4	1.4	0	1.4	2.7	0	45.9	0	45.9	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
07:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	5	0	5	1	0	0	1	0	5	0	5	11
07:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
Total Volume	0	0	0	0	0	17	0	17	1	0	0	1	0	14	0	14	32
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.850	.000	.850	.250	.000	.000	.250	.000	.583	.000	.583	.727

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	<b>5</b>	0	<b>5</b>	0	0	0	0	0	3	0	<b>3</b>
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	5	0	5	<b>1</b>	0	0	<b>1</b>	0	5	0	5
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	<b>6</b>	0	<b>6</b>
Total Volume	0	0	0	0	0	17	0	17	1	0	0	1	0	14	0	14
% App. Total	0	0	0	0	0	100	0	100	100	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.850	.000	.850	.250	.000	.000	.250	.000	.583	.000	.583

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

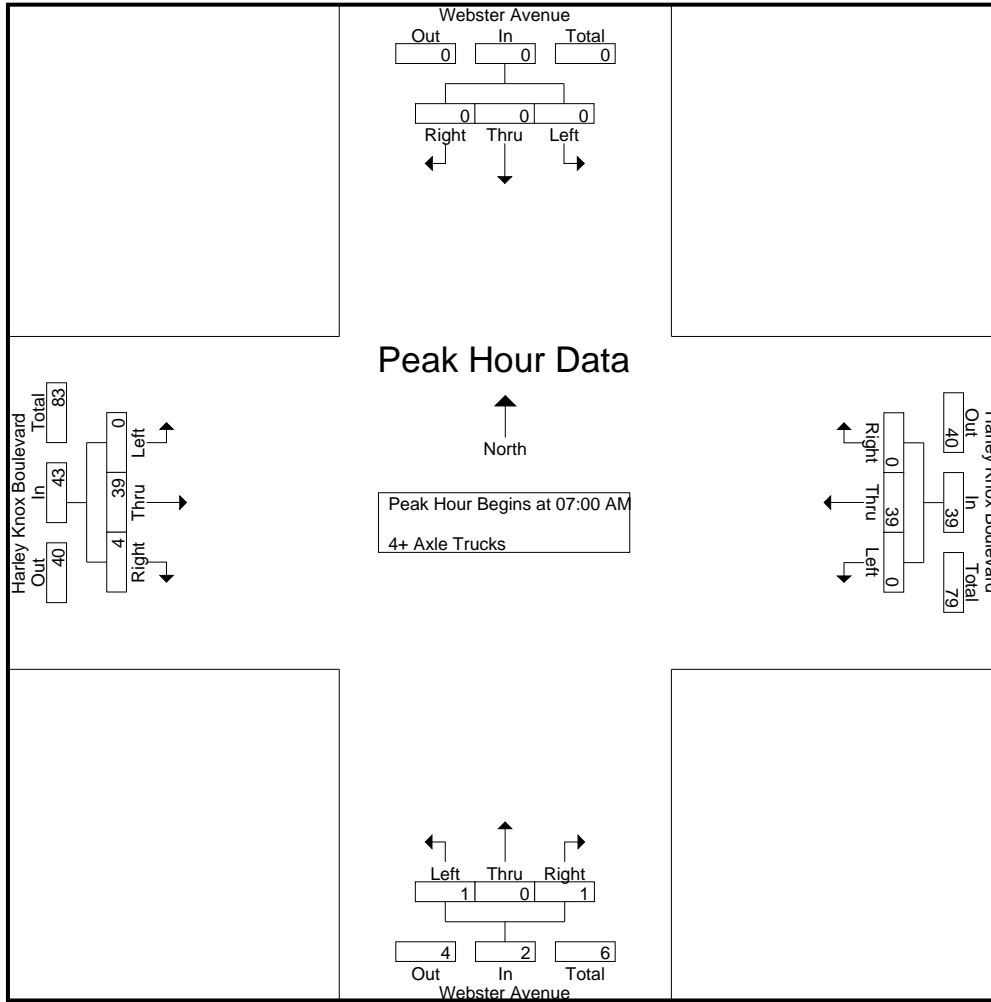
Groups Printed- 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
07:15 AM	0	0	0	0	0	10	0	10	1	0	1	2	0	4	1	5	17
07:30 AM	0	0	0	0	0	11	0	11	0	0	0	0	0	11	1	12	23
07:45 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	10	2	12	21
Total	0	0	0	0	0	39	0	39	1	0	1	2	0	39	4	43	84
08:00 AM	0	0	0	0	0	11	0	11	1	0	0	1	0	12	0	12	24
08:15 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	16	0	16	25
08:30 AM	0	0	0	0	0	10	0	10	0	0	0	0	0	12	2	14	24
08:45 AM	0	0	0	0	0	19	0	19	0	0	0	0	0	16	0	16	35
Total	0	0	0	0	0	49	0	49	1	0	0	1	0	56	2	58	108
Grand Total	0	0	0	0	0	88	0	88	2	0	1	3	0	95	6	101	192
Apprch %	0	0	0		0	100	0		66.7	0	33.3		0	94.1	5.9		
Total %	0	0	0		0	45.8	0	45.8	1	0	0.5	1.6	0	49.5	3.1	52.6	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14	23
07:15 AM	0	0	0	0	0	10	0	10	1	0	1	2	0	4	1	5	17
07:30 AM	0	0	0	0	0	11	0	11	0	0	0	0	0	11	1	12	23
07:45 AM	0	0	0	0	0	9	0	9	0	0	0	0	0	10	2	12	21
Total Volume	0	0	0	0	0	39	0	39	1	0	1	2	0	39	4	43	84
% App. Total	0	0	0		0	100	0		50	0	50		0	90.7	9.3		
PHF	.000	.000	.000	.000	.000	.886	.000	.886	.250	.000	.250	.250	.000	.696	.500	.768	.913

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	9	0	9	0	0	0	0	0	14	0	14
+15 mins.	0	0	0	0	0	10	0	10	1	0	1	2	0	4	1	5
+30 mins.	0	0	0	0	0	11	0	11	0	0	0	0	0	11	1	12
+45 mins.	0	0	0	0	0	9	0	9	0	0	0	0	0	10	2	12
Total Volume	0	0	0	0	0	39	0	39	1	0	1	2	0	39	4	43
% App. Total	0	0	0	0	0	100	0	100	50	0	50	100	0	90.7	9.3	100
PHF	.000	.000	.000	.000	.000	.886	.000	.886	.250	.000	.250	.250	.000	.696	.500	.768

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

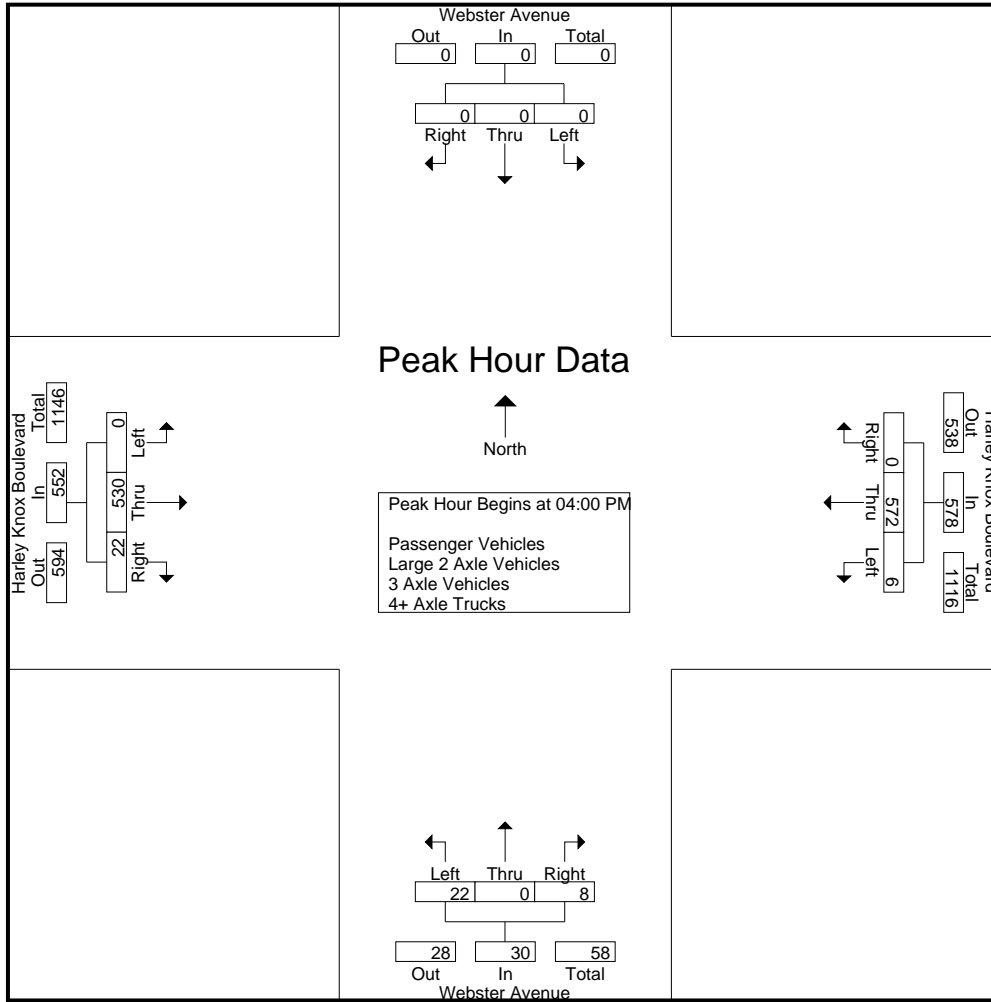
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	3	117	0	120	3	0	2	5	0	128	6	134	259
04:15 PM	0	0	0	0	3	98	0	101	7	0	3	10	0	139	7	146	257
04:30 PM	0	0	0	0	0	223	0	223	7	0	2	9	0	141	1	142	374
04:45 PM	0	0	0	0	0	134	0	134	5	0	1	6	0	122	8	130	270
Total	0	0	0	0	6	572	0	578	22	0	8	30	0	530	22	552	1160
05:00 PM	0	0	0	0	1	120	0	121	4	0	2	6	0	117	3	120	247
05:15 PM	0	0	0	0	0	109	0	109	2	0	1	3	0	114	6	120	232
05:30 PM	0	0	0	0	0	142	0	142	5	0	1	6	0	105	6	111	259
05:45 PM	0	0	0	0	2	95	0	97	3	0	0	3	0	105	6	111	211
Total	0	0	0	0	3	466	0	469	14	0	4	18	0	441	21	462	949
Grand Total	0	0	0	0	9	1038	0	1047	36	0	12	48	0	971	43	1014	2109
Apprch %	0	0	0		0.9	99.1	0		75	0	25		0	95.8	4.2		
Total %	0	0	0		0.4	49.2	0	49.6	1.7	0	0.6	2.3	0	46	2	48.1	
Passenger Vehicles	0	0	0	0	8	908	0	916	29	0	11	40	0	844	36	880	1836
% Passenger Vehicles	0	0	0	0	88.9	87.5	0	87.5	80.6	0	91.7	83.3	0	86.9	83.7	86.8	87.1
Large 2 Axle Vehicles	0	0	0	0	0	26	0	26	1	0	0	1	0	19	1	20	47
% Large 2 Axle Vehicles	0	0	0	0	0	2.5	0	2.5	2.8	0	0	2.1	0	2	2.3	2	2.2
3 Axle Vehicles	0	0	0	0	1	17	0	18	0	0	1	1	0	53	2	55	74
% 3 Axle Vehicles	0	0	0	0	11.1	1.6	0	1.7	0	0	8.3	2.1	0	5.5	4.7	5.4	3.5
4+ Axle Trucks	0	0	0	0	0	87	0	87	6	0	0	6	0	55	4	59	152
% 4+ Axle Trucks	0	0	0	0	0	8.4	0	8.3	16.7	0	0	12.5	0	5.7	9.3	5.8	7.2

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	3	117	0	120	3	0	2	5	0	128	6	134	259
04:15 PM	0	0	0	0	3	98	0	101	7	0	3	10	0	139	7	146	257
04:30 PM	0	0	0	0	0	223	0	223	7	0	2	9	0	141	1	142	374
04:45 PM	0	0	0	0	0	134	0	134	5	0	1	6	0	122	8	130	270
Total Volume	0	0	0	0	6	572	0	578	22	0	8	30	0	530	22	552	1160
% App. Total	0	0	0	0	1	99	0		73.3	0	26.7		0	96	4		
PHF	.000	.000	.000	.000	.500	.641	.000	.648	.786	.000	.667	.750	.000	.940	.688	.945	.775

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	0	0	0	0	0	<b>223</b>	0	<b>223</b>	<b>7</b>	0	<b>3</b>	<b>10</b>	0	128	6	134
+15 mins.	0	0	0	0	0	134	0	134	7	0	2	9	0	139	7	<b>146</b>
+30 mins.	0	0	0	0	<b>1</b>	120	0	121	5	0	1	6	0	<b>141</b>	1	142
+45 mins.	0	0	0	0	0	109	0	109	4	0	2	6	0	122	<b>8</b>	130
Total Volume	0	0	0	0	1	586	0	587	23	0	8	31	0	530	22	552
% App. Total	0	0	0	0	0.2	99.8	0		74.2	0	25.8		0	96	4	
PHF	.000	.000	.000	.000	.250	.657	.000	.658	.821	.000	.667	.775	.000	.940	.688	.945

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

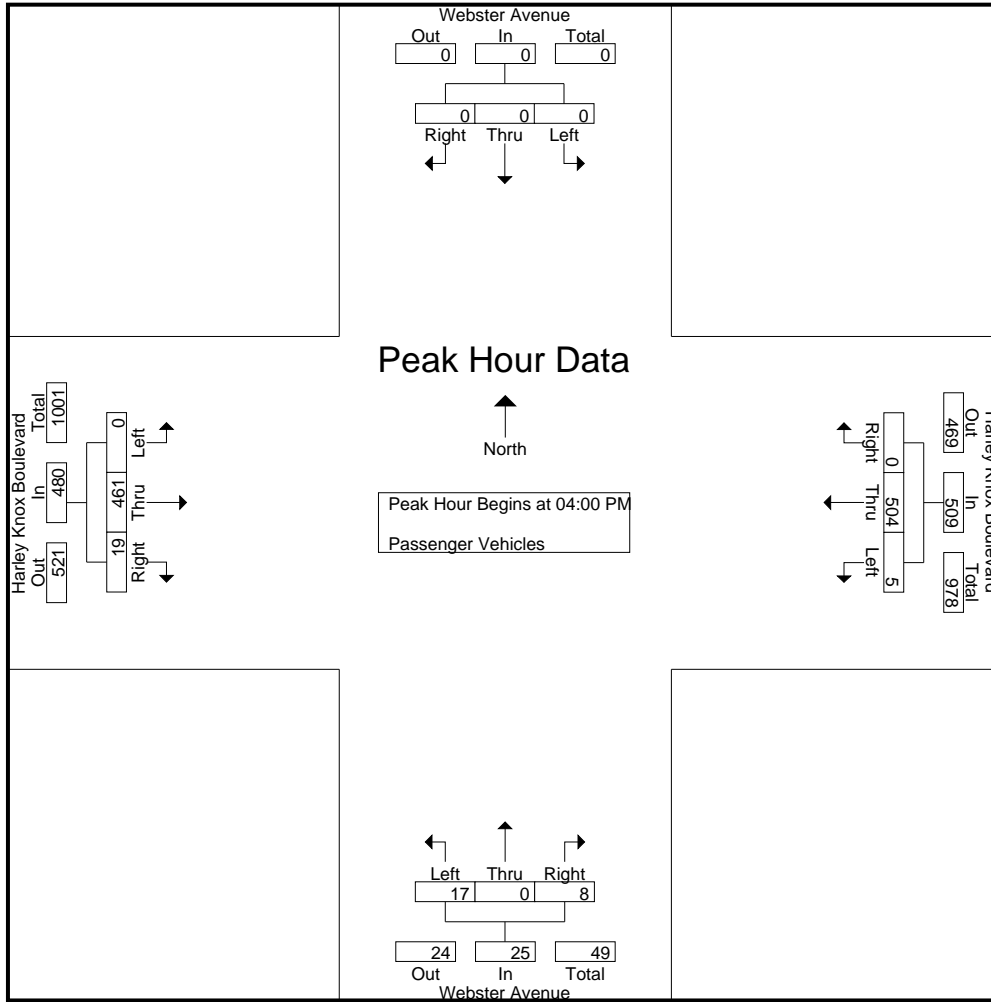
Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	3	102	0	105	2	0	2	4	0	118	4	122	231
04:15 PM	0	0	0	0	2	78	0	80	5	0	3	8	0	116	6	122	210
04:30 PM	0	0	0	0	0	202	0	202	6	0	2	8	0	120	1	121	331
04:45 PM	0	0	0	0	0	122	0	122	4	0	1	5	0	107	8	115	242
Total	0	0	0	0	5	504	0	509	17	0	8	25	0	461	19	480	1014
05:00 PM	0	0	0	0	1	107	0	108	4	0	1	5	0	101	2	103	216
05:15 PM	0	0	0	0	0	90	0	90	2	0	1	3	0	93	4	97	190
05:30 PM	0	0	0	0	0	127	0	127	3	0	1	4	0	97	5	102	233
05:45 PM	0	0	0	0	2	80	0	82	3	0	0	3	0	92	6	98	183
Total	0	0	0	0	3	404	0	407	12	0	3	15	0	383	17	400	822
Grand Total	0	0	0	0	8	908	0	916	29	0	11	40	0	844	36	880	1836
Apprch %	0	0	0		0.9	99.1	0		72.5	0	27.5		0	95.9	4.1		
Total %	0	0	0	0	0.4	49.5	0	49.9	1.6	0	0.6	2.2	0	46	2	47.9	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	<b>3</b>	102	0	105	2	0	2	4	0	118	4	<b>122</b>	231
04:15 PM	0	0	0	0	2	78	0	80	5	0	<b>3</b>	<b>8</b>	0	116	6	122	210
04:30 PM	0	0	0	0	0	<b>202</b>	0	<b>202</b>	<b>6</b>	0	2	8	0	<b>120</b>	1	121	<b>331</b>
04:45 PM	0	0	0	0	0	122	0	122	4	0	1	5	0	107	<b>8</b>	115	242
Total Volume	0	0	0	0	5	504	0	509	17	0	8	25	0	461	19	480	1014
% App. Total	0	0	0		1	99	0		68	0	32		0	96	4		
PHF	.000	.000	.000	.000	.417	.624	.000	.630	.708	.000	.667	.781	.000	.960	.594	.984	.766



City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	<b>3</b>	102	0	105	2	0	2	4	0	118	4	<b>122</b>
+15 mins.	0	0	0	0	2	78	0	80	5	0	<b>3</b>	<b>8</b>	0	116	6	122
+30 mins.	0	0	0	0	0	<b>202</b>	0	<b>202</b>	<b>6</b>	0	2	8	0	<b>120</b>	1	121
+45 mins.	0	0	0	0	0	122	0	122	4	0	1	5	0	107	<b>8</b>	115
Total Volume	0	0	0	0	5	504	0	509	17	0	8	25	0	461	19	480
% App. Total	0	0	0	0	1	99	0		68	0	32		0	96	4	
PHF	.000	.000	.000	.000	.417	.624	.000	.630	.708	.000	.667	.781	.000	.960	.594	.984

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

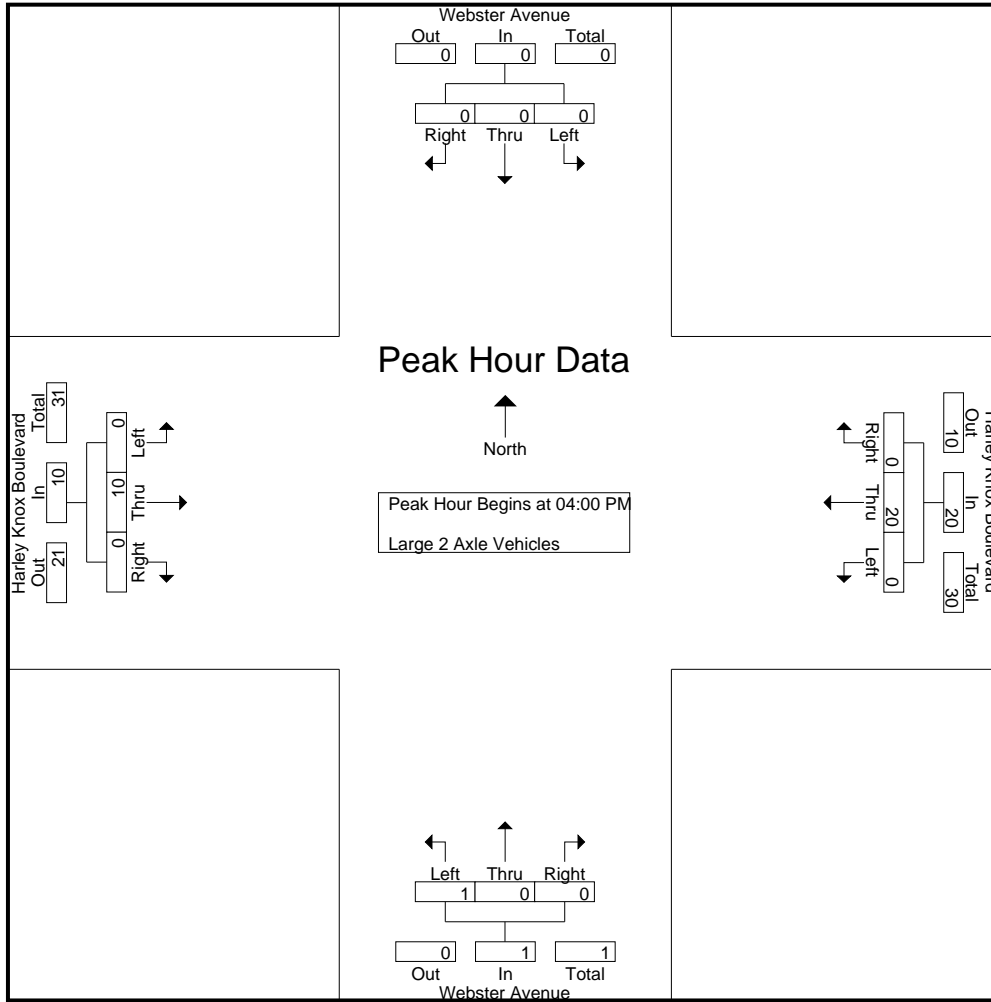
Groups Printed- Large 2 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
04:15 PM	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	20	0	20	1	0	0	1	0	10	0	10	31
05:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	9	1	10	16
Grand Total	0	0	0	0	0	26	0	26	1	0	0	1	0	19	1	20	47
Apprch %	0	0	0		0	100	0		100	0	0		0	95	5		
Total %	0	0	0	0	0	55.3	0	55.3	2.1	0	0	2.1	0	40.4	2.1	42.6	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
04:15 PM	0	0	0	0	0	5	0	5	1	0	0	1	0	6	0	6	12
04:30 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
04:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total Volume	0	0	0	0	0	20	0	20	1	0	0	1	0	10	0	10	31
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.714	.000	.714	.250	.000	.000	.250	.000	.417	.000	.417	.646

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	<b>7</b>	0	<b>7</b>	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	5	0	5	<b>1</b>	0	0	<b>1</b>	0	<b>6</b>	0	<b>6</b>
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	20	0	20	1	0	0	1	0	10	0	10
% App. Total	0	0	0	0	0	100	0	100	100	0	0	100	0	100	0	100
PHF	.000	.000	.000	.000	.000	.714	.000	.714	.250	.000	.000	.250	.000	.417	.000	.417

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

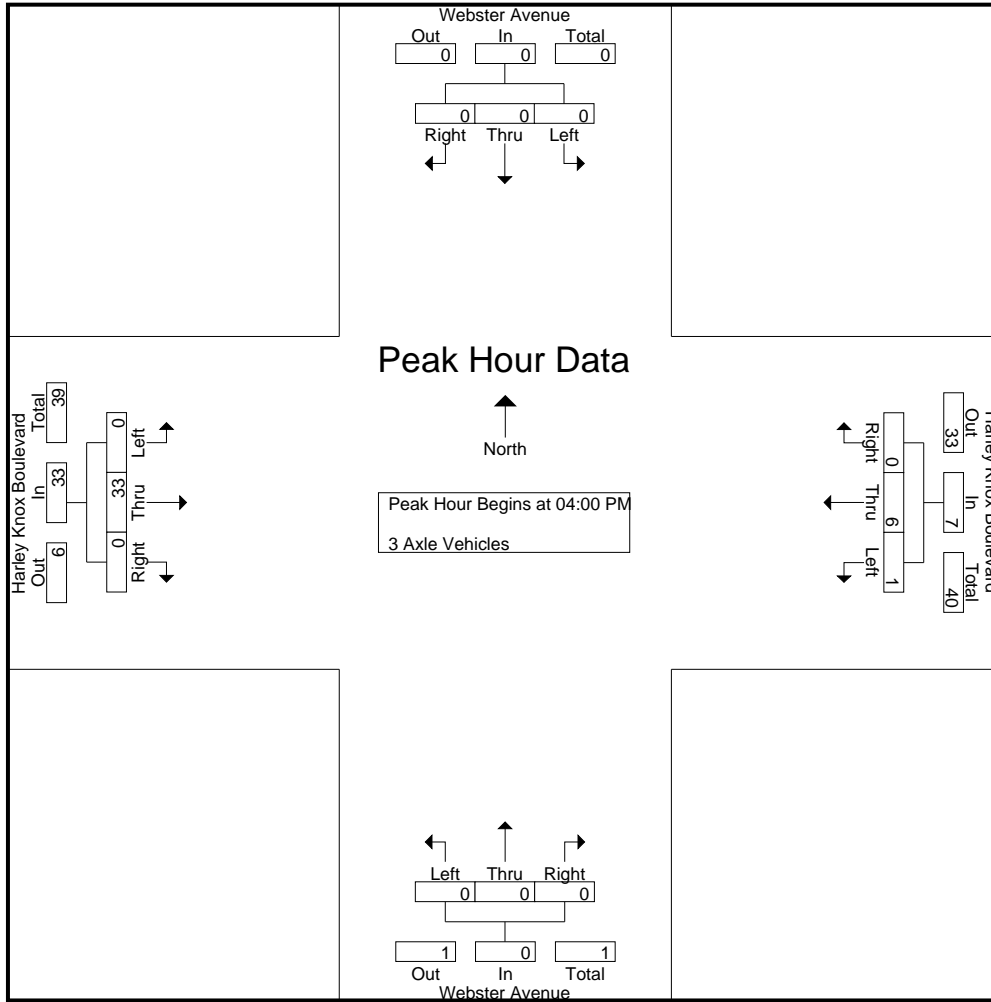
Groups Printed- 3 Axle Vehicles

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
04:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	8	0	8	12
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11	12
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	10	0	10	12
Total	0	0	0	0	1	6	0	7	0	0	0	0	0	33	0	33	40
05:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	5	0	5	8
05:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	9	1	10	13
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	5
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Total	0	0	0	0	0	11	0	11	0	0	1	1	0	20	2	22	34
Grand Total	0	0	0	0	1	17	0	18	0	0	1	1	0	53	2	55	74
Apprch %	0	0	0		5.6	94.4	0		0	0	100		0	96.4	3.6		
Total %	0	0	0	0	1.4	23	0	24.3	0	0	1.4	1.4	0	71.6	2.7	74.3	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
04:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	8	0	8	12
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11	12
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	10	0	10	12
Total Volume	0	0	0	0	1	6	0	7	0	0	0	0	0	33	0	33	40
% App. Total	0	0	0		14.3	85.7	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.500	.000	.438	.000	.000	.000	.000	.000	.750	.000	.750	.833

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
+15 mins.	0	0	0	0	1	3	0	4	0	0	0	0	0	8	0	8
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	10	0	10
Total Volume	0	0	0	0	1	6	0	7	0	0	0	0	0	33	0	33
% App. Total	0	0	0	0	14.3	85.7	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.250	.500	.000	.438	.000	.000	.000	.000	.000	.750	.000	.750

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

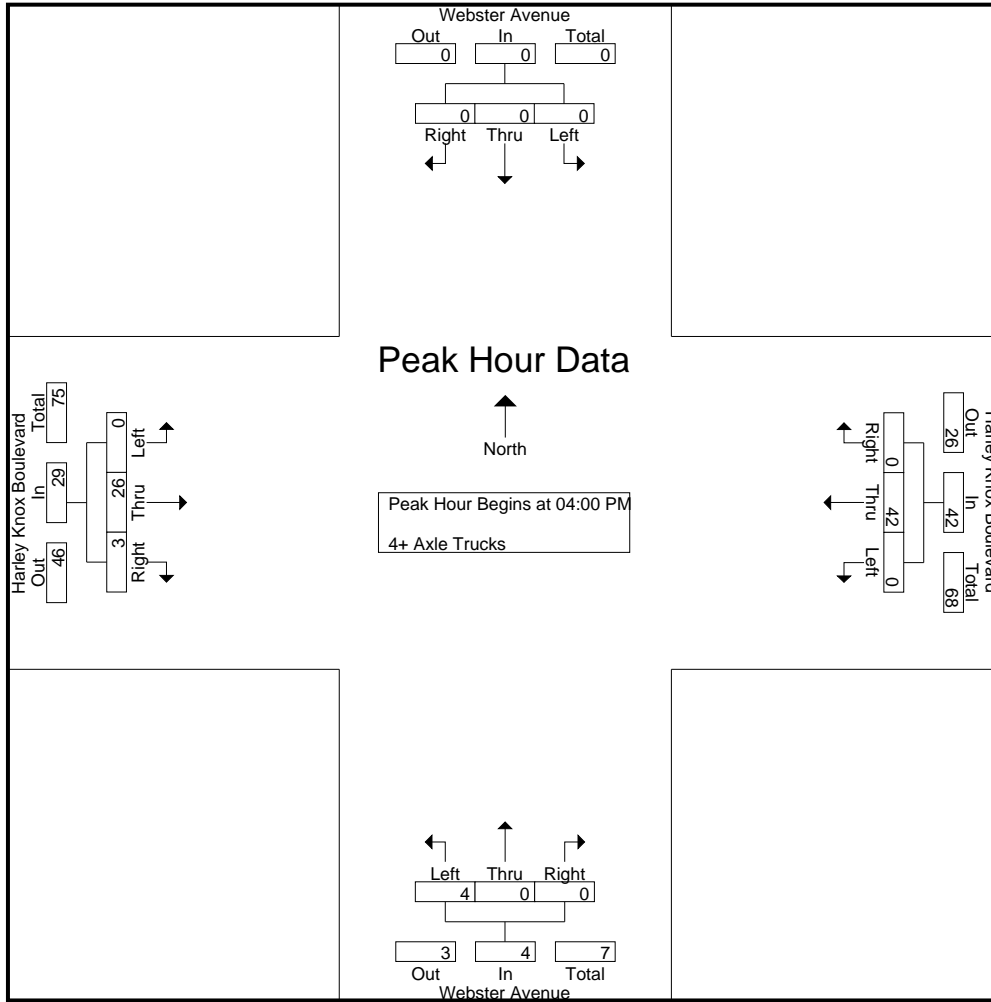
Groups Printed- 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	8	0	8	1	0	0	1	0	4	2	6	15
04:15 PM	0	0	0	0	0	12	0	12	1	0	0	1	0	9	1	10	23
04:30 PM	0	0	0	0	0	15	0	15	1	0	0	1	0	9	0	9	25
04:45 PM	0	0	0	0	0	7	0	7	1	0	0	1	0	4	0	4	12
Total	0	0	0	0	0	42	0	42	4	0	0	4	0	26	3	29	75
05:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	8	1	9	16
05:15 PM	0	0	0	0	0	16	0	16	0	0	0	0	0	10	0	10	26
05:30 PM	0	0	0	0	0	12	0	12	2	0	0	2	0	5	0	5	19
05:45 PM	0	0	0	0	0	10	0	10	0	0	0	0	0	6	0	6	16
Total	0	0	0	0	0	45	0	45	2	0	0	2	0	29	1	30	77
Grand Total	0	0	0	0	0	87	0	87	6	0	0	6	0	55	4	59	152
Apprch %	0	0	0		0	100	0		100	0	0		0	93.2	6.8		
Total %	0	0	0		0	57.2	0	57.2	3.9	0	0	3.9	0	36.2	2.6	38.8	

Start Time	Webster Avenue Southbound				Harley Knox Boulevard Westbound				Webster Avenue Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	8	0	8	1	0	0	1	0	4	2	6	15
04:15 PM	0	0	0	0	0	12	0	12	1	0	0	1	0	9	1	10	23
04:30 PM	0	0	0	0	0	15	0	15	1	0	0	1	0	9	0	9	25
04:45 PM	0	0	0	0	0	7	0	7	1	0	0	1	0	4	0	4	12
Total Volume	0	0	0	0	0	42	0	42	4	0	0	4	0	26	3	29	75
% App. Total	0	0	0		0	100	0		100	0	0		0	89.7	10.3		
PHF	.000	.000	.000	.000	.000	.700	.000	.700	1.00	.000	.000	1.00	.000	.722	.375	.725	.750

City of Perris  
 N/S: Webster Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 05\_PER\_Webster\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	8	0	8	1	0	0	1	0	4	2	6
+15 mins.	0	0	0	0	0	12	0	12	1	0	0	1	0	9	1	10
+30 mins.	0	0	0	0	0	15	0	15	1	0	0	1	0	9	0	9
+45 mins.	0	0	0	0	0	7	0	7	1	0	0	1	0	4	0	4
Total Volume	0	0	0	0	0	42	0	42	4	0	0	4	0	26	3	29
% App. Total	0	0	0	0	0	100	0	100	100	0	0	100	0	89.7	10.3	100
PHF	.000	.000	.000	.000	.000	.700	.000	.700	1.000	.000	.000	1.000	.000	.722	.375	.725

Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Patterson Avenue Pedestrians	East Leg Harley Knox Boulevard Pedestrians	South Leg Patterson Avenue Pedestrians	West Leg Harley Knox Boulevard Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Patterson Avenue Pedestrians	East Leg Harley Knox Boulevard Pedestrians	South Leg Patterson Avenue Pedestrians	West Leg Harley Knox Boulevard Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0



Location: Perris  
 N/S: Patterson Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Patterson Avenue			Westbound Harley Knox Boulevard			Northbound Patterson Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	1	0	0	0	0	0	0	1

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Webster Avenue Southbound						Ramona Expressway Westbound						Webster Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu.	Inclu.	Total				Exclu.	Inclu.	Total				Exclu.	Inclu.	Total				Exclu.	Inclu.	Total			
07:00 AM	6	1	27	9	34	1	318	5	0	324	21	6	6	4	33	26	223	9	0	258	13	649	662	
07:15 AM	11	5	21	6	37	3	313	4	0	320	23	8	7	6	38	38	244	9	1	291	13	686	699	
07:30 AM	6	1	17	7	24	13	324	6	2	343	21	12	1	1	34	32	276	19	3	327	13	728	741	
07:45 AM	7	5	25	9	37	10	296	4	1	310	29	7	10	4	46	44	238	9	3	291	17	684	701	
<b>Total</b>	30	12	90	31	132	27	1251	19	3	1297	94	33	24	15	151	140	981	46	7	1167	56	2747	2803	
08:00 AM	8	5	26	12	39	10	288	2	2	300	15	10	3	1	28	46	233	16	4	295	19	662	681	
08:15 AM	9	3	21	9	33	4	279	5	1	288	16	6	5	2	27	17	226	10	1	253	13	601	614	
08:30 AM	7	4	21	9	32	5	257	2	0	264	13	2	5	0	20	35	203	5	1	243	10	559	569	
08:45 AM	1	5	17	7	23	3	290	2	0	295	7	4	5	1	16	22	155	8	1	185	9	519	528	
<b>Total</b>	25	17	85	37	127	22	1114	11	3	1147	51	22	18	4	91	120	817	39	7	976	51	2341	2392	
<b>Grand Total</b>	55	29	175	68	259	49	2365	30	6	2444	145	55	42	19	242	260	1798	85	14	2143	107	5088	5195	
Approch %	21.2	11.2	67.6			2	96.8	1.2		48	59.9	22.7	17.4			12.1	83.9	4		42.1	2.1	97.9		
Total %	1.1	0.6	3.4		5.1	1	46.5	0.6		48	2.8	1.1	0.8		4.8	5.1	35.3	1.7		42.1	0	0	4685	
Passenger Vehicles	40	28	146		271	49	2181	25		2261	128	50	30		223	226	1625	68		1930	0	0	4685	
% Passenger Vehicles	72.7	96.6	83.4		83.8	100	92.2	83.3		100	88.3	90.9	71.4		78.9	86.9	90.4	80		78.6	89.5	0	90.2	
Large 2 Axle Vehicles	8	0	14		31	0	76	4		80	10	3	10		26	19	71	7		100	0	0	237	
% Large 2 Axle Vehicles	14.5	0	8		13.2	0	3.2	13.3		3.3	6.9	5.5	23.8		15.8	7.3	3.9	8.2		21.4	4.6	0	4.6	
3 Axle Vehicles	1	0	2		4	0	14	0		14	0	0	0		0	0	18	3		21	0	0	39	
% 3 Axle Vehicles	1.8	0	1.1		1.5	0	0.6	0		0.6	0	0	0		0	0	1	3.5		0	0	0	0.8	
4+ Axle Trucks	6	1	13		21	0	94	1		95	7	2	2		12	15	84	7		106	0	0	234	
% 4+ Axle Trucks	10.9	3.4	7.4		15	0	4	3.3		3.9	4.8	3.6	4.8		5.3	5.8	4.7	8.2		4.9	0	0	4.5	

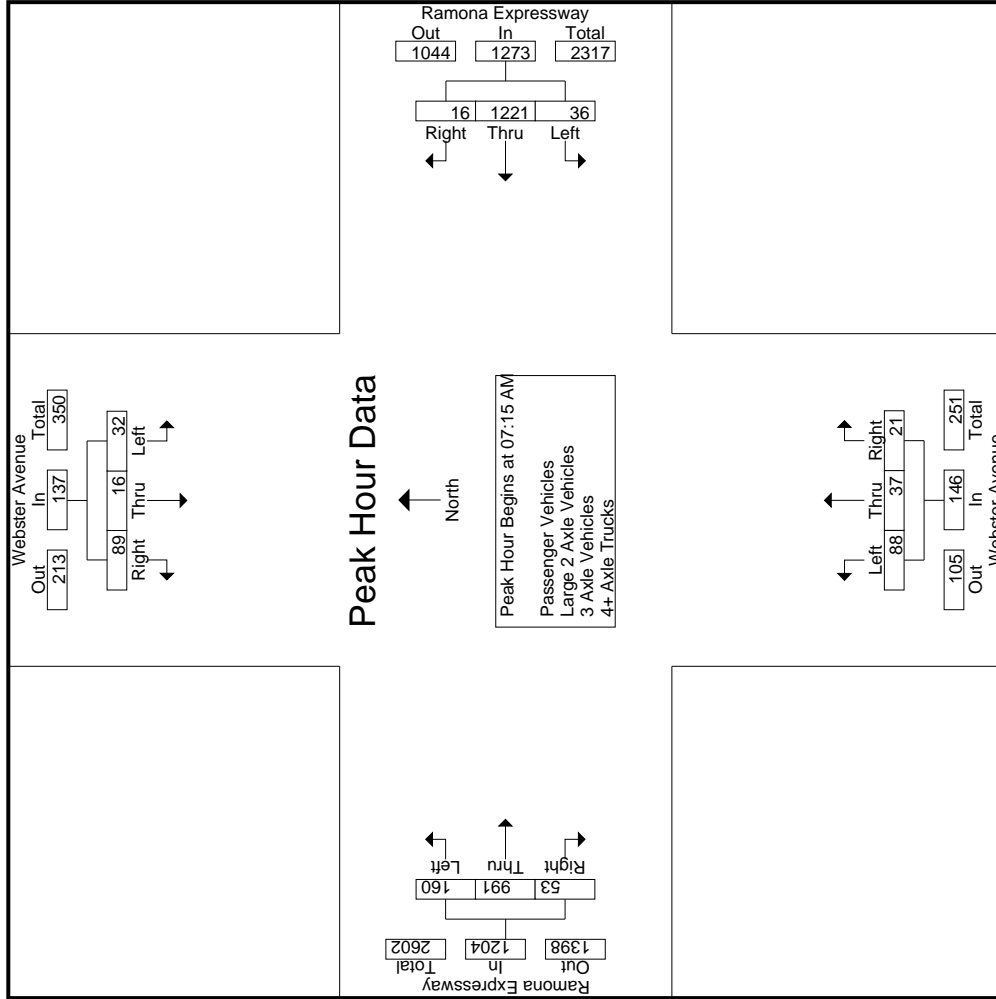
Start Time	Webster Avenue Southbound						Ramona Expressway Westbound						Webster Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu.	Inclu.	Total				Exclu.	Inclu.	Total				Exclu.	Inclu.	Total				Exclu.	Inclu.	Total			
07:15 AM	11	5	21		37	3	313	4		320	23	8	7		38	38	244	9		291	686			
07:30 AM	6	1	17		24	13	324	6		343	21	12	1		34	32	276	19		327	728			
07:45 AM	7	5	25		37	10	296	4		310	29	7	10		46	44	238	9		291	684			
08:00 AM	8	5	26		39	10	288	2		300	15	10	3		28	46	233	16		295	662			
Total Volume	32	16	89		137	36	1221	16		1273	88	37	21		146	160	991	53		1204	2760			
% App. Total	23.4	11.7	65		65	2.8	95.9	1.3		1.3	60.3	25.3	14.4		13.3	82.3	4.4		4.4	1204	2760			
PHF	.727	.800	.856		.878	.692	.942	.667		.928	.759	.771	.525		.793	.870	.898		.697	.920	.948			

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:45 AM			07:00 AM			07:00 AM			07:15 AM		
+0 mins.	7	5	25	1	318	5	324	21	6	6	244	9
+15 mins.	8	5	26	3	313	4	320	23	8	7	276	19
+30 mins.	9	3	21	13	324	6	343	21	12	1	238	9
+45 mins.	7	4	21	10	296	4	310	29	7	10	233	16
Total Volume	31	17	93	27	1251	19	1297	94	33	24	991	53
% App. Total	22	12.1	66	2.1	96.5	1.5	62.3	62.3	21.9	15.9	82.3	4.4
PHF	.861	.850	.894	.519	.965	.792	.945	.810	.688	.600	.898	.697
								.870				.920

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

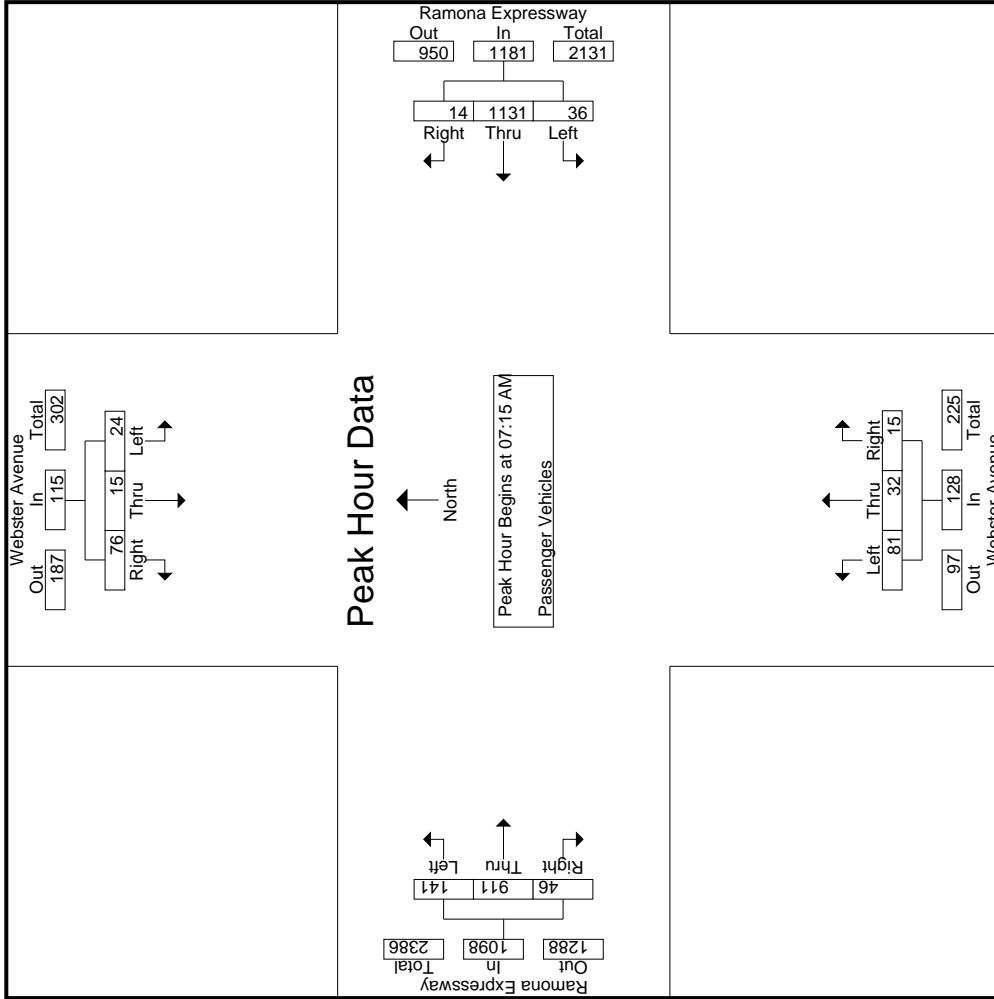
Groups Printed- Passenger Vehicles

Start Time	Webster Avenue Southbound					Ramona Expressway Westbound					Webster Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	5	1	23	8	29	1	298	4	0	303	18	6	4	3	28	23	210	7	0	240	11	600	611
07:15 AM	10	5	17	4	32	3	286	4	0	293	22	8	4	4	34	35	219	9	1	263	9	622	631
07:30 AM	4	1	15	6	20	13	300	5	2	318	19	12	1	1	32	31	257	17	3	305	12	675	687
07:45 AM	4	5	21	7	30	10	279	3	1	292	27	6	8	4	41	39	217	8	3	264	15	627	642
<b>Total</b>	<b>23</b>	<b>12</b>	<b>76</b>	<b>25</b>	<b>111</b>	<b>27</b>	<b>1163</b>	<b>16</b>	<b>3</b>	<b>1206</b>	<b>86</b>	<b>32</b>	<b>17</b>	<b>12</b>	<b>135</b>	<b>128</b>	<b>903</b>	<b>41</b>	<b>7</b>	<b>1072</b>	<b>47</b>	<b>2524</b>	<b>2571</b>
08:00 AM	6	4	23	12	33	10	266	2	2	278	13	6	2	1	21	36	218	12	2	266	17	598	615
08:15 AM	5	3	15	7	23	4	263	3	1	270	10	6	3	1	19	13	193	7	1	213	10	525	535
08:30 AM	5	4	17	7	26	5	229	2	0	236	12	2	4	0	18	30	174	5	1	209	8	489	497
08:45 AM	1	5	15	6	21	3	260	2	0	265	7	4	4	1	15	19	137	3	0	159	7	460	467
<b>Total</b>	<b>17</b>	<b>16</b>	<b>70</b>	<b>32</b>	<b>103</b>	<b>22</b>	<b>1018</b>	<b>9</b>	<b>3</b>	<b>1049</b>	<b>42</b>	<b>18</b>	<b>13</b>	<b>3</b>	<b>73</b>	<b>98</b>	<b>722</b>	<b>27</b>	<b>4</b>	<b>847</b>	<b>42</b>	<b>2072</b>	<b>2114</b>
<b>Grand Total</b>	<b>40</b>	<b>28</b>	<b>146</b>	<b>57</b>	<b>214</b>	<b>49</b>	<b>2181</b>	<b>25</b>	<b>6</b>	<b>2255</b>	<b>128</b>	<b>50</b>	<b>30</b>	<b>15</b>	<b>208</b>	<b>226</b>	<b>1625</b>	<b>68</b>	<b>11</b>	<b>1919</b>	<b>89</b>	<b>4596</b>	<b>4685</b>
Apprch %	18.7	13.1	68.2		4.7	2.2	96.7	1.1		49.1	61.5	24	14.4		4.5	11.8	84.7	3.5		41.8	1.9	98.1	
Total %	0.9	0.6	3.2			1.1	47.5	0.5			2.8	1.1	0.7			4.9	35.4	1.5					

3.1-253

Start Time	Webster Avenue Southbound					Ramona Expressway Westbound					Webster Avenue Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:15 AM	10	5	17		32	3	286	4		293	22	8	4		34	35	219	9		263			622	
07:30 AM	4	1	15		20	13	300	5		318	19	12	1		32	31	257	17		305			675	
07:45 AM	4	5	21		30	10	279	3		292	27	6	8		41	39	217	8		264			627	
08:00 AM	6	4	23		33	10	266	2		278	13	6	2		21	36	218	12		266			598	
Total Volume	24	15	76		115	36	1131	14		1181	81	32	15		128	141	911	46		1098			2522	
% App. Total	20.9	13	66.1		66.1	3	95.8	1.2		928	63.3	25	11.7		780	12.8	83	4.2						934
PHF	.600	.750	.826		.871	.692	.943	.700		.928	.750	.667	.469		.780	.904	.886	.676			.900			

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:15 AM			07:15 AM			07:15 AM			07:15 AM				
+0 mins.	10	5	17	32	3	286	4	293	8	4	34	219	9	263
+15 mins.	4	1	15	20	13	300	5	318	12	1	32	257	17	305
+30 mins.	4	5	21	30	10	279	3	292	6	8	41	217	8	264
+45 mins.	6	4	23	33	10	266	2	278	6	2	21	218	12	266
Total Volume	24	15	76	115	36	1131	14	1181	32	15	128	911	46	1098
% App. Total	20.9	13	66.1		3	95.8	1.2		25	11.7		83	4.2	
PHF	.600	.750	.826	.871	.692	.943	.700	.928	.667	.469	.780	.886	.676	.900

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	0	1	0	2	1	0	2	1	3	2	3	0	0	5	1	12	13
07:15 AM	0	0	2	1	2	16	0	2	1	2	1	13	0	0	14	2	34	36
07:30 AM	0	0	1	1	1	7	1	0	0	1	1	8	2	0	11	1	21	22
07:45 AM	1	0	2	2	3	8	0	2	0	3	3	11	0	0	14	2	28	30
<b>Total</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>8</b>	<b>34</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>9</b>	<b>7</b>	<b>35</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>6</b>	<b>95</b>	<b>101</b>
08:00 AM	1	0	0	0	1	10	0	0	0	10	7	6	3	2	16	2	32	34
08:15 AM	3	0	4	2	7	5	0	2	1	7	3	16	1	0	20	3	41	44
08:30 AM	2	0	3	2	5	15	0	1	0	2	1	7	0	0	8	2	30	32
08:45 AM	0	0	1	1	1	14	0	0	0	0	1	7	1	1	9	2	24	26
<b>Total</b>	<b>6</b>	<b>0</b>	<b>8</b>	<b>5</b>	<b>14</b>	<b>46</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>14</b>	<b>12</b>	<b>36</b>	<b>5</b>	<b>3</b>	<b>53</b>	<b>9</b>	<b>127</b>	<b>136</b>
<b>Grand Total</b>	<b>8</b>	<b>0</b>	<b>14</b>	<b>9</b>	<b>22</b>	<b>80</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>23</b>	<b>19</b>	<b>71</b>	<b>7</b>	<b>3</b>	<b>97</b>	<b>15</b>	<b>222</b>	<b>237</b>
Apprch %	36.4	0	63.6			43.5	13	43.5			19.6	73.2	7.2		43.7	6.3	93.7	
Total %	3.6	0	6.3		9.9	36	4.5	1.4	4.5	10.4	8.6	32	3.2					

3.1-256

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 AM	0	0	0	0	2	0	0	0	0	2	0	0	0	0	2	0	14	14
07:30 AM	0	0	1	1	1	7	1	0	0	1	1	8	2	0	11	1	21	21
07:45 AM	1	0	0	2	3	8	0	0	0	1	1	9	0	0	10	1	20	21
08:00 AM	1	0	0	0	1	10	0	1	0	1	3	11	0	0	14	2	26	28
<b>Total</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>14</b>	<b>42</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>7</b>	<b>38</b>	<b>5</b>	<b>5</b>	<b>55</b>	<b>5</b>	<b>115</b>	<b>115</b>
% App. Total	28.6	0	71.4			97.6	2.4	45.5			21.8	69.1	9.1					
PHF	.500	.000	.625		.583	.656	.750	.250	.625	.550	.429	.731	.417		.859			

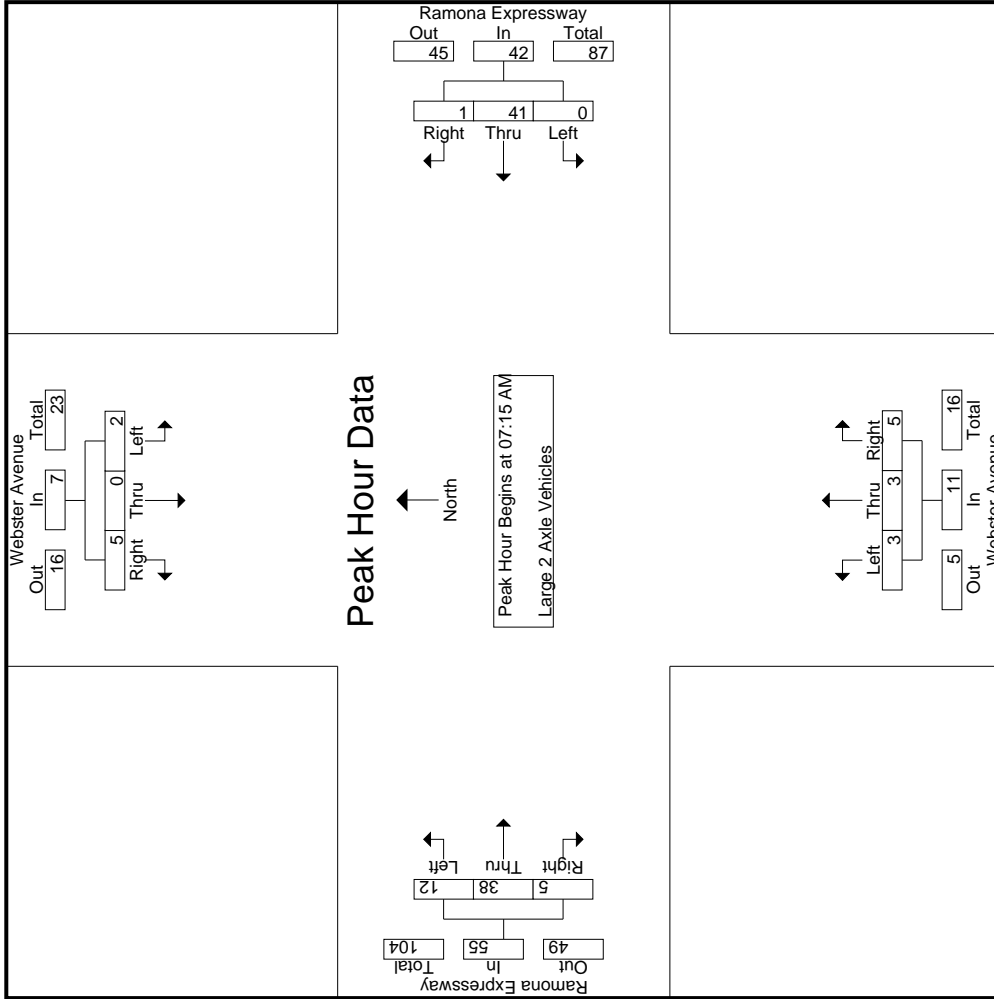
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:15 AM			07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	2	0	16	0	0	0	2	2	1	13
+15 mins.	0	0	1	0	7	1	0	0	0	1	1	8
+30 mins.	1	0	2	0	8	0	0	0	2	3	11	0
+45 mins.	1	0	0	0	10	0	1	3	1	5	7	6
Total Volume	2	0	5	0	41	1	3	3	5	11	12	38
% App. Total	28.6	0	71.4	0	97.6	2.4	27.3	27.3	45.5	21.8	69.1	9.1
PHF	.500	.000	.625	.000	.641	.250	.750	.250	.625	.429	.731	.417
					.656			.550				.859

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	1	1	1	0	3	0	0	3	0	0	0	0	0	6	1	10	11
07:15 AM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	1	0	5	5
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	3	3
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	2	2
<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>20</b>	<b>21</b>	
08:00 AM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2	0	4	4
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	2	2	
08:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	5	0	7	7	
08:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	3	0	5	5	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>18</b>	<b>18</b>	
<b>Grand Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>1</b>	<b>38</b>	<b>39</b>	
Apprch %	33.3	0	66.7		7.9	0	100	0	0	36.8	0	0	0	0	55.3	2.6	97.4		
Total %	2.6	0	5.3		7.9	0	36.8	0	0	36.8	0	0	0	0	55.3	2.6	97.4		

3.1-259

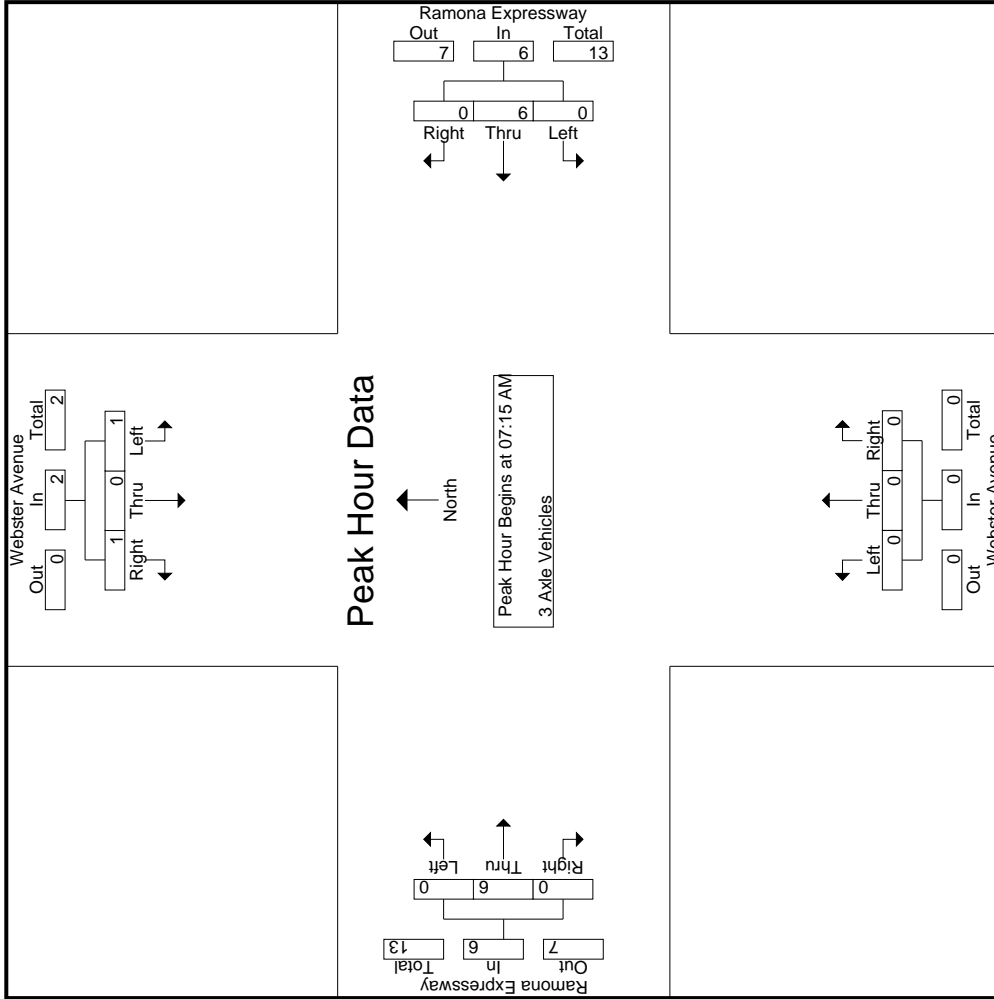
Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
<b>Total Volume</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>14</b>
% App. Total	.250	.000	.250	.500	.500	.000	.500	.000	.000	.500	.000	.000	.000	.000	.750	.000	.750	.700
PHF	.250	.000	.250	.500	.500	.000	.500	.000	.000	.500	.000	.000	.000	.000	.750	.000	.750	.700

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM	07:15 AM
+0 mins.	1	0	0	1	0	0	3	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	1	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	1	0	0	0	0	0
+45 mins.	0	0	1	1	0	1	1	0	0	0	0	0
Total Volume	1	0	1	2	0	6	6	0	0	0	6	0
% App. Total	.50	0	.50	.500	0	100	0	0	0	0	100	0
PHF	.250	.000	.250	.500	.000	.500	.000	.000	.000	.000	.750	.000
App. Total												
Int. Total												

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

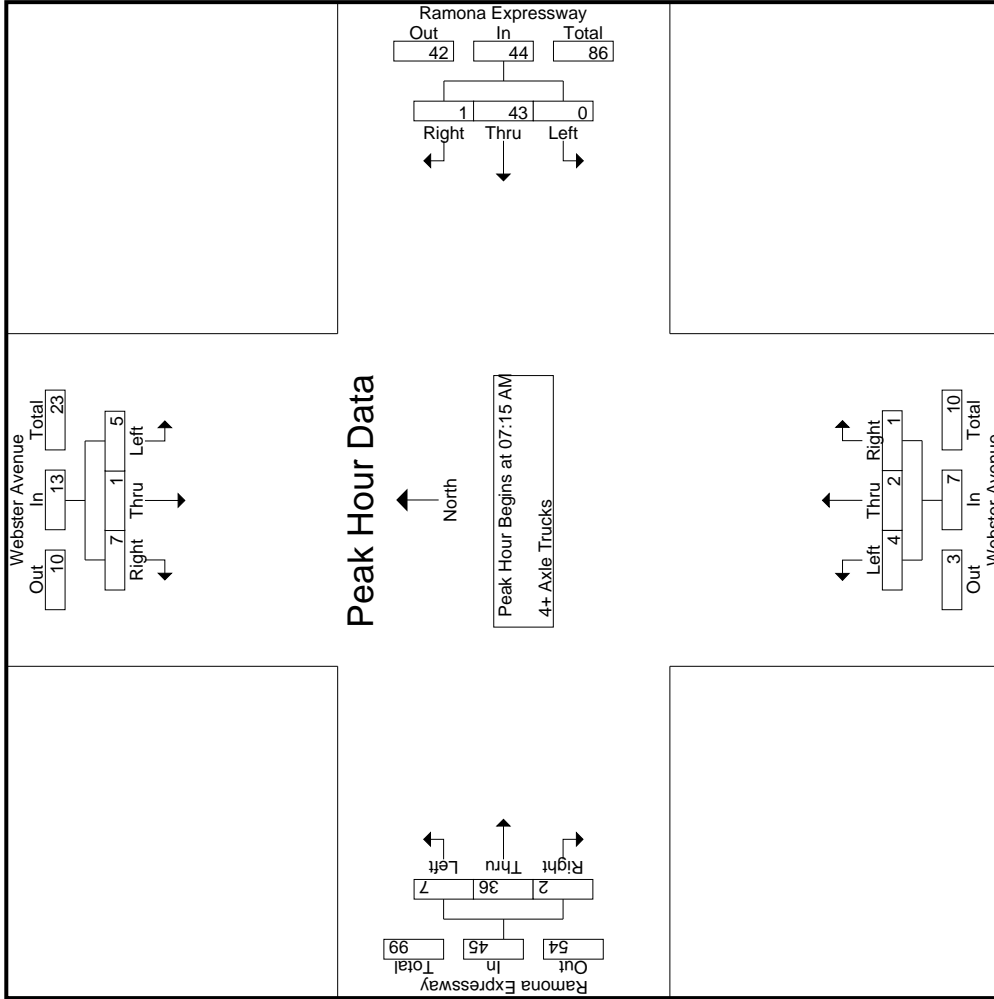
Groups Printed- 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	2	0	2	0	16	0	0	16	2	0	0	0	2	1	6	0	7
07:15 AM	0	0	2	1	2	0	8	0	0	8	1	0	1	1	2	2	11	0	13
07:30 AM	2	0	1	0	3	0	16	0	0	16	1	0	0	0	1	0	9	0	9
07:45 AM	2	0	2	0	4	0	8	1	0	9	1	1	0	0	2	2	9	1	12
<b>Total</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>48</b>	<b>1</b>	<b>0</b>	<b>49</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>5</b>	<b>35</b>	<b>1</b>	<b>41</b>
08:00 AM	1	1	2	0	4	0	11	0	0	11	1	1	0	0	2	3	7	1	11
08:15 AM	1	0	2	0	3	0	10	0	0	10	1	0	0	0	1	1	16	2	19
08:30 AM	0	0	1	0	1	0	11	0	0	11	0	0	0	0	0	4	17	0	21
08:45 AM	0	0	1	0	1	0	14	0	0	14	0	0	1	0	1	2	9	3	14
<b>Total</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>49</b>	<b>6</b>	<b>65</b>
<b>Grand Total</b>	<b>6</b>	<b>1</b>	<b>13</b>	<b>1</b>	<b>20</b>	<b>0</b>	<b>94</b>	<b>1</b>	<b>0</b>	<b>95</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>11</b>	<b>15</b>	<b>84</b>	<b>7</b>	<b>106</b>
Apprch %	30	5	65			0	98.9	1.1		40.9	63.6	18.2	18.2		14.2	79.2	6.6		45.7
Total %	2.6	0.4	5.6		8.6	0	40.5	0.4		40.9	3	0.9	0.9		4.7	6.5	36.2	3	99.1

3.1-262

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total
07:15 AM	0	0	0		2	0	8	0		8	1	0	0		1	2	0	0	13	25
07:30 AM	2	0	1		3	0	16	0		16	1	0	0		1	1	0	0	9	29
07:45 AM	2	0	2		4	0	8	1		9	1	1	0		2	2	0	1	12	27
08:00 AM	1	1	1		4	0	11	0		11	1	1	0		2	3	1	1	11	28
Total Volume	5	1	7		13	0	43	1		44	4	2	1		7	7	36	2	45	109
% App. Total	38.5	7.7	53.8		81.3	0	97.7	2.3		250	57.1	28.6	14.3		80	15.6	80	4.4	865	940
PHF	.625	.250	.875		.813	.000	.672	.250		.688	1.00	.500	.250		.875	.583	.818	.500	.865	.940

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:15 AM



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City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:15 AM			07:15 AM			07:15 AM			07:15 AM				
+0 mins.	0	0	2	0	8	0	1	0	1	2	2	11	0	13
+15 mins.	2	0	1	0	16	0	1	0	0	1	0	9	0	9
+30 mins.	2	0	2	0	8	1	1	1	0	2	2	9	1	12
+45 mins.	1	1	2	0	11	0	1	1	0	2	3	7	1	11
Total Volume	5	1	7	0	43	1	4	2	1	7	7	36	2	45
% App. Total	38.5	7.7	53.8	0	97.7	2.3	57.1	28.6	14.3	15.6	15.6	80	4.4	80
PHF	.625	.250	.875	.000	.672	.250	1.000	.500	.250	.875	.583	.818	.500	.865



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City of Perris  
N/S: Webster Avenue  
E/W: Ramona Expressway  
Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
Site Code : 05118431  
Start Date : 5/24/2018  
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Webster Avenue Southbound					Ramona Expressway Westbound					Webster Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	16	3	31	6	50	7	277	4	0	288	32	6	3	0	41	22	329	4	0	355	6	734	740
04:15 PM	21	6	22	11	49	3	286	4	3	293	25	1	3	1	29	37	303	4	1	344	16	715	731
04:30 PM	18	7	34	11	59	7	320	10	1	337	41	8	5	4	54	38	257	4	1	299	17	749	766
04:45 PM	20	6	36	4	62	4	284	5	1	293	31	12	6	3	49	31	280	5	2	316	10	720	730
<b>Total</b>	75	22	123	32	220	21	1167	23	5	1211	129	27	17	8	173	128	1169	17	4	1314	49	2918	2967
05:00 PM	13	12	37	19	62	6	265	6	2	277	27	1	2	1	30	32	294	3	1	329	23	698	721
05:15 PM	8	5	32	23	45	5	304	6	1	315	9	1	2	1	12	21	323	4	2	348	27	720	747
05:30 PM	19	7	44	16	70	3	243	9	2	255	15	1	4	2	20	23	350	7	2	380	22	725	747
05:45 PM	11	7	26	12	44	5	292	7	2	304	8	4	5	3	17	17	330	8	3	355	20	720	740
<b>Total</b>	51	31	139	70	221	19	1104	28	7	1151	59	7	13	7	79	93	1297	22	8	1412	92	2863	2955
<b>Grand Total</b>	126	53	262	102	441	40	2271	51	12	2362	188	34	30	15	252	221	2466	39	12	2726	141	5781	5922
Approach %	28.6	12	59.4			1.7	96.1	2.2			74.6	13.5	11.9			8.1	90.5	1.4					
Total %	2.2	0.9	4.5		7.6	0.7	39.3	0.9		40.9	3.3	0.6	0.5		4.4	3.8	42.7	0.7		47.2	2.4	97.6	
Passenger Vehicles	122	52	252		526	38	2127	50		2227	179	33	14		235	211	2314	32		2568	0	0	5556
% Passenger Vehicles	96.8	98.1	96.2		98	95	93.7	98		100	93.8	95.2	97.1		60	95.5	93.8	82.1		91.7	0	0	93.8
Large 2 Axle Vehicles	2	0	8		11	1	37	0		38	7	1	15		29	6	56	1		64	0	0	142
% Large 2 Axle Vehicles	1.6	0	3.1		2	2.5	1.6	0		1.6	3.7	2.9	50		10.9	2.7	2.3	2.6		8.3	0	0	2.4
3 Axle Vehicles	1	0	0		1	0	19	0		19	1	0	0		1	2	24	0		26	0	0	47
% 3 Axle Vehicles	0.8	0	0		0.2	0	0.8	0		0.8	0.5	0	0		0.4	0.9	1	0		0.9	0	0	0.8
4+ Axle Trucks	1	1	2		5	1	88	1		90	1	0	1		2	2	72	6		80	0	0	177
% 4+ Axle Trucks	0.8	1.9	0.8		0.9	2.5	3.9	2		3.8	0.5	0	3.3		0.7	0.9	2.9	15.4		2.9	0	0	3

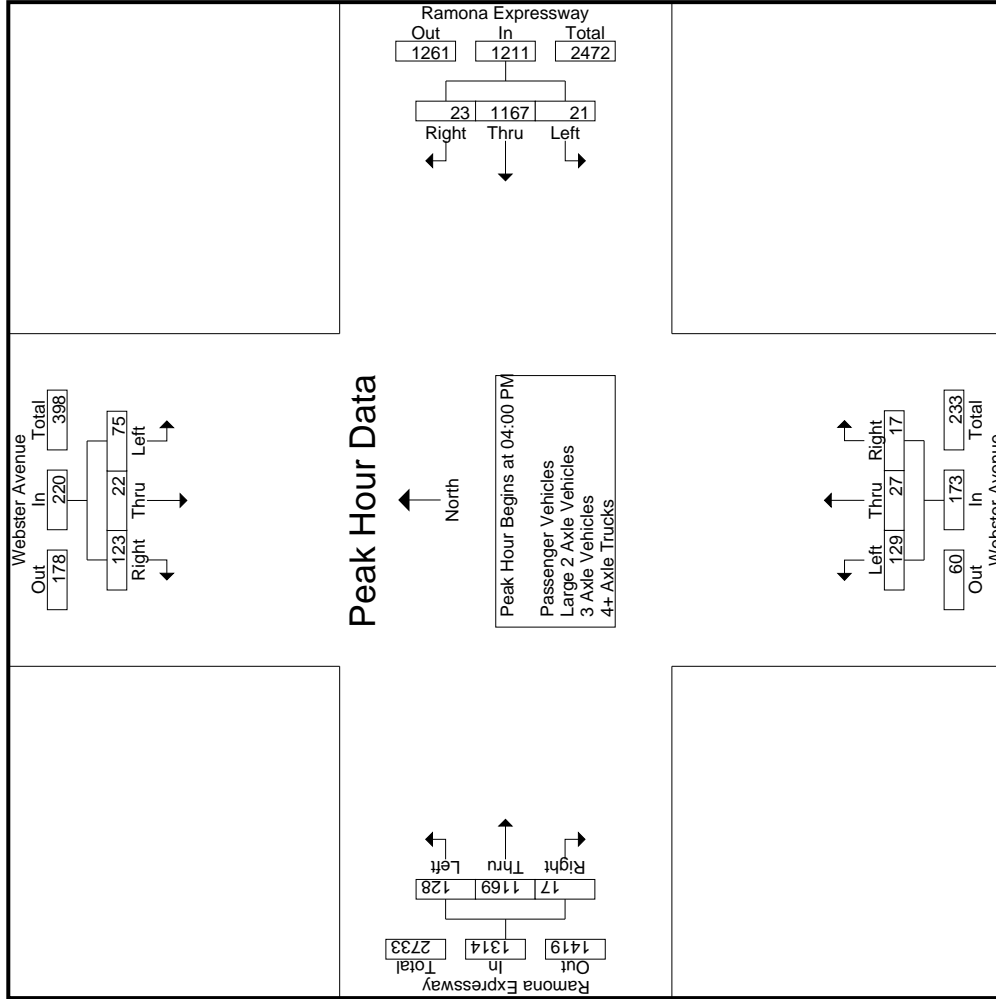
  

Start Time	Webster Avenue Southbound					Ramona Expressway Westbound					Webster Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
<b>Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1</b>																							
<b>Peak Hour for Entire Intersection Begins at 04:00 PM</b>																							
04:00 PM	16	3	31		50	7	277	4		288	32	6	3		41	22	329	4		355	6	734	734
04:15 PM	21	6	22		49	3	286	4		293	25	1	3		3	37	303	4		344	16	715	715
04:30 PM	18	7	34		59	7	320	10		337	41	8	5		5	38	257	4		299	17	749	749
04:45 PM	20	6	36		62	4	284	5		293	31	12	6		6	31	280	5		316	10	720	720
Total Volume	75	22	123		220	21	1167	23		1211	129	27	17		17	128	1169	17		1314	49	2918	2918
% App. Total	34.1	10	55.9			1.7	96.4	1.9			74.6	15.6	9.8			9.7	89	1.3					
PHF	.893	.786	.854		.887	.750	.912	.575		.898	.787	.563	.708		.708	.842	.888	.850		.925			.974

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City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
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City of Perris  
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File Name : 12\_PER\_Webster\_Ramona PM  
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 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:45 PM			04:30 PM			04:00 PM			05:00 PM					
+0 mins.	20	6	36	62	7	320	10	337	32	6	3	41	294	3	329
+15 mins.	13	12	37	62	4	284	5	293	25	1	3	29	323	4	348
+30 mins.	8	5	32	45	6	265	6	277	41	8	5	54	350	7	380
+45 mins.	19	7	44	70	5	304	6	315	31	12	6	49	330	8	355
Total Volume	60	30	149	239	22	1173	27	1222	129	27	17	173	1297	22	1412
% App. Total	25.1	12.6	62.3		1.8	96	2.2		74.6	15.6	9.8		91.9	1.6	
PHF	.750	.625	.847	.854	.786	.916	.675	.907	.787	.563	.708	.801	.926	.688	.929

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File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Passenger Vehicles

Start Time	Webster Avenue Southbound						Ramona Expressway Westbound						Webster Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
04:00 PM	16	3	29	6	48	6	247	4	0	257	30	5	2	0	37	20	301	2	0	323	6	665	671	
04:15 PM	20	6	22	11	48	3	267	4	3	274	24	1	1	1	26	36	283	4	1	323	16	671	687	
04:30 PM	18	6	33	11	57	6	297	10	1	313	40	8	2	1	50	37	236	2	0	275	13	695	708	
04:45 PM	19	6	36	4	61	4	270	5	1	279	28	12	4	2	44	28	259	5	2	292	9	676	685	
<b>Total</b>	<b>73</b>	<b>21</b>	<b>120</b>	<b>32</b>	<b>214</b>	<b>19</b>	<b>1081</b>	<b>23</b>	<b>5</b>	<b>1123</b>	<b>122</b>	<b>26</b>	<b>9</b>	<b>4</b>	<b>157</b>	<b>121</b>	<b>1079</b>	<b>13</b>	<b>3</b>	<b>1213</b>	<b>44</b>	<b>2707</b>	<b>2751</b>	
05:00 PM	12	12	34	18	58	6	251	6	2	263	27	1	0	0	28	32	278	1	1	311	21	660	681	
05:15 PM	8	5	32	23	45	5	287	6	1	298	8	1	1	1	10	20	310	3	2	333	27	686	713	
05:30 PM	18	7	41	16	66	3	228	8	2	239	15	1	1	1	17	21	333	7	2	361	21	683	704	
05:45 PM	11	7	25	11	43	5	280	7	2	292	7	4	3	3	14	17	314	8	3	339	19	688	707	
<b>Total</b>	<b>49</b>	<b>31</b>	<b>132</b>	<b>68</b>	<b>242</b>	<b>19</b>	<b>1046</b>	<b>27</b>	<b>7</b>	<b>1092</b>	<b>57</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>69</b>	<b>90</b>	<b>1235</b>	<b>19</b>	<b>8</b>	<b>1344</b>	<b>88</b>	<b>2717</b>	<b>2805</b>	
<b>Grand Total</b>	<b>122</b>	<b>52</b>	<b>252</b>	<b>100</b>	<b>426</b>	<b>38</b>	<b>2127</b>	<b>50</b>	<b>12</b>	<b>2215</b>	<b>179</b>	<b>33</b>	<b>14</b>	<b>9</b>	<b>226</b>	<b>211</b>	<b>2314</b>	<b>32</b>	<b>11</b>	<b>2557</b>	<b>132</b>	<b>5424</b>	<b>5556</b>	
Approch %	28.6	12.2	59.2			1.7	96	2.3		40.8	79.2	14.6	6.2		4.2	8.3	90.5	1.3		47.1	2.4	97.6		
Total %	2.2	1	4.6		7.9	0.7	39.2	0.9			3.3	0.6	0.3			3.9	42.7	0.6						

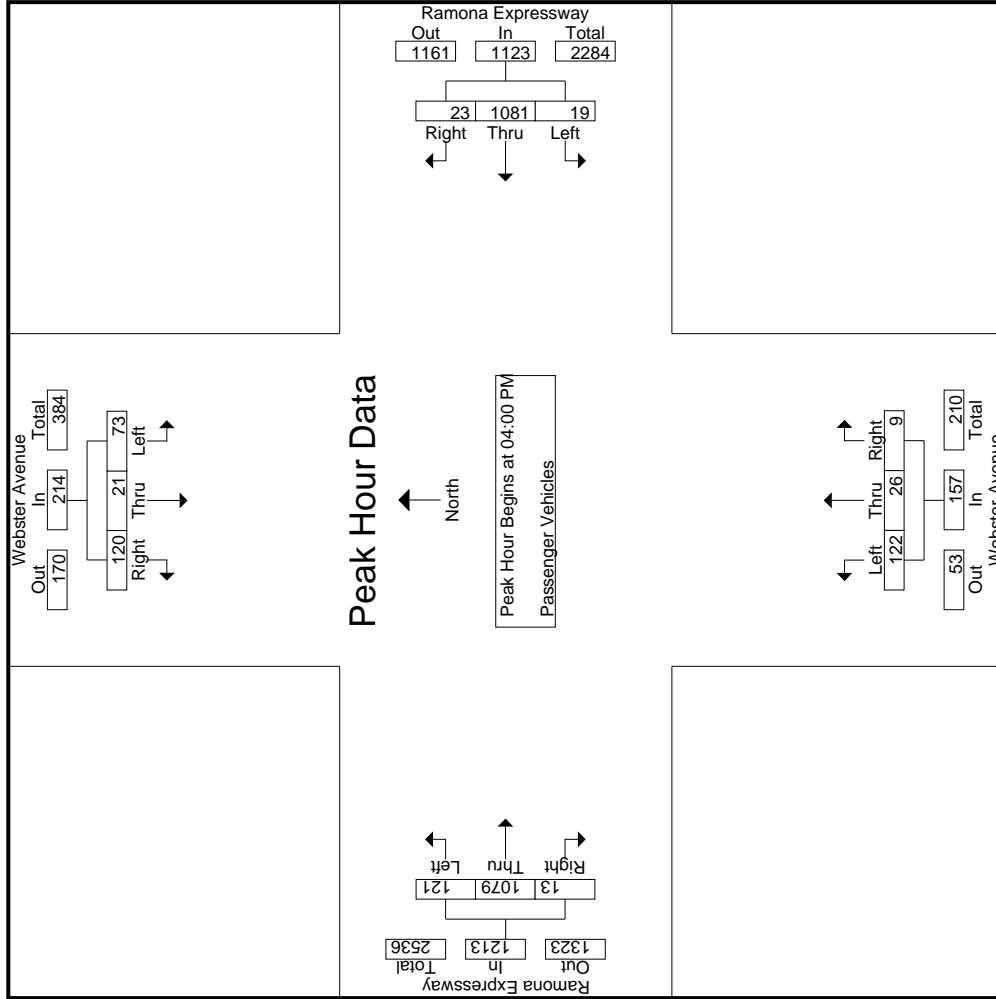
  

Start Time	Webster Avenue Southbound						Ramona Expressway Westbound						Webster Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
04:00 PM	16	3	29	6	48	6	247	4	0	257	30	5	2	0	37	20	301	2	0	323	6	665	671	
04:15 PM	20	6	22	11	48	3	267	4	3	274	24	1	1	1	26	36	283	4	1	323	16	671	687	
04:30 PM	18	6	33	11	57	6	297	10	1	313	40	8	2	1	50	37	236	2	0	275	13	695	708	
04:45 PM	19	6	36	4	61	4	270	5	1	279	28	12	4	2	44	28	259	5	2	292	9	676	685	
<b>Total</b>	<b>73</b>	<b>21</b>	<b>120</b>	<b>32</b>	<b>214</b>	<b>19</b>	<b>1081</b>	<b>23</b>	<b>5</b>	<b>1123</b>	<b>122</b>	<b>26</b>	<b>9</b>	<b>4</b>	<b>157</b>	<b>121</b>	<b>1079</b>	<b>13</b>	<b>3</b>	<b>1213</b>	<b>44</b>	<b>2707</b>	<b>2751</b>	
<b>Grand Total</b>	<b>122</b>	<b>52</b>	<b>252</b>	<b>100</b>	<b>426</b>	<b>38</b>	<b>2127</b>	<b>50</b>	<b>12</b>	<b>2215</b>	<b>179</b>	<b>33</b>	<b>14</b>	<b>9</b>	<b>226</b>	<b>211</b>	<b>2314</b>	<b>32</b>	<b>11</b>	<b>2557</b>	<b>132</b>	<b>5424</b>	<b>5556</b>	
Approch %	28.6	12.2	59.2			1.7	96	2.3		40.8	79.2	14.6	6.2		4.2	8.3	90.5	1.3		47.1	2.4	97.6		
Total %	2.2	1	4.6		7.9	0.7	39.2	0.9			3.3	0.6	0.3			3.9	42.7	0.6						

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City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			
+0 mins.	16	3	29	6	247	4	257	5	2	37	301	2	323
+15 mins.	20	6	22	3	267	4	274	1	1	26	283	4	323
+30 mins.	18	6	33	6	297	10	313	8	2	50	236	2	275
+45 mins.	19	6	36	4	270	5	279	12	4	44	259	5	292
Total Volume	73	21	120	19	1081	23	1123	26	9	157	1079	13	1213
% App. Total	34.1	9.8	56.1	1.7	96.3	2	77.7	16.6	5.7	10	89	1.1	
PHF	.913	.875	.833	.792	.910	.575	.897	.763	.563	.785	.896	.650	.939

Groups Printed- Large 2 Axle Vehicles

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	0	2	0	0	1	6	0	0	7	1	1	1	0	3	1	11	0	0	12	0	24	24
04:15 PM	1	0	0	0	1	0	4	0	0	4	1	0	2	0	3	0	9	0	0	9	0	17	17
04:30 PM	0	0	1	0	1	0	8	0	0	8	1	0	3	3	4	1	7	1	1	9	4	22	26
04:45 PM	0	0	0	0	0	0	3	0	0	3	2	0	2	1	4	2	7	0	0	9	1	16	17
<b>Total</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>5</b>	<b>1</b>	<b>8</b>	<b>4</b>	<b>14</b>	<b>4</b>	<b>34</b>	<b>1</b>	<b>1</b>	<b>39</b>	<b>5</b>	<b>79</b>	<b>84</b>
05:00 PM	1	0	2	1	3	0	5	0	0	5	0	0	2	1	2	0	7	0	0	7	2	17	19
05:15 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	0	6	0	0	6	0	12	12
05:30 PM	0	0	3	0	3	0	3	0	0	3	0	0	3	1	3	2	6	0	0	8	1	17	18
05:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	0	3	0	0	3	0	9	9
<b>Total</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>9</b>	<b>2</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>3</b>	<b>55</b>	<b>58</b>
<b>Grand Total</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>7</b>	<b>1</b>	<b>15</b>	<b>6</b>	<b>23</b>	<b>6</b>	<b>56</b>	<b>1</b>	<b>1</b>	<b>63</b>	<b>8</b>	<b>134</b>	<b>142</b>
Apprch %	20	0	80			2.6	97.4	0			30.4	4.3	65.2			9.5	88.9	1.6			5.6	94.4	
Total %	1.5	0	6			0.7	27.6	0			5.2	0.7	11.2			4.5	41.8	0.7					

3.1-271

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	0	2	0	2	1	6	0	0	7	1	1	1	0	3	1	11	0	0	12	0	24	24
04:15 PM	1	0	0	0	1	0	4	0	0	4	1	0	2	0	3	0	9	0	0	9	0	17	17
04:30 PM	0	0	1	0	1	0	8	0	0	8	1	0	3	3	4	1	7	1	1	9	4	22	26
04:45 PM	0	0	0	0	0	0	3	0	0	3	2	0	2	1	4	2	7	0	0	9	1	16	17
<b>Total</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>5</b>	<b>1</b>	<b>8</b>	<b>4</b>	<b>14</b>	<b>4</b>	<b>34</b>	<b>1</b>	<b>1</b>	<b>39</b>	<b>5</b>	<b>79</b>	<b>84</b>
05:00 PM	1	0	2	1	3	0	5	0	0	5	0	0	2	1	2	0	7	0	0	7	2	17	19
05:15 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	0	6	0	0	6	0	12	12
05:30 PM	0	0	3	0	3	0	3	0	0	3	0	0	3	1	3	2	6	0	0	8	1	17	18
05:45 PM	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	0	3	0	0	3	0	9	9
<b>Total</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>9</b>	<b>2</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>3</b>	<b>55</b>	<b>58</b>
<b>Grand Total</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>7</b>	<b>1</b>	<b>15</b>	<b>6</b>	<b>23</b>	<b>6</b>	<b>56</b>	<b>1</b>	<b>1</b>	<b>63</b>	<b>8</b>	<b>134</b>	<b>142</b>
Apprch %	20	0	80			2.6	97.4	0			30.4	4.3	65.2			9.5	88.9	1.6			5.6	94.4	
Total %	1.5	0	6			0.7	27.6	0			5.2	0.7	11.2			4.5	41.8	0.7					

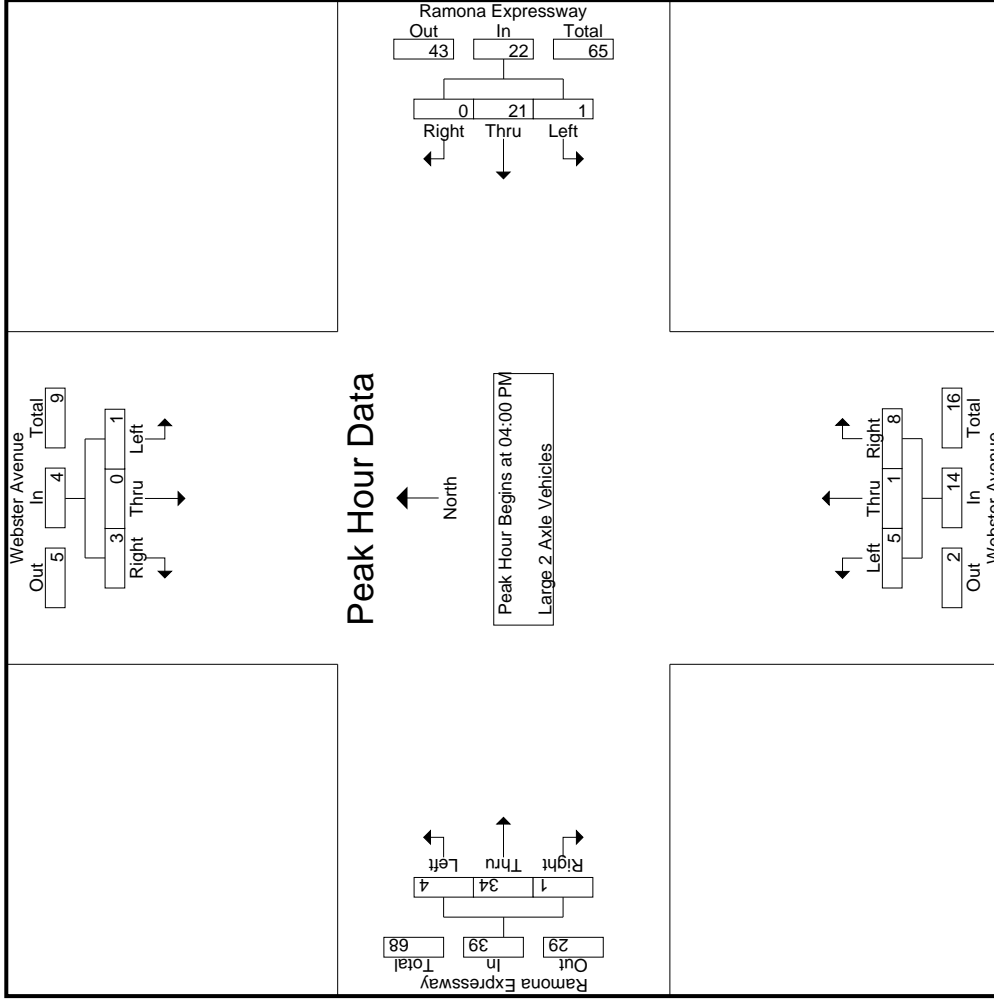
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound										
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	0	2	0	2	1	6	0	0	7	1	1	1	0	3	1	11	0	0	12	0	24	24
04:15 PM	1	0	0	0	1	0	4	0	0	4	1	0	2	0	3	0	9	0	0	9	0	17	17
04:30 PM	0	0	1	0	1	0	8	0	0	8	1	0	3	3	4	1	7	1	1	9	4	22	26
04:45 PM	0	0	0	0	0	0	3	0	0	3	2	0	2	1	4	2	7	0	0	9	1	16	17
<b>Total</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>5</b>	<b>1</b>	<b>8</b>	<b>4</b>	<b>14</b>	<b>4</b>	<b>34</b>	<b>1</b>	<b>1</b>	<b>39</b>	<b>5</b>	<b>79</b>	<b>84</b>
% App. Total	.250	0	.000			.688	.656	.000			.625	.250	.667		.875	.250	.773	.250		.813	.250	.823	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	App. Total			App. Total			App. Total			App. Total			
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1	Peak Hour for Each Approach Begins at:												
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			
+0 mins.	0	0	2	1	6	0	1	1	1	1	11	0	12
+15 mins.	1	0	1	0	4	0	0	0	2	0	9	0	9
+30 mins.	0	0	1	0	8	0	1	0	3	1	7	1	9
+45 mins.	0	0	0	0	3	0	2	0	2	2	7	0	9
Total Volume	1	0	3	1	21	0	5	1	8	4	34	1	39
% App. Total	.250	.000	.375	.250	.656	.000	.625	.250	.667	.875	.773	.250	.813
PHF													

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	6	0	0	0	1	1	4	0	0	5	0	12	12
04:15 PM	0	0	0	0	3	3	0	0	0	0	1	2	0	0	3	0	6	6
04:30 PM	0	0	0	0	1	1	0	0	0	0	0	7	0	0	7	0	8	8
04:45 PM	1	0	0	0	1	2	0	0	0	0	0	5	0	0	5	0	8	8
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>34</b>	<b>34</b>
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	3	0	0	3	0	4	4
05:15 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	3	3
05:30 PM	0	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	2	2
05:45 PM	0	0	0	0	2	2	0	0	0	0	0	2	0	0	2	0	4	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>13</b>	<b>13</b>
<b>Grand Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>47</b>	<b>47</b>
Approch %	100	0	0	0	2.1	100	0	0	0	2.1	7.7	92.3	0	0	55.3	0	100	100
Total %	2.1	0	0	0	2.1	40.4	0	0	0	2.1	4.3	51.1	0	0	55.3	0	100	100

3.1-274

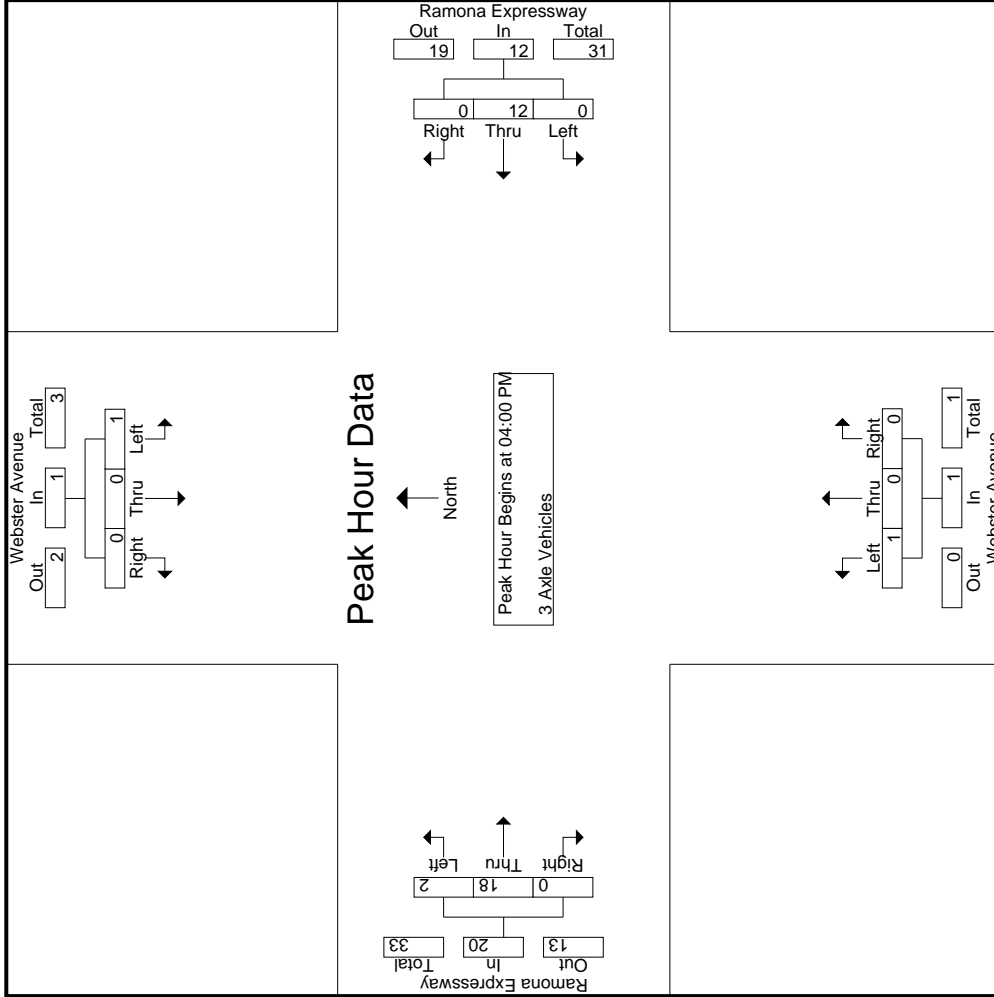
Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	6	0	0	0	1	1	4	0	0	5	0	12	12
04:15 PM	0	0	0	0	3	3	0	0	0	0	1	2	0	0	3	0	6	6
04:30 PM	0	0	0	0	1	1	0	0	0	0	0	7	0	0	7	0	8	8
04:45 PM	1	0	0	0	1	2	0	0	0	0	0	5	0	0	5	0	8	8
<b>Total Volume</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>34</b>	<b>34</b>
% App. Total	100	0	0	0	2.50	100	0	0	0	2.50	10	90	0	0	70.8	0	100	100
PHF	.250	.000	.000	.000	.250	.500	.000	.000	.000	.250	.500	.643	.000	.000	.714	.000	.708	.708

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound			Ramona Expressway Westbound			Webster Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	6	0	1	0	0	1	4	0
+15 mins.	0	0	0	0	3	0	0	0	0	0	2	0
+30 mins.	0	0	0	0	1	0	0	0	0	0	7	0
+45 mins.	1	0	0	0	2	0	0	0	0	0	5	0
Total Volume	1	0	0	0	12	0	1	0	0	1	18	0
% App. Total	100	0	0	0	100	0	100	0	0	10	90	0
PHF	.250	.000	.000	.250	.500	.000	.250	.000	.000	.500	.643	.000

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	18	0	0	0	0	0	13	2	0	15	0	33	33
04:15 PM	0	0	0	0	12	0	0	0	0	0	0	9	0	0	9	0	21	21
04:30 PM	0	1	0	0	15	0	0	0	0	0	0	7	1	0	8	0	24	24
04:45 PM	0	0	0	0	9	1	0	0	0	1	1	9	0	0	10	0	20	20
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>38</b>	<b>3</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>98</b>	<b>98</b>
05:00 PM	0	0	1	0	8	0	0	0	0	0	0	6	2	0	8	0	17	17
05:15 PM	0	0	0	0	10	0	0	0	0	0	1	7	1	0	9	0	19	19
05:30 PM	1	0	0	1	12	0	0	0	0	0	0	10	0	0	10	0	23	23
05:45 PM	0	0	1	1	6	0	0	1	0	1	0	11	0	0	11	1	19	20
<b>Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>34</b>	<b>3</b>	<b>0</b>	<b>38</b>	<b>1</b>	<b>78</b>	<b>79</b>
<b>Grand Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>90</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>72</b>	<b>6</b>	<b>0</b>	<b>80</b>	<b>1</b>	<b>176</b>	<b>177</b>
Approch %	25	25	50		1.1	97.8	1.1			1.1	2.5	90	7.5		45.5	0.6	99.4	
Total %	0.6	0.6	1.1		2.3	0.6	50	0.6		1.1	1.1	40.9	3.4					

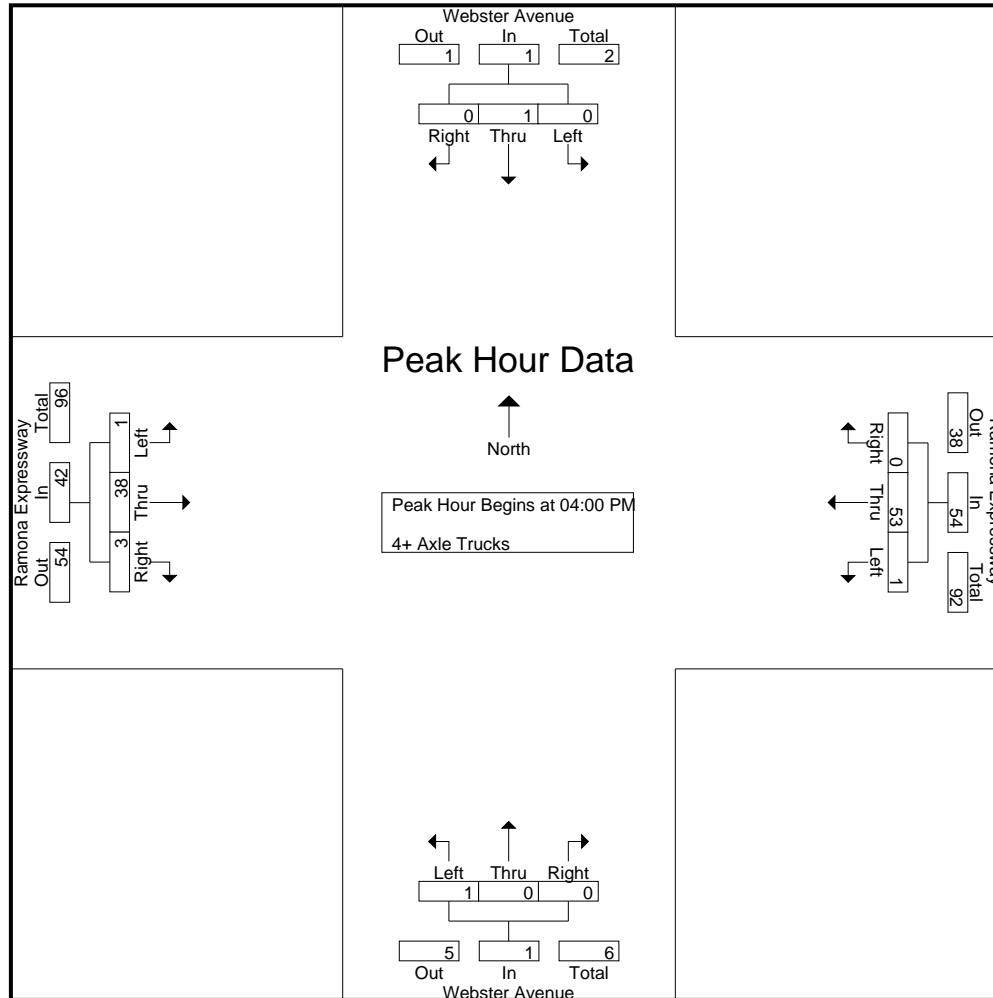
3.1-277

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	15	15
04:15 PM	0	0	0	0	12	0	0	0	0	0	0	9	0	0	9	0	21	21
04:30 PM	0	1	0	0	15	0	0	0	0	0	0	7	1	0	8	0	24	24
04:45 PM	0	0	0	0	9	1	0	0	0	1	1	9	0	0	10	0	20	20
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>38</b>	<b>3</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>98</b>	<b>98</b>
% App. Total	.000	.250	.000		.250	.736	.000	.750	.000	.000	.250	.731	.375	.700	.742			

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 12\_PER\_Webster\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Webster Avenue Southbound				Ramona Expressway Westbound				Webster Avenue Northbound				Ramona Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	<b>18</b>	0	<b>18</b>	0	0	0	0	0	<b>13</b>	<b>2</b>	<b>15</b>	
+15 mins.	0	0	0	0	0	12	0	12	0	0	0	0	0	9	0	9	
+30 mins.	0	<b>1</b>	0	<b>1</b>	<b>1</b>	14	0	15	0	0	0	0	0	7	1	8	
+45 mins.	0	0	0	0	0	9	0	9	<b>1</b>	0	0	<b>1</b>	<b>1</b>	9	0	10	
Total Volume	0	1	0	1	1	53	0	54	1	0	0	1	1	38	3	42	
% App. Total	0	100	0		1.9	98.1	0		100	0	0		2.4	90.5	7.1		
PHF	.000	.250	.000	.250	.250	.736	.000	.750	.250	.000	.000	.250	.250	.731	.375	.700	

Location: City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Webster Avenue	East Leg Ramona Expressway	South Leg Webster Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	0	2

	North Leg Webster Avenue	East Leg Ramona Expressway	South Leg Webster Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0



Location: City of Perris  
 N/S: Webster Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Webster Avenue			Westbound Ramona Expressway			Northbound Webster Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Webster Avenue			Westbound Ramona Expressway			Northbound Webster Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	1	0	1	0	0	3

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

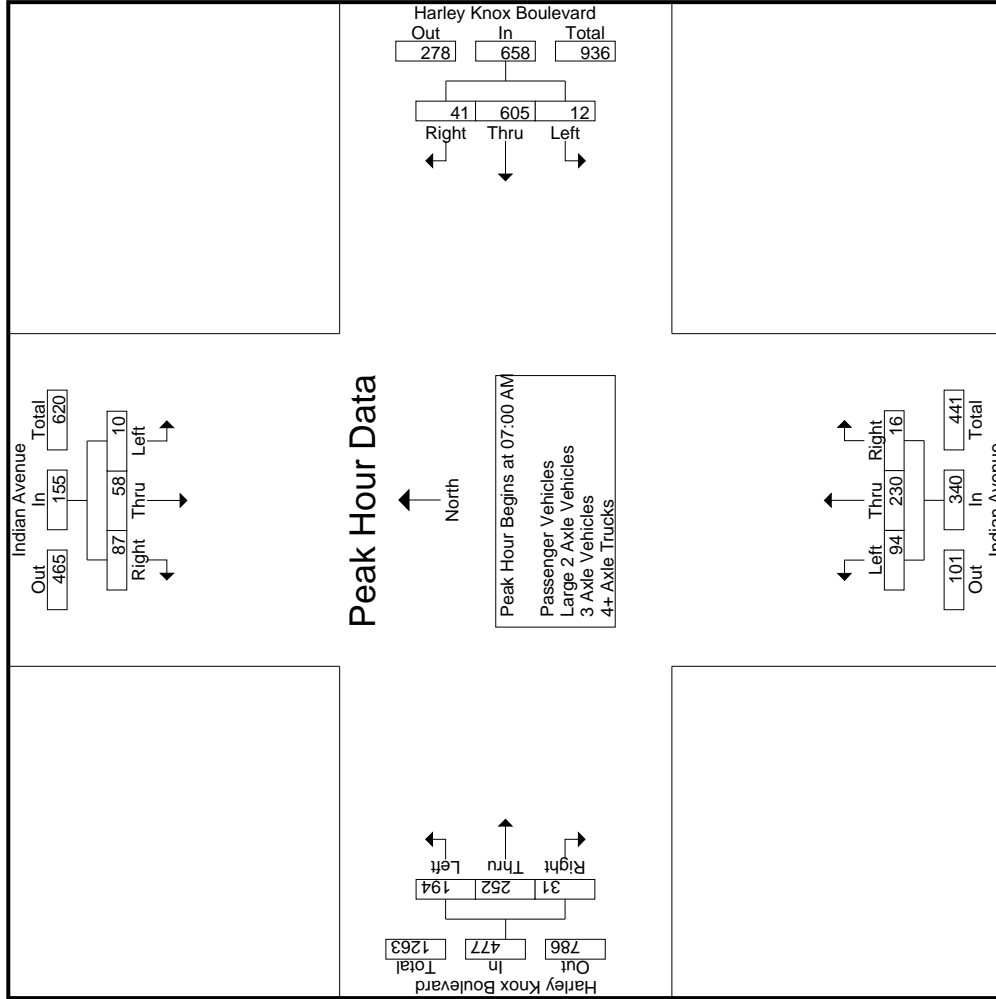
	Indian Avenue Southbound										Indian Avenue Northbound										Harley Knox Boulevard Westbound										Harley Knox Boulevard Eastbound										
	Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total		
	Start Time	Left	Thru	Right	RTOR	App. Total	Start Time	Left	Thru	Right	RTOR	App. Total	Start Time	Left	Thru	Right	RTOR	App. Total	Start Time	Left	Thru	Right	RTOR	App. Total	Start Time	Left	Thru	Right	RTOR	App. Total	Start Time	Left	Thru	Right	RTOR	App. Total	Start Time	Left	Thru	Right	RTOR
07:00 AM	1	11	25	6	37	07:00 AM	2	191	9	2	202	07:00 AM	29	64	2	0	95	07:00 AM	52	56	4	4	112																		
07:15 AM	3	12	25	8	40	07:15 AM	3	160	10	5	173	07:15 AM	15	61	3	0	79	07:15 AM	56	55	8	3	119																		
07:30 AM	2	16	21	6	39	07:30 AM	2	126	8	1	136	07:30 AM	31	57	7	6	95	07:30 AM	47	77	11	4	135																		
07:45 AM	4	19	16	7	39	07:45 AM	5	128	14	6	147	07:45 AM	19	48	4	1	71	07:45 AM	39	64	8	2	111																		
<b>Total</b>	<b>10</b>	<b>58</b>	<b>87</b>	<b>27</b>	<b>155</b>	<b>Total</b>	<b>12</b>	<b>605</b>	<b>41</b>	<b>14</b>	<b>658</b>	<b>Total</b>	<b>94</b>	<b>230</b>	<b>16</b>	<b>7</b>	<b>340</b>	<b>Total</b>	<b>194</b>	<b>252</b>	<b>31</b>	<b>13</b>	<b>477</b>																		
08:00 AM	5	18	21	9	44	08:00 AM	4	102	4	1	110	08:00 AM	11	42	3	2	56	08:00 AM	34	58	7	3	99																		
08:15 AM	1	10	23	10	34	08:15 AM	0	66	2	0	68	08:15 AM	17	15	2	2	34	08:15 AM	33	45	14	3	92																		
08:30 AM	0	8	24	14	32	08:30 AM	1	60	2	0	63	08:30 AM	8	22	4	2	34	08:30 AM	33	38	11	2	82																		
08:45 AM	1	18	31	11	50	08:45 AM	3	46	1	1	50	08:45 AM	4	27	1	0	32	08:45 AM	50	39	8	3	97																		
<b>Total</b>	<b>7</b>	<b>54</b>	<b>99</b>	<b>44</b>	<b>160</b>	<b>Total</b>	<b>8</b>	<b>274</b>	<b>9</b>	<b>2</b>	<b>291</b>	<b>Total</b>	<b>40</b>	<b>106</b>	<b>10</b>	<b>6</b>	<b>156</b>	<b>Total</b>	<b>150</b>	<b>180</b>	<b>40</b>	<b>11</b>	<b>370</b>																		
<b>Grand Total</b>	<b>17</b>	<b>112</b>	<b>186</b>	<b>71</b>	<b>315</b>	<b>Grand Total</b>	<b>20</b>	<b>879</b>	<b>50</b>	<b>16</b>	<b>949</b>	<b>Grand Total</b>	<b>134</b>	<b>336</b>	<b>26</b>	<b>13</b>	<b>496</b>	<b>Grand Total</b>	<b>344</b>	<b>432</b>	<b>71</b>	<b>24</b>	<b>847</b>																		
Approach %	5.4	35.6	59			Approach %	2.1	92.6	5.3			Approach %	27	67.7	5.2			Approach %	40.6	51	8.4																				
Total %	0.7	4.3	7.1		12.1	Total %	0.8	33.7	1.9		36.4	Total %	5.1	12.9	1		19	Total %	13.2	16.6	2.7		32.5																		
Passenger Vehicles	13	90	89		226	Passenger Vehicles	15	827	48		905	Passenger Vehicles	110	305	19		445	Passenger Vehicles	237	384	41		678																		
% Passenger Vehicles	76.5	80.4	47.8		47.9	% Passenger Vehicles	75	94.1	96		93.8	% Passenger Vehicles	82.1	90.8	73.1		84.6	% Passenger Vehicles	68.9	88.9	57.7		66.7																		
Large 2 Axle Vehicles	1	4	21		33	Large 2 Axle Vehicles	0	18	2		21	Large 2 Axle Vehicles	5	10	1		16	Large 2 Axle Vehicles	25	24	6		56																		
% Large 2 Axle Vehicles	5.9	3.6	11.3		9.9	% Large 2 Axle Vehicles	0	2	4		6.2	% Large 2 Axle Vehicles	3.7	3	3.8		0	% Large 2 Axle Vehicles	7.3	5.6	8.5		4.2																		
3 Axle Vehicles	2	8	25		44	3 Axle Vehicles	3	4	0		7	3 Axle Vehicles	11	2	5		20	3 Axle Vehicles	27	5	3		37																		
% 3 Axle Vehicles	11.8	7.1	13.4		12.7	% 3 Axle Vehicles	15	0.5	0		0.7	% 3 Axle Vehicles	8.2	0.6	19.2		15.4	% 3 Axle Vehicles	7.8	1.2	4.2		8.3																		
4+ Axle Trucks	1	10	51		83	4+ Axle Trucks	2	30	0		32	4+ Axle Trucks	8	19	1		28	4+ Axle Trucks	55	19	21		100																		
% 4+ Axle Trucks	5.9	8.9	27.4		29.6	% 4+ Axle Trucks	10	3.4	0		3.3	% 4+ Axle Trucks	6	5.7	3.8		0	% 4+ Axle Trucks	16	4.4	29.6		20.8																		
PHF	.625	.763	.870		.969	PHF	.600	.792	.732		.814	PHF	.758	.898	.571		.883	PHF	.866	.818	.705		.914																		

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:15 AM			07:00 AM			07:00 AM			07:00 AM					
+0 mins.	3	12	25	2	191	9	202	29	64	2	95	52	56	4	112
+15 mins.	2	16	21	3	160	10	173	15	61	3	79	56	55	8	119
+30 mins.	4	19	16	2	126	8	136	31	57	7	95	47	77	11	135
+45 mins.	5	18	21	5	128	14	147	19	48	4	71	39	64	8	111
Total Volume	14	65	83	12	605	41	658	94	230	16	340	194	252	31	477
% App. Total	8.6	40.1	51.2	1.8	91.9	6.2	81.4	27.6	67.6	4.7	89.5	40.7	52.8	6.5	88.3
PHF	.700	.855	.830	.600	.792	.732	.814	.758	.898	.571	.895	.866	.818	.705	.883

Counts Unlimited  
 PO Box 1178  
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File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound						Harley Knox Boulevard Westbound						Indian Avenue Northbound						Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total					
07:00 AM	1	10	12	2	23	1	187	9	2	197	24	57	1	0	82	39	47	1	1	87	5	389	394			
07:15 AM	3	8	13	3	24	2	157	9	4	168	13	56	2	0	71	46	52	7	3	105	10	368	378			
07:30 AM	2	15	12	4	29	2	116	8	1	126	29	53	6	5	88	39	68	8	4	115	14	358	372			
07:45 AM	3	17	8	4	28	5	121	14	6	140	16	46	3	1	65	27	59	5	2	91	13	324	337			
<b>Total</b>	<b>9</b>	<b>50</b>	<b>45</b>	<b>13</b>	<b>104</b>	<b>10</b>	<b>581</b>	<b>40</b>	<b>13</b>	<b>631</b>	<b>82</b>	<b>212</b>	<b>12</b>	<b>6</b>	<b>306</b>	<b>151</b>	<b>226</b>	<b>21</b>	<b>10</b>	<b>398</b>	<b>42</b>	<b>1439</b>	<b>1481</b>			
08:00 AM	3	14	8	4	25	4	92	4	1	100	10	38	2	2	50	17	52	5	1	74	8	249	257			
08:15 AM	1	8	15	6	24	0	60	1	0	61	10	14	2	2	26	17	41	9	3	67	11	178	189			
08:30 AM	0	5	11	7	16	0	54	2	0	56	6	19	3	1	28	20	33	5	1	58	9	158	167			
08:45 AM	0	13	10	4	23	1	40	1	1	42	2	22	0	0	24	32	32	1	1	65	6	154	160			
<b>Total</b>	<b>4</b>	<b>40</b>	<b>44</b>	<b>21</b>	<b>88</b>	<b>5</b>	<b>246</b>	<b>8</b>	<b>2</b>	<b>259</b>	<b>28</b>	<b>93</b>	<b>7</b>	<b>5</b>	<b>128</b>	<b>86</b>	<b>158</b>	<b>20</b>	<b>6</b>	<b>264</b>	<b>34</b>	<b>739</b>	<b>773</b>			
<b>Grand Total</b>	<b>13</b>	<b>90</b>	<b>89</b>	<b>34</b>	<b>192</b>	<b>15</b>	<b>827</b>	<b>48</b>	<b>15</b>	<b>890</b>	<b>110</b>	<b>305</b>	<b>19</b>	<b>11</b>	<b>434</b>	<b>237</b>	<b>384</b>	<b>41</b>	<b>16</b>	<b>662</b>	<b>76</b>	<b>2178</b>	<b>2254</b>			
Approch %	6.8	46.9	46.4			1.7	92.9	5.4		40.9	25.3	70.3	4.4		19.9	35.8	58	6.2		30.4	3.4	96.6				
Total %	0.6	4.1	4.1		8.8	0.7	38	2.2			5.1	14	0.9			10.9	17.6	1.9								

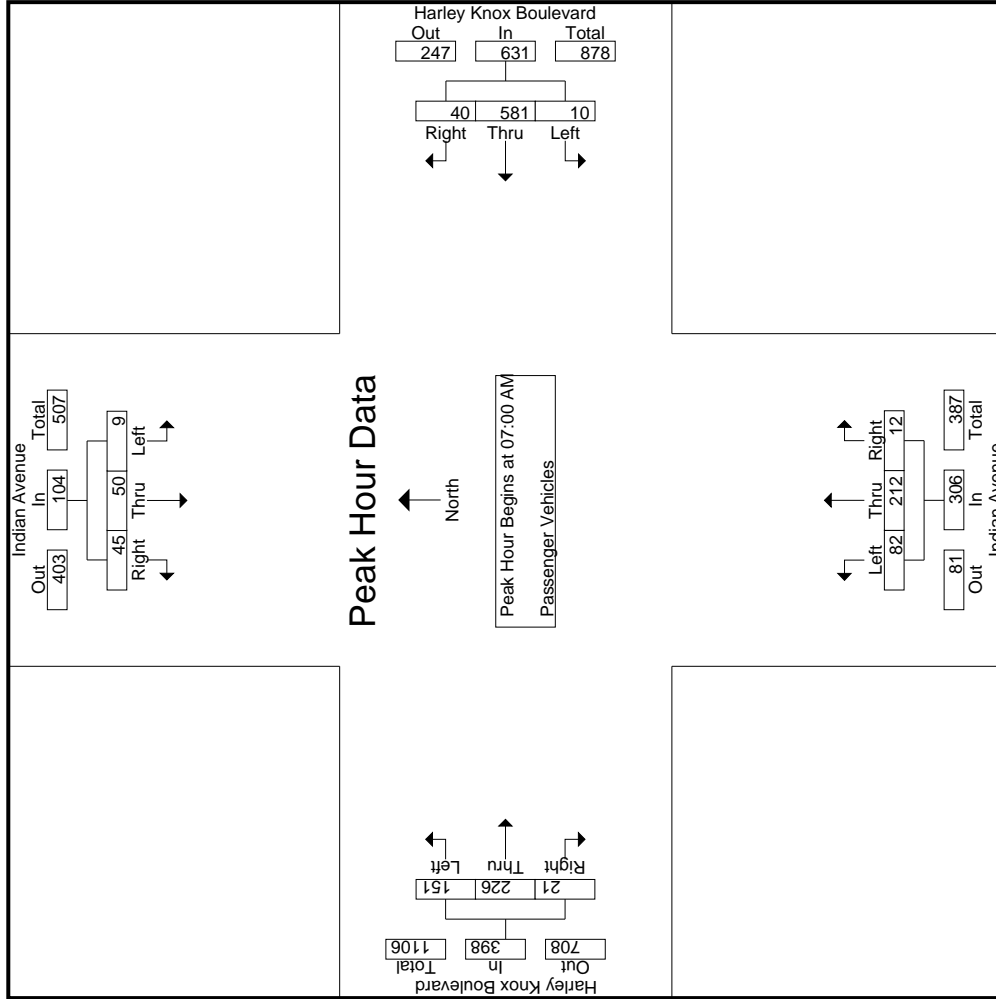
  

Start Time	Indian Avenue Southbound						Harley Knox Boulevard Westbound						Indian Avenue Northbound						Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total					
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	1	10	12		23	1	187	9		197	24	57	1		82	39	47	1		87	5	389	394			
07:00 AM	3	8	13		24	2	157	9		168	13	56	2		71	46	52	7		105	10	368	378			
07:15 AM	2	15	12		29	2	116	8		126	29	53	6		88	39	68	8		115	14	358	372			
07:30 AM	3	17	8		28	5	121	14		140	16	46	3		65	27	59	5		91	13	324	337			
07:45 AM	9	50	45		104	10	581	40		631	82	212	12		306	151	226	21		398	42	1439	1481			
Total Volume	8.7	48.1	43.3		89.7	1.6	92.1	6.3		71.4	26.8	69.3	3.9		86.9	37.9	56.8	5.3		96.6	3.4	96.6				
% App. Total	.750	.735	.865		.897	.500	.777	.714		.801	.707	.930	.500		.869	.821	.831	.656		.865			.925			
PHF																										

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
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File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
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 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound						
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	1	10	12	23	1	187	9	197	24	57	1	82	39	47	1	87
+15 mins.	3	8	13	24	2	157	9	168	13	56	2	71	46	52	7	105
+30 mins.	2	15	12	29	2	116	8	126	29	53	6	88	39	68	8	115
+45 mins.	3	17	8	28	5	121	14	140	16	46	3	65	27	59	5	91
Total Volume	9	50	45	104	10	581	40	631	82	212	12	306	151	226	21	398
% App. Total	8.7	48.1	43.3		1.6	92.1	6.3		26.8	69.3	3.9		37.9	56.8	5.3	
PHF	.750	.735	.865	.897	.500	.777	.714	.801	.707	.930	.500	.869	.821	.831	.656	.865

Counts Unlimited  
 PO Box 1178  
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File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	4	3	4	0	3	0	0	3	2	3	0	0	5	4	6	0	10
07:15 AM	0	0	1	0	1	0	0	1	1	1	1	0	1	0	2	4	1	1	6
07:30 AM	0	0	3	0	3	0	3	0	0	3	0	2	0	0	2	0	5	0	5
07:45 AM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	1	4	0	5
<b>Total</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>10</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>9</b>	<b>16</b>	<b>1</b>	<b>26</b>
08:00 AM	0	2	3	0	5	0	3	0	0	3	0	1	0	0	1	6	2	0	8
08:15 AM	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	3	3	2	8
08:30 AM	0	0	4	3	4	0	3	0	0	3	1	1	0	0	2	3	2	1	6
08:45 AM	1	1	6	1	8	0	0	1	0	1	0	2	0	0	2	4	1	2	7
<b>Total</b>	<b>1</b>	<b>3</b>	<b>13</b>	<b>4</b>	<b>17</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>16</b>	<b>8</b>	<b>5</b>	<b>29</b>
<b>Grand Total</b>	<b>1</b>	<b>4</b>	<b>21</b>	<b>7</b>	<b>26</b>	<b>0</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>20</b>	<b>5</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>25</b>	<b>24</b>	<b>6</b>	<b>55</b>
Apprch %	3.8	15.4	80.8			0	90	10			31.2	62.5	6.2		13.7	45.5	43.6	10.9	
Total %	0.9	3.4	17.9		22.2	0	15.4	1.7		17.1	4.3	8.5	0.9			21.4	20.5	5.1	

3.1-288

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	4	4	0	0	3	0	3	2	3	0	0	5	4	6	0	10	22
07:15 AM	0	0	0	1	1	0	0	1	1	1	1	0	1	0	2	4	1	1	6	10
07:30 AM	0	0	0	3	3	0	0	3	0	3	0	2	0	0	2	0	5	0	5	13
07:45 AM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	1	4	0	5	10
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>9</b>	<b>16</b>	<b>1</b>	<b>26</b>	<b>55</b>
% App. Total	0.000	0.250	0.500	.563	.500	.000	.750	.250	.833	.250	.375	.500	.250	.500	.500	.563	.667	.250	.650	.625
PHF																				

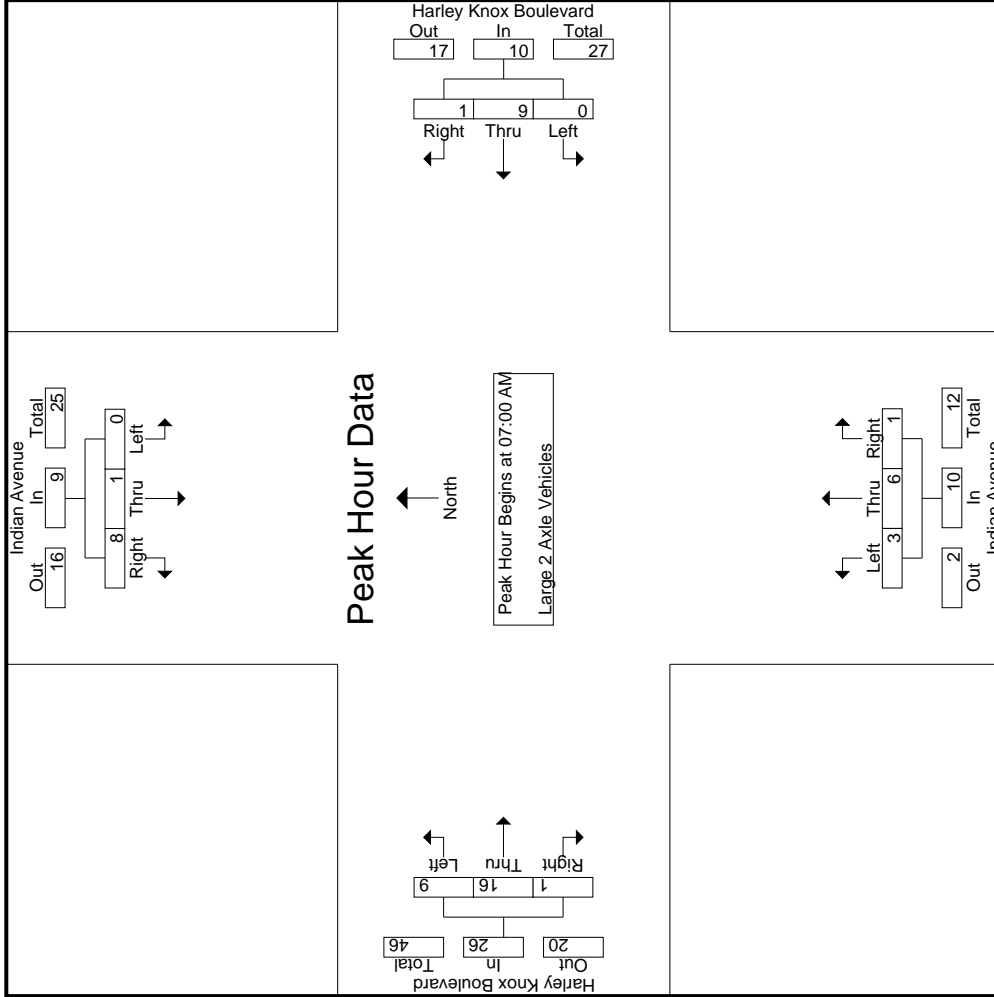
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	0	4	0	3	0	2	3	0	4	6	0	10
+15 mins.	0	0	1	0	1	1	1	0	1	4	1	1	6
+30 mins.	0	0	3	0	3	0	0	2	0	0	5	0	5
+45 mins.	0	1	0	0	3	0	0	1	0	1	4	0	5
Total Volume	0	1	8	0	9	1	3	6	1	9	16	1	26
% App. Total	0	11.1	88.9	0	90	10	30	60	10	34.6	61.5	3.8	
PHF	.000	.250	.500	.000	.750	.250	.375	.500	.250	.563	.667	.250	.650

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	1	3	0	4	1	0	0	0	1	2	1	0	0	4	2	0	1	12
07:15 AM	0	2	3	1	5	1	1	0	0	2	0	0	0	0	0	0	0	1	7
07:30 AM	0	1	3	0	4	0	1	0	0	1	0	1	1	0	2	3	1	1	12
07:45 AM	1	1	2	1	4	0	0	0	0	0	3	0	1	0	4	6	0	1	14
<b>Total</b>	<b>1</b>	<b>5</b>	<b>11</b>	<b>2</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>10</b>	<b>11</b>	<b>1</b>	<b>2</b>	<b>45</b>
08:00 AM	1	1	6	4	8	0	1	0	0	1	1	0	1	0	2	3	0	1	15
08:15 AM	0	1	4	1	5	0	0	0	0	0	4	0	0	0	4	4	0	0	13
08:30 AM	0	1	2	1	3	1	0	0	0	1	1	0	1	1	2	0	1	2	7
08:45 AM	0	0	2	1	2	0	1	0	0	1	0	0	0	0	0	9	3	0	15
<b>Total</b>	<b>1</b>	<b>3</b>	<b>14</b>	<b>7</b>	<b>18</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>8</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>50</b>
<b>Grand Total</b>	<b>2</b>	<b>8</b>	<b>25</b>	<b>9</b>	<b>35</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>11</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>18</b>	<b>27</b>	<b>5</b>	<b>3</b>	<b>95</b>
Approch %	5.7	22.9	71.4		36.8	42.9	57.1	0		7.4	61.1	11.1	27.8		18.9	77.1	14.3	8.6	13
Total %	2.1	8.4	26.3		36.8	3.2	4.2	0		7.4	11.6	2.1	5.3		18.9	28.4	5.3	3.2	12

3.1-291

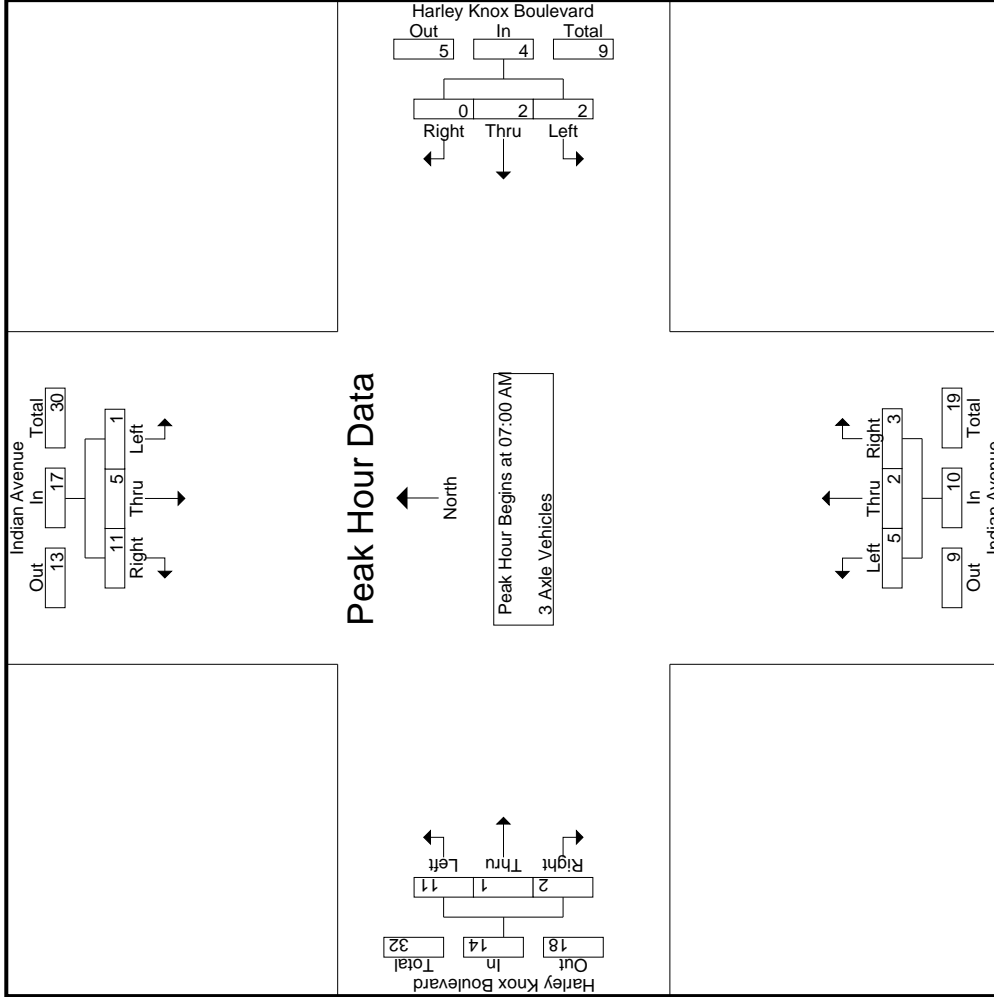
Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	3	0	4	1	0	0	0	1	2	1	0	0	4	2	0	1	12	3
07:15 AM	0	2	3	1	5	1	1	0	0	2	0	0	0	0	0	0	0	0	0	7
07:30 AM	0	1	3	0	4	0	1	0	0	1	0	1	1	0	2	3	1	1	5	12
07:45 AM	1	1	2	1	4	0	0	0	0	0	3	0	1	0	4	6	0	0	6	14
<b>Total Volume</b>	<b>1</b>	<b>5</b>	<b>11</b>	<b>2</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>10</b>	<b>11</b>	<b>1</b>	<b>2</b>	<b>14</b>	<b>45</b>
% App. Total	5.9	29.4	64.7		850	50	50	0		750	417	250	30		750	78.6	7.1	14.3	583	804
PHF	.250	.625	.917		.850	.500	.500	.000		.500	.417	.250	.750		.625	.458	.250	.500	.583	.804

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	3	4	4	0	0	1	1	2	1	0	0	1	3
+15 mins.	0	2	3	5	1	1	0	2	0	0	0	0	0	0	0
+30 mins.	0	1	3	4	0	1	0	1	1	0	1	1	1	1	5
+45 mins.	1	1	2	4	0	0	0	0	3	0	1	0	0	0	6
Total Volume	1	5	11	17	2	2	0	4	5	2	3	1	1	2	14
% App. Total	5.9	29.4	64.7	85.0	50	50	0	100	50	20	30	78.6	7.1	14.3	100
PHF	.250	.625	.917	.850	.500	.500	.000	.500	.417	.250	.750	.458	.250	.500	.583

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	6	1	0	0	0	0	2	2	0	0	7	3	2	2	12	3	23	26
07:15 AM	0	2	8	4	0	2	0	0	1	5	0	0	6	2	0	0	8	4	26	30
07:30 AM	0	0	3	2	0	6	0	0	1	2	0	0	5	3	2	0	10	2	22	24
07:45 AM	0	0	6	2	0	4	0	0	0	1	0	0	5	1	3	0	9	2	20	22
<b>Total</b>	<b>0</b>	<b>2</b>	<b>23</b>	<b>9</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>9</b>	<b>7</b>	<b>2</b>	<b>39</b>	<b>11</b>	<b>91</b>	<b>102</b>
08:00 AM	1	1	4	1	0	6	0	0	0	3	0	0	8	4	1	1	13	2	28	30
08:15 AM	0	1	4	3	0	4	0	0	2	1	0	0	9	1	3	0	13	3	25	28
08:30 AM	0	2	7	3	0	3	0	0	3	2	0	0	10	2	5	0	17	3	31	34
08:45 AM	0	4	13	5	2	4	0	0	2	3	1	0	5	3	5	2	13	7	42	49
<b>Total</b>	<b>1</b>	<b>8</b>	<b>28</b>	<b>12</b>	<b>2</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>32</b>	<b>10</b>	<b>14</b>	<b>3</b>	<b>56</b>	<b>15</b>	<b>126</b>	<b>141</b>
<b>Grand Total</b>	<b>1</b>	<b>10</b>	<b>51</b>	<b>21</b>	<b>2</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>55</b>	<b>19</b>	<b>21</b>	<b>5</b>	<b>95</b>	<b>26</b>	<b>217</b>	<b>243</b>
Approch %	1.6	16.1	82.3		6.2	93.8	0		28.6	67.9	3.6		57.9	20	22.1		43.8	10.7	89.3	
Total %	0.5	4.6	23.5		0.9	13.8	0		3.7	8.8	0.5		25.3	8.8	9.7					

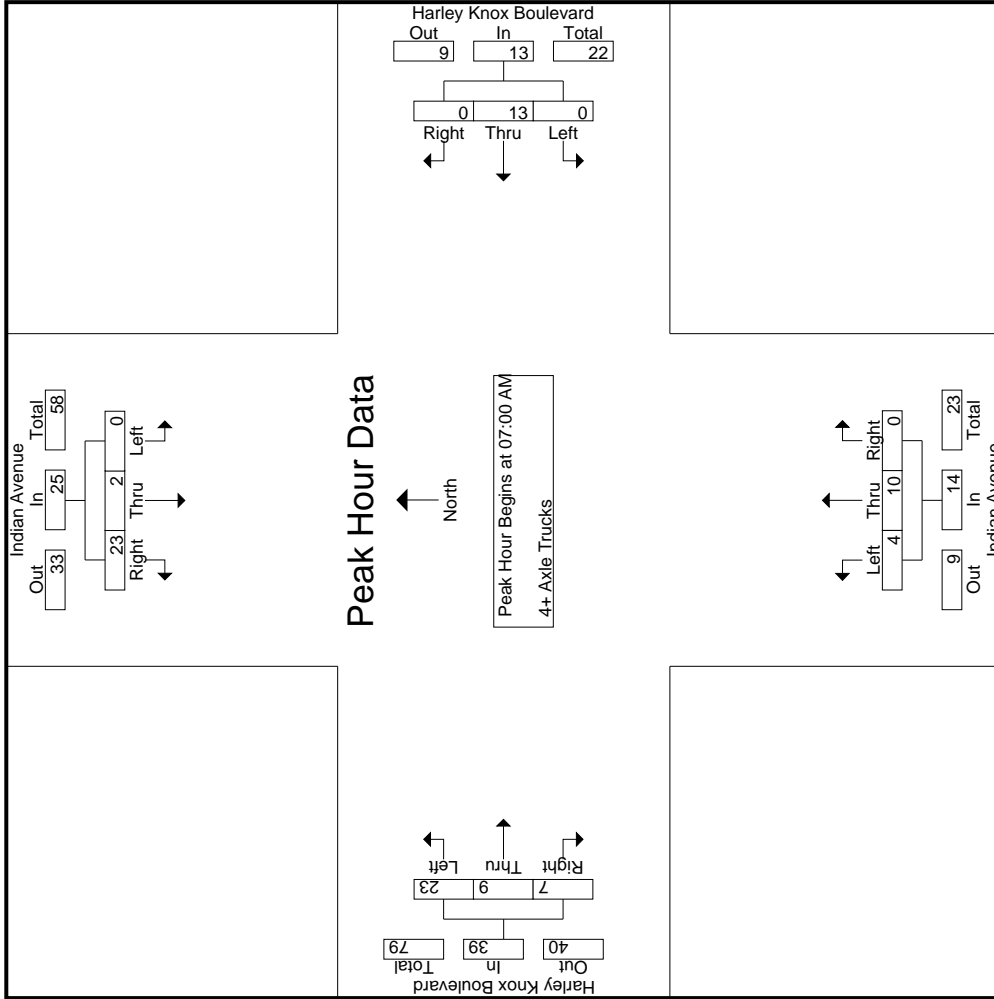
  

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	6	1	0	0	0	0	2	2	0	0	7	3	2	2	12	3	23	26
07:15 AM	0	2	8	4	0	2	0	0	1	5	0	0	6	2	0	0	8	4	26	30
07:30 AM	0	0	3	2	0	6	0	0	1	2	0	0	5	3	2	0	10	2	22	24
07:45 AM	0	0	6	2	0	4	0	0	0	1	0	0	5	1	3	0	9	2	20	22
<b>Total</b>	<b>0</b>	<b>2</b>	<b>23</b>	<b>9</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>9</b>	<b>7</b>	<b>2</b>	<b>39</b>	<b>11</b>	<b>91</b>	<b>102</b>
08:00 AM	1	1	4	1	0	6	0	0	0	3	0	0	8	4	1	1	13	2	28	30
08:15 AM	0	1	4	3	0	4	0	0	2	1	0	0	9	1	3	0	13	3	25	28
08:30 AM	0	2	7	3	0	3	0	0	3	2	0	0	10	2	5	0	17	3	31	34
08:45 AM	0	4	13	5	2	4	0	0	2	3	1	0	5	3	5	2	13	7	42	49
<b>Total</b>	<b>1</b>	<b>8</b>	<b>28</b>	<b>12</b>	<b>2</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>32</b>	<b>10</b>	<b>14</b>	<b>3</b>	<b>56</b>	<b>15</b>	<b>126</b>	<b>141</b>
<b>Grand Total</b>	<b>1</b>	<b>10</b>	<b>51</b>	<b>21</b>	<b>2</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>55</b>	<b>19</b>	<b>21</b>	<b>5</b>	<b>95</b>	<b>26</b>	<b>217</b>	<b>243</b>
Approch %	1.6	16.1	82.3		6.2	93.8	0		28.6	67.9	3.6		57.9	20	22.1		43.8	10.7	89.3	
Total %	0.5	4.6	23.5		0.9	13.8	0		3.7	8.8	0.5		25.3	8.8	9.7					

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	6	0	1	0	2	2	0	7	3	2
+15 mins.	0	2	8	0	2	0	1	5	0	6	2	0
+30 mins.	0	0	3	0	6	0	1	2	0	3	3	2
+45 mins.	0	0	6	0	4	0	0	1	0	5	1	3
Total Volume	0	2	23	0	13	0	4	10	0	23	9	7
% App. Total	0	8	92	0	100	0	28.6	71.4	0	59	23.1	17.9
PHF	.000	.250	.719	.000	.542	.000	.500	.500	.000	.821	.750	.583
			.625		.542			.583				.813



Counts Unlimited  
PO Box 1178  
Corona, CA 92878  
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File Name : 01\_PER\_Indian\_Harley Knox PM  
Site Code : 05118430  
Start Date : 5/24/2018  
Page No : 1

City of Perris  
N/S: Indian Avenue  
E/W: Harley Knox Boulevard  
Weather: Clear

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound						Harley Knox Boulevard Westbound						Indian Avenue Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total							
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total									
04:00 PM	6	43	44	18	93		0	75	6	1	81		5	42	4	1	51		43	87	8	3	138		23	363	386			
04:15 PM	10	51	31	12	92		3	64	2	1	69		5	25	3	2	33		38	90	10	4	138		19	332	351			
04:30 PM	14	61	122	42	197		4	72	2	0	78		14	54	8	6	76		60	79	7	1	146		49	497	546			
04:45 PM	13	60	55	25	128		4	67	0	0	71		15	49	5	4	69		47	73	5	1	125		30	393	423			
<b>Total</b>	<b>43</b>	<b>215</b>	<b>252</b>	<b>97</b>	<b>510</b>		<b>11</b>	<b>278</b>	<b>10</b>	<b>2</b>	<b>299</b>		<b>39</b>	<b>170</b>	<b>20</b>	<b>13</b>	<b>229</b>		<b>188</b>	<b>329</b>	<b>30</b>	<b>9</b>	<b>547</b>		<b>121</b>	<b>1585</b>	<b>1706</b>			
05:00 PM	11	52	40	21	103		6	67	6	4	79		9	17	5	2	31		25	84	9	4	118		31	331	362			
05:15 PM	12	70	35	11	117		3	84	3	2	90		2	19	0	0	21		26	81	7	2	114		15	342	357			
05:30 PM	12	76	57	17	145		3	63	1	1	67		9	21	4	0	34		30	70	6	1	106		19	352	371			
05:45 PM	16	51	34	15	101		1	51	3	1	55		4	23	3	2	30		30	69	3	1	102		19	288	307			
<b>Total</b>	<b>51</b>	<b>249</b>	<b>166</b>	<b>64</b>	<b>466</b>		<b>13</b>	<b>265</b>	<b>13</b>	<b>8</b>	<b>291</b>		<b>24</b>	<b>80</b>	<b>12</b>	<b>4</b>	<b>116</b>		<b>111</b>	<b>304</b>	<b>25</b>	<b>8</b>	<b>440</b>		<b>84</b>	<b>1313</b>	<b>1397</b>			
<b>Grand Total</b>	<b>94</b>	<b>464</b>	<b>418</b>	<b>161</b>	<b>976</b>		<b>24</b>	<b>543</b>	<b>23</b>	<b>10</b>	<b>590</b>		<b>63</b>	<b>250</b>	<b>32</b>	<b>17</b>	<b>345</b>		<b>299</b>	<b>633</b>	<b>55</b>	<b>17</b>	<b>987</b>		<b>205</b>	<b>2898</b>	<b>3103</b>			
<b>Approch %</b>	<b>9.6</b>	<b>47.5</b>	<b>42.8</b>				<b>4.1</b>	<b>92</b>	<b>3.9</b>		<b>18.3</b>		<b>18.3</b>	<b>72.5</b>	<b>9.3</b>		<b>11.9</b>		<b>30.3</b>	<b>64.1</b>	<b>5.6</b>		<b>5.6</b>		<b>30.3</b>	<b>64.1</b>	<b>5.6</b>			
<b>Total %</b>	<b>3.2</b>	<b>16</b>	<b>14.4</b>		<b>33.7</b>		<b>0.8</b>	<b>18.7</b>	<b>0.8</b>		<b>20.4</b>		<b>2.2</b>	<b>8.6</b>	<b>1.1</b>		<b>11.9</b>		<b>10.3</b>	<b>21.8</b>	<b>1.9</b>		<b>34.1</b>		<b>6.6</b>	<b>93.4</b>				
Passenger Vehicles	94	442	368		1046		20	483	20		531		43	207	29		294		223	598	34		865		0	0	0		2736	
Large 2 Axle Vehicles	100	95.3	88	88.2	92		83.3	89	87	80	88.5		68.3	82.8	90.6	88.2	81.2		74.6	94.5	61.8	58.8	86.2		0	0	0		88.2	
3 Axle Vehicles	0	5	8		16		1	13	0	0	14		5	5	0	0	10		9	8	4		25		0	0	0		65	
4+ Axle Trucks	0	1.1	1.9	1.9	1.4		4.2	2.4	0	0	2.3		7.9	2	0	0	2.8		3	1.3	7.3	23.5	2.5		0	0	0		2.1	
% 3 Axle Vehicles	0	2	8		11		1	8	2		12		4	17	2		25		44	8	6		60		0	0	0		108	
% 4+ Axle Trucks	0	0.4	1.9	0.6	1		4.2	1.5	8.7	10	2		6.3	6.8	6.2	11.8	6.9		14.7	1.3	10.9	11.8	6		0	0	0		3.5	
% 4+ Axle Trucks	0	15	34		64		2	39	1		43		11	21	1		33		23	19	11		54		0	0	0		194	
% 4+ Axle Trucks	0	3.2	8.1	9.3	5.6		8.3	7.2	4.3	10	7.2		17.5	8.4	3.1	0	9.1		7.7	3	20	5.9	5.4		0	0	0		6.3	

Start Time	Indian Avenue Southbound						Harley Knox Boulevard Westbound						Indian Avenue Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total							
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total									
04:00 PM	6	43	44	18	93		0	75	6	1	81		5	42	4	1	51		43	87	8	3	138		23	363	386			
04:15 PM	10	51	31	12	92		3	64	2	1	69		5	25	3	2	33		38	90	10	4	138		19	332	351			
04:30 PM	14	61	122	42	197		4	72	2	0	78		14	54	8	6	76		60	79	7	1	146		49	497	546			
04:45 PM	13	60	55	25	128		4	67	0	0	71		15	49	5	4	69		47	73	5	1	125		30	393	423			
<b>Total</b>	<b>43</b>	<b>215</b>	<b>252</b>	<b>97</b>	<b>510</b>		<b>11</b>	<b>278</b>	<b>10</b>	<b>2</b>	<b>299</b>		<b>39</b>	<b>170</b>	<b>20</b>	<b>13</b>	<b>229</b>		<b>188</b>	<b>329</b>	<b>30</b>	<b>9</b>	<b>547</b>		<b>121</b>	<b>1585</b>	<b>1706</b>			
05:00 PM	11	52	40	21	103		6	67	6	4	79		9	17	5	2	31		25	84	9	4	118		31	331	362			
05:15 PM	12	70	35	11	117		3	84	3	2	90		2	19	0	0	21		26	81	7	2	114		15	342	357			
05:30 PM	12	76	57	17	145		3	63	1	1	67		9	21	4	0	34		30	70	6	1	106		19	352	371			
05:45 PM	16	51	34	15	101		1	51	3	1	55		4	23	3	2	30		30	69	3	1	102		19	288	307			
<b>Total</b>	<b>51</b>	<b>249</b>	<b>166</b>	<b>64</b>	<b>466</b>		<b>13</b>	<b>265</b>	<b>13</b>	<b>8</b>	<b>291</b>		<b>24</b>	<b>80</b>	<b>12</b>	<b>4</b>	<b>116</b>		<b>111</b>	<b>304</b>	<b>25</b>	<b>8</b>	<b>440</b>		<b>84</b>	<b>1313</b>	<b>1397</b>			
<b>Grand Total</b>	<b>94</b>	<b>464</b>	<b>418</b>	<b>161</b>	<b>976</b>		<b>24</b>	<b>543</b>	<b>23</b>	<b>10</b>	<b>590</b>		<b>63</b>	<b>250</b>	<b>32</b>	<b>17</b>	<b>345</b>		<b>299</b>	<b>633</b>	<b>55</b>	<b>17</b>	<b>987</b>		<b>205</b>	<b>2898</b>	<b>3103</b>			
<b>Approch %</b>	<b>9.6</b>	<b>47.5</b>	<b>42.8</b>				<b>4.1</b>	<b>92</b>	<b>3.9</b>		<b>18.3</b>		<b>18.3</b>	<b>72.5</b>	<b>9.3</b>		<b>11.9</b>		<b>30.3</b>	<b>64.1</b>	<b>5.6</b>		<b>5.6</b>		<b>30.3</b>	<b>64.1</b>	<b>5.6</b>			
<b>Total %</b>	<b>3.2</b>	<b>16</b>	<b>14.4</b>		<b>33.7</b>		<b>0.8</b>	<b>18.7</b>	<b>0.8</b>		<b>20.4</b>		<b>2.2</b>	<b>8.6</b>	<b>1.1</b>		<b>11.9</b>		<b>10.3</b>	<b>21.8</b>	<b>1.9</b>		<b>34.1</b>		<b>6.6</b>	<b>93.4</b>				
Passenger Vehicles	94	442	368		1046		20	483	20		531		43	207	29		294		223	598	34		865		0	0	0		2736	
Large 2 Axle Vehicles	100	95.3	88	88.2	92		83.3	89	87	80	88.5		68.3	82.8	90.6	88.2	81.2		74.6	94.5	61.8	58.8	86.2		0	0	0		88.2	
3 Axle Vehicles	0	5	8		16		1	13	0	0	14		5	5	0	0	10		9	8	4		25		0	0	0		65	
4+ Axle Trucks	0	1.1	1.9	1.9	1.4		4.2	2.4	0	0	2.3		7.9	2	0	0	2.8		3	1.3	7.3	23.5	2.5		0	0	0		2.1	
% 3 Axle Vehicles	0	2	8		11		1	8	2		12		4	17	2		25		44	8	6		60		0	0	0		108	
% 4+ Axle Trucks	0	0.4	1.9	0.6	1		4.2	1.5	8.7	10	2		6.3	6.8	6.2	11.8	6.9		14.7	1.3	10.9	11.8	6		0	0	0		3.5	
% 4+ Axle Trucks	0	15	34		64		2	39	1		43		11	21	1		33		23	19	11		54		0	0	0		194	
% 4+ Axle Trucks	0	3.2	8.1	9.3	5.6		8.3	7.2	4.3	10	7.2		17.5	8.4	3.1	0	9.1		7.7	3	20	5.9	5.4		0	0	0		6.3	

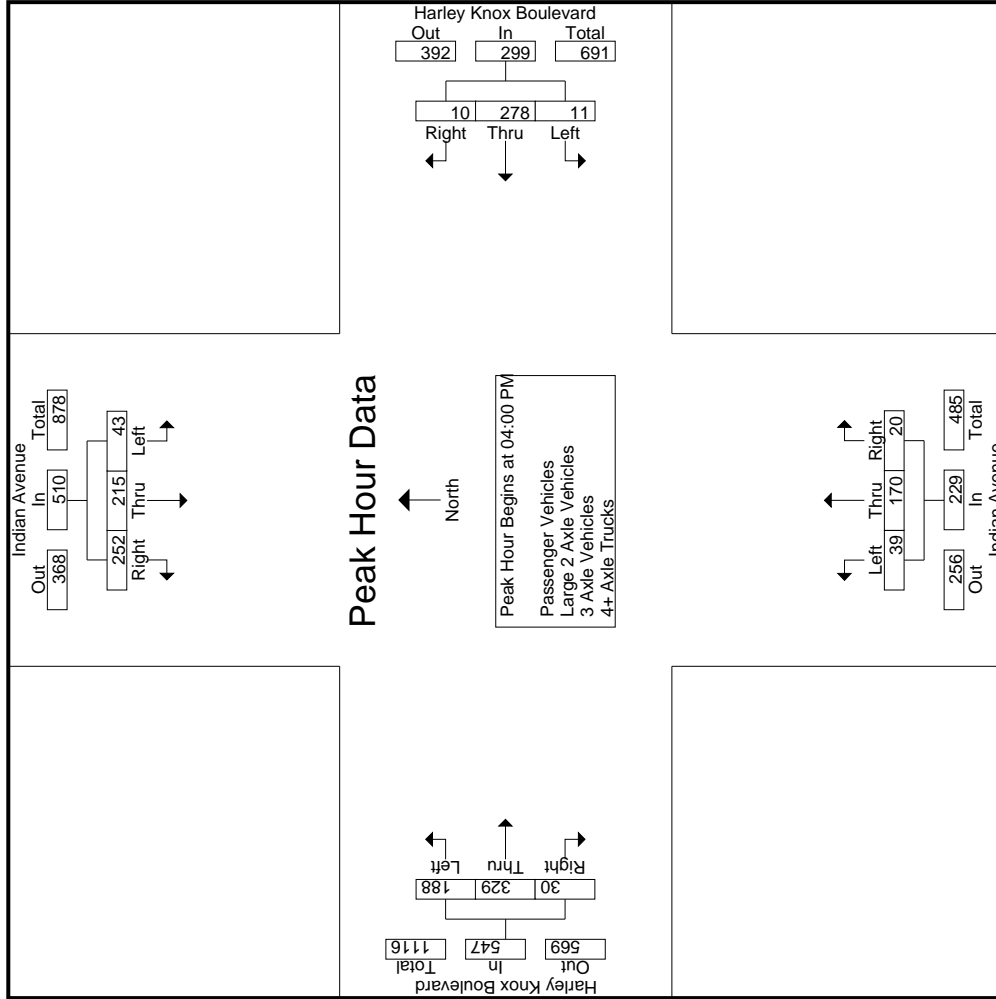
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Start Time	Indian Avenue Southbound						Harley Knox Boulevard Westbound						Indian Avenue Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total							
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total									
04:00 PM	6	43	44	18	93		0	75	6	1	81		5	42	4	1	51		43	87	8	3	138		23	363	386			
04:15 PM	10	51	31	12	92		3	64	2	1	69		5	25	3	2	33		38	90	10	4	138		19	332	351			
04:30 PM	14	61	122	42	197		4	72	2	0	78		14	54	8	6	76		60	79	7	1	146		49	497	546			
04:45 PM	13	60	55	25	128		4	67	0	0	71		15	49	5	4	69		47	73	5	1	125		30	393	423			
<b>Total</b>	<b>43</b>	<b>215</b>	<b>252</b>																											

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2





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File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	6	42	36	13	84	0	68	6	1	74	5	34	4	1	43	39	83	6	1	128	16	329	345
04:15 PM	10	46	26	11	82	2	52	2	1	56	2	20	3	2	25	27	83	7	3	117	17	280	297
04:30 PM	14	59	114	40	187	3	61	1	0	65	12	48	7	5	67	44	73	4	0	121	45	440	485
04:45 PM	13	57	52	24	122	4	63	0	0	67	9	37	3	3	49	37	70	3	1	110	28	348	376
<b>Total</b>	<b>43</b>	<b>204</b>	<b>228</b>	<b>88</b>	<b>475</b>	<b>9</b>	<b>244</b>	<b>9</b>	<b>2</b>	<b>262</b>	<b>28</b>	<b>139</b>	<b>17</b>	<b>11</b>	<b>184</b>	<b>147</b>	<b>309</b>	<b>20</b>	<b>5</b>	<b>476</b>	<b>106</b>	<b>1397</b>	<b>1503</b>
05:00 PM	11	50	37	20	98	6	61	5	3	72	5	15	5	2	25	20	78	5	2	103	27	298	325
05:15 PM	12	66	26	8	104	2	73	2	1	77	2	17	0	0	19	14	76	3	1	93	10	293	303
05:30 PM	12	73	50	16	135	2	58	1	1	61	5	18	4	0	27	22	68	4	1	94	18	317	335
05:45 PM	16	49	27	10	92	1	47	3	1	51	3	18	3	2	24	20	67	2	1	89	14	256	270
<b>Total</b>	<b>51</b>	<b>238</b>	<b>140</b>	<b>54</b>	<b>429</b>	<b>11</b>	<b>239</b>	<b>11</b>	<b>6</b>	<b>261</b>	<b>15</b>	<b>68</b>	<b>12</b>	<b>4</b>	<b>95</b>	<b>76</b>	<b>289</b>	<b>14</b>	<b>5</b>	<b>379</b>	<b>69</b>	<b>1164</b>	<b>1233</b>
<b>Grand Total</b>	<b>94</b>	<b>442</b>	<b>368</b>	<b>142</b>	<b>904</b>	<b>20</b>	<b>483</b>	<b>20</b>	<b>8</b>	<b>523</b>	<b>43</b>	<b>207</b>	<b>29</b>	<b>15</b>	<b>279</b>	<b>223</b>	<b>598</b>	<b>34</b>	<b>10</b>	<b>855</b>	<b>175</b>	<b>2561</b>	<b>2736</b>
Approch %	10.4	48.9	40.7			3.8	92.4	3.8		20.4	15.4	74.2	10.4		10.9	26.1	69.9	4		33.4	6.4	93.6	
Total %	3.7	17.3	14.4		35.3	0.8	18.9	0.8			1.7	8.1	1.1			8.7	23.4	1.3					

3.1-300

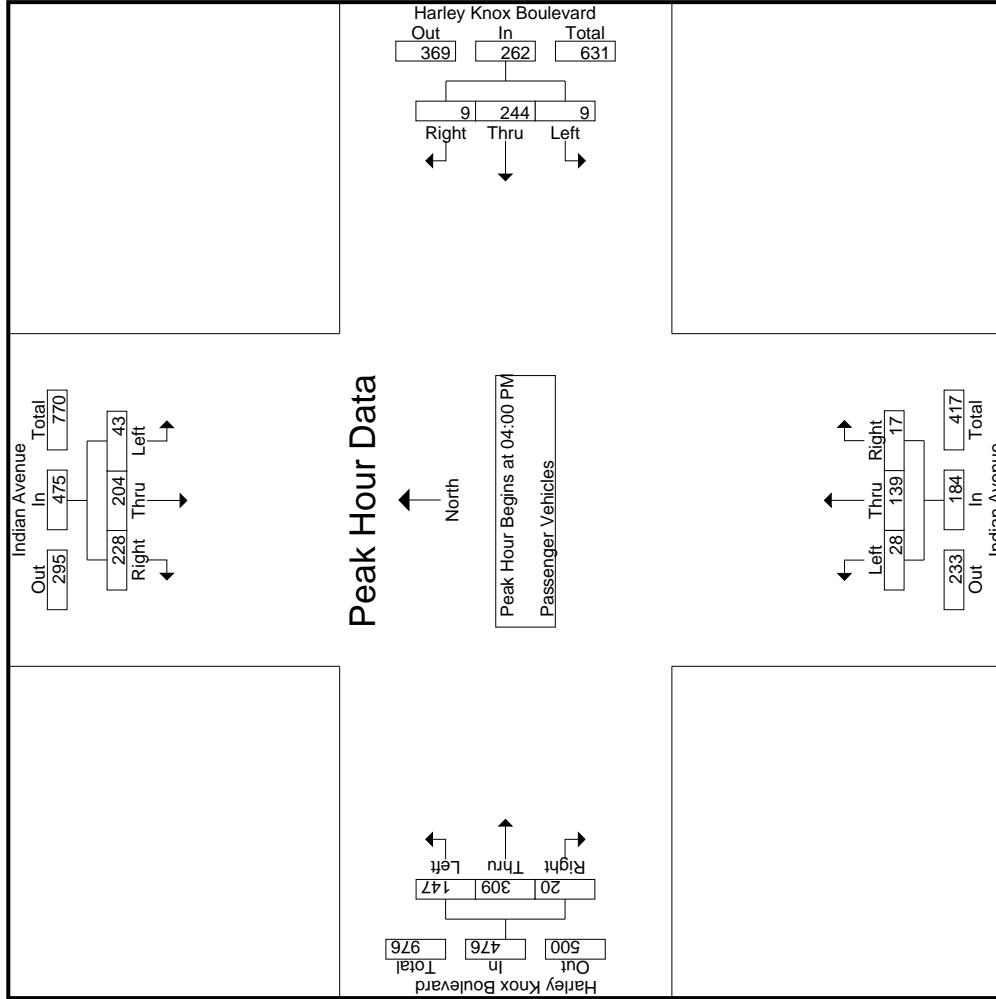
Start Time	Indian Avenue Southbound					Harley Knox Boulevard Westbound					Indian Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	6	42	36	13	84	0	68	6	1	74	5	34	4	1	43	39	83	6	1	128	16	329	345
04:15 PM	10	46	26	11	82	2	52	2	1	56	2	20	3	2	25	27	83	7	3	117	17	280	297
04:30 PM	14	59	114	40	187	3	61	1	0	65	12	48	7	5	67	44	73	4	0	121	45	440	485
04:45 PM	13	57	52	24	122	4	63	0	0	67	9	37	3	3	49	37	70	3	1	110	28	348	376
<b>Total Volume</b>	<b>43</b>	<b>204</b>	<b>228</b>	<b>88</b>	<b>475</b>	<b>9</b>	<b>244</b>	<b>9</b>	<b>2</b>	<b>262</b>	<b>28</b>	<b>139</b>	<b>17</b>	<b>11</b>	<b>184</b>	<b>147</b>	<b>309</b>	<b>20</b>	<b>5</b>	<b>476</b>	<b>106</b>	<b>1397</b>	<b>1503</b>
% App. Total	9.1	42.9	48			3.4	93.1	3.4		20.4	15.4	75.5	9.2		10.9	30.9	64.9	4.2		33.4	6.4	93.6	
PHF	.768	.864	.500		.635	.563	.897	.375		.885	.583	.724	.607		.687	.835	.931	.714		.930			.794

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

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City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	6	42	36	0	68	6	74	5	34	4	43	39	83	6	128
+15 mins.	10	46	26	2	52	2	56	2	20	3	25	27	83	7	117
+30 mins.	14	59	114	3	61	1	65	12	48	7	67	44	73	4	121
+45 mins.	13	57	52	4	63	0	67	9	37	3	49	37	70	3	110
Total Volume	43	204	228	9	244	9	262	28	139	17	184	147	309	20	476
% App. Total	9.1	42.9	48	3.4	93.1	3.4	88.5	15.2	75.5	9.2	68.7	30.9	64.9	4.2	93.0
PHF	.768	.864	.500	.563	.897	.375	.885	.583	.724	.607	.687	.835	.931	.714	.930

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

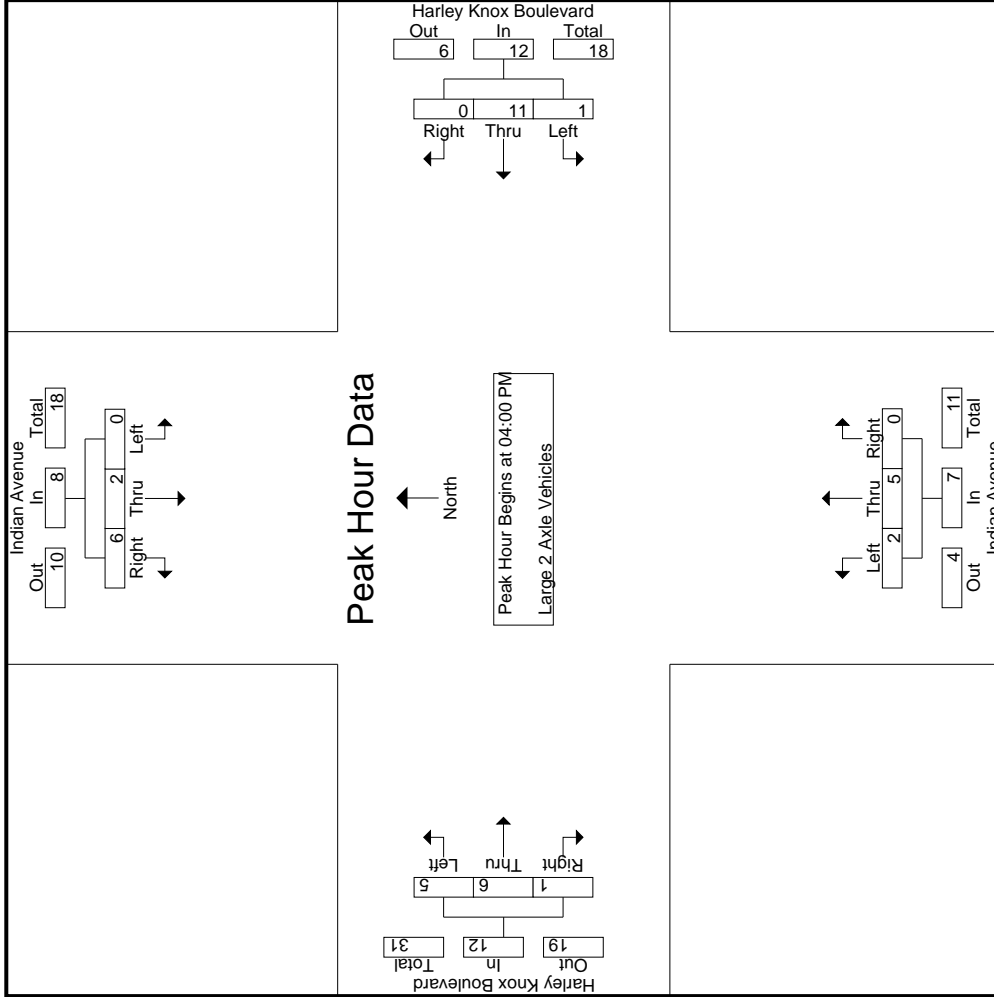
Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound						Harley Knox Boulevard Westbound						Indian Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
04:00 PM	0	0	2	2	0	0	3	0	0	0	0	0	2	1	1	0	0	2	2	0	0	0	2	2
04:15 PM	0	1	1	0	2	1	4	0	0	0	0	2	2	2	3	0	0	5	5	0	0	0	5	0
04:30 PM	0	1	3	0	4	0	3	0	0	0	0	0	0	1	1	1	1	3	3	1	1	1	3	1
04:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	2	1	1	0	0	3	2	0	0	0	2	0
<b>Total</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>12</b>	<b>3</b>	
05:00 PM	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	1	0	0	2	2	2	2	2
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	3	1	1	1	3	1	
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	3	0	
05:45 PM	0	2	1	1	3	0	0	0	0	0	0	0	2	1	1	0	1	2	1	0	0	3	1	
<b>Total</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>9</b>	<b>4</b>		
Grand Total	0	5	8	3	13	1	13	0	0	0	14	5	5	5	0	0	10	9	8	4	4	21	7	
Approch %	0	38.5	61.5		22.4	7.1	92.9	0	0	0	24.1	8.6	8.6	0	0	17.2	42.9	38.1	19	6.9	36.2	10.8		
Total %	0	8.6	13.8			1.7	22.4	0	0	0	8.6	8.6	0	0	0	15.5	15.5	13.8	6.9	6.9	36.2	10.8		
PHF	.000	.500	.500	.500	.500	.500	.688	.000	.600	.000	.600	.250	.625	.000	.583	.625	.500	.250	.600	.600	.696	.696		

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	2	0	3	0	0	2	0	0	1	0
+15 mins.	0	1	1	1	4	0	0	2	0	2	3	0
+30 mins.	0	1	3	0	3	0	0	0	0	1	1	1
+45 mins.	0	0	0	0	1	0	0	2	1	1	1	0
Total Volume	0	2	6	1	11	0	0	5	0	5	6	1
% App. Total	0	.25	.75	8.3	91.7	0	0	28.6	71.4	0	41.7	50
PHF	.000	.500	.500	.250	.688	.000	.000	.250	.625	.000	.625	.250
					.600				.583			.600

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	1	3	1	6	7
04:15 PM	0	0	1	0	1	0	0	0	0	3	1	2	0	1	10	1	15	16
04:30 PM	0	0	0	0	0	2	1	0	0	3	1	3	1	1	5	1	19	20
04:45 PM	0	0	2	1	2	0	1	0	0	1	6	1	1	0	10	2	20	22
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>14</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>34</b>	<b>5</b>	<b>60</b>	<b>65</b>
05:00 PM	0	0	1	0	1	0	0	0	0	0	1	1	0	0	2	0	10	10
05:15 PM	0	0	1	0	1	2	1	1	0	4	0	1	0	0	1	1	14	15
05:30 PM	0	2	1	0	3	0	1	0	0	1	1	1	0	0	2	0	11	11
05:45 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	4	0	7	7
<b>Total</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>24</b>	<b>1</b>	<b>42</b>	<b>43</b>
<b>Grand Total</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>11</b>	<b>4</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>58</b>	<b>6</b>	<b>102</b>	<b>108</b>
Apprch %	0	20	80		9.1	72.7	18.2		2	10.8	17.4	73.9	8.7	2	22.5	75.9	13.8	10.3
Total %	0	2	7.8		9.8	1	7.8		2	10.8	3.9	16.7	2	5.9	56.9	43.1	7.8	5.9

3.1-306

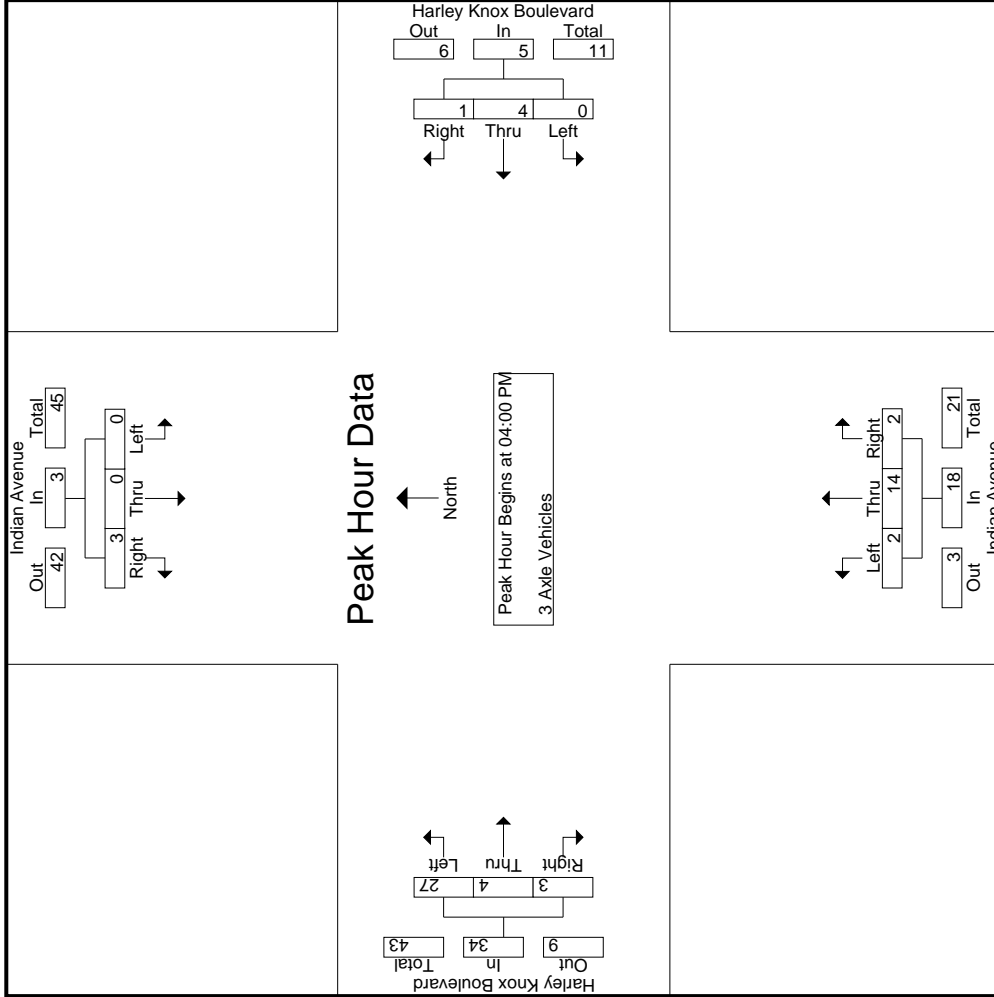
Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	6
04:15 PM	0	0	0	0	0	0	1	0	0	1	1	2	0	0	3	1	10	15
04:30 PM	0	0	0	0	0	0	2	1	0	3	1	3	1	1	5	1	19	20
04:45 PM	0	0	2	1	2	0	1	0	0	1	6	1	1	0	10	2	20	22
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>14</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>34</b>	<b>5</b>	<b>60</b>	<b>60</b>
% App. Total	0	0	0	0	100	0	80	20	0	100	11.1	77.8	11.1	0	11.8	8.8	8.8	7.5
PHF	.000	.000	.375	.375	.375	.000	.500	.250	.417	.500	.583	.500	.643	.750	.773	.750	.773	.750

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Harley Knox Boulevard Westbound			Indian Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:00 PM			04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	1	0	1	0	0	2	0	1	2	0	0	1	
+30 mins.	0	0	0	0	2	1	0	3	1	3	1	1	2	0	
+45 mins.	0	0	2	0	1	0	1	0	6	1	7	1	8	1	
Total Volume	0	0	3	0	4	1	5	14	14	2	18	4	27	3	
% App. Total	0	0	100	0	80	20	11.1	77.8	11.1	11.1	64.3	11.8	79.4	8.8	
PHF	.000	.000	.375	.000	.500	.250	.417	.583	.500	.500	.643	.500	.750	.773	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	1	6	3	0	4	0	0	4	0	3	0	3	1	3	1	5	4	19	23
04:15 PM	0	4	3	1	0	7	0	0	7	2	1	0	3	1	3	2	6	1	23	24
04:30 PM	0	1	5	2	6	0	0	0	7	1	3	0	4	6	3	2	11	2	28	30
04:45 PM	0	3	1	0	0	2	0	0	2	4	5	1	10	1	1	0	3	0	19	19
<b>Total</b>	0	9	15	6	24	1	19	0	20	7	12	1	20	9	10	6	25	7	89	96
05:00 PM	0	2	2	1	4	0	4	1	5	2	1	0	3	0	5	1	6	2	18	20
05:15 PM	0	4	7	3	11	0	9	0	9	0	1	0	1	5	3	2	10	3	31	34
05:30 PM	0	0	6	1	6	1	4	0	5	2	2	0	4	5	0	1	6	1	21	22
05:45 PM	0	0	4	4	4	0	3	0	3	0	5	0	5	4	1	1	6	4	18	22
<b>Total</b>	0	6	19	9	25	1	20	1	22	4	9	0	13	14	9	5	28	10	88	98
<b>Grand Total</b>	0	15	34	15	49	2	39	1	42	11	21	1	33	23	19	11	53	17	177	194
Apprch %	0	30.6	69.4		4.8	92.9	2.4		33.3	63.6	3		43.4	35.8	20.8		29.9	8.8	91.2	
Total %	0	8.5	19.2		1.1	22	0.6		6.2	11.9	0.6		18.6	10.7	6.2					

3.1-309

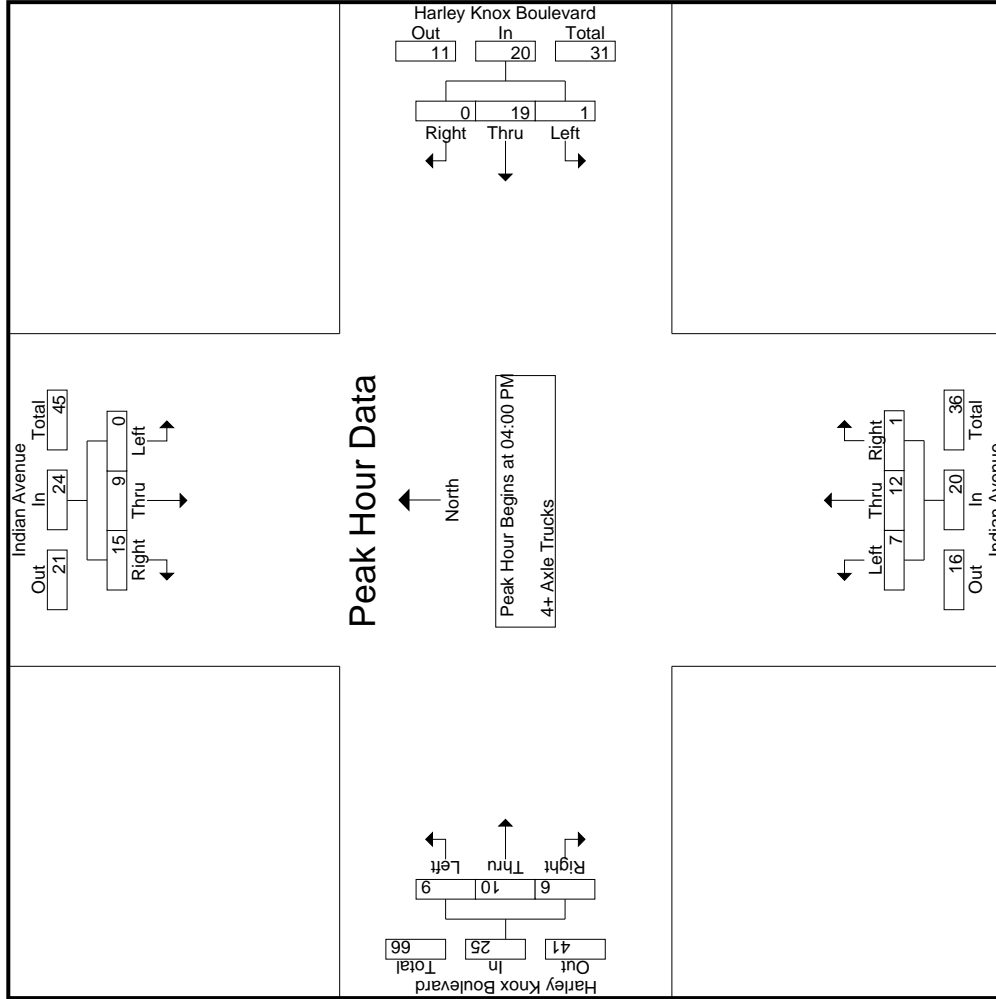
Start Time	Indian Avenue Southbound				Harley Knox Boulevard Westbound				Indian Avenue Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	1	6	3	0	4	0	0	4	0	3	0	3	1	3	1	5	4	19	23
04:15 PM	0	4	3	1	0	7	0	0	7	2	1	0	3	1	3	2	6	1	23	24
04:30 PM	0	1	5	2	6	0	0	0	7	1	3	0	4	6	3	2	11	2	28	30
04:45 PM	0	3	1	0	0	2	0	0	2	4	5	1	10	1	1	0	3	0	19	19
<b>Total Volume</b>	0	9	15	6	24	1	19	0	20	7	12	1	20	9	10	6	25	7	89	96
% App. Total	0	37.5	62.5		4.8	92.9	2.4		33.3	63.6	3		43.4	35.8	20.8		29.9	8.8	91.2	
PHF	.000	.563	.625		.857	.714	.438	.600	.250	.500	.375	.833	.750	.568	.795					

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 01\_PER\_Indian\_Harley Knox PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2





Location: Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Harley Knox Boulevard	South Leg Indian Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Indian Avenue	East Leg Harley Knox Boulevard	South Leg Indian Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0



Location: Perris  
 N/S: Indian Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Harley Knox Boulevard			Northbound Indian Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Indian Avenue			Westbound Harley Knox Boulevard			Northbound Indian Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	3	5	6	1	14	7	340	31	5	378	14	28	10	7	52	28	208	11	0	247	13	691	704	
07:15 AM	4	9	4	2	17	10	296	22	4	328	9	31	8	6	48	24	223	10	2	257	14	650	664	
07:30 AM	5	8	7	2	20	14	344	24	12	382	11	37	9	4	57	30	246	10	3	286	21	745	766	
07:45 AM	3	18	5	3	26	25	329	20	7	374	13	18	11	5	42	22	231	10	6	263	21	705	726	
Total	15	40	22	8	77	56	1309	97	28	1462	47	114	38	22	199	104	908	41	11	1053	69	2791	2860	
08:00 AM	3	8	8	2	19	14	300	18	5	332	9	13	12	6	34	24	221	9	3	254	16	639	655	
08:15 AM	0	9	4	3	13	3	287	10	2	300	5	8	6	5	19	11	203	14	2	228	12	560	572	
08:30 AM	4	9	7	2	20	15	275	8	2	298	18	8	11	7	37	13	197	17	3	227	14	582	596	
08:45 AM	5	11	7	3	23	12	262	9	0	283	14	9	11	6	34	11	147	11	3	169	12	509	521	
Total	12	37	26	10	75	44	1124	45	9	1213	46	38	40	24	124	59	768	51	11	878	54	2290	2344	
Grand Total	27	77	48	18	152	100	2433	142	37	2675	93	152	78	46	323	163	1676	92	22	1931	123	5081	5204	
Approch %	17.8	50.7	31.6			3.7	91	5.3			28.8	47.1	24.1			8.4	86.8	4.8						
Total %	0.5	1.5	0.9		3	2	47.9	2.8		52.6	1.8	3	1.5		6.4	3.2	33	1.8		38	2.4	97.6		
Passenger Vehicles	24	66	18		117	84	2313	139		2572	52	124	70		291	129	1550	54		1749	0	0	4729	
% Passenger Vehicles	88.9	85.7	37.5		50	84	95.1	97.9		97.3	55.9	81.6	89.7		97.8	79.1	92.5	58.7		72.7	0	0	90.9	
Large 2 Axle Vehicles	0	2	4		9	12	70	2		85	7	17	1		25	4	79	6		90	0	0	209	
% Large 2 Axle Vehicles	0	2.6	8.3		16.7	12	2.9	1.4		2.7	7.5	11.2	1.3		6.8	2.5	4.7	6.5		4.5	0	0	4	
3 Axle Vehicles	0	1	5		8	2	9	0		11	2	3	1		7	2	13	3		19	0	0	45	
% 3 Axle Vehicles	0	1.3	10.4		11.1	2	0.4	0		0.4	2.2	2	1.3		1.9	1.2	0.8	3.3		4.5	1	0	0.9	
4+ Axle Trucks	3	8	21		36	2	41	1		44	32	8	6		46	28	34	29		95	0	0	221	
% 4+ Axle Trucks	11.1	10.4	43.8		22.2	2	1.7	0.7		1.6	34.4	5.3	7.7		12.5	17.2	2	31.5		18.2	0	0	4.2	

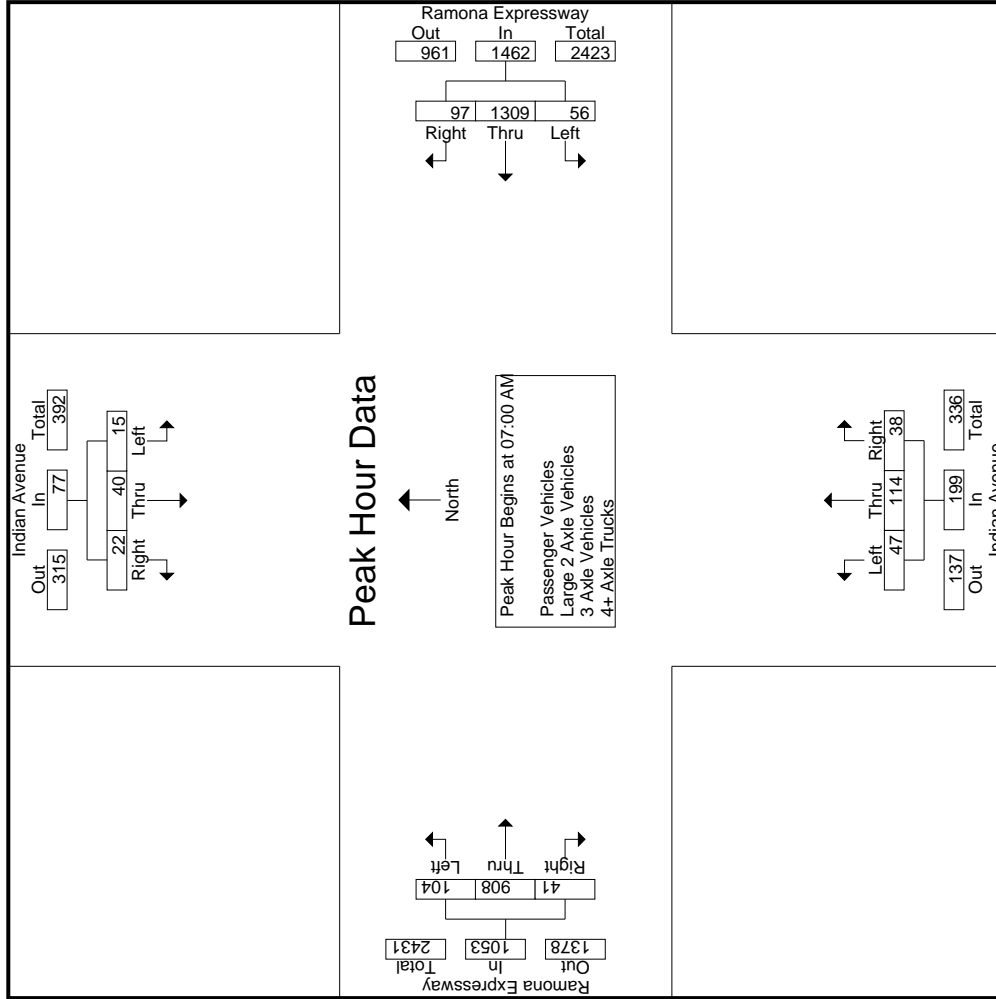
  

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1	3	5	6		14	7	340	31		378	14	28	10		52	28	208	11		247	13	691	704	
07:00 AM	3	5	6		14	7	340	31		378	14	28	10		52	28	208	11		247	13	691	704	
07:15 AM	4	9	4		17	10	296	22		328	9	31	8		48	24	223	10		257	14	650	664	
07:30 AM	5	8	7		20	14	344	24		382	11	37	9		57	30	246	10		286	21	745	766	
07:45 AM	3	18	5		26	25	329	20		374	13	18	11		42	22	231	10		263	21	705	726	
Total Volume	15	40	22		77	56	1309	97		1462	47	114	38		199	104	908	41		1053	69	2791	2860	
% App. Total	19.5	51.9	28.6			3.8	89.5	6.6			23.6	57.3	19.1			9.9	86.2	3.9			9.9	86.2	3.9	
PHF	.750	.556	.786		.740	.560	.951	.782		.957	.839	.770	.864		.873	.867	.923	.932		.920	.920	.937		

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:15 AM			07:00 AM			07:00 AM			07:15 AM				
+0 mins.	4	9	4	7	340	31	378	14	28	10	24	223	10	257
+15 mins.	5	8	7	10	296	22	328	9	31	8	30	246	10	286
+30 mins.	3	18	5	14	344	24	382	11	37	9	22	231	10	263
+45 mins.	3	8	8	25	329	20	374	13	18	11	24	221	9	254
Total Volume	15	43	24	56	1309	97	1462	47	114	38	100	921	39	1060
% App. Total	18.3	52.4	29.3	3.8	89.5	6.6	95.7	23.6	57.3	19.1	9.4	86.9	3.7	92.7
PHF	.750	.597	.750	.560	.951	.782	.957	.839	.770	.864	.833	.936	.975	.927

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
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Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	3	5	3	0	11	4	323	31	5	358	9	23	10	7	42	21	199	6	226	12	637	649
07:15 AM	4	7	1	1	12	7	283	21	4	311	4	28	6	6	38	18	208	7	233	13	594	607
07:30 AM	4	7	5	2	16	14	329	24	12	367	5	31	9	4	45	26	229	8	263	20	691	711
07:45 AM	2	16	3	2	21	22	315	20	7	357	9	13	10	5	32	18	211	8	237	19	647	666
<b>Total</b>	<b>13</b>	<b>35</b>	<b>12</b>	<b>5</b>	<b>60</b>	<b>47</b>	<b>1250</b>	<b>96</b>	<b>28</b>	<b>1393</b>	<b>27</b>	<b>95</b>	<b>35</b>	<b>22</b>	<b>157</b>	<b>83</b>	<b>847</b>	<b>29</b>	<b>959</b>	<b>64</b>	<b>2569</b>	<b>2633</b>
08:00 AM	2	7	4	2	13	10	285	17	5	312	3	11	11	6	25	22	209	6	237	16	587	603
08:15 AM	0	7	1	1	8	2	275	9	1	286	2	4	4	4	10	7	182	5	194	6	498	504
08:30 AM	4	9	0	0	13	13	254	8	2	275	11	7	9	7	27	9	181	9	199	11	514	525
08:45 AM	5	8	1	1	14	12	249	9	0	270	9	7	11	6	27	8	131	5	144	9	455	464
<b>Total</b>	<b>11</b>	<b>31</b>	<b>6</b>	<b>4</b>	<b>48</b>	<b>37</b>	<b>1063</b>	<b>43</b>	<b>8</b>	<b>1143</b>	<b>25</b>	<b>29</b>	<b>35</b>	<b>23</b>	<b>89</b>	<b>46</b>	<b>703</b>	<b>25</b>	<b>774</b>	<b>42</b>	<b>2054</b>	<b>2096</b>
<b>Grand Total</b>	<b>24</b>	<b>66</b>	<b>18</b>	<b>9</b>	<b>108</b>	<b>84</b>	<b>2313</b>	<b>139</b>	<b>36</b>	<b>2536</b>	<b>52</b>	<b>124</b>	<b>70</b>	<b>45</b>	<b>246</b>	<b>129</b>	<b>1550</b>	<b>54</b>	<b>1733</b>	<b>106</b>	<b>4623</b>	<b>4729</b>
Approch %	22.2	61.1	16.7			3.3	91.2	5.5		54.9	21.1	50.4	28.5		5.3	7.4	89.4	3.1				
Total %	0.5	1.4	0.4		2.3	1.8	50	3			1.1	2.7	1.5			2.8	33.5	1.2		37.5	2.2	97.8

3.1-317

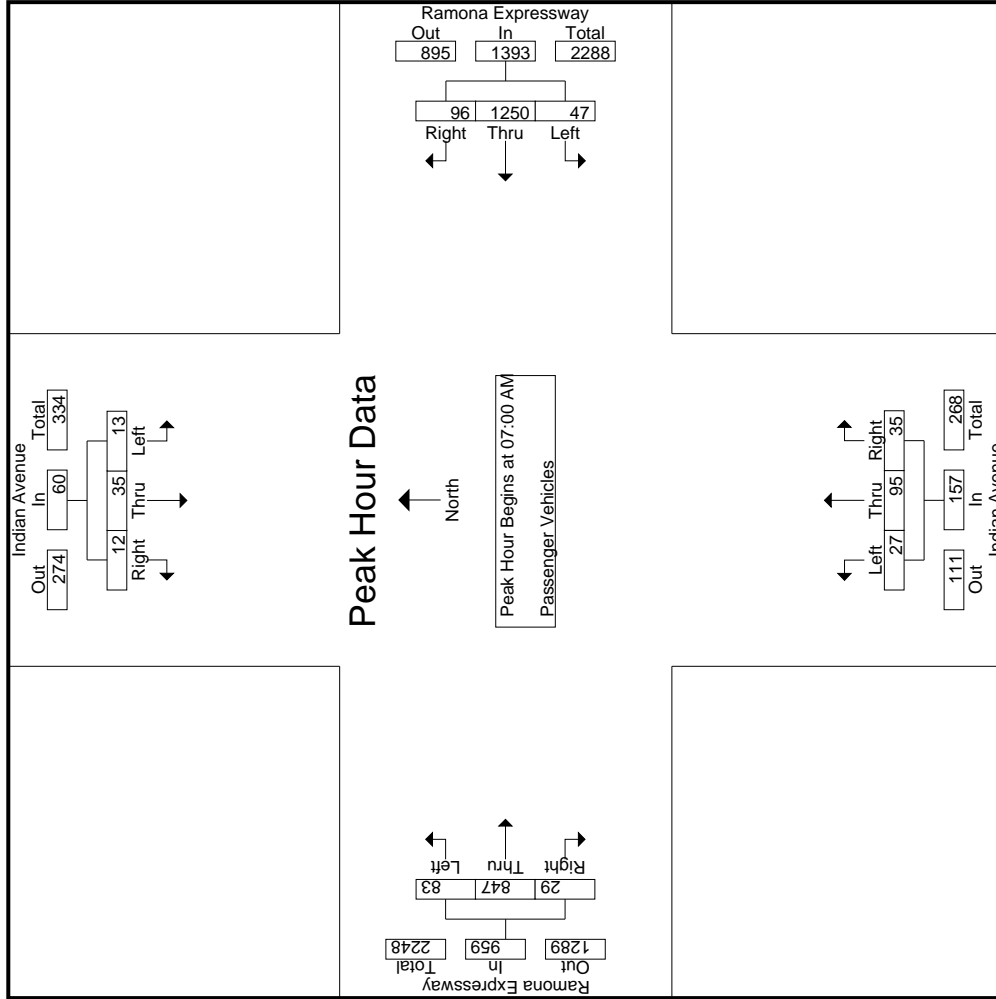
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound												
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total
07:00 AM	3	5	3	0	11	4	323	31	5	358	9	23	10	7	42	21	199	6	226	12	637	649			
07:15 AM	4	7	1	1	12	7	283	21	4	311	4	28	6	6	38	18	208	7	233	13	594	607			
07:30 AM	4	7	5	2	16	14	329	24	12	367	5	31	9	4	45	26	229	8	263	20	691	711			
07:45 AM	2	16	3	2	21	22	315	20	7	357	9	13	10	5	32	18	211	8	237	19	647	666			
<b>Total Volume</b>	<b>13</b>	<b>35</b>	<b>12</b>	<b>5</b>	<b>60</b>	<b>47</b>	<b>1250</b>	<b>96</b>	<b>28</b>	<b>1393</b>	<b>27</b>	<b>95</b>	<b>35</b>	<b>22</b>	<b>157</b>	<b>83</b>	<b>847</b>	<b>29</b>	<b>959</b>	<b>64</b>	<b>2569</b>	<b>2633</b>			
% App. Total	21.7	58.3	20			3.4	89.7	6.9		77.4	21.1	50.4	28.5		5.3	7.4	88.3	3							
PHF	.813	.547	.600		.714	.534	.950	.774		.949	.750	.766	.875		.872	.798	.925	.906		.912	.929				

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	3	5	3	4	323	31	358	23	10	21	199	6	226		
+15 mins.	4	7	1	7	283	21	311	28	6	18	208	7	233		
+30 mins.	4	7	5	14	329	24	367	31	9	26	229	8	263		
+45 mins.	2	16	3	22	315	20	357	13	10	18	211	8	237		
Total Volume	13	35	12	47	1250	96	1393	95	35	83	847	29	959		
% App. Total	21.7	58.3	20	3.4	89.7	6.9	17.2	60.5	22.3	8.7	88.3	3	91.2		
PHF	.813	.547	.600	.534	.950	.774	.949	.766	.875	.798	.925	.906	.912		

Counts Unlimited  
 PO Box 1178  
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File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	2	6	0	0	8	0	2	0	0	2	1	6	1	0	8	0	18	18
07:15 AM	0	0	0	0	0	3	8	1	0	12	0	2	0	0	2	0	11	1	0	12	0	26	26
07:30 AM	0	0	0	0	0	0	6	0	0	6	1	4	0	0	5	1	9	0	0	10	0	21	21
07:45 AM	0	0	1	1	1	2	8	0	0	10	0	3	0	0	3	0	14	0	0	14	1	28	29
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>28</b>	<b>1</b>	<b>0</b>	<b>36</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>40</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>93</b>	<b>94</b>
08:00 AM	0	1	1	0	2	3	13	0	0	16	3	2	0	0	5	1	7	0	0	8	0	31	31
08:15 AM	0	1	1	1	2	1	6	1	1	8	1	2	1	0	4	0	16	3	1	19	3	33	36
08:30 AM	0	0	0	0	0	1	15	0	0	16	2	1	0	0	3	1	8	0	0	9	0	28	28
08:45 AM	0	0	1	1	1	0	8	0	0	8	0	1	0	0	1	0	8	1	0	9	1	19	20
<b>Total</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>42</b>	<b>1</b>	<b>1</b>	<b>48</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>39</b>	<b>4</b>	<b>1</b>	<b>45</b>	<b>4</b>	<b>111</b>	<b>115</b>
<b>Grand Total</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>70</b>	<b>2</b>	<b>1</b>	<b>84</b>	<b>7</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>25</b>	<b>4</b>	<b>79</b>	<b>6</b>	<b>1</b>	<b>89</b>	<b>5</b>	<b>204</b>	<b>209</b>
Apprch %	0	33.3	66.7			14.3	83.3	2.4		41.2	3.4	8.3	0.5		12.3	4.5	88.8	6.7		43.6	2.4	97.6	
Total %	0	1	2		2.9	5.9	34.3	1								2	38.7	2.9					

3.1-320

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	2	6	0	0	8	0	2	0	0	2	1	6	1	0	8	0	18	18
07:15 AM	0	0	0	0	0	3	8	1	0	12	0	2	0	0	2	0	11	1	0	12	0	26	26
07:30 AM	0	0	0	0	0	0	6	0	0	6	1	4	0	0	5	1	9	0	0	10	0	21	21
07:45 AM	0	0	1	1	1	2	8	0	0	10	0	3	0	0	3	0	14	0	0	14	1	28	29
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>28</b>	<b>1</b>	<b>0</b>	<b>36</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>40</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>93</b>	<b>94</b>
% App. Total	0.000	0.000	0.250	0.250	0.250	19.4	77.8	2.8		75.0	8.3	91.7	0.000		60.0	4.5	90.9	4.5		78.6	0.500	97.6	
PHF						.583	.875	.250		.750	.250	.688	.000		.600	.500	.714	.500		.786		.830	

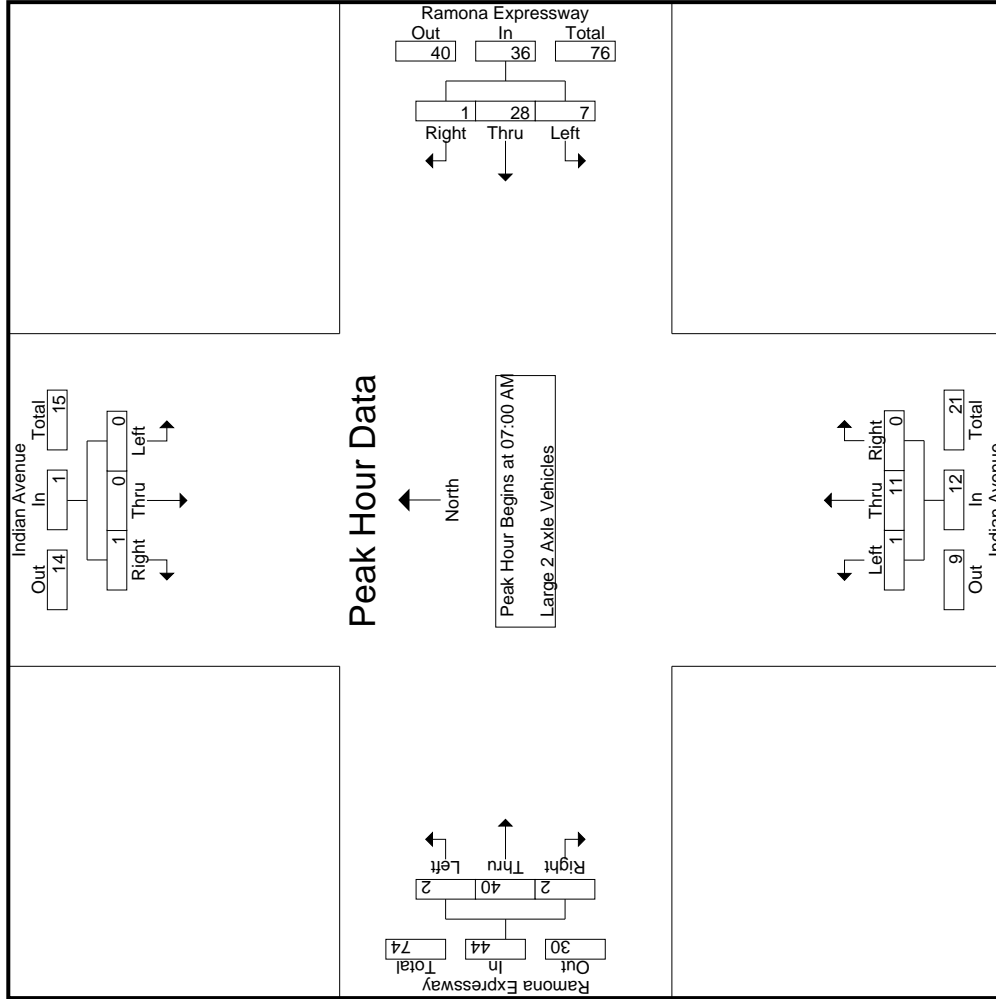
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
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Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM												07:00 AM	
+0 mins.	0	0	0	2	6	0	8	2	2	0	0	1	6	8
+15 mins.	0	0	0	3	8	1	12	2	2	0	0	11	1	12
+30 mins.	0	0	0	0	6	0	6	4	5	1	9	0	0	10
+45 mins.	0	0	1	2	8	0	10	3	3	0	0	14	0	14
Total Volume	0	0	1	7	28	1	36	11	12	0	0	40	2	44
% App. Total	0	0	100	19.4	77.8	2.8	8.3	91.7	0	0	0	90.9	4.5	4.5
PHF	.000	.000	.250	.583	.875	.250	.750	.688	.000	.000	.500	.714	.500	.786

Counts Unlimited  
 PO Box 1178  
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File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	1	1	1	4	0	0	5	0	0	0	2	1	1	0	4	1	10	11
07:15 AM	0	0	2	1	0	1	0	0	1	0	0	0	0	0	1	0	1	1	4	5
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	3	3
07:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2	1	4	5
<b>Total</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>21</b>	<b>24</b>
08:00 AM	0	0	1	0	1	0	0	0	1	0	0	0	0	0	2	0	2	0	4	4
08:15 AM	0	0	0	0	0	1	0	0	1	0	1	1	2	0	0	1	1	1	4	5
08:30 AM	0	0	1	0	0	2	0	0	2	0	0	0	0	0	3	0	3	0	6	6
08:45 AM	0	0	0	0	0	1	0	0	1	1	0	0	1	0	4	0	4	0	6	6
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>10</b>	<b>1</b>	<b>20</b>	<b>21</b>
<b>Grand Total</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>13</b>	<b>3</b>	<b>18</b>	<b>4</b>	<b>41</b>	<b>45</b>
Apprch %	0	16.7	83.3		18.2	81.8	0		26.8	33.3	50	16.7	14.6	11.1	72.2	16.7	43.9	8.9	91.1	
Total %	0	2.4	12.2		4.9	22	0			4.9	7.3	2.4		4.9	31.7	7.3				

3.1-323

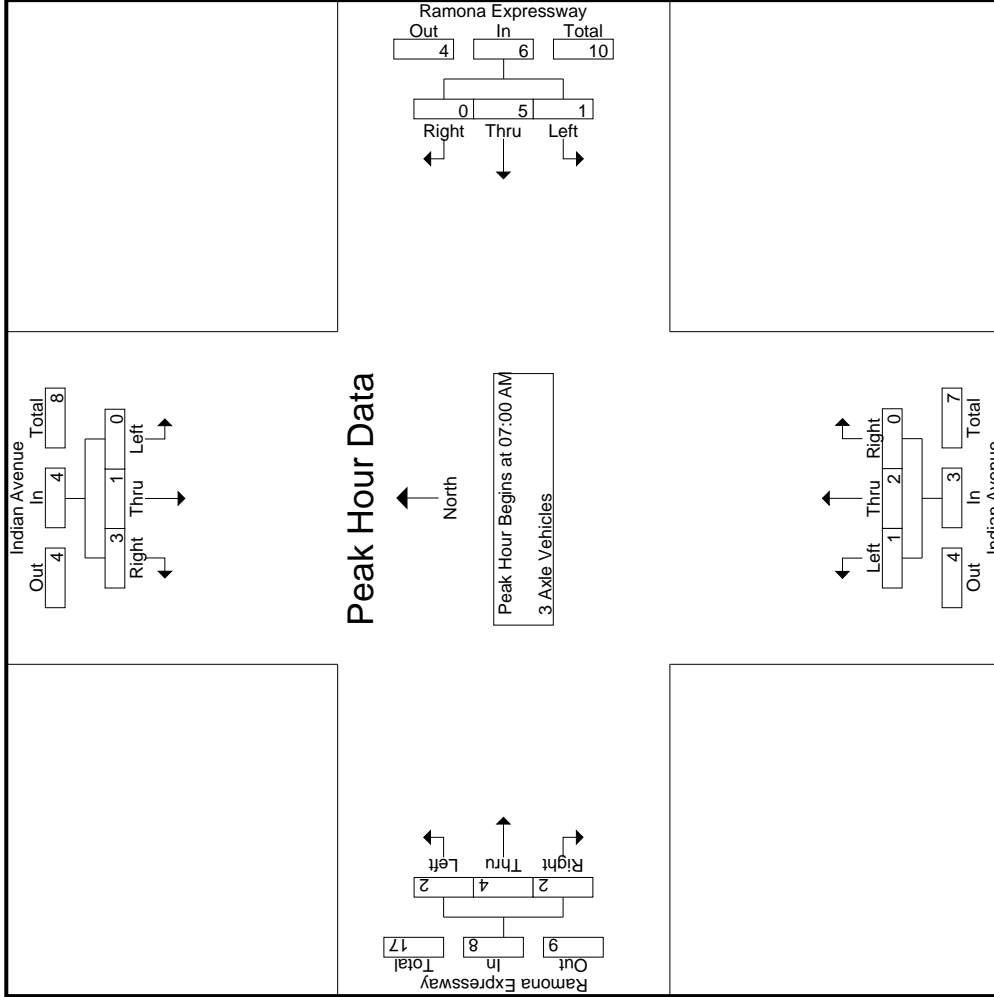
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	1	1	4	0	0	5	0	0	0	2	1	1	0	4	1	10	11
07:15 AM	0	0	2	1	0	1	0	0	1	0	0	0	0	0	1	0	1	1	4	5
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	3	3
07:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	1	4	5
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>21</b>	<b>24</b>
% App. Total	0	25	75		16.7	83.3	0		26.8	33.3	66.7	0	14.6	11.1	72.2	16.7	43.9	8.9	91.1	
PHF	.000	.250	.375	.500	.250	.313	.000	.300	.300	.250	.500	.000	.375	.250	1.00	.500	.500	.500	.525	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	0	1	1	4	0	5	0	0	0	2	1	4
+15 mins.	0	0	2	0	1	0	1	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	1	0	2	0	0	1
+45 mins.	0	1	0	0	0	0	0	0	1	1	0	1	2
Total Volume	0	1	3	1	5	0	6	1	2	0	2	4	8
% App. Total	0	.25	.75	16.7	83.3	0	.300	33.3	66.7	0	25	50	25
PHF	.000	.250	.375	.250	.313	.000	.300	.250	.500	.000	.250	1.000	.500

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File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
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 Weather: Clear

Groups Printed- 4+ Axle Trucks

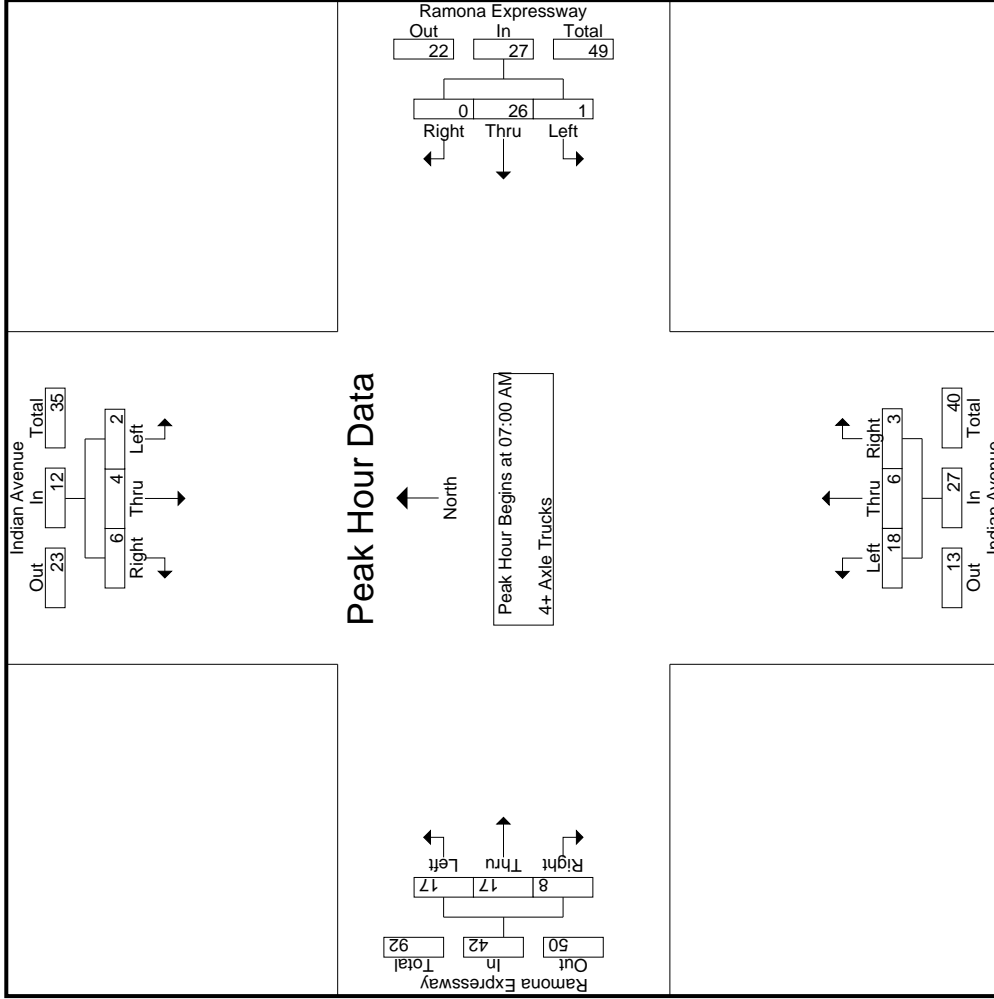
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	2	0	0	7	0	0	0	0	0	0	8	4	2	3	0	9	0	0	0	26	26	26
07:15 AM	0	2	1	0	0	4	0	0	0	8	0	0	8	6	3	2	0	11	0	0	0	26	26	26
07:30 AM	1	1	2	0	0	9	0	0	0	5	0	0	5	3	7	2	1	12	1	1	30	31	31	
07:45 AM	1	1	1	0	0	6	0	0	0	7	0	0	6	4	5	1	0	10	0	0	26	26	26	
Total	2	4	6	0	12	27	0	0	0	27	6	3	0	17	17	8	1	42	1	1	108	108	109	
08:00 AM	1	0	2	0	0	2	1	0	0	3	0	1	0	4	1	3	0	7	0	0	17	17	17	
08:15 AM	0	1	2	1	3	0	0	0	0	5	0	0	3	4	5	5	1	14	2	2	25	27	27	
08:30 AM	0	0	6	2	6	1	4	0	0	5	0	2	7	3	5	8	1	16	3	3	34	37	37	
08:45 AM	0	3	5	1	8	0	4	0	0	4	1	0	5	3	4	5	1	12	2	2	29	29	31	
Total	1	4	15	4	20	17	15	1	0	17	2	3	0	19	11	17	21	49	7	7	105	105	112	
Grand Total	3	8	21	4	32	2	41	1	0	44	8	6	0	46	28	34	29	91	8	8	213	213	221	
Approch %	9.4	25	65.6		4.5	93.2	2.3			69.6	17.4	13		30.8	37.4	31.9		42.7		3.6	96.4			
Total %	1.4	3.8	9.9		0.9	19.2	0.5			20.7	3.8	2.8		13.1	16	13.6								

3.1-326

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	2	1	0	0	4	0	0	0	4	0	0	0	0	3	2	0	11	0	0	0	0	0	0
07:30 AM	1	1	2	0	0	9	0	0	0	5	0	0	0	3	7	2	1	12	1	1	30	31	31	
07:45 AM	1	1	1	0	0	6	0	0	0	7	0	0	0	4	5	1	0	10	0	0	26	26	26	
Total	2	4	6	0	12	27	0	0	0	27	6	3	0	27	17	8	1	42	1	1	108	108	109	
08:00 AM	1	0	2	0	0	2	1	0	0	3	0	1	0	4	1	3	0	7	0	0	17	17	17	
08:15 AM	0	1	2	1	3	0	0	0	0	5	0	0	3	4	5	5	1	14	2	2	25	27	27	
08:30 AM	0	0	6	2	6	1	4	0	0	5	0	2	7	3	5	8	1	16	3	3	34	37	37	
08:45 AM	0	3	5	1	8	0	4	0	0	4	1	0	5	3	4	5	1	12	2	2	29	29	31	
Total	1	4	15	4	20	17	15	1	0	17	2	3	0	19	11	17	21	49	7	7	105	105	112	
Grand Total	3	8	21	4	32	2	41	1	0	44	8	6	0	46	28	34	29	91	8	8	213	213	221	
Approch %	9.4	25	65.6		4.5	93.2	2.3			69.6	17.4	13		30.8	37.4	31.9		42.7		3.6	96.4			
Total %	1.4	3.8	9.9		0.9	19.2	0.5			20.7	3.8	2.8		13.1	16	13.6								

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	2	1	0	0	4	0	0	0	4	0	0	0	0	3	2	0	11	0	0	0	0	0	0
07:30 AM	1	1	2	0	0	9	0	0	0	5	0	0	0	3	7	2	1	12	1	1	30	31	31	
07:45 AM	1	1	1	0	0	6	0	0	0	7	0	0	0	4	5	1	0	10	0	0	26	26	26	
Total	2	4	6	0	12	27	0	0	0	27	6	3	0	27	17	8	1	42	1	1	108	108	109	
% App. Total	16.7	33.3	50		3.7	96.3	0			66.7	22.2	11.1		40.5	40.5	19		66.7		19	96.7	96.7	96.7	
PHF	.500	.500	.750		.250	.722	.000			.900	.500	.375		.844	.607	.667		.667		.667	.875	.875	.900	



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City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy AM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	2	0	7	0	7	0	3	0	8	4	2	3	9
+15 mins.	0	2	1	0	4	0	4	1	1	2	8	6	3	2	11
+30 mins.	1	1	2	0	9	0	9	4	0	0	5	3	7	2	12
+45 mins.	1	1	1	1	6	0	7	4	1	1	6	4	5	1	10
Total Volume	2	4	6	1	26	0	27	18	6	3	27	17	17	8	42
% App. Total	16.7	33.3	50	3.7	96.3	0	0	66.7	22.2	11.1	40.5	40.5	40.5	19	87.5
PHF	.500	.500	.750	.250	.722	.000	.750	.900	.500	.375	.844	.708	.607	.667	.875



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File Name : 04\_PER\_Indian\_Ramona Expy PM  
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 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	18	26	13	5	57	16	252	10	4	278	19	20	10	4	49	16	304	12	1	332	14	716	730			
04:15 PM	16	29	13	5	58	8	304	15	1	327	16	9	11	5	36	14	314	12	5	340	16	761	777			
04:30 PM	12	32	15	4	59	5	254	13	3	272	59	35	52	8	146	20	263	11	2	294	17	771	788			
04:45 PM	17	40	13	5	70	11	257	16	2	284	24	24	12	6	60	13	277	13	2	303	15	717	732			
<b>Total</b>	63	127	54	19	244	40	1067	54	10	1161	118	88	85	23	291	63	1158	48	10	1269	62	2965	3027			
05:00 PM	10	32	17	9	59	10	250	5	1	265	23	14	7	1	44	14	302	8	2	324	13	692	705			
05:15 PM	15	47	9	7	71	22	290	5	0	317	22	9	6	3	37	6	329	11	3	346	13	771	784			
05:30 PM	17	40	14	10	71	37	263	8	2	308	15	12	9	6	36	13	310	28	6	351	24	766	790			
05:45 PM	13	32	8	7	53	42	282	7	3	331	12	11	8	5	31	8	301	25	6	334	21	749	770			
<b>Total</b>	55	151	48	33	254	111	1085	25	6	1221	72	46	30	15	148	41	1242	72	17	1355	71	2978	3049			
<b>Grand Total</b>	118	278	102	52	498	151	2152	79	16	2382	190	134	115	38	439	104	2400	120	27	2624	133	5943	6076			
<b>Approch %</b>	23.7	55.8	20.5			6.3	90.3	3.3		40.1	43.3	30.5	26.2		7.4	4	91.5	4.6		44.2	2.2	97.8				
<b>Total %</b>	2	4.7	1.7		8.4	2.5	36.2	1.3		40.1	3.2	2.3	1.9		7.4	1.7	40.4	2		44.2	2.2	97.8				
Passenger Vehicles	114	255	83		501	132	2052	68		2265	153	106	114		411	82	2291	87		2483	0	0	5660			
% Passenger Vehicles	96.6	91.7	81.4		94.2	87.4	95.4	86.1		94.5	80.5	79.1	99.1		100	78.8	95.5	72.5		85.2	93.7	0	93.2			
Large 2 Axle Vehicles	0	3	1		5	16	41	1		59	3	6	1		10	2	62	6		71	0	0	145			
% Large 2 Axle Vehicles	0	1.1	1		1.9	10.6	1.9	1.3		6.2	1.6	4.5	0.9		2.1	1.9	2.6	5		3.7	2.7	0	2.4			
3 Axle Vehicles	2	1	4		8	2	11	7		21	4	5	0		9	8	12	4		25	0	0	63			
% 3 Axle Vehicles	1.7	0.4	3.9		1.5	1.3	0.5	8.9		6.2	2.1	3.7	0		1.9	7.7	0.5	3.3		0.9	0	0	1			
4+ Axle Trucks	2	19	14		36	1	48	3		53	30	17	0		47	12	35	23		72	0	0	208			
% 4+ Axle Trucks	1.7	6.8	13.7		6.5	0.7	2.2	3.8		6.2	15.8	12.7	0		9.9	11.5	1.5	19.2		7.4	0	0	3.4			

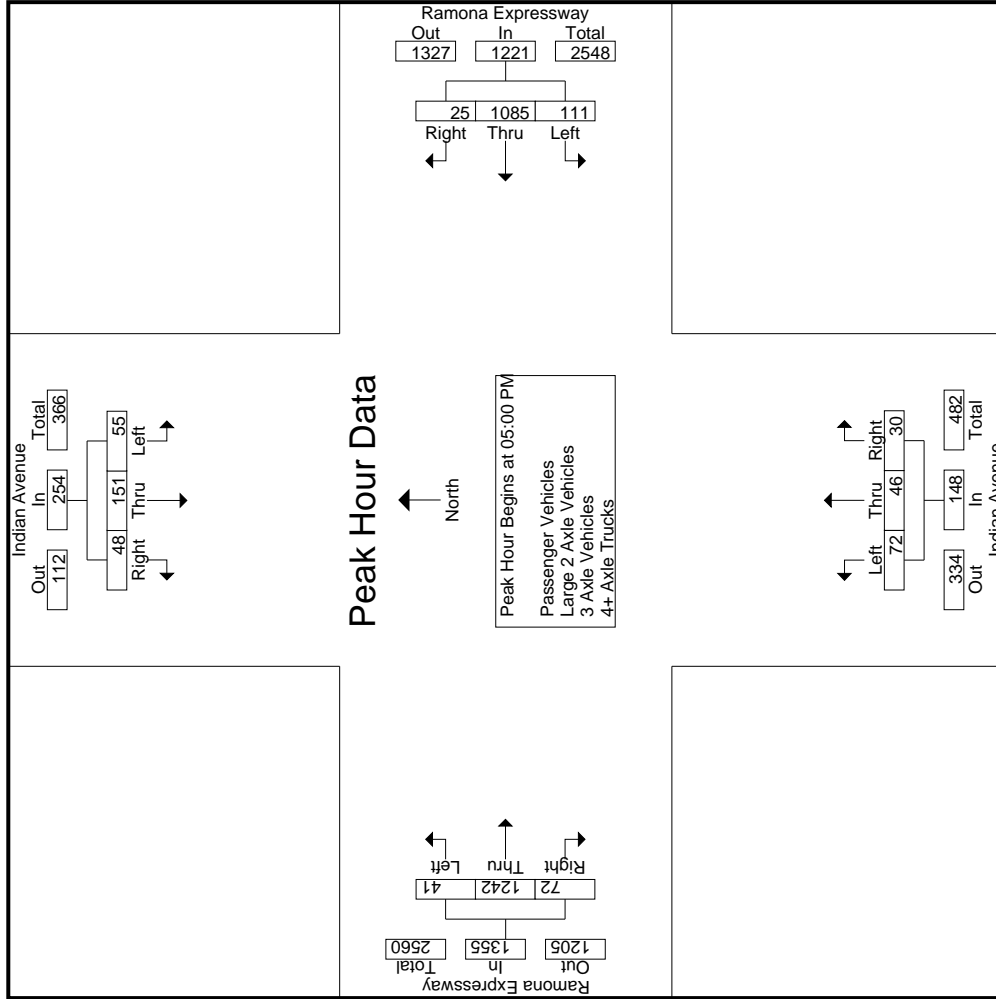
  

Start Time	Indian Avenue Southbound						Ramona Expressway Westbound						Indian Avenue Northbound						Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total					
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1	10	32	17		59	10	250	5		265	23	14	7		44	14	302	8		324	13	692	705			
05:00 PM	15	47	9		71	22	290	5		317	22	9	6		37	6	329	11		346	13	771	784			
05:15 PM	17	40	14		71	37	263	8		308	15	12	9		36	13	310	28		351	24	766	790			
05:30 PM	13	32	8		53	42	282	7		331	12	11	8		31	8	301	25		334	21	749	770			
05:45 PM	55	151	48		254	111	1085	25		1221	72	46	30		148	41	1242	72		1355	71	2978	3049			
<b>Total Volume</b>	21.7	59.4	18.9		89.4	9.1	88.9	2		92.2	48.6	31.1	20.3		841	3	91.7	5.3		966	3	91.7	5.3			
% App. Total	.809	.803	.706		.894	.661	.935	.781		.922	.783	.821	.833		.841	.732	.944	.643		.966	.732	.944	.643			
PHF																										

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File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
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File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:45 PM			05:00 PM			04:00 PM			05:00 PM				
+0 mins.	17	40	13	10	250	5	265	19	20	10	14	302	8	324
+15 mins.	10	32	17	22	290	5	317	16	9	11	6	329	11	346
+30 mins.	15	47	9	37	263	8	308	59	35	52	13	310	28	351
+45 mins.	17	40	14	42	282	7	331	24	24	12	8	301	25	334
Total Volume	59	159	53	111	1085	25	1221	118	88	85	41	1242	72	1355
% App. Total	21.8	58.7	19.6	9.1	88.9	2		40.5	30.2	29.2	3	91.7	5.3	
PHF	.868	.846	.779	.661	.935	.781	.922	.500	.629	.409	.732	.944	.643	.965

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 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Passenger Vehicles

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	18	24	8	4	50	12	236	9	3	257	11	18	10	4	39	13	288	4	1	305	12	651	663
04:15 PM	16	24	10	5	50	6	287	13	1	306	11	6	11	5	28	12	296	9	4	317	15	701	716
04:30 PM	12	29	13	4	54	4	241	12	3	257	51	31	51	8	133	14	246	6	1	266	16	710	726
04:45 PM	17	37	10	5	64	9	243	13	1	265	21	15	12	6	48	10	262	9	1	281	13	658	671
<b>Total</b>	63	114	41	18	218	31	1007	47	8	1085	94	70	84	23	248	49	1092	28	7	1169	56	2720	2776
05:00 PM	10	31	15	9	56	8	239	4	1	251	18	11	7	1	36	11	290	5	1	306	12	649	661
05:15 PM	15	40	8	7	63	21	280	4	0	305	19	9	6	3	34	6	322	8	3	336	13	738	751
05:30 PM	14	40	12	9	66	33	253	6	1	292	14	8	9	6	31	10	295	25	6	330	22	719	741
05:45 PM	12	30	7	6	49	39	273	7	3	319	8	8	8	5	24	6	292	21	6	319	20	711	731
<b>Total</b>	51	141	42	31	234	101	1045	21	5	1167	59	36	30	15	125	33	1199	59	16	1291	67	2817	2884
<b>Grand Total</b>	114	255	83	49	452	132	2052	68	13	2252	153	106	114	38	373	82	2291	87	23	2460	123	5537	5660
Approch %	25.2	56.4	18.4			5.9	91.1	3		40.7	2.8	1.9	2.1		6.7	3.3	93.1	3.5		44.4	2.2	97.8	
Total %	2.1	4.6	1.5		8.2	2.4	37.1	1.2								1.5	41.4	1.6					

3.1-332

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
05:00 PM	10	31	15	9	56	8	239	4	1	251	18	11	7	1	36	11	290	5	1	306	12	649	661
05:15 PM	15	40	8	7	63	21	280	4	0	305	19	9	6	3	34	6	322	8	3	336	13	738	751
05:30 PM	14	40	12	9	66	33	253	6	1	292	14	8	9	6	31	10	295	25	6	330	22	719	741
05:45 PM	12	30	7	6	49	39	273	7	3	319	8	8	8	5	24	6	292	21	6	319	20	711	731
<b>Total</b>	51	141	42	31	234	101	1045	21	5	1167	59	36	30	15	125	33	1199	59	16	1291	67	2817	2884
<b>Grand Total</b>	114	255	83	49	452	132	2052	68	13	2252	153	106	114	38	373	82	2291	87	23	2460	123	5537	5660
Approch %	25.2	56.4	18.4			5.9	91.1	3		40.7	2.8	1.9	2.1		6.7	3.3	93.1	3.5		44.4	2.2	97.8	
Total %	2.1	4.6	1.5		8.2	2.4	37.1	1.2								1.5	41.4	1.6					

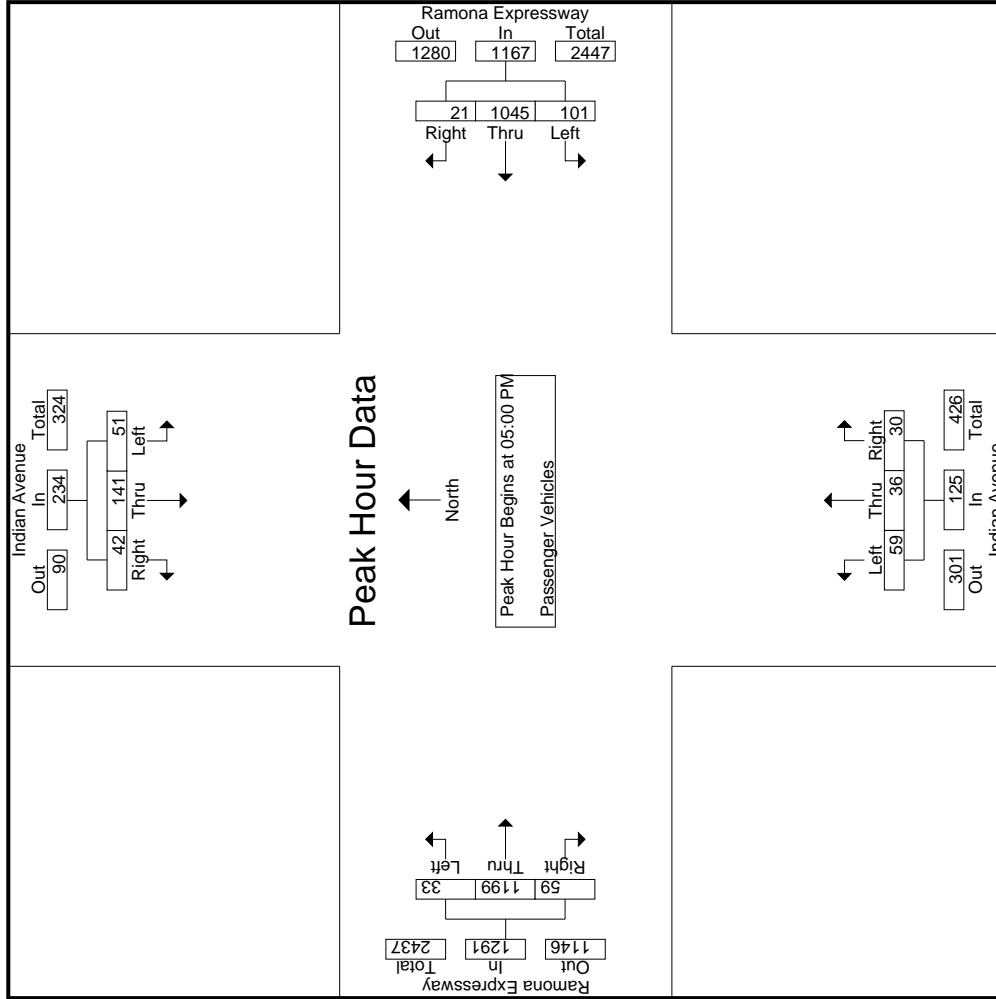
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Start Time	Indian Avenue Southbound					Ramona Expressway Westbound					Indian Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
05:00 PM	10	31	15	9	56	8	239	4	1	251	18	11	7	1	36	11	290	5	1	306	12	649	661
05:15 PM	15	40	8	7	63	21	280	4	0	305	19	9	6	3	34	6	322	8	3	336	13	738	751
05:30 PM	14	40	12	9	66	33	253	6	1	292	14	8	9	6	31	10	295	25	6	330	22	719	741
05:45 PM	12	30	7	6	49	39	273	7	3	319	8	8	8	5	24	6	292	21	6	319	20	711	731
<b>Total Volume</b>	51	141	42	31	234	101	1045	21	5	1167	59	36	30	15	125	33	1199	59	16	1291	67	2817	2884
<b>% App. Total</b>	21.8	60.3	17.9			8.7	89.5	1.8		47.2	28.8	24			2.6	92.9	4.6						
<b>PHF</b>	.850	.881	.700		.886	.647	.933	.750		.915	.776	.818	.833		.868	.750	.931	.590		.961		.954	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	05:00 PM			05:00 PM			05:00 PM			05:00 PM				
+0 mins.	10	31	15	8	239	4	251	18	11	7	11	290	5	306
+15 mins.	15	40	8	21	280	4	305	19	9	6	6	322	8	336
+30 mins.	14	40	12	33	253	6	292	14	8	9	10	295	25	330
+45 mins.	12	30	7	39	273	7	319	8	8	8	6	292	21	319
Total Volume	51	141	42	101	1045	21	1167	59	36	30	33	1199	59	1291
% App. Total	21.8	60.3	17.9	8.7	89.5	1.8	47.2	28.8	24	24	2.6	92.9	4.6	
PHF	.850	.881	.700	.647	.933	.750	.915	.776	.818	.833	.750	.931	.590	.961

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- Large 2 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	3	6	0	0	9	1	0	0	0	1	12	1	0	14
04:15 PM	0	2	0	0	2	2	8	0	0	10	0	1	0	0	1	9	1	0	11
04:30 PM	0	0	0	0	0	1	6	0	0	7	1	2	1	0	4	0	9	2	11
04:45 PM	0	0	0	0	0	2	6	1	1	9	0	0	0	0	0	7	0	0	7
<b>Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>26</b>	<b>1</b>	<b>1</b>	<b>35</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>37</b>	<b>4</b>	<b>43</b>
05:00 PM	0	0	0	0	0	2	6	0	0	8	0	1	0	0	1	8	1	1	9
05:15 PM	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	3	1	0	4
05:30 PM	0	0	0	0	0	3	2	0	0	5	0	1	0	0	1	10	0	0	10
05:45 PM	0	0	1	1	1	2	4	0	0	6	1	1	0	0	2	4	0	0	4
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>27</b>
<b>Grand Total</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>16</b>	<b>41</b>	<b>1</b>	<b>1</b>	<b>58</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>62</b>	<b>6</b>	<b>70</b>
Apprch %	0	75	25		27.6	70.7	1.7			40.8	30	60	10		7	2.9	88.6	8.6	3
Total %	0	2.1	0.7		2.8	11.3	28.9	0.7			2.1	4.2	0.7			1.4	43.7	4.2	49.3

3.1-335

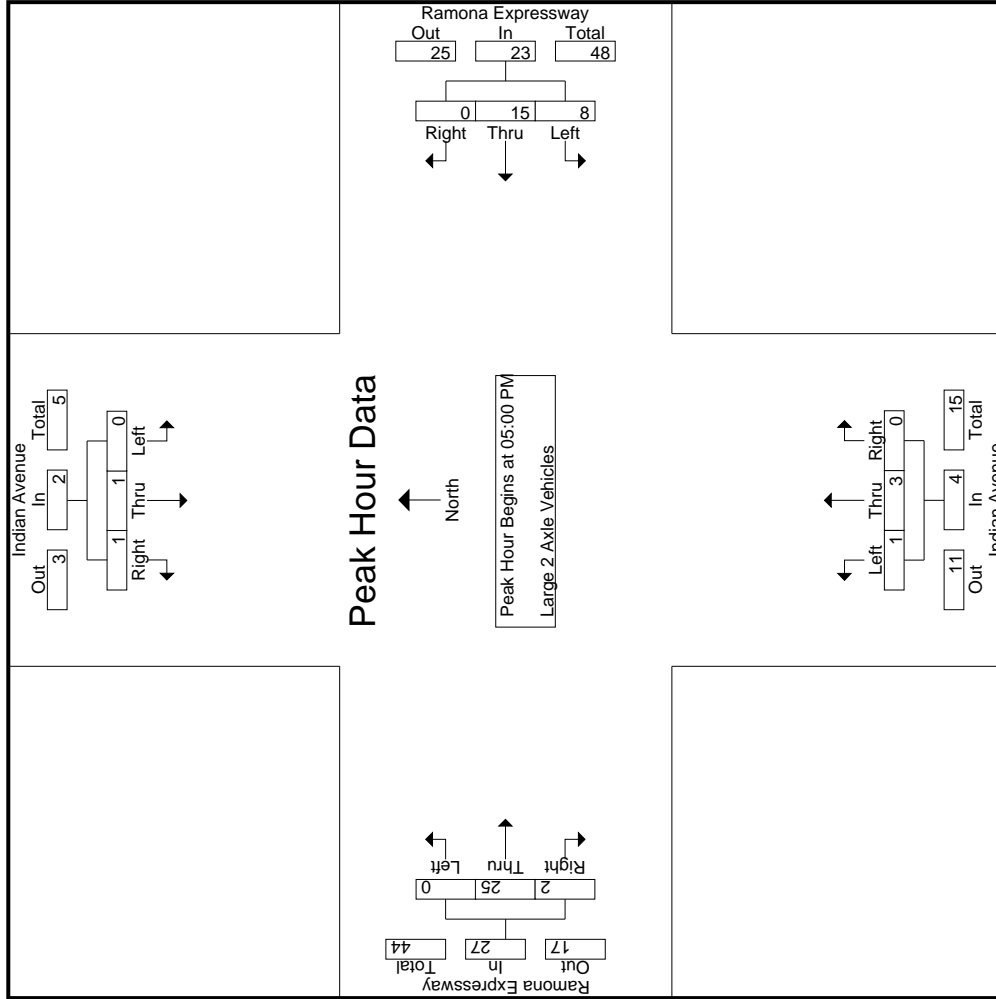
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	0	0	0	0	2	6	0	0	8	0	1	0	0	1	8	1	1	9
05:15 PM	0	1	0	0	1	1	3	0	0	4	0	0	0	0	0	3	1	1	4
05:30 PM	0	0	0	0	0	3	2	0	0	5	0	1	0	0	1	10	0	0	10
05:45 PM	0	0	0	0	0	2	4	0	0	6	1	1	0	0	2	4	0	0	4
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>8</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>27</b>
% App. Total	.000	.250	.250		.500	.667	.625	.000		.719	.250	.750	.000		.500	.000	.625	.74	.675
PHF																			

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	05:00 PM			05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	2	6	0	8	1	0	0	0	8
+15 mins.	0	1	0	1	3	0	4	0	0	0	0	3
+30 mins.	0	0	0	3	2	0	5	1	0	0	0	10
+45 mins.	0	0	1	2	4	0	6	1	0	0	0	4
Total Volume	0	1	1	8	15	0	23	1	3	0	0	25
% App. Total	0	50	50	34.8	65.2	0	25	25	75	0	0	92.6
PHF	.000	.250	.250	.667	.625	.000	.719	.250	.750	.000	.000	.500

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	4	1	1	0	0	0	2	1	0	0	1	1	1	0	0	2	1	9	10
04:15 PM	0	0	0	0	3	1	0	0	4	0	1	0	1	2	0	0	0	2	0	7	7
04:30 PM	0	0	0	0	0	1	0	0	1	1	0	0	1	3	3	1	1	7	1	9	10
04:45 PM	0	0	0	0	0	1	1	0	2	1	4	0	5	3	1	2	0	6	0	13	13
<b>Total</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>2</b>	<b>38</b>	<b>40</b>	
05:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	1	0	3	0	4	4
05:15 PM	0	1	0	0	3	1	0	0	4	1	0	0	1	0	1	0	0	1	0	7	7
05:30 PM	2	0	0	0	2	1	2	1	4	0	0	0	0	0	1	0	0	1	1	7	8
05:45 PM	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	2	0	4	4
<b>Total</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>22</b>	<b>23</b>	
<b>Grand Total</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>7</b>	<b>1</b>	<b>20</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>8</b>	<b>12</b>	<b>4</b>	<b>1</b>	<b>24</b>	<b>3</b>	<b>60</b>	<b>63</b>
Approch %	28.6	14.3	57.1		10	55	35		33.3	44.4	55.6	0	15	33.3	50	16.7	40	4.8	95.2		
Total %	3.3	1.7	6.7		3.3	18.3	11.7		33.3	6.7	8.3	0	15	13.3	20	6.7	40				

3.1-338

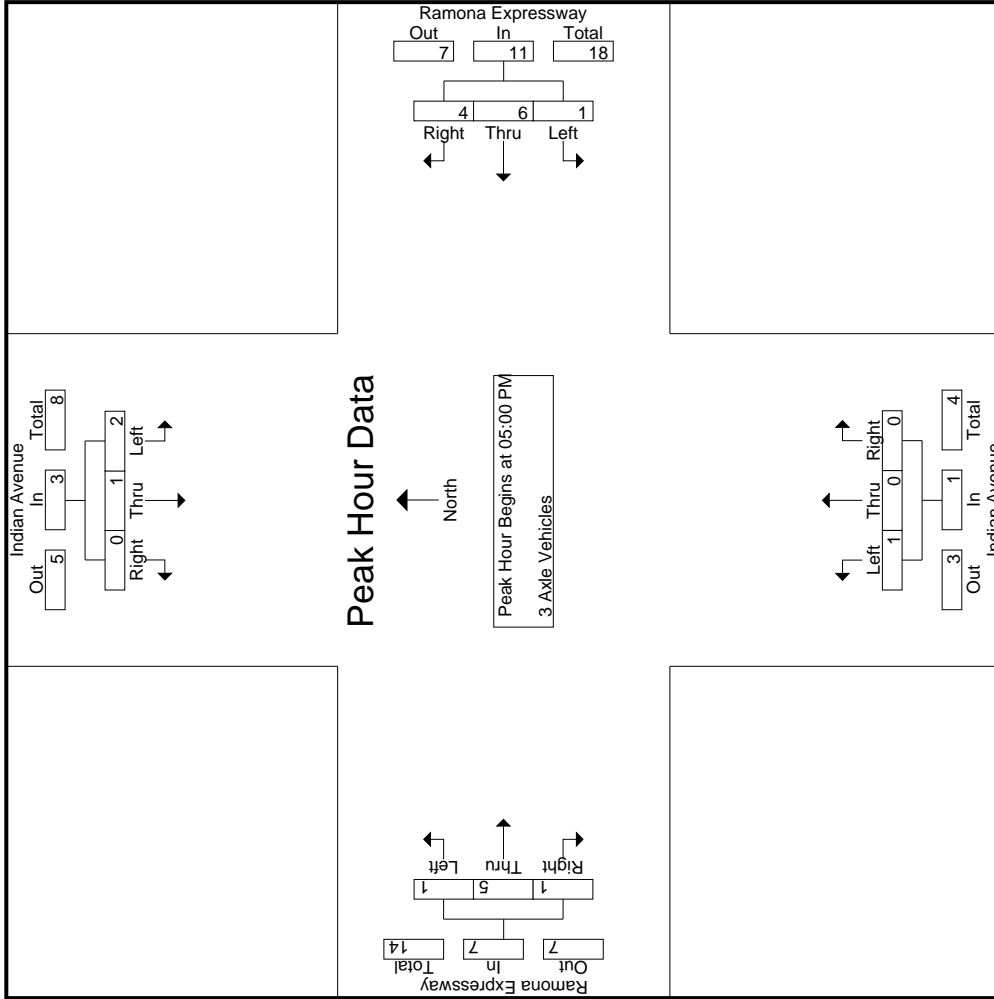
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	0	3	1	0	4	1	0	0	1	0	1	0	0	1	0	1	1
05:30 PM	2	0	0	0	1	1	2	1	4	0	0	0	0	0	1	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	2	0	2	2
<b>Total Volume</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>7</b>	<b>22</b>	
% App. Total	66.7	33.3	0		9.1	54.5	36.4		36.4	100	0	0	14.3	71.4	14.3						
PHF	.250	.250	.000		.250	.688	.500		.500	.250	.000	.000	.250	.625	.250			.583		.786	

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total	App. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	05:00 PM			05:00 PM			05:00 PM			05:00 PM					
+0 mins.	0	0	0	0	0	1	0	0	0	0	0	0	1	1	3
+15 mins.	0	1	0	0	3	1	1	4	1	0	1	1	0	0	1
+30 mins.	2	0	0	1	1	2	4	4	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
Total Volume	2	1	0	1	6	4	11	1	0	0	1	5	1	1	7
% App. Total	66.7	33.3	0	9.1	54.5	36.4	68.8	.250	.000	.000	.250	71.4	14.3	.250	.583
PHF	.250	.250	.000	.250	.500	.500	.688	.250	.000	.000	.250	.625	.250	.250	.583

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total		
04:00 PM	0	2	1	0	3	0	9	1	1	10	0	0	8	1	3	7	0	11	1	32	33
04:15 PM	0	3	3	0	6	0	6	1	0	7	0	0	6	1	7	2	1	10	1	29	30
04:30 PM	0	3	2	0	5	0	7	0	0	7	0	0	8	3	5	2	0	10	0	30	30
04:45 PM	0	3	3	0	6	0	7	1	0	8	0	0	7	0	7	2	1	9	1	30	31
<b>Total</b>	<b>0</b>	<b>11</b>	<b>9</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>29</b>	<b>3</b>	<b>1</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>5</b>	<b>22</b>	<b>13</b>	<b>2</b>	<b>40</b>	<b>3</b>	<b>121</b>	<b>124</b>
05:00 PM	0	1	2	0	3	0	5	0	0	5	0	0	7	2	3	1	0	6	0	21	21
05:15 PM	0	5	1	0	6	0	4	0	0	4	0	0	2	0	3	2	0	5	0	17	17
05:30 PM	1	0	2	1	3	0	7	0	0	7	1	3	4	3	4	3	0	10	1	24	25
05:45 PM	1	2	0	0	3	1	3	0	0	4	3	2	5	2	3	4	0	9	0	21	21
<b>Total</b>	<b>2</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>15</b>	<b>1</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>11</b>	<b>7</b>	<b>18</b>	<b>7</b>	<b>13</b>	<b>10</b>	<b>0</b>	<b>30</b>	<b>1</b>	<b>83</b>	<b>84</b>
<b>Grand Total</b>	<b>2</b>	<b>19</b>	<b>14</b>	<b>1</b>	<b>35</b>	<b>1</b>	<b>48</b>	<b>3</b>	<b>1</b>	<b>52</b>	<b>30</b>	<b>17</b>	<b>0</b>	<b>12</b>	<b>35</b>	<b>23</b>	<b>2</b>	<b>70</b>	<b>4</b>	<b>204</b>	<b>208</b>
Apprch %	5.7	54.3	40		17.2	1.9	92.3	5.8		25.5	63.8	36.2	0	17.1	50	32.9		34.3	1.9	98.1	
Total %	1	9.3	6.9			0.5	23.5	1.5			14.7	8.3	0	5.9	17.2	11.3					

3.1-341

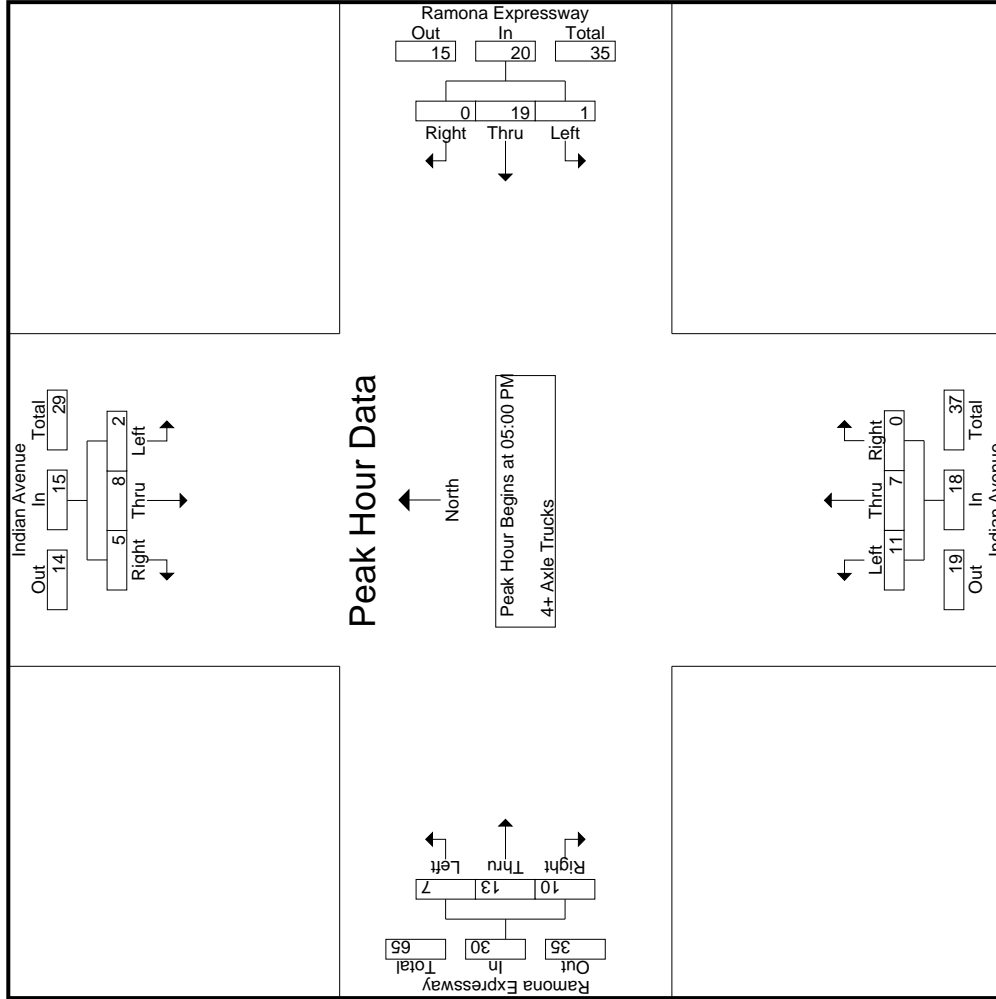
Start Time	Indian Avenue Southbound				Ramona Expressway Westbound				Indian Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
05:00 PM	0	1	2		3	0	5		0	0	0		2	3	1		0	21	21	
05:15 PM	0	5	1		6	0	4		0	0	0		0	3	2		0	17	17	
05:30 PM	1	0	2		3	0	7		0	0	0		3	4	3		0	24	24	
05:45 PM	1	2	0		3	1	3		0	0	0		2	3	4		0	21	21	
<b>Total Volume</b>	<b>2</b>	<b>8</b>	<b>5</b>		<b>15</b>	<b>1</b>	<b>19</b>		<b>0</b>	<b>20</b>	<b>11</b>	<b>7</b>	<b>0</b>	<b>18</b>	<b>13</b>	<b>10</b>	<b>0</b>	<b>83</b>	<b>83</b>	
% App. Total	13.3	53.3	33.3		17.2	1.9	92.3	5.8		25.5	63.8	36.2	0	17.1	50	32.9		34.3	1.9	98.1
PHF	.500	.400	.625		.625	.250	.679	.000		.714	.550	.583	.000	.643	.813	.625		.750		.865

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 04\_PER\_Indian\_Ramona Expy PM  
 Site Code : 05118430  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Indian Avenue Southbound			Ramona Expressway Westbound			Indian Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	05:00 PM			05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	1	2	3	0	5	0	0	2	0	0	7
+15 mins.	0	5	1	6	0	4	0	0	0	0	0	2
+30 mins.	1	0	2	3	0	7	0	0	3	0	0	4
+45 mins.	1	2	0	3	1	3	0	4	2	0	0	5
Total Volume	2	8	5	15	1	19	0	20	7	0	0	18
% App. Total	13.3	53.3	33.3		61.1	38.9			23.3	43.3		33.3
PHF	.500	.400	.625	.625	.250	.679	.000	.714	.583	.813	.625	.750

Location: Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

	North Leg Indian Avenue	East Leg Ramona Expressway	South Leg Indian Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	1	0	0	2
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	1	0	0	3



Location: Perris  
 N/S: Indian Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Indian Avenue			Westbound Ramona Expressway			Northbound Indian Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	1	0	0	0	0	1	0	4

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Perris Boulevard Southbound							Harley Knox Boulevard Westbound							Perris Boulevard Northbound							Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
Total	22	576	309	102	907	0	188	128	87	316	148	1089	3	1	1240	220	27	25	13	272	203	2735	2938	68	689	757	68	689	757
08:00 AM	6	124	98	38	228	0	59	29	23	88	37	274	1	0	312	46	6	9	7	61	68	689	757						
08:15 AM	5	140	69	18	214	0	46	39	25	85	51	301	0	0	352	44	7	3	1	54	44	705	749						
08:30 AM	3	161	69	24	233	0	41	35	20	76	28	272	0	0	300	68	5	6	3	79	47	688	735						
08:45 AM	8	151	73	22	232	0	42	25	19	67	32	242	2	1	276	62	9	7	2	78	44	653	697						
Grand Total	39	1043	484	158	1566	1	246	177	115	424	205	1762	5	1	1972	373	48	50	25	471	299	4433	4732						
Approach %	2.5	66.6	30.9			0.2	58	41.7			10.4	89.4	0.3			79.2	10.2	10.6											
Total %	0.9	23.5	10.9		35.3	0	5.5	4		9.6	4.6	39.7	0.1		44.5	8.4	1.1	1.1		10.6	6.3	93.7							
% Passenger Vehicles	36	982	456		1621	1	238	170		522	195	1680	3		1878	350	33	37		441	0	0	4462						
% 2 Axle Vehicles	92.3	94.2	94.2		93	100	96.7	96		98.3	95.1	95.3	60	0	95.2	93.8	68.8	74		84	88.9	0	94.3						
% Large 2 Axle Vehicles	0	4.5	6		54	0	0	3		4	4	59	0	0	63	11	2	8		22	0	0	143						
% 3 Axle Vehicles	1	1	4		8	0	2	1		3	3	8	0	0	11	6	3	2		13	0	0	35						
% 4+ Axle Trucks	2.6	0.1	0.8		1.3	0	0.8	0.6		0.6	1.5	0.5	0	0	0.6	1.6	6.2	4		8	2.6	0	0.7						
% 4+ Axle Trucks	5.1	1.4	3.7		3.8	0	2.4	1.7		1.9	1.5	0.9	40	100	1.1	1.6	20.8	6		4	0	0	1.9						

Start Time	Perris Boulevard Southbound							Harley Knox Boulevard Westbound							Perris Boulevard Northbound							Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	6	124	98		228	0	59	29		88	37	274	1		312	46	6	9		61	68	689	757						
07:15 AM	5	140	69		214	0	46	39		85	51	301	0		352	44	7	3		54	44	705	749						
07:30 AM	3	161	69		233	0	41	35		76	28	272	0		300	68	5	6		79	47	688	735						
07:45 AM	8	151	73		232	0	42	25		67	32	242	2		276	62	9	7		78	44	653	697						
Total Volume	22	576	309		907	0	188	128		316	148	1089	3		1240	220	27	25		272	203	2735	2938						
% App. Total	2.4	63.5	34.1			0	59.5	40.5			11.9	87.8	0.2			80.9	9.9	9.2											
PHF	.688	.894	.788		.973	.000	.797	.821		.898	.725	.904	.375		.881	.809	.750	.694		.861									

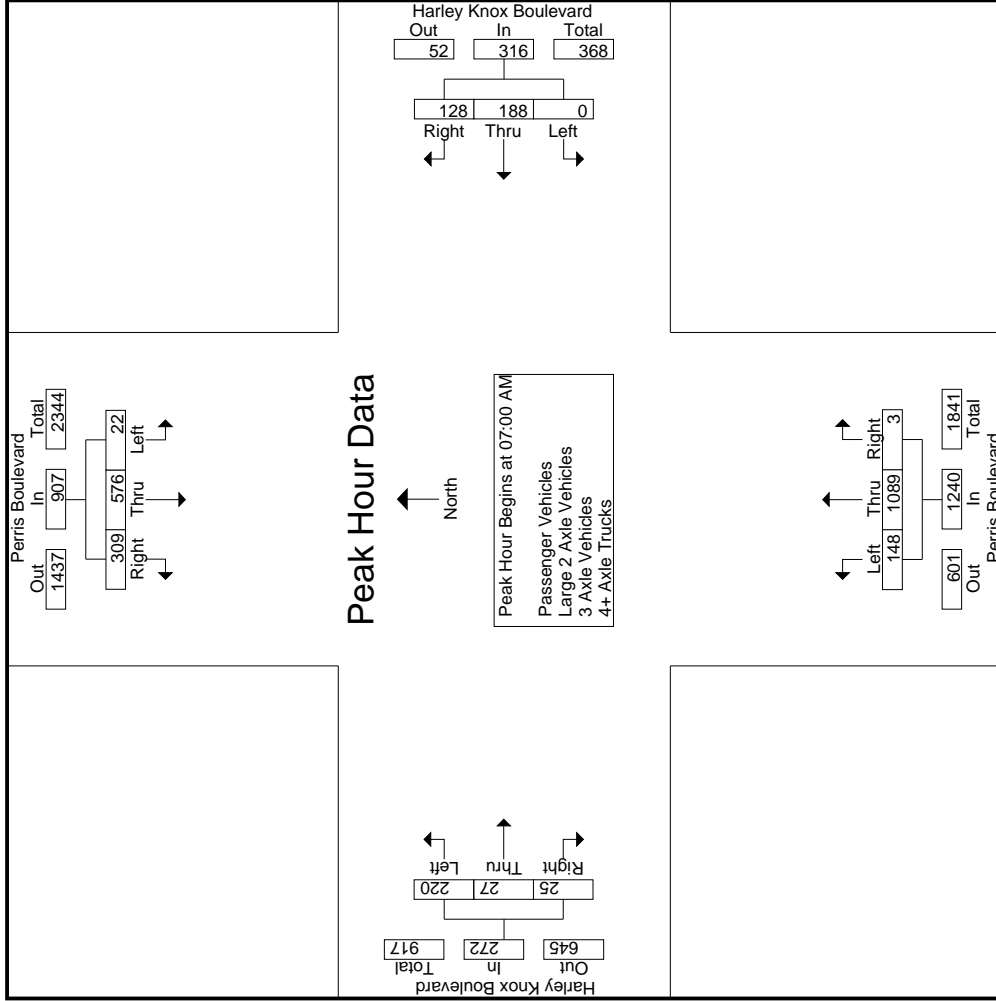
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
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File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:	07:00 AM			07:00 AM			07:00 AM			07:15 AM		
+0 mins.	6	124	98	0	59	29	37	274	1	44	7	3
+15 mins.	5	140	69	0	46	39	51	301	0	68	5	6
+30 mins.	3	161	69	0	41	35	28	272	0	62	9	7
+45 mins.	8	151	73	0	42	25	32	242	2	53	8	6
Total Volume	22	576	309	0	188	128	148	1089	3	227	29	22
% App. Total	2.4	63.5	34.1	0	59.5	40.5	11.9	87.8	0.2	81.7	10.4	7.9
PHF	.688	.894	.788	.000	.797	.821	.725	.904	.375	.835	.806	.786
			.973		.898				.881			.880

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	5	122	95	38	222	0	59	28	22	87	35	260	1	0	296	41	3	7	6	51	66	656	722
07:15 AM	4	129	67	16	200	0	44	38	25	82	51	292	0	0	343	42	6	3	1	51	42	676	718
07:30 AM	3	155	64	22	222	0	41	34	20	75	28	264	0	0	292	65	3	5	3	73	45	662	707
07:45 AM	8	146	69	20	223	0	42	24	18	66	31	240	1	0	272	58	8	3	1	69	39	630	669
<b>Total</b>	<b>20</b>	<b>552</b>	<b>295</b>	<b>96</b>	<b>867</b>	<b>0</b>	<b>186</b>	<b>124</b>	<b>85</b>	<b>310</b>	<b>145</b>	<b>1056</b>	<b>2</b>	<b>0</b>	<b>1203</b>	<b>206</b>	<b>20</b>	<b>18</b>	<b>11</b>	<b>244</b>	<b>192</b>	<b>2624</b>	<b>2816</b>
08:00 AM	6	114	60	24	180	0	15	11	7	26	19	205	0	0	224	51	4	5	3	60	34	490	524
08:15 AM	3	127	43	12	173	1	14	12	7	27	17	161	1	0	179	32	8	5	3	45	22	424	446
08:30 AM	4	87	34	11	125	0	16	15	10	31	8	119	0	0	127	34	0	3	1	37	22	320	342
08:45 AM	3	102	24	4	129	0	7	8	4	15	6	139	0	0	145	27	1	6	3	34	11	323	334
<b>Total</b>	<b>16</b>	<b>430</b>	<b>161</b>	<b>51</b>	<b>607</b>	<b>1</b>	<b>52</b>	<b>46</b>	<b>28</b>	<b>99</b>	<b>50</b>	<b>624</b>	<b>1</b>	<b>0</b>	<b>675</b>	<b>144</b>	<b>13</b>	<b>19</b>	<b>10</b>	<b>176</b>	<b>89</b>	<b>1557</b>	<b>1646</b>
<b>Grand Total</b>	<b>36</b>	<b>982</b>	<b>456</b>	<b>147</b>	<b>1474</b>	<b>1</b>	<b>238</b>	<b>170</b>	<b>113</b>	<b>409</b>	<b>195</b>	<b>1680</b>	<b>3</b>	<b>0</b>	<b>1878</b>	<b>350</b>	<b>33</b>	<b>37</b>	<b>21</b>	<b>420</b>	<b>281</b>	<b>4181</b>	<b>4462</b>
Apprch %	2.4	66.6	30.9		35.3	0.2	58.2	41.6		9.8	10.4	89.5	0.2		44.9	83.3	7.9	8.8		10	6.3	93.7	
Total %	0.9	23.5	10.9			0	5.7	4.1			4.7	40.2	0.1			8.4	0.8	0.9					

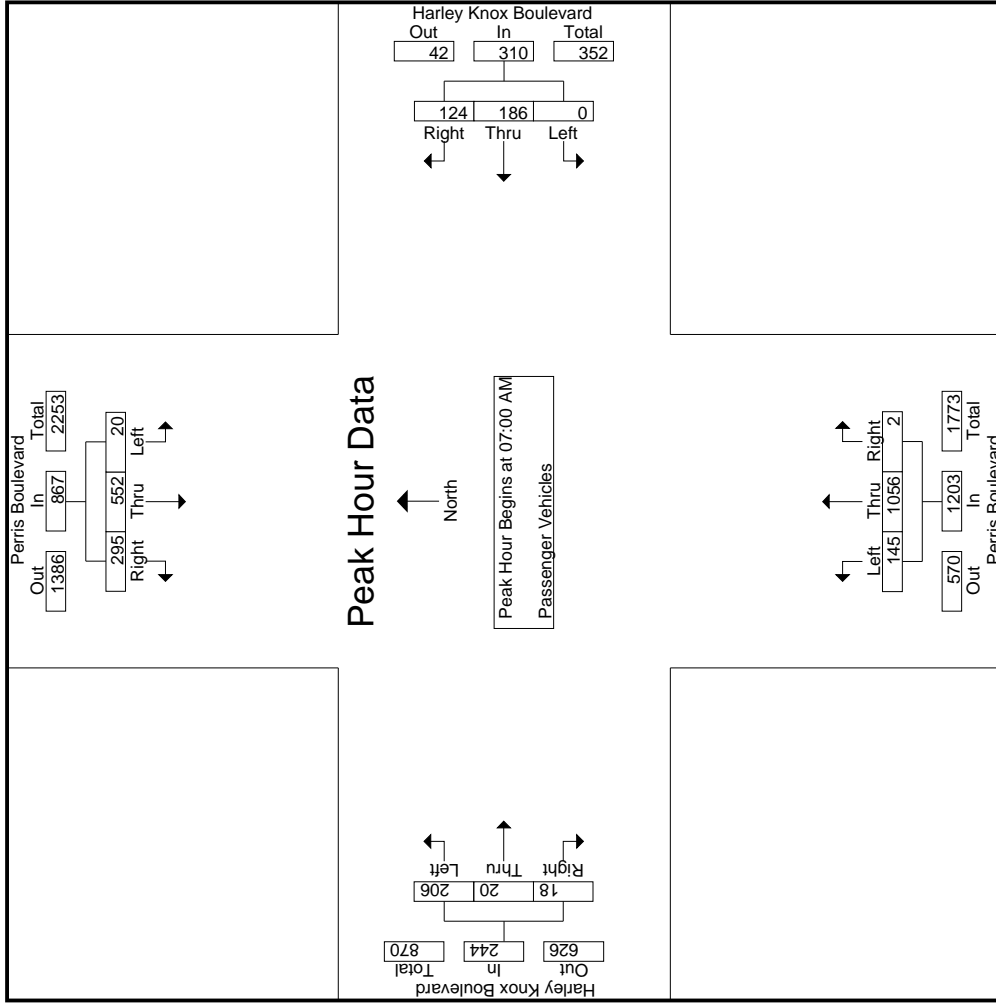
  

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	5	122	95	38	222	0	59	28	22	87	35	260	1	0	296	41	3	7	6	51	66	656	722
07:15 AM	4	129	67	16	200	0	44	38	25	82	51	292	0	0	343	42	6	3	1	51	42	676	718
07:30 AM	3	155	64	22	222	0	41	34	20	75	28	264	0	0	292	65	3	5	3	73	45	662	707
07:45 AM	8	146	69	20	223	0	42	24	18	66	31	240	1	0	272	58	8	3	1	69	39	630	669
<b>Total</b>	<b>20</b>	<b>552</b>	<b>295</b>	<b>96</b>	<b>867</b>	<b>0</b>	<b>186</b>	<b>124</b>	<b>85</b>	<b>310</b>	<b>145</b>	<b>1056</b>	<b>2</b>	<b>0</b>	<b>1203</b>	<b>206</b>	<b>20</b>	<b>18</b>	<b>11</b>	<b>244</b>	<b>192</b>	<b>2624</b>	<b>2816</b>
08:00 AM	6	114	60	24	180	0	15	11	7	26	19	205	0	0	224	51	4	5	3	60	34	490	524
08:15 AM	3	127	43	12	173	1	14	12	7	27	17	161	1	0	179	32	8	5	3	45	22	424	446
08:30 AM	4	87	34	11	125	0	16	15	10	31	8	119	0	0	127	34	0	3	1	37	22	320	342
08:45 AM	3	102	24	4	129	0	7	8	4	15	6	139	0	0	145	27	1	6	3	34	11	323	334
<b>Total</b>	<b>16</b>	<b>430</b>	<b>161</b>	<b>51</b>	<b>607</b>	<b>1</b>	<b>52</b>	<b>46</b>	<b>28</b>	<b>99</b>	<b>50</b>	<b>624</b>	<b>1</b>	<b>0</b>	<b>675</b>	<b>144</b>	<b>13</b>	<b>19</b>	<b>10</b>	<b>176</b>	<b>89</b>	<b>1557</b>	<b>1646</b>
<b>Grand Total</b>	<b>36</b>	<b>982</b>	<b>456</b>	<b>147</b>	<b>1474</b>	<b>1</b>	<b>238</b>	<b>170</b>	<b>113</b>	<b>409</b>	<b>195</b>	<b>1680</b>	<b>3</b>	<b>0</b>	<b>1878</b>	<b>350</b>	<b>33</b>	<b>37</b>	<b>21</b>	<b>420</b>	<b>281</b>	<b>4181</b>	<b>4462</b>
Apprch %	2.4	66.6	30.9		35.3	0.2	58.2	41.6		9.8	10.4	89.5	0.2		44.9	83.3	7.9	8.8		10	6.3	93.7	
Total %	0.9	23.5	10.9			0	5.7	4.1			4.7	40.2	0.1			8.4	0.8	0.9					

Counts Unlimited  
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City of Perris  
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 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
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File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound						
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total			
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																
	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	5	122	95	222	0	59	28	87	35	260	1	296	41	3	7	51
+15 mins.	4	129	67	200	0	44	38	82	51	292	0	343	42	6	3	51
+30 mins.	3	155	64	222	0	41	34	75	28	264	0	292	65	3	5	73
+45 mins.	8	146	69	223	0	42	24	66	31	240	1	272	58	8	3	69
Total Volume	20	552	295	867	0	186	124	310	145	1056	2	1203	206	20	18	244
% App. Total	2.3	63.7	34		0	60	40		12.1	87.8	0.2		84.4	8.2	7.4	
PHF	.625	.890	.776	.972	.000	.788	.816	.891	.711	.904	.500	.877	.792	.625	.643	.836

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	1	0	0	0	1	1	1	10	0	0	11	4	0	0	2	1	6	2	18	20
07:15 AM	0	8	0	0	8	0	0	0	0	0	7	0	0	0	7	1	0	0	0	1	0	0	16	16
07:30 AM	0	3	1	1	4	0	0	1	0	1	0	7	0	0	7	1	0	1	0	2	1	1	14	15
07:45 AM	0	5	2	1	7	0	0	0	0	0	1	2	0	0	3	1	1	3	0	5	1	15	16	
<b>Total</b>	<b>0</b>	<b>16</b>	<b>3</b>	<b>2</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>7</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>14</b>	<b>4</b>	<b>63</b>	<b>67</b>	
08:00 AM	0	5	1	1	6	0	0	0	0	0	8	0	0	0	8	0	1	0	0	1	1	15	16	
08:15 AM	0	8	0	0	8	0	0	1	0	1	15	0	0	0	16	3	0	0	0	3	0	28	28	
08:30 AM	0	10	1	0	11	0	0	0	0	0	6	0	0	0	6	1	0	1	0	2	0	19	19	
08:45 AM	0	6	1	0	7	0	0	0	0	0	4	0	0	0	5	0	0	1	0	1	0	13	13	
<b>Total</b>	<b>0</b>	<b>29</b>	<b>3</b>	<b>1</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>75</b>	<b>76</b>	
<b>Grand Total</b>	<b>0</b>	<b>45</b>	<b>6</b>	<b>3</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>11</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>21</b>	<b>5</b>	<b>138</b>	<b>143</b>	
Approch %	0	88.2	11.8			0	0	100		6.3	93.7	0	0	0	45.7	52.4	9.5	38.1		15.2	3.5	96.5		
Total %	0	32.6	4.3		37	0	0	2.2		2.2	2.9	42.8	0	0	45.7	8	1.4	5.8		15.2		96.5		

3.1-352

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	10	0	0	11	4	0	0	2	1	6	2	18	20
07:15 AM	0	8	0	0	8	0	0	0	0	0	7	0	0	0	7	1	0	0	0	1	0	0	16	16
07:30 AM	0	3	1	1	4	0	0	1	0	1	0	7	0	0	7	1	0	1	0	2	1	1	14	15
07:45 AM	0	5	2	1	7	0	0	0	0	0	1	2	0	0	3	1	1	3	0	5	1	15	16	
<b>Total Volume</b>	<b>0</b>	<b>16</b>	<b>3</b>	<b>2</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>7</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>14</b>	<b>4</b>	<b>63</b>	<b>67</b>	
% App. Total	0	84.2	15.8		37	0	0	100		2.2	7.1	92.9	0	0	45.7	50	7.1	42.9		15.2		96.5		
PHF	.000	.500	.375		.594	.000	.000	.500		.500	.500	.650	.000	.000	.636	.438	.250	.500		.583		.875		

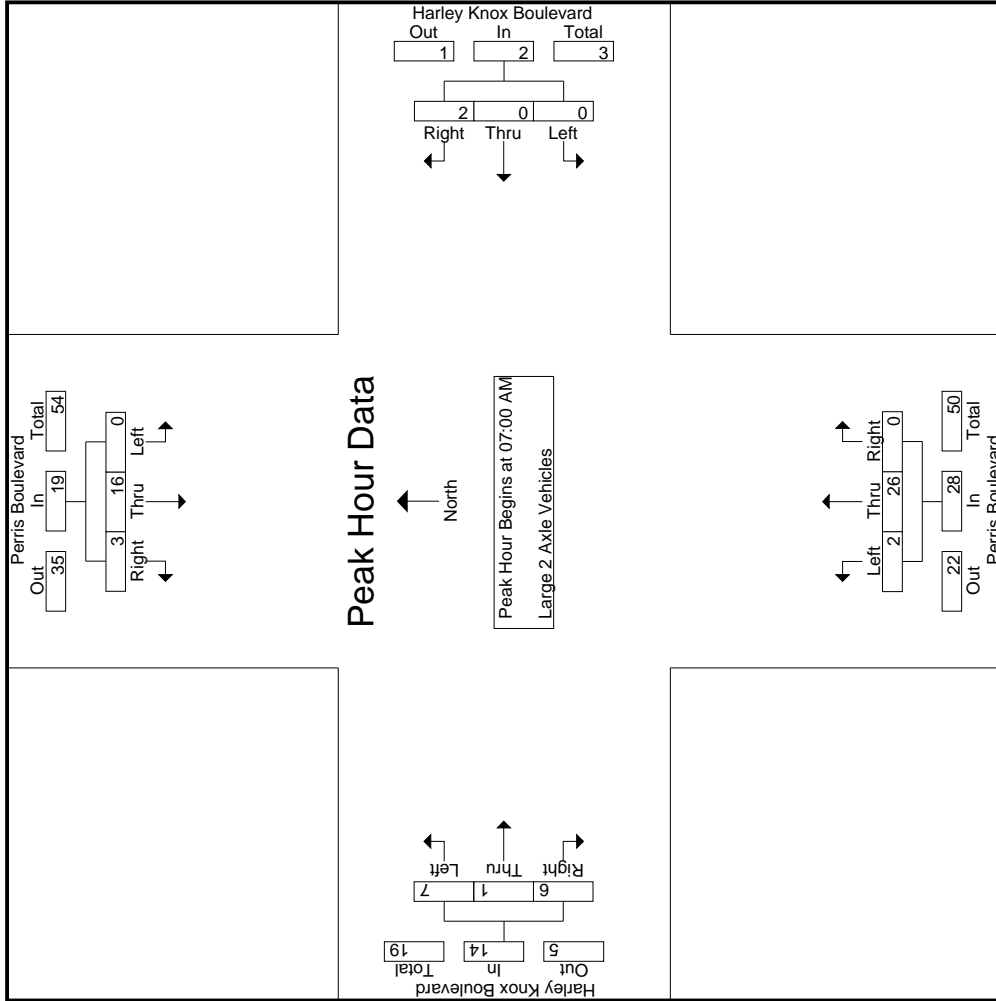
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	0	0	0	1	1	10	0	4	0	2
+15 mins.	0	8	0	0	0	0	0	7	0	1	0	0
+30 mins.	0	3	1	0	0	1	0	7	0	1	0	1
+45 mins.	0	5	2	0	0	0	1	2	0	1	1	3
Total Volume	0	16	3	0	0	2	2	26	0	7	1	6
% App. Total	0	84.2	15.8	0	0	100	7.1	92.9	0	50	7.1	42.9
PHF	.000	.500	.375	.000	.000	.500	.500	.650	.000	.438	.250	.500

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 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Harley Knox Boulevard Westbound				Perris Boulevard Northbound				Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	3
07:15 AM	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
Total	0	1	2	1	0	1	0	0	1	1	1	0	2	2	1	1	1	1	1	1	4	2	10	12
08:00 AM	0	0	0	0	0	0	0	0	1	3	0	0	4	1	0	1	1	0	0	0	2	1	7	8
08:15 AM	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
08:45 AM	0	0	2	1	0	0	1	0	1	0	0	0	3	1	2	0	0	0	0	0	3	1	9	10
Total	1	0	2	1	0	1	0	0	2	7	0	0	9	4	2	1	1	1	1	7	2	21	23	23
Grand Total	1	1	4	2	0	2	1	0	3	8	0	0	11	6	3	2	2	11	4	31	4	31	35	35
Approch %	16.7	16.7	66.7		0	66.7	33.3		27.3	72.7	0		54.5	19.4	27.3	18.2		35.5	11.4	88.6				
Total %	3.2	3.2	12.9		0	6.5	3.2		9.7	25.8	0		35.5	19.4	9.7	6.5		35.5	11.4	88.6				

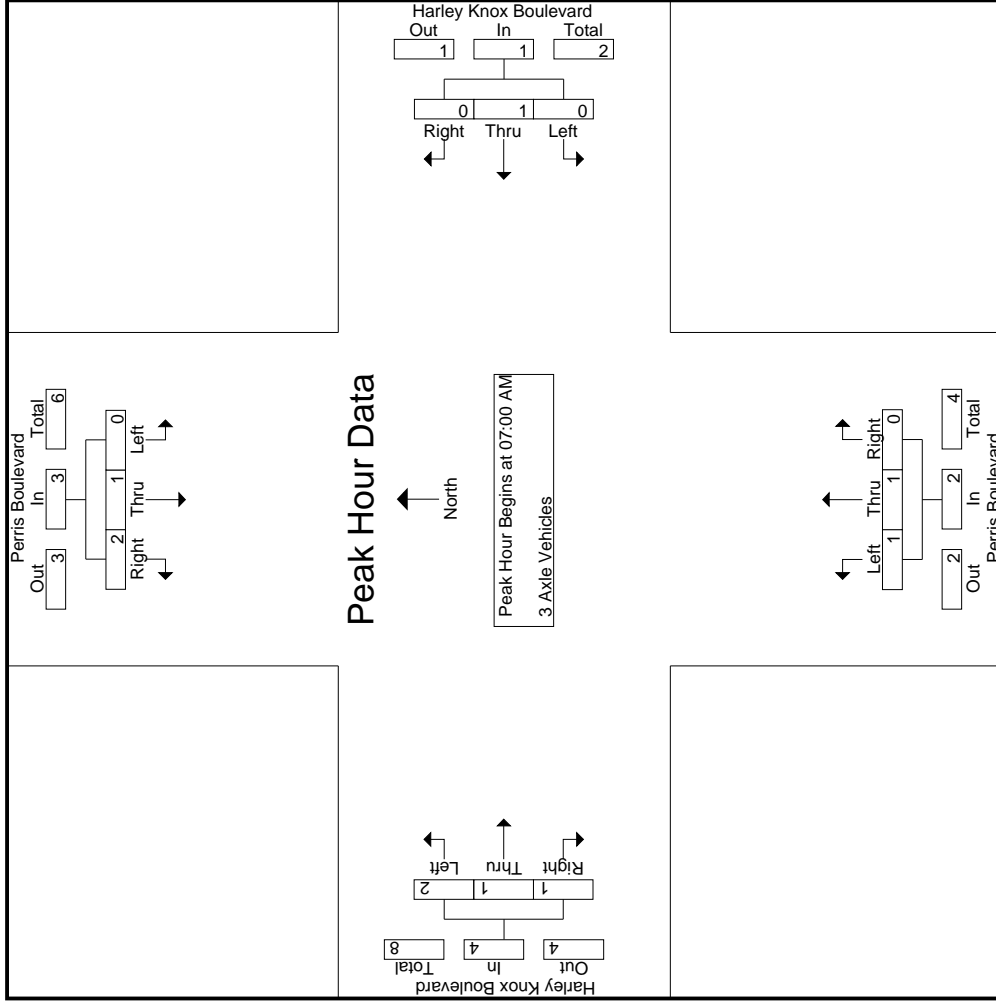
Start Time	Perris Boulevard Southbound				Harley Knox Boulevard Westbound				Perris Boulevard Northbound				Harley Knox Boulevard Eastbound												
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	App. Total	App. Total	Int. Total	
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	1	2	0	1	0	0	1	1	1	0	2	2	1	1	2	1	1	1	4	2	4	10	10
% App. Total	0	0	33.3	66.7	0	100	0	0	.250	.250	.250	.000	.250	.250	.250	.250	.500	.250	.250	.250	.500	.500	.833	.833	
PHF	.000	.250	.500	.375	.000	.250	.000	.250	.250	.250	.250	.000	.250	.250	.250	.250	.500	.250	.250	.250	.500	.500	.833	.833	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	1	0	0	0	0	0	0	1	0	0
+15 mins.	0	1	1	0	1	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	2	0	1	0	1	0	0	1	1	1
% App. Total	0	33.3	66.7	0	100	0	50	50	0	50	25	25
PHF	.000	.250	.500	.000	.250	.000	.250	.000	.000	.500	.250	.250

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total
07:00 AM	1	2	2	0	5	0	0	0	0	0	0	3	1	3	0	0	4	0	1	3	0	0	4	12
07:15 AM	1	2	1	1	4	0	0	1	1	0	2	2	2	2	0	0	2	1	1	1	0	0	2	10
07:30 AM	0	3	4	1	7	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	0	0	2	10
07:45 AM	0	0	2	1	2	0	0	0	1	1	1	1	2	0	0	0	2	3	0	0	0	0	2	6
<b>Total</b>	<b>2</b>	<b>7</b>	<b>9</b>	<b>3</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>38</b>
08:00 AM	0	1	3	2	4	0	0	3	0	0	3	2	1	3	0	0	4	2	1	3	0	0	4	13
08:15 AM	0	1	1	1	2	0	0	1	0	0	1	5	0	1	1	1	2	2	1	1	1	1	2	10
08:30 AM	0	1	1	0	2	0	0	1	0	0	1	4	0	1	1	0	2	0	1	1	1	0	2	9
08:45 AM	0	5	4	0	9	0	0	0	1	0	1	2	0	0	1	0	1	0	0	0	1	0	1	13
<b>Total</b>	<b>0</b>	<b>8</b>	<b>9</b>	<b>3</b>	<b>17</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>9</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>45</b>
<b>Grand Total</b>	<b>2</b>	<b>15</b>	<b>18</b>	<b>6</b>	<b>35</b>	<b>0</b>	<b>3</b>	<b>15</b>	<b>2</b>	<b>1</b>	<b>20</b>	<b>20</b>	<b>6</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>19</b>	<b>9</b>	<b>9</b>	<b>13</b>	<b>3</b>	<b>1</b>	<b>19</b>	<b>83</b>
<b>Approch %</b>	<b>5.7</b>	<b>42.9</b>	<b>51.4</b>				<b>15</b>	<b>75</b>	<b>10</b>		<b>24.1</b>	<b>24.1</b>	<b>31.6</b>	<b>52.6</b>	<b>15.8</b>		<b>22.9</b>	<b>9.8</b>	<b>9.8</b>	<b>90.2</b>	<b>3.6</b>		<b>90.2</b>	
<b>Total %</b>	<b>2.4</b>	<b>18.1</b>	<b>21.7</b>		<b>42.2</b>	<b>0</b>	<b>3.6</b>	<b>18.1</b>	<b>2.4</b>		<b>10.8</b>	<b>10.8</b>	<b>7.2</b>	<b>12</b>	<b>3.6</b>		<b>22.9</b>	<b>9.8</b>	<b>9.8</b>	<b>90.2</b>	<b>3.6</b>		<b>90.2</b>	

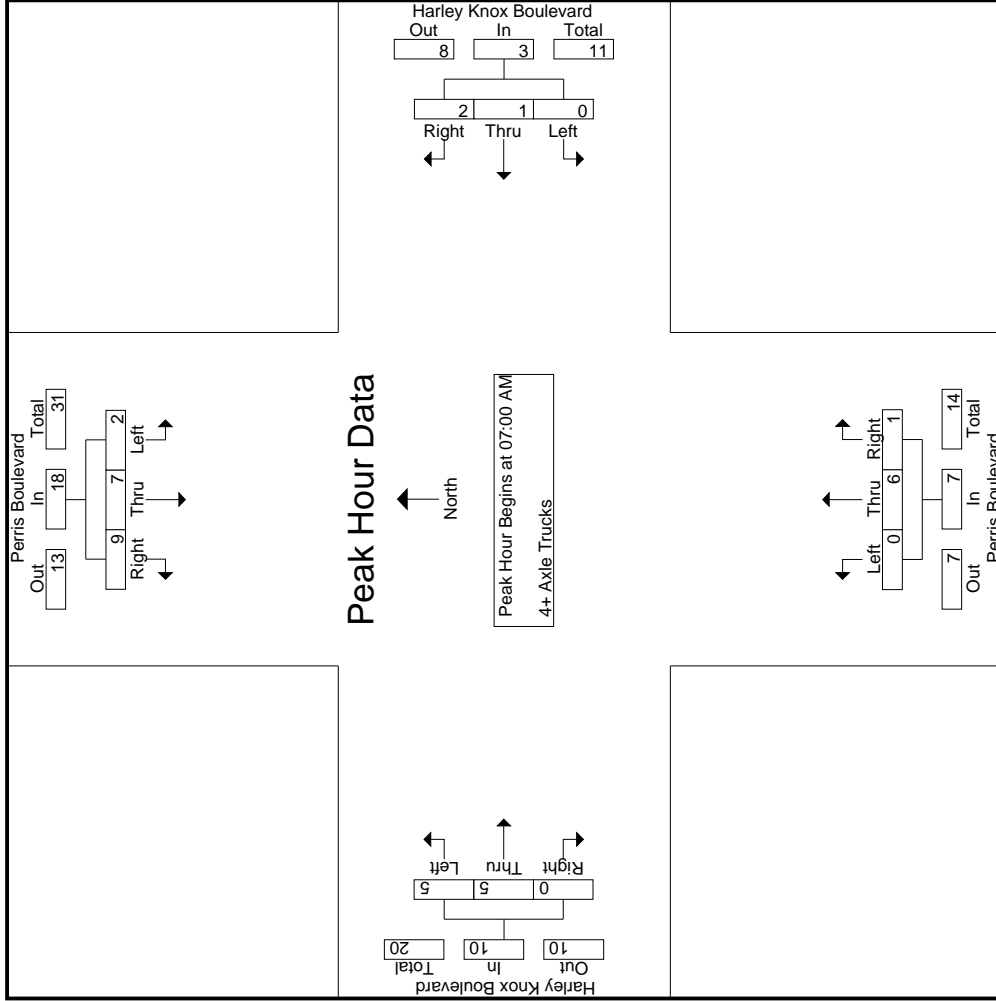
  

Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	1	2	2	0	5	0	0	0	0	0	0	3	1	3	0	0	4	0	1	3	0	0	4	12
Peak Hour for Entire Intersection Begins at 07:00 AM	1	2	1	1	4	0	0	1	1	0	2	2	2	2	0	0	2	1	1	1	0	0	2	10
07:00 AM	0	3	4	1	7	0	0	0	0	0	0	1	1	1	0	0	2	1	1	1	0	0	2	10
07:15 AM	0	0	2	1	2	0	0	0	1	1	1	1	2	0	0	0	2	3	0	0	0	0	2	6
07:30 AM	2	7	9	3	18	0	0	1	2	1	3	7	5	5	0	0	10	5	3	5	0	0	10	38
07:45 AM	0	0	2	1	2	0	0	0	1	1	1	1	2	0	0	0	2	3	0	0	0	0	2	6
<b>Total Volume</b>	<b>2</b>	<b>7</b>	<b>9</b>	<b>3</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>38</b>
<b>% App. Total</b>	<b>11.1</b>	<b>38.9</b>	<b>50</b>		<b>50</b>	<b>0</b>	<b>33.3</b>	<b>66.7</b>	<b>14.3</b>		<b>85.7</b>	<b>14.3</b>	<b>50</b>	<b>50</b>	<b>0</b>		<b>50</b>	<b>0</b>	<b>50</b>	<b>50</b>	<b>0</b>		<b>50</b>	<b>38</b>
<b>PHF</b>	<b>.500</b>	<b>.583</b>	<b>.563</b>		<b>.643</b>	<b>.000</b>	<b>.250</b>	<b>.500</b>	<b>.375</b>		<b>.250</b>	<b>.250</b>	<b>.000</b>	<b>.583</b>	<b>.625</b>		<b>.583</b>	<b>.625</b>	<b>.625</b>	<b>.417</b>	<b>.000</b>		<b>.625</b>	<b>.792</b>

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	1	2	2	0	0	0	0	0	0	0	3	0
+15 mins.	1	2	1	0	1	1	0	2	0	1	1	0
+30 mins.	0	3	4	0	0	0	0	1	0	1	1	0
+45 mins.	0	0	2	0	0	1	0	0	1	2	0	0
Total Volume	2	7	9	0	1	2	0	6	1	5	5	0
% App. Total	11.1	38.9	50	0	33.3	66.7	0	85.7	14.3	50	50	0
PHF	.500	.563	.563	.000	.250	.500	.000	.500	.250	.625	.417	.000



Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total
04:00 PM	20	225	63	27	308	308	0	10	7	2	17	17	8	173	0	0	181	181	67	26	16	6	109	109
04:15 PM	7	251	56	13	314	314	0	11	5	3	16	16	5	167	3	1	175	175	59	32	15	9	106	106
04:30 PM	37	308	63	26	408	408	1	9	19	14	29	29	4	197	0	0	201	201	48	29	18	11	95	95
04:45 PM	22	259	58	11	339	339	1	6	21	15	28	28	3	212	2	0	217	217	54	28	15	11	97	97
<b>Total</b>	<b>86</b>	<b>1043</b>	<b>240</b>	<b>77</b>	<b>1369</b>	<b>1369</b>	<b>2</b>	<b>36</b>	<b>52</b>	<b>34</b>	<b>90</b>	<b>90</b>	<b>20</b>	<b>749</b>	<b>5</b>	<b>1</b>	<b>774</b>	<b>774</b>	<b>228</b>	<b>115</b>	<b>64</b>	<b>37</b>	<b>407</b>	<b>407</b>
05:00 PM	21	252	67	18	340	340	1	10	10	6	21	21	5	182	0	0	187	187	55	26	19	10	100	100
05:15 PM	21	252	63	15	336	336	1	9	13	6	23	23	3	181	1	0	185	185	45	30	19	14	94	94
05:30 PM	18	308	53	13	379	379	0	7	11	8	18	18	5	190	0	0	195	195	56	30	15	7	101	101
05:45 PM	16	224	40	15	280	280	2	9	20	12	31	31	4	156	0	0	160	160	50	27	15	8	92	92
<b>Total</b>	<b>76</b>	<b>1036</b>	<b>223</b>	<b>61</b>	<b>1335</b>	<b>1335</b>	<b>4</b>	<b>35</b>	<b>54</b>	<b>32</b>	<b>93</b>	<b>93</b>	<b>17</b>	<b>709</b>	<b>1</b>	<b>0</b>	<b>727</b>	<b>727</b>	<b>206</b>	<b>113</b>	<b>68</b>	<b>39</b>	<b>387</b>	<b>387</b>
<b>Grand Total</b>	<b>162</b>	<b>2079</b>	<b>463</b>	<b>138</b>	<b>2704</b>	<b>2704</b>	<b>6</b>	<b>71</b>	<b>106</b>	<b>66</b>	<b>183</b>	<b>183</b>	<b>37</b>	<b>1458</b>	<b>6</b>	<b>1</b>	<b>1501</b>	<b>1501</b>	<b>434</b>	<b>228</b>	<b>132</b>	<b>76</b>	<b>794</b>	<b>794</b>
<b>Approch %</b>	<b>6</b>	<b>76.9</b>	<b>17.1</b>				<b>3.3</b>	<b>38.8</b>	<b>57.9</b>				<b>2.5</b>	<b>97.1</b>	<b>0.4</b>				<b>54.7</b>	<b>28.7</b>	<b>16.6</b>			
<b>Total %</b>	<b>3.1</b>	<b>40.1</b>	<b>8.9</b>				<b>0.1</b>	<b>1.4</b>	<b>2</b>				<b>0.7</b>	<b>28.1</b>	<b>0.1</b>				<b>8.4</b>	<b>4.4</b>	<b>2.5</b>			
Passenger Vehicles	154	2011	429	99	2725	2725	5	59	99	93.9	225	225	30	1405	4	0	1439	1439	419	221	129	100	845	845
Large 2 Axle Vehicles	95.1	96.7	92.7	94.9	95.9	95.9	83.3	83.1	93.4	93.9	90.4	90.4	81.1	96.4	66.7	0	95.8	95.8	96.5	96.9	97.7	100	97.1	97.1
3 Axle Vehicles	0	52	6	0.7	59	59	0	0	1	0	1	1	3	26	0	0	29	29	3	3	0	0	6	6
4+ Axle Trucks	0	2.5	1.3	0.7	2.1	2.1	0	0	0.9	0	0.4	0.4	8.1	1.8	0	0	1.9	1.9	0.7	1.3	0	0	0.7	0.7
% Large 2 Axle Vehicles	3	3	4		11	11	0	2	4	4.5	9	9	2	5	0	0	7	7	7	1	1	1	9	9
% 3 Axle Vehicles	1.9	0.1	0.9	0.7	0.4	0.4	0	2.8	3.8	4.5	3.6	3.6	5.4	0.3	0	0	0.5	0.5	1.6	0.4	0.8	0	1	1
% 4+ Axle Trucks	5	13	24		47	47	1	10	2	1.5	14	14	2	22	2	100	27	27	5	3	2	0	10	10
% 4+ Axle Trucks	3.1	0.6	5.2	3.6	1.7	1.7	16.7	14.1	1.9	1.5	5.6	5.6	5.4	1.5	33.3	100	1.8	1.8	1.2	1.3	1.5	0	1.1	1.1

Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total
04:30 PM	37	308	63		408	408	1	9	19		29	29	4	197	0		197	197	0	201	18		219	219
04:45 PM	22	259	58		339	339	1	6	21		28	28	3	212	2		214	214	2	217	15		219	219
05:00 PM	21	252	63		340	340	1	10	10		21	21	5	182	0		187	187	0	187	19		187	187
05:15 PM	21	252	63		340	340	1	10	10		21	21	5	182	0		187	187	0	187	19		187	187
<b>Total Volume</b>	<b>101</b>	<b>1071</b>	<b>251</b>		<b>1423</b>	<b>1423</b>	<b>4</b>	<b>34</b>	<b>63</b>		<b>101</b>	<b>101</b>	<b>15</b>	<b>772</b>	<b>3</b>		<b>775</b>	<b>775</b>	<b>3</b>	<b>790</b>	<b>71</b>		<b>861</b>	<b>861</b>
<b>% App. Total</b>	<b>7.1</b>	<b>75.3</b>	<b>17.6</b>		<b>17.6</b>	<b>17.6</b>	<b>4</b>	<b>33.7</b>	<b>62.4</b>		<b>0.4</b>	<b>0.4</b>	<b>1.9</b>	<b>97.7</b>	<b>0.4</b>		<b>0.4</b>	<b>0.4</b>	<b>52.3</b>	<b>29.3</b>	<b>18.4</b>		<b>18.4</b>	<b>18.4</b>
<b>PHF</b>	<b>.682</b>	<b>.869</b>	<b>.937</b>		<b>.872</b>	<b>.872</b>	<b>1.00</b>	<b>.850</b>	<b>.750</b>		<b>.871</b>	<b>.871</b>	<b>.750</b>	<b>.910</b>	<b>.375</b>		<b>.910</b>	<b>.910</b>	<b>.918</b>	<b>.942</b>	<b>.934</b>		<b>.965</b>	<b>.965</b>

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

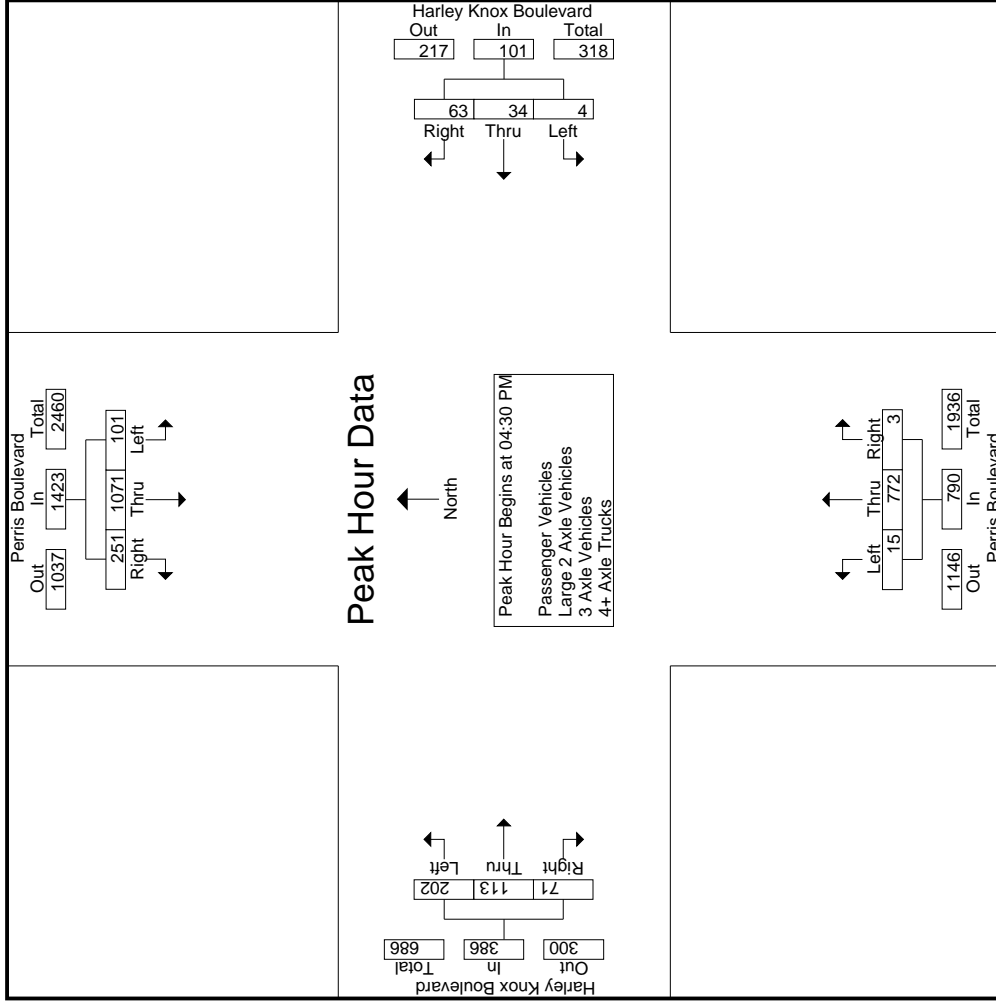
Peak Hour for Entire Intersection Begins at 04:30 PM

Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total	Left	Thru	Right	RTOR	App. Total	Inclu. Total
04:30 PM	37	308	63		408	408	1	9	19		29	29	4	197	0		197	197	0	201	18		219	219
04:45 PM	22	259	58		339	339	1	6	21		28	28	3	212	2		214	214	2	217	15		219	219
05:00 PM	21	252	63		340	340	1	10	10		21	21	5	182	0		187	187	0	187	19		187	187
05:15 PM	21	252	63		340	340	1	10	10		21	21	5	182	0		187	187	0	187	19		187	187
<b>Total Volume</b>	<b>101</b>	<b>1071</b>	<b>251</b>		<b>1423</b>	<b>1423</b>	<b>4</b>	<b>34</b>	<b>63</b>		<b>101</b>	<b>101</b>	<b>15</b>	<b>772</b>	<b>3</b>		<b>775</b>	<b>775</b>	<b>3</b>	<b>790</b>	<b>71</b>		<b>861</b>	<b>861</b>
<b>% App. Total</b>	<b>7.1</b>	<b>75.3</b>	<b>17.6</b>		<b>17.6</b>	<b>17.6</b>	<b>4</b>	<b>33.7</b>	<b>62.4</b>		<b>0.4</b>	<b>0.4</b>	<b>1.9</b>	<b>97.7</b>	<b>0.4</b>		<b>0.4</b>	<b>0.4</b>	<b>52.3</b>	<b>29.3</b>	<b>18.4</b>		<b>18.4</b>	<b>18.4</b>
<b>PHF</b>	<b>.682</b>	<b>.869</b>	<b>.937</b>		<b>.872</b>	<b>.872</b>	<b>1.00</b>	<b>.850</b>	<b>.750</b>		<b>.871</b>	<b>.871</b>	<b>.750</b>	<b>.910</b>	<b>.375</b>		<b>.910</b>	<b>.910</b>	<b>.918</b>	<b>.942</b>	<b>.934</b>		<b>.965</b>	<b>.965</b>

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	App. Total			App. Total			App. Total			App. Total			
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:30 PM			04:30 PM			04:30 PM			04:00 PM			
+0 mins.	37	308	63	1	9	19	4	197	0	201	67	26	109
+15 mins.	22	259	58	1	6	21	3	212	2	217	59	32	15
+30 mins.	21	252	67	1	10	10	5	182	0	187	48	29	95
+45 mins.	21	252	63	1	9	13	3	181	1	185	54	28	97
Total Volume	101	1071	251	4	34	63	15	772	3	790	228	115	64
% App. Total	7.1	75.3	17.6	4	33.7	62.4	1.9	97.7	0.4	56	28.3	15.7	407
PHF	.682	.869	.937	1.000	.850	.750	.750	.910	.375	.910	.851	.898	.933

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 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	19	212	61	27	292	0	9	7	2	16	6	166	0	0	172	65	24	14	6	103	35	583	618
04:15 PM	6	242	50	9	298	0	7	4	3	11	5	158	2	0	165	56	28	14	9	98	21	572	593
04:30 PM	34	302	58	26	394	1	7	18	14	26	4	193	0	0	197	45	29	18	11	92	51	709	760
04:45 PM	21	251	56	11	328	0	6	21	15	27	2	200	2	0	204	50	28	15	11	93	37	652	689
<b>Total</b>	<b>80</b>	<b>1007</b>	<b>225</b>	<b>73</b>	<b>1312</b>	<b>1</b>	<b>29</b>	<b>50</b>	<b>34</b>	<b>80</b>	<b>17</b>	<b>717</b>	<b>4</b>	<b>0</b>	<b>738</b>	<b>216</b>	<b>109</b>	<b>61</b>	<b>37</b>	<b>386</b>	<b>144</b>	<b>2516</b>	<b>2660</b>
05:00 PM	20	245	61	18	326	1	8	7	4	16	4	176	0	0	180	53	26	19	10	98	32	620	652
05:15 PM	21	244	58	13	323	0	6	12	5	19	2	178	0	0	180	45	30	19	14	94	32	616	648
05:30 PM	18	298	48	13	364	0	7	10	7	17	4	184	0	0	188	55	29	15	7	99	27	668	695
05:45 PM	15	217	37	14	269	2	9	20	12	31	3	150	0	0	153	50	27	15	8	92	34	545	579
<b>Total</b>	<b>74</b>	<b>1004</b>	<b>204</b>	<b>58</b>	<b>1282</b>	<b>4</b>	<b>30</b>	<b>49</b>	<b>28</b>	<b>83</b>	<b>13</b>	<b>688</b>	<b>0</b>	<b>0</b>	<b>701</b>	<b>203</b>	<b>112</b>	<b>68</b>	<b>39</b>	<b>363</b>	<b>125</b>	<b>2449</b>	<b>2574</b>
<b>Grand Total</b>	<b>154</b>	<b>2011</b>	<b>429</b>	<b>131</b>	<b>2594</b>	<b>5</b>	<b>59</b>	<b>99</b>	<b>62</b>	<b>163</b>	<b>30</b>	<b>1405</b>	<b>4</b>	<b>0</b>	<b>1439</b>	<b>419</b>	<b>221</b>	<b>129</b>	<b>76</b>	<b>769</b>	<b>269</b>	<b>4965</b>	<b>5234</b>
Approch %	5.9	77.5	16.5			3.1	36.2	60.7			2.1	97.6	0.3		29	54.5	28.7	16.8		15.5	5.1	94.9	
Total %	3.1	40.5	8.6		52.2	0.1	1.2	2		3.3	0.6	28.3	0.1		29	8.4	4.5	2.6		15.5			

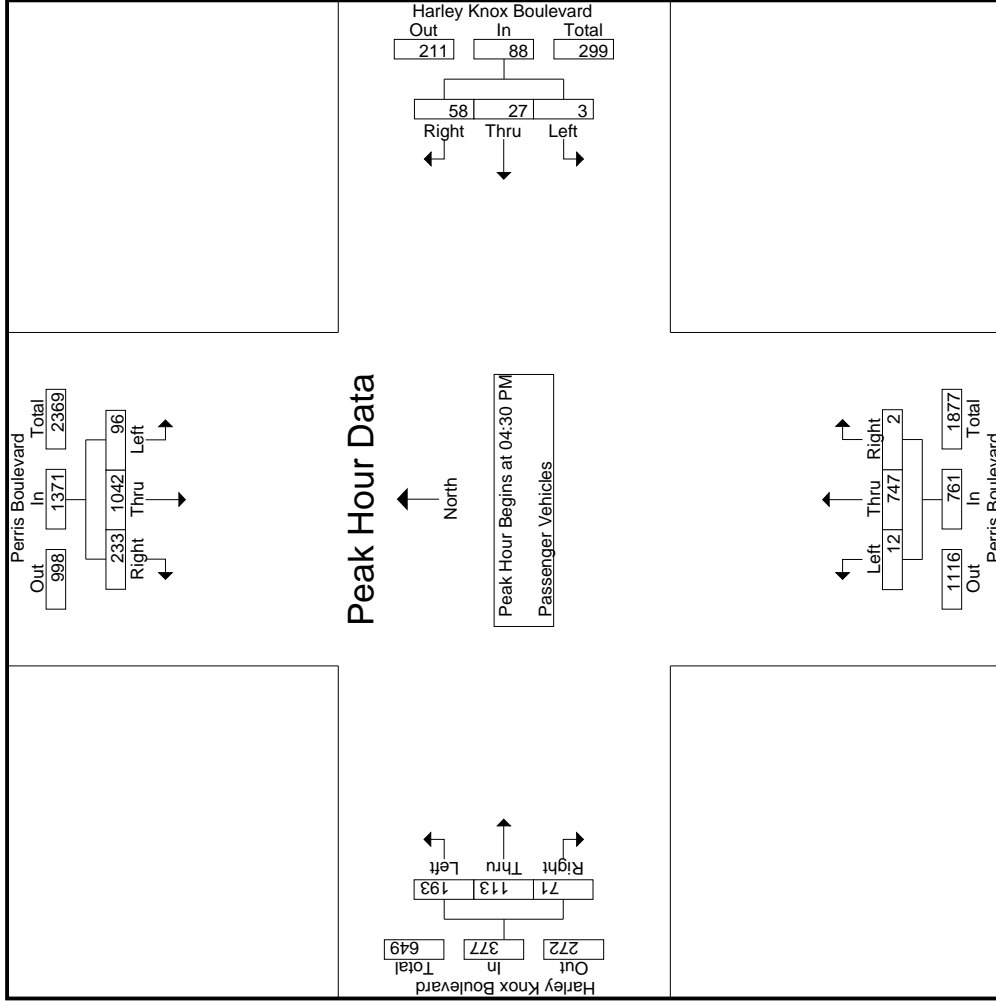
  

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:30 PM	34	302	58		394	1	7	18		26	4	193	0		197	45	29	18		92	709		
04:45 PM	21	251	56		328	0	6	21		27	2	200	2		204	50	28	15		93	689		
05:00 PM	20	245	61		326	1	8	7		16	4	176	0		180	53	26	19		98	652		
05:15 PM	21	244	58		323	0	6	12		19	2	178	0		180	45	30	19		94	648		
05:30 PM	18	298	48		364	0	7	10		17	4	184	0		188	55	29	15		99	668		
05:45 PM	15	217	37		269	2	9	20		31	3	150	0		153	50	27	15		92	545		
<b>Total Volume</b>	<b>96</b>	<b>1042</b>	<b>233</b>		<b>1371</b>	<b>3</b>	<b>27</b>	<b>58</b>		<b>88</b>	<b>12</b>	<b>747</b>	<b>2</b>		<b>761</b>	<b>193</b>	<b>113</b>	<b>71</b>		<b>377</b>	<b>2597</b>		
% App. Total	7	76	17			3.4	30.7	65.9			1.6	98.2	0.3			51.2	30	18.8					
PHF	.706	.863	.955		.870	.750	.844	.690		.815	.750	.934	.250		.933	.910	.942	.934				.962	.916

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File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
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City of Perris  
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File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:30 PM													
+0 mins.	34	302	58	394	1	7	18	26	4	193	0	197	45	92
+15 mins.	21	251	56	328	0	6	21	27	2	200	2	204	50	93
+30 mins.	20	245	61	326	1	8	7	16	4	176	0	180	53	98
+45 mins.	21	244	58	323	1	6	12	19	2	178	0	180	45	94
Total Volume	96	1042	233	1371	3	27	58	88	12	747	2	761	193	377
% App. Total	7	76	17	870	3.4	30.7	65.9	815	1.6	98.2	0.3	933	51.2	18.8
PHF	.706	.863	.955	.870	.750	.844	.690	.815	.750	.934	.250	.933	.910	.934

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound				Harley Knox Boulevard Westbound				Perris Boulevard Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	11	0	0	0	0	0	0	2	6	0	0	1	0	0	0	8	0	0	20
04:15 PM	0	7	2	1	0	1	0	0	0	5	0	0	5	3	0	0	5	1	20	21
04:30 PM	0	6	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	8
04:45 PM	0	7	1	0	0	0	0	0	0	7	0	0	7	0	0	0	7	0	15	15
<b>Total</b>	<b>0</b>	<b>31</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>63</b>	<b>64</b>
05:00 PM	0	6	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	11	11
05:15 PM	0	5	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6	6
05:30 PM	0	6	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7	7
05:45 PM	0	4	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7	7
<b>Total</b>	<b>0</b>	<b>21</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>31</b>
<b>Grand Total</b>	<b>0</b>	<b>52</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>94</b>	<b>95</b>
Approch %	0	89.7	10.3		0	100			10.3	89.7	0		30.9	50	50		6.4	1.1	98.9	
Total %	0	55.3	6.4		0	1.1			3.2	27.7	0		30.9	3.2	3.2		6.4	1.1	98.9	

3.1-367

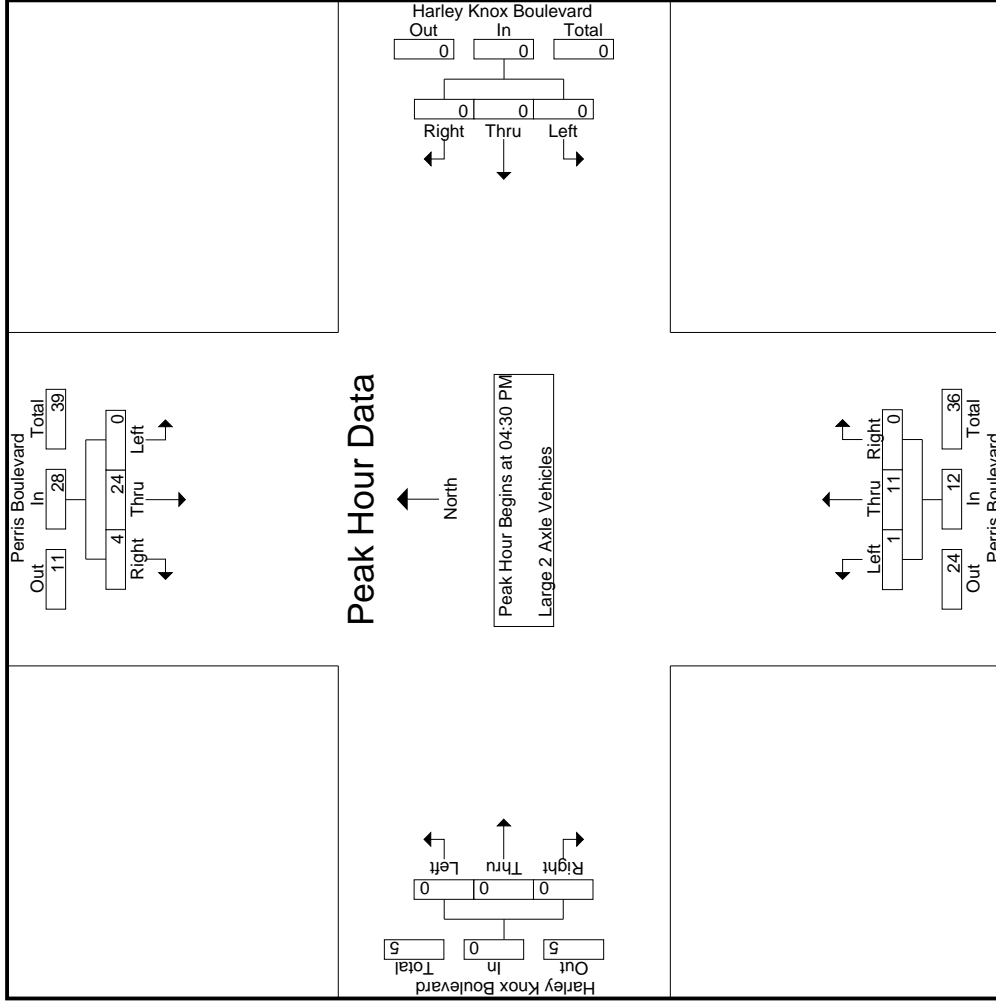
Start Time	Perris Boulevard Southbound				Harley Knox Boulevard Westbound				Perris Boulevard Northbound				Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	6	1		0	0	0		0	0	0		1	0	0		0	0	0	8
04:45 PM	0	7	1		0	0	0		0	0	0		7	0	0		7	0	0	15
05:00 PM	0	6	2		0	0	0		1	2	0		2	0	0		3	0	0	11
05:15 PM	0	5	0		0	0	0		0	0	0		0	0	0		1	0	0	6
<b>Total Volume</b>	<b>0</b>	<b>24</b>	<b>4</b>		<b>0</b>	<b>0</b>	<b>0</b>		<b>1</b>	<b>11</b>	<b>0</b>		<b>12</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>
% App. Total	0	85.7	14.3		0	0	0		8.3	91.7	0		0	0	0		0	0	0	66.7
PHF	.000	.857	.500		.000	.000	.000		.250	.393	.000		.429	.000	.000		.000	.000	.000	.667

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
04:30 PM												
+0 mins.	0	6	1	0	0	0	0	0	0	0	0	0
+15 mins.	0	7	1	0	0	0	0	0	0	0	0	0
+30 mins.	0	6	2	0	0	0	1	2	0	0	0	0
+45 mins.	0	5	0	0	0	0	0	1	0	0	0	0
Total Volume	0	24	4	0	0	0	1	11	0	0	0	0
% App. Total	0	85.7	14.3	0	0	0	8.3	91.7	0	0	0	0
PHF	.000	.857	.500	.000	.000	.000	.250	.393	.000	.000	.000	.000

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	4	4
04:15 PM	0	0	1	1	1	0	0	0	0	2	2	0	0	0	2	1	0	0	0	1	1	4	5
04:30 PM	2	0	0	0	2	0	1	1	0	2	0	0	0	0	2	1	0	0	0	1	0	7	7
04:45 PM	1	0	0	0	1	0	0	0	0	1	1	0	0	0	2	2	0	0	0	2	0	5	5
<b>Total</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>20</b>	<b>21</b>
05:00 PM	0	0	1	0	1	0	0	2	2	2	0	0	0	0	0	1	0	0	0	1	2	4	6
05:15 PM	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3	3
05:30 PM	0	1	0	0	1	0	0	1	1	1	0	0	0	0	0	1	1	0	0	2	1	4	5
05:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>Total</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>12</b>	<b>15</b>	
<b>Grand Total</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>4</b>	<b>32</b>	<b>36</b>
Approch %	30	30	40			0	33.3	66.7			28.6	71.4	0		21.9	77.8	11.1	11.1		28.1	11.1	88.9	
Total %	9.4	9.4	12.5		31.2	0	6.2	12.5		18.8	6.2	15.6	0		21.9	21.9	3.1	3.1		28.1	11.1	88.9	

3.1-370

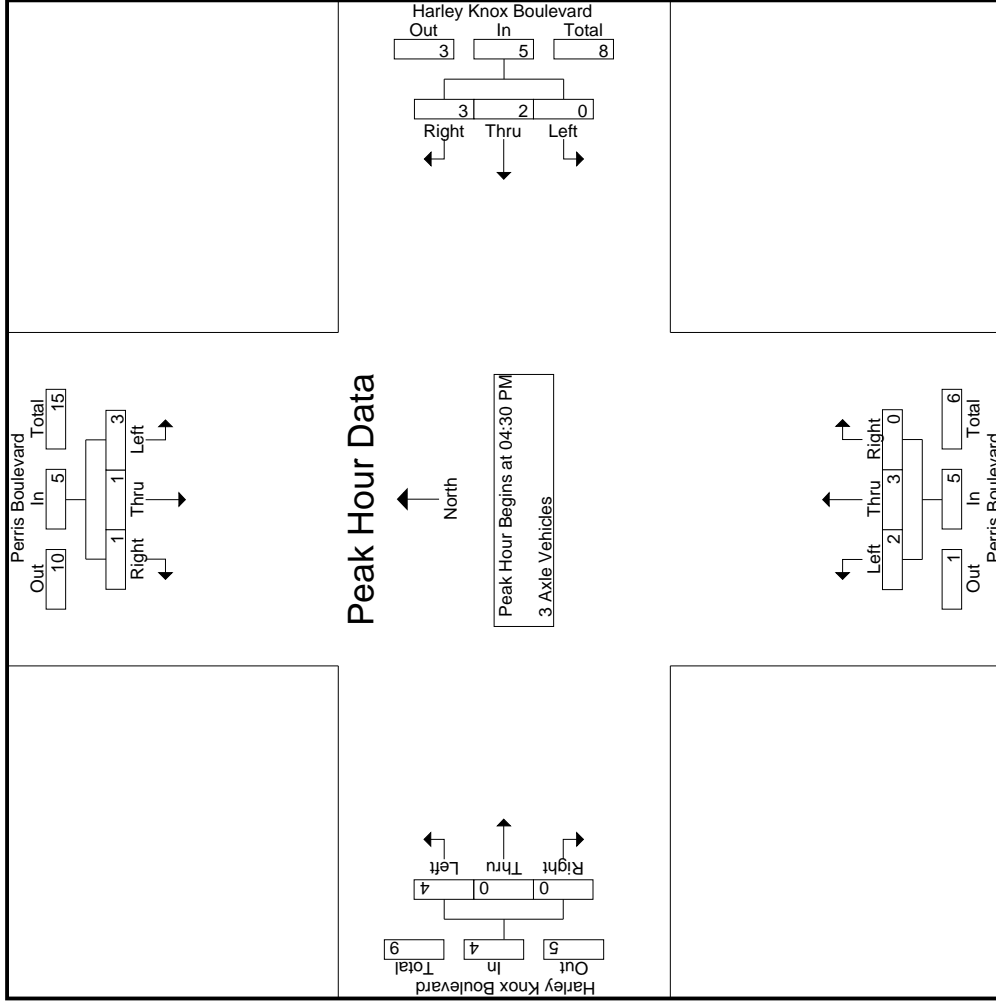
Start Time	Perris Boulevard Southbound					Harley Knox Boulevard Westbound					Perris Boulevard Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	2	0	0	0	2	0	1	1	0	2	0	2	0	0	2	1	0	0	0	2	0	1	7
04:45 PM	1	0	0	0	1	0	0	0	0	0	1	1	0	0	2	2	0	0	0	2	0	2	5
05:00 PM	0	0	1	1	1	0	0	2	0	2	0	0	0	0	0	1	0	0	0	0	0	1	4
05:15 PM	0	1	0	0	1	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	3
<b>Total Volume</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>19</b>
% App. Total	60	20	20			0	40	60			40	60	0		100	100	0	0		0	0	0	67.9
PHF	.375	.250	.250		.625	.000	.500	.375		.625	.500	.375	.000		.625	.500	.000	.000		.500	.500	.500	.679

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:30 PM				04:30 PM				04:30 PM				04:30 PM		
+0 mins.	2	0	0	2	0	0	1	2	0	0	2	0	0	0	1
+15 mins.	1	0	0	1	0	0	0	0	1	0	2	0	0	0	2
+30 mins.	0	0	1	1	0	0	2	2	0	0	0	0	0	0	1
+45 mins.	0	1	0	1	0	0	1	1	1	0	1	0	0	0	0
Total Volume	3	1	1	5	0	2	3	5	2	3	5	4	0	0	4
% App. Total	60	20	20	.625	0	40	60	.625	40	60	.625	100	0	0	.500
PHF	.375	.250	.250	.625	.000	.500	.375	.625	.500	.375	.625	.500	.000	.000	.500

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

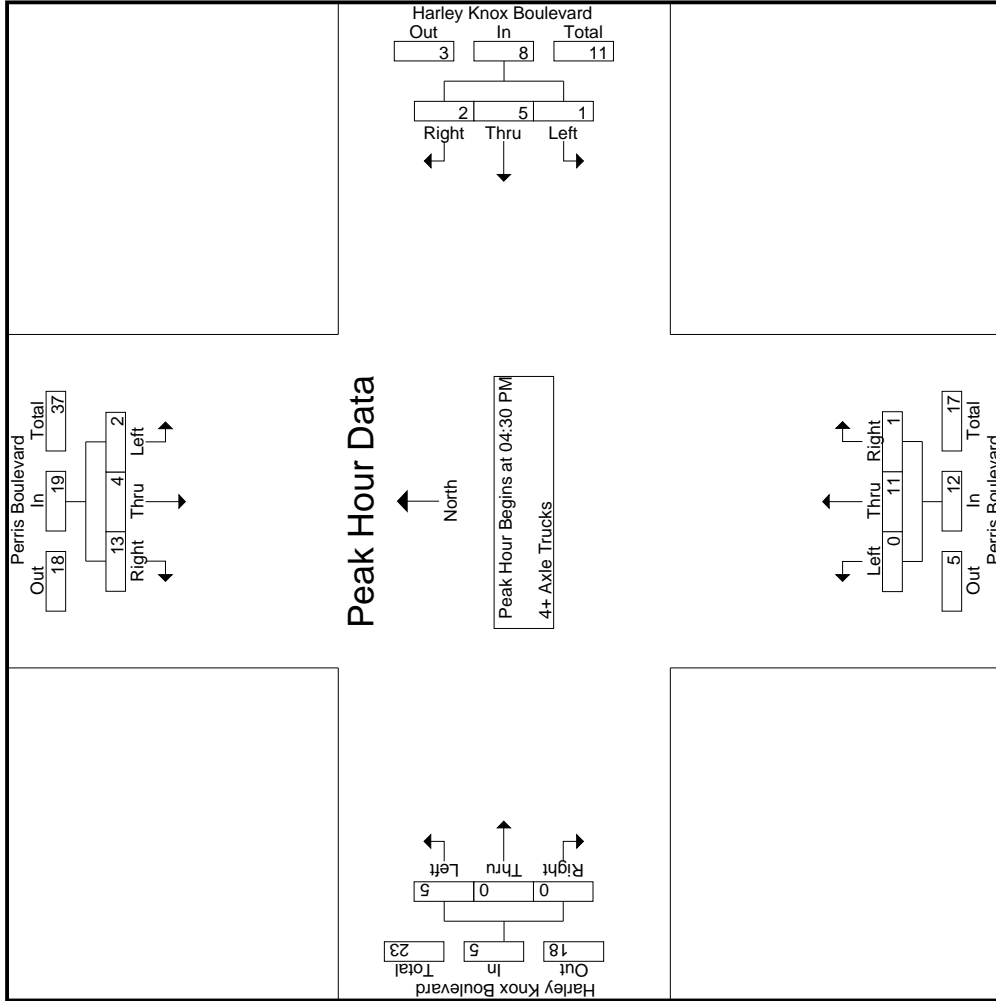
Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total						
04:00 PM	1	1	1	0	3	1	0	1	0	0	1	0	0	1	0	0	1	0	0	2	1	0	3	0	0	2	1	0	3	0
04:15 PM	1	2	3	2	6	4	0	4	0	0	4	3	2	2	1	1	3	2	0	1	1	0	2	3	1	1	1	0	2	3
04:30 PM	1	0	4	0	5	1	0	1	0	0	1	1	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	1	0	2	1	0	0	0	0	1	4	0	4	0	0	4	2	0	0	0	0	2	0	0	0	0	0	2	0
Total	3	4	9	2	16	7	0	6	0	0	7	8	0	8	1	1	9	4	0	3	2	0	9	3	0	3	2	0	9	4
05:00 PM	1	1	3	0	5	3	0	2	1	0	3	4	0	4	0	0	4	1	0	0	0	0	1	0	0	0	0	0	1	0
05:15 PM	0	2	5	2	7	3	0	2	1	1	3	3	2	2	1	0	3	0	0	0	0	0	0	3	0	0	0	0	0	3
05:30 PM	0	3	5	0	8	0	0	0	0	0	0	5	0	5	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	3	2	1	6	0	0	0	0	0	0	3	0	3	0	0	4	0	0	0	0	0	0	1	0	0	0	0	1	10
Total	2	9	15	3	26	6	2	4	2	1	6	14	2	14	1	0	17	1	0	0	0	0	1	4	0	0	0	0	1	50
Grand Total	5	13	24	5	42	13	2	22	2	1	26	22	5	3	2	0	10	7	5	3	2	0	10	7	9	13	20	0	31	91
Approch %	11.9	31	57.1				7.7	84.6	7.7		28.6	84.6	5.5	30	2.2		28.6	84.6	5.5	30	2.2		28.6	84.6	7.1	92.9	2.2		92.9	92.9
Total %	5.5	14.3	26.4		46.2	14.3	2.2	24.2	2.2		14.3	24.2	2.2	24.2	2.2		14.3	24.2	2.2	24.2	2.2		14.3	24.2	7.1	92.9	2.2		92.9	92.9
Start Time	Perris Boulevard Southbound						Harley Knox Boulevard Westbound						Perris Boulevard Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total						
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																														
Peak Hour for Entire Intersection Begins at 04:30 PM																														
04:30 PM	1	0	4		5		0	1	0		1		0	1	0		1		0	0	0		0		0	0	0		0	
04:45 PM	0	1	1		2		1	0	0		0		0	0	0		0		4	0	0		4		2	0	0		2	
05:00 PM	1	1	3		5		0	2	1		3		0	4	0		4		0	0	0		0		0	0	0		0	
05:15 PM	0	2	5		7		0	2	1		3		2	2	1		3		0	0	0		0		0	0	0		0	
Total Volume	2	4	13		19		1	5	2		8		0	11	1		12		5	0	0		5		2	0	0		2	
% App. Total	10.5	21.1	68.4		68.4		12.5	62.5	25		83.3		0	91.7	8.3		100		0	0	0		0		0	0	0		0	
PHF	.500	.500	.650		.679		.250	.625	.500		.667		.000	.688	.250		.750		.000	.000	.000		.625		.000	.625	.000		.846	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 06\_PER\_Perris Blvd\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Harley Knox Boulevard Westbound			Perris Boulevard Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	1	0	4	0	1	0	0	1	0	0	0	0
+15 mins.	0	1	1	1	0	0	0	0	0	2	0	0
+30 mins.	1	1	3	0	2	1	0	4	0	1	0	0
+45 mins.	0	2	5	0	2	1	0	2	1	0	0	0
Total Volume	2	4	13	1	5	2	0	11	1	5	0	0
% App. Total	10.5	21.1	68.4	12.5	62.5	25	0	91.7	8.3	100	0	0
PHF	.500	.500	.650	.250	.625	.500	.000	.688	.250	.625	.000	.000

Location: Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Perris Boulevard	East Leg Harley Knox Boulevard	South Leg Perris Boulevard	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

	North Leg Perris Boulevard	East Leg Harley Knox Boulevard	South Leg Perris Boulevard	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	1	0	2
<b>TOTAL VOLUMES:</b>	0	1	2	1	4



Location: Perris  
 N/S: Perris Boulevard  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Perris Boulevard			Westbound Harley Knox Boulevard			Northbound Perris Boulevard			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Perris Boulevard			Westbound Harley Knox Boulevard			Northbound Perris Boulevard			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	0	0	0	0	2	0	0	0	0	4

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound					
	Left		Right		RTOR		Left		Right		RTOR		Left		Right		RTOR		Left		Right		RTOR	
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total
07:00 AM	25	66	31	122	20	244	45	7	309	70	181	21	6	272	82	118	13	6	213	24	916	24	916	940
07:15 AM	27	67	33	127	28	264	54	7	346	52	197	12	3	261	80	138	16	3	234	20	968	20	968	988
07:30 AM	32	87	32	151	17	276	47	3	340	70	181	12	11	263	88	141	21	12	250	35	1004	35	1004	1039
07:45 AM	28	94	27	149	35	286	45	9	366	57	150	12	9	219	92	128	17	4	237	30	971	30	971	1001
<b>Total</b>	<b>112</b>	<b>314</b>	<b>123</b>	<b>549</b>	<b>100</b>	<b>1070</b>	<b>191</b>	<b>26</b>	<b>1361</b>	<b>249</b>	<b>709</b>	<b>57</b>	<b>29</b>	<b>1015</b>	<b>342</b>	<b>525</b>	<b>67</b>	<b>25</b>	<b>934</b>	<b>109</b>	<b>3859</b>	<b>109</b>	<b>3859</b>	<b>3968</b>
08:00 AM	33	65	41	139	28	207	25	2	260	64	114	14	7	192	92	124	22	6	238	22	829	22	829	851
08:15 AM	24	76	29	111	29	231	25	1	285	43	70	18	6	131	76	114	12	2	202	20	747	20	747	767
08:30 AM	19	51	21	91	25	215	25	2	265	60	80	8	3	148	59	123	24	4	206	11	710	11	710	721
08:45 AM	31	64	24	119	23	199	29	2	251	58	90	9	3	157	42	98	16	5	156	16	683	16	683	699
<b>Total</b>	<b>107</b>	<b>256</b>	<b>115</b>	<b>478</b>	<b>105</b>	<b>852</b>	<b>104</b>	<b>7</b>	<b>1061</b>	<b>225</b>	<b>354</b>	<b>49</b>	<b>19</b>	<b>628</b>	<b>269</b>	<b>459</b>	<b>74</b>	<b>17</b>	<b>802</b>	<b>69</b>	<b>2969</b>	<b>69</b>	<b>2969</b>	<b>3038</b>
<b>Grand Total</b>	<b>219</b>	<b>570</b>	<b>238</b>	<b>1027</b>	<b>205</b>	<b>1922</b>	<b>295</b>	<b>33</b>	<b>2422</b>	<b>474</b>	<b>1063</b>	<b>106</b>	<b>48</b>	<b>1643</b>	<b>611</b>	<b>984</b>	<b>141</b>	<b>42</b>	<b>1736</b>	<b>178</b>	<b>6828</b>	<b>178</b>	<b>6828</b>	<b>7006</b>
<b>Approch %</b>	<b>21.3</b>	<b>55.5</b>	<b>23.2</b>		<b>8.5</b>	<b>79.4</b>	<b>12.2</b>		<b>35.5</b>	<b>28.8</b>	<b>64.7</b>	<b>6.5</b>		<b>24.1</b>	<b>35.2</b>	<b>56.7</b>	<b>8.1</b>		<b>25.4</b>	<b>2.5</b>	<b>97.5</b>	<b>2.5</b>	<b>97.5</b>	
<b>Total %</b>	<b>3.2</b>	<b>8.3</b>	<b>3.5</b>		<b>3</b>	<b>28.1</b>	<b>4.3</b>		<b>35.5</b>	<b>6.9</b>	<b>15.6</b>	<b>1.6</b>		<b>24.1</b>	<b>8.9</b>	<b>14.4</b>	<b>2.1</b>		<b>25.4</b>	<b>2.5</b>	<b>97.5</b>	<b>2.5</b>	<b>97.5</b>	
Passenger Vehicles	203	522	208	982	199	1854	288	93.9	2372	435	1022	100	91.7	1601	561	924	118	90.5	1641	0	0	0	0	6596
Passenger Vehicles	92.7	91.6	87.4	89.1	90.8	97.6	97.6	93.9	96.6	91.8	96.1	94.3	91.7	94.7	91.8	93.9	83.7	90.5	92.3	0	0	0	0	94.1
Large 2 Axle Vehicles	11	23	21	59	4	40	6	3	51	23	29	6	6.2	61	32	33	14	80	80	0	0	0	0	251
Large 2 Axle Vehicles	5	4	8.8	7.3	2	2.1	2	3	2.1	4.9	2.7	5.7	6.2	3.6	5.2	3.4	9.9	2.4	4.5	0	0	0	0	3.6
3 Axle Vehicles	0	5	0	5	1	9	0	11	11	3	9	0	2.1	13	3	10	2	17	17	0	0	0	0	46
3 Axle Vehicles	0	0.9	0	0.5	0.5	0.5	0	0.4	0.4	0.6	0.8	0	2.1	0.8	0.5	1	1.4	4.8	1	0	0	0	0	0.7
4+ Axle Trucks	5	20	9	36	1	19	1	21	21	13	3	0	0	16	15	17	7	40	40	0	0	0	0	113
4+ Axle Trucks	2.3	3.5	3.8	3.6	0.5	1	0.3	0	0.9	2.7	0.3	0	0	0.9	2.5	1.7	5	2.4	2.2	0	0	0	0	1.6

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound					
	Left		Right		RTOR		Left		Right		RTOR		Left		Right		RTOR		Left		Right		RTOR	
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total
07:00 AM	25	66	31	122	20	244	45	7	309	70	181	21	6	272	82	118	13	6	213	24	916	24	916	940
07:15 AM	27	67	33	127	28	264	54	7	346	52	197	12	3	261	80	138	16	3	234	20	968	20	968	988
07:30 AM	32	87	32	151	17	276	47	3	340	70	181	12	11	263	88	141	21	12	250	35	1004	35	1004	1039
07:45 AM	28	94	27	149	35	286	45	9	366	57	150	12	9	219	92	128	17	4	237	30	971	30	971	1001
<b>Total</b>	<b>112</b>	<b>314</b>	<b>123</b>	<b>549</b>	<b>100</b>	<b>1070</b>	<b>191</b>	<b>26</b>	<b>1361</b>	<b>249</b>	<b>709</b>	<b>57</b>	<b>29</b>	<b>1015</b>	<b>342</b>	<b>525</b>	<b>67</b>	<b>25</b>	<b>934</b>	<b>109</b>	<b>3859</b>	<b>109</b>	<b>3859</b>	<b>3968</b>
<b>Approch %</b>	<b>20.4</b>	<b>57.2</b>	<b>22.4</b>		<b>7.3</b>	<b>78.6</b>	<b>14</b>		<b>884</b>	<b>.930</b>	<b>.889</b>	<b>.900</b>		<b>.679</b>	<b>.929</b>	<b>.798</b>	<b>.934</b>		<b>.961</b>	<b>.934</b>	<b>.934</b>	<b>.934</b>	<b>.934</b>	<b>.961</b>
<b>Total Volume</b>	<b>112</b>	<b>314</b>	<b>123</b>	<b>549</b>	<b>100</b>	<b>1070</b>	<b>191</b>	<b>26</b>	<b>1361</b>	<b>249</b>	<b>709</b>	<b>57</b>	<b>29</b>	<b>1015</b>	<b>342</b>	<b>525</b>	<b>67</b>	<b>25</b>	<b>934</b>	<b>109</b>	<b>3859</b>	<b>109</b>	<b>3859</b>	<b>3968</b>
<b>% App. Total</b>	<b>20.4</b>	<b>57.2</b>	<b>22.4</b>		<b>7.3</b>	<b>78.6</b>	<b>14</b>		<b>884</b>	<b>.930</b>	<b>.889</b>	<b>.900</b>		<b>.679</b>	<b>.929</b>	<b>.798</b>	<b>.934</b>		<b>.961</b>	<b>.934</b>	<b>.934</b>	<b>.934</b>	<b>.934</b>	<b>.961</b>
<b>PHF</b>	<b>.875</b>	<b>.835</b>	<b>.932</b>	<b>.909</b>	<b>.714</b>	<b>.935</b>	<b>.884</b>		<b>.930</b>	<b>.930</b>	<b>.889</b>	<b>.900</b>		<b>.679</b>	<b>.929</b>	<b>.798</b>	<b>.934</b>		<b>.961</b>	<b>.934</b>	<b>.934</b>	<b>.934</b>	<b>.934</b>	<b>.961</b>

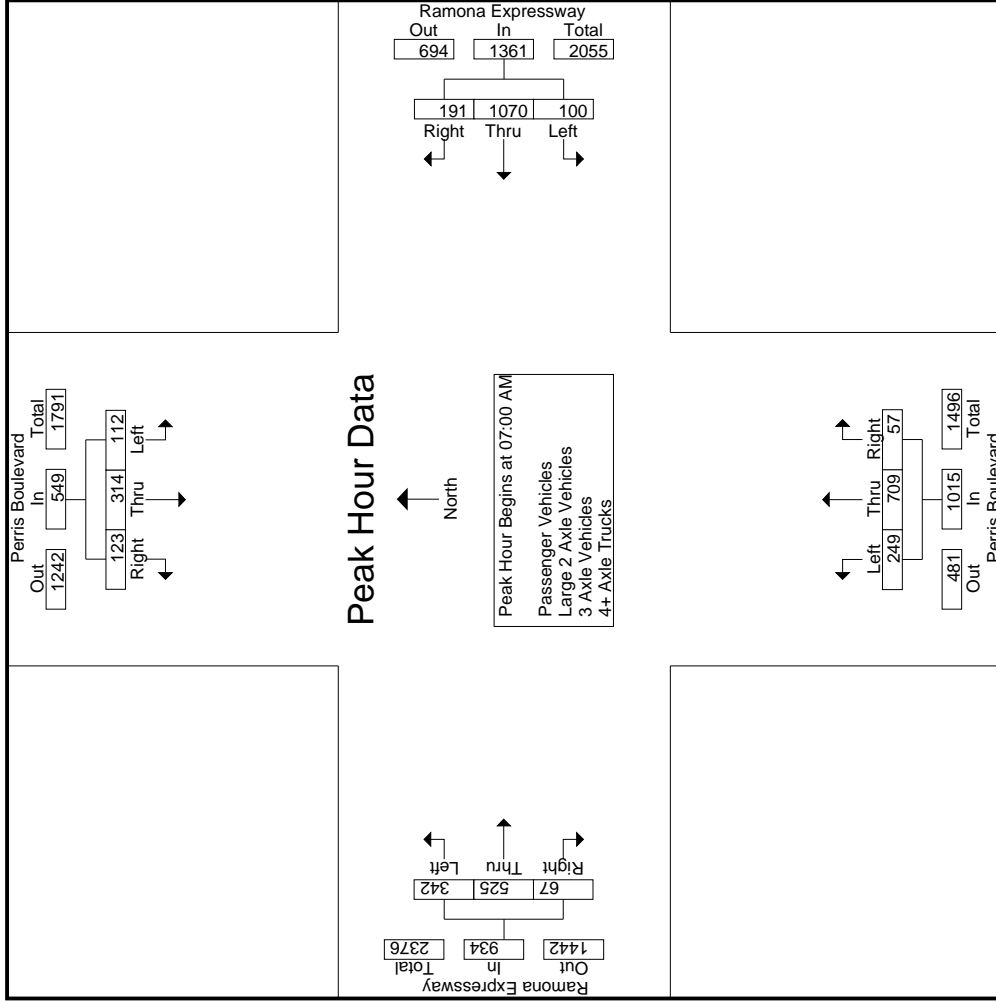
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	32	87	32	20	244	45	70	181	21	80	138	16	234
+15 mins.	28	94	27	28	264	54	52	197	12	88	141	21	250
+30 mins.	33	65	41	17	276	47	70	181	12	92	128	17	237
+45 mins.	24	76	29	35	286	45	57	150	12	92	124	22	238
Total Volume	117	322	129	100	1070	191	249	709	57	352	531	76	959
% App. Total	20.6	56.7	22.7	7.3	78.6	14	24.5	69.9	5.6	36.7	55.4	7.9	95.9
PHF	.886	.856	.787	.714	.935	.884	.889	.900	.679	.957	.941	.864	.959

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	23	63	31	5	117	20	233	45	6	298	62	173	21	6	256	78	115	11	6	204	23	875	898		
07:15 AM	25	62	28	7	115	28	254	54	7	336	49	194	11	3	254	73	130	14	3	217	20	922	942		
07:30 AM	28	82	28	8	138	16	268	46	3	330	67	176	11	9	254	83	136	16	11	235	31	957	988		
07:45 AM	28	83	25	8	136	34	276	44	8	354	53	148	12	9	213	84	116	13	3	213	28	916	944		
<b>Total</b>	104	290	112	28	506	98	1031	189	24	1318	231	691	55	27	977	318	497	54	23	869	102	3670	3772		
08:00 AM	32	63	33	5	128	28	203	23	2	254	58	108	14	7	180	87	120	20	6	227	20	789	809		
08:15 AM	22	68	24	8	114	28	223	24	1	275	41	65	16	5	122	66	105	10	1	181	15	692	707		
08:30 AM	17	41	20	2	78	23	202	24	2	249	50	75	7	3	132	53	111	21	4	185	11	644	655		
08:45 AM	28	60	19	6	107	22	195	28	2	245	55	83	8	2	146	37	91	13	4	141	14	639	653		
<b>Total</b>	99	232	96	21	427	101	823	99	7	1023	204	331	45	17	580	243	427	64	15	734	60	2764	2824		
<b>Grand Total</b>	203	522	208	49	933	199	1854	288	31	2341	435	1022	100	44	1557	561	924	118	38	1603	162	6434	6596		
Approch %	21.8	55.9	22.3			8.5	79.2	12.3		36.4	27.9	65.6	6.4		24.2	8.7	57.6	7.4		24.9	2.5	97.5			
Total %	3.2	8.1	3.2		14.5	3.1	28.8	4.5			6.8	15.9	1.6			8.7	14.4	1.8							

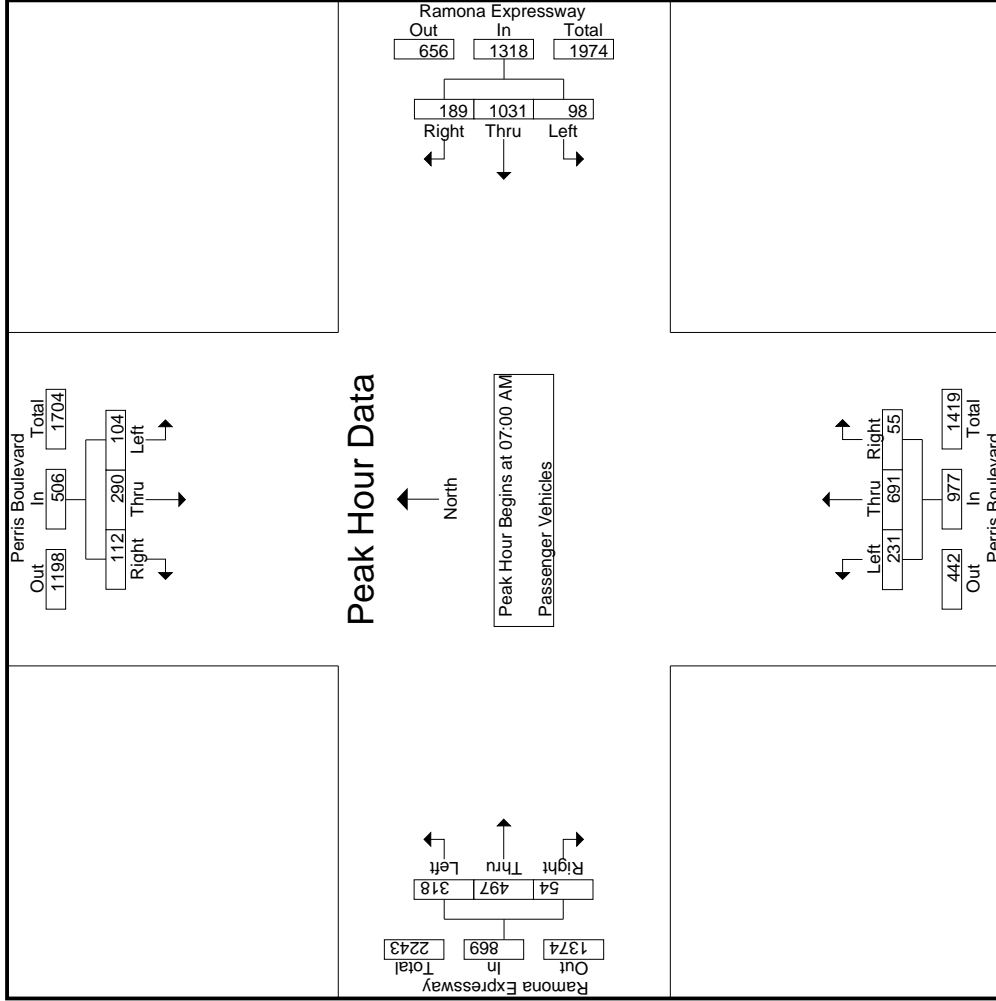
  

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	23	63	31	5	117	20	233	45	6	298	62	173	21	6	256	78	115	11	6	204	23	875	898		
07:15 AM	25	62	28	7	115	28	254	54	7	336	49	194	11	3	254	73	130	14	3	217	20	922	942		
07:30 AM	28	82	28	8	138	16	268	46	3	330	67	176	11	9	254	83	136	16	11	235	31	957	988		
07:45 AM	28	83	25	8	136	34	276	44	8	354	53	148	12	9	213	84	116	13	3	213	28	916	944		
<b>Total</b>	104	290	112	28	506	98	1031	189	24	1318	231	691	55	27	977	318	497	54	23	869	102	3670	3772		
08:00 AM	32	63	33	5	128	28	203	23	2	254	58	108	14	7	180	87	120	20	6	227	20	789	809		
08:15 AM	22	68	24	8	114	28	223	24	1	275	41	65	16	5	122	66	105	10	1	181	15	692	707		
08:30 AM	17	41	20	2	78	23	202	24	2	249	50	75	7	3	132	53	111	21	4	185	11	644	655		
08:45 AM	28	60	19	6	107	22	195	28	2	245	55	83	8	2	146	37	91	13	4	141	14	639	653		
<b>Total</b>	99	232	96	21	427	101	823	99	7	1023	204	331	45	17	580	243	427	64	15	734	60	2764	2824		
<b>Grand Total</b>	203	522	208	49	933	199	1854	288	31	2341	435	1022	100	44	1557	561	924	118	38	1603	162	6434	6596		
Approch %	21.8	55.9	22.3			8.5	79.2	12.3		36.4	27.9	65.6	6.4		24.2	8.7	57.6	7.4		24.9	2.5	97.5			
Total %	3.2	8.1	3.2		14.5	3.1	28.8	4.5			6.8	15.9	1.6			8.7	14.4	1.8							

Counts Unlimited  
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 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
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File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	07:00 AM												
Peak Hour for Each Approach Begins at:	07:00 AM												
+0 mins.	23	63	31	20	233	45	62	173	21	78	115	11	204
+15 mins.	25	62	28	28	254	54	49	194	11	73	130	14	217
+30 mins.	28	82	28	16	268	46	67	176	11	83	136	16	235
+45 mins.	28	83	25	34	276	44	53	148	12	84	116	13	213
Total Volume	104	290	112	98	1031	189	231	691	55	318	497	54	869
% App. Total	20.6	57.3	22.1	7.4	78.2	14.3	23.6	70.7	5.6	36.6	57.2	6.2	
PHF	.929	.873	.903	.721	.934	.875	.862	.890	.655	.946	.914	.844	.924

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	1	1	0	0	2	0	3	0	0	3	5	5	0	0	10	3	2	1	0	6	0	21	21	21
07:15 AM	1	1	4	0	6	0	5	0	0	5	3	2	1	0	6	6	4	1	0	11	0	28	28	28
07:30 AM	3	1	1	0	5	0	6	1	0	7	2	5	1	1	8	4	1	2	1	7	2	27	29	29
07:45 AM	0	3	2	0	5	1	6	1	1	8	2	2	0	0	4	5	8	2	0	15	1	32	33	33
Total	5	6	7	0	18	1	20	2	1	23	12	14	2	1	28	18	15	6	1	39	3	108	111	111
08:00 AM	1	1	7	1	9	0	4	2	0	6	4	3	0	0	7	2	2	1	0	5	1	27	28	28
08:15 AM	2	4	3	3	9	1	4	1	0	6	0	4	2	1	6	8	7	2	0	17	4	38	42	42
08:30 AM	2	9	1	0	12	2	10	1	0	13	5	3	1	0	9	2	6	2	0	10	0	44	44	44
08:45 AM	1	3	3	0	7	0	2	0	0	2	2	5	1	1	8	2	3	3	0	8	1	25	26	26
Total	6	17	14	4	37	3	20	4	0	27	11	15	4	2	30	14	18	8	0	40	6	134	140	140
Grand Total	11	23	21	4	55	4	40	6	1	50	23	29	6	3	58	32	33	14	1	79	9	242	251	251
Approch %	20	41.8	38.2			8	80	12			39.7	50	10.3		40.5	41.8	17.7				3.6	96.4		
Total %	4.5	9.5	8.7		22.7	1.7	16.5	2.5		20.7	9.5	12	2.5		24	13.2	13.6	5.8		32.6				

3.1-384

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	1	1	1	0	2	0	3	0	0	3	5	5	0	0	10	3	2	1	0	6	0	21	21	21
07:15 AM	1	1	4	0	6	0	5	0	0	5	3	2	1	0	6	6	4	1	0	11	0	28	28	28
07:30 AM	3	1	1	0	5	0	6	1	0	7	2	5	1	1	8	4	1	2	1	7	2	27	29	29
07:45 AM	0	3	2	0	5	1	6	1	1	8	2	2	0	0	4	5	8	2	0	15	1	32	33	33
Total	5	6	7	0	18	1	20	2	1	23	12	14	2	1	28	18	15	6	1	39	3	108	111	111
08:00 AM	1	1	7	1	9	0	4	2	0	6	4	3	0	0	7	2	2	1	0	5	1	27	28	28
08:15 AM	2	4	3	3	9	1	4	1	0	6	0	4	2	1	6	8	7	2	0	17	4	38	42	42
08:30 AM	2	9	1	0	12	2	10	1	0	13	5	3	1	0	9	2	6	2	0	10	0	44	44	44
08:45 AM	1	3	3	0	7	0	2	0	0	2	2	5	1	1	8	2	3	3	0	8	1	25	26	26
Total	6	17	14	4	37	3	20	4	0	27	11	15	4	2	30	14	18	8	0	40	6	134	140	140
Grand Total	11	23	21	4	55	4	40	6	1	50	23	29	6	3	58	32	33	14	1	79	9	242	251	251
Approch %	20	41.8	38.2			8	80	12			39.7	50	10.3		40.5	41.8	17.7				3.6	96.4		
Total %	4.5	9.5	8.7		22.7	1.7	16.5	2.5		20.7	9.5	12	2.5		24	13.2	13.6	5.8		32.6				

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

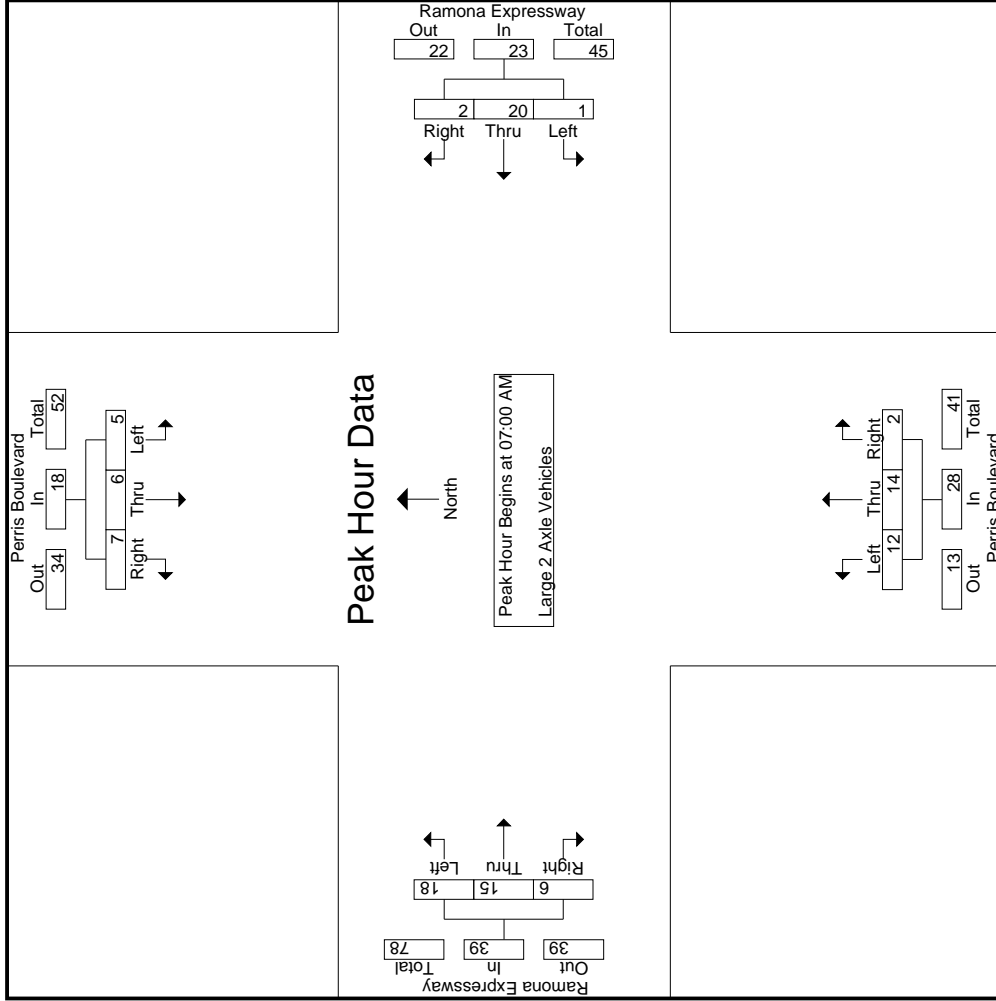
Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	1	1	1	0	2	0	3	0	0	3	5	5	0	0	10	3	2	1	0	6	0	21	21	21
07:15 AM	1	1	4	0	6	0	5	0	0	5	3	2	1	0	6	6	4	1	0	11	0	28	28	28
07:30 AM	3	1	1	0	5	0	6	1	0	7	2	5	1	1	8	4	1	2	1	7	2	27	29	29
07:45 AM	0	3	2	0	5	1	6	1	1	8	2	2	0	0	4	5	8	2	0	15	1	32	33	33
Total Volume	5	6	7	0	18	1	20	2	1	23	12	14	2	1	28	18	15	6	1	39	3	108	111	111
% App. Total	27.8	33.3	38.9			4.3	87	8.7			42.9	50	7.1		46.2	38.5	15.4							
PHF	.417	.500	.438		.750	.250	.833	.500		.719	.600	.700	.500		.700	.750	.469				.650	.844	.844	.844



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM				
+0 mins.	1	1	0	0	3	0	5	0	5	0	3	2	10	6
+15 mins.	1	1	4	0	5	0	3	2	3	1	5	4	6	11
+30 mins.	3	1	1	0	6	1	7	5	2	1	8	1	8	7
+45 mins.	0	3	2	1	6	1	8	2	2	0	4	8	5	15
Total Volume	5	6	7	1	20	2	23	14	12	2	28	15	18	39
% App. Total	27.8	33.3	38.9	4.3	87	8.7	97.1	50	42.9	7.1	100	38.5	46.2	15.4
PHF	.417	.500	.438	.250	.833	.500	.719	.700	.600	.500	.700	.469	.750	.650

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	2	0	1	2	3	0	0	5	0	0	0	1	1	0	0	1	1	8	9
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3	3
07:30 AM	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	1	3	4
07:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	2	0	5	5
Total	0	5	0	0	5	1	3	1	4	2	3	1	5	0	3	2	0	5	2	0	5	2	19	21
08:00 AM	0	0	0	0	0	0	0	0	0	1	3	0	4	2	0	0	0	2	0	0	2	0	6	6
08:15 AM	0	0	0	0	2	0	0	0	2	0	1	0	1	0	1	0	1	1	1	1	1	1	4	5
08:30 AM	0	0	0	0	3	0	0	0	3	0	0	0	0	0	4	0	0	4	0	0	4	0	7	7
08:45 AM	0	0	0	0	1	0	0	0	1	2	0	2	2	1	2	0	1	3	1	1	3	1	6	7
Total	0	0	0	0	6	0	0	0	6	1	6	0	7	3	7	0	2	10	2	2	10	2	23	25
Grand Total	0	5	0	0	5	1	9	0	10	3	9	0	12	3	10	2	2	15	4	4	15	4	42	46
Approch %	0	100	0	0	10	90	0	0	23.8	7.1	21.4	0	28.6	20	66.7	13.3	35.7	8.7	8.7	91.3	8.7	91.3		
Total %	0	11.9	0	0	11.9	2.4	21.4	0	23.8	7.1	21.4	0	28.6	7.1	23.8	4.8	35.7	8.7	8.7	91.3	8.7	91.3		

3.1-387

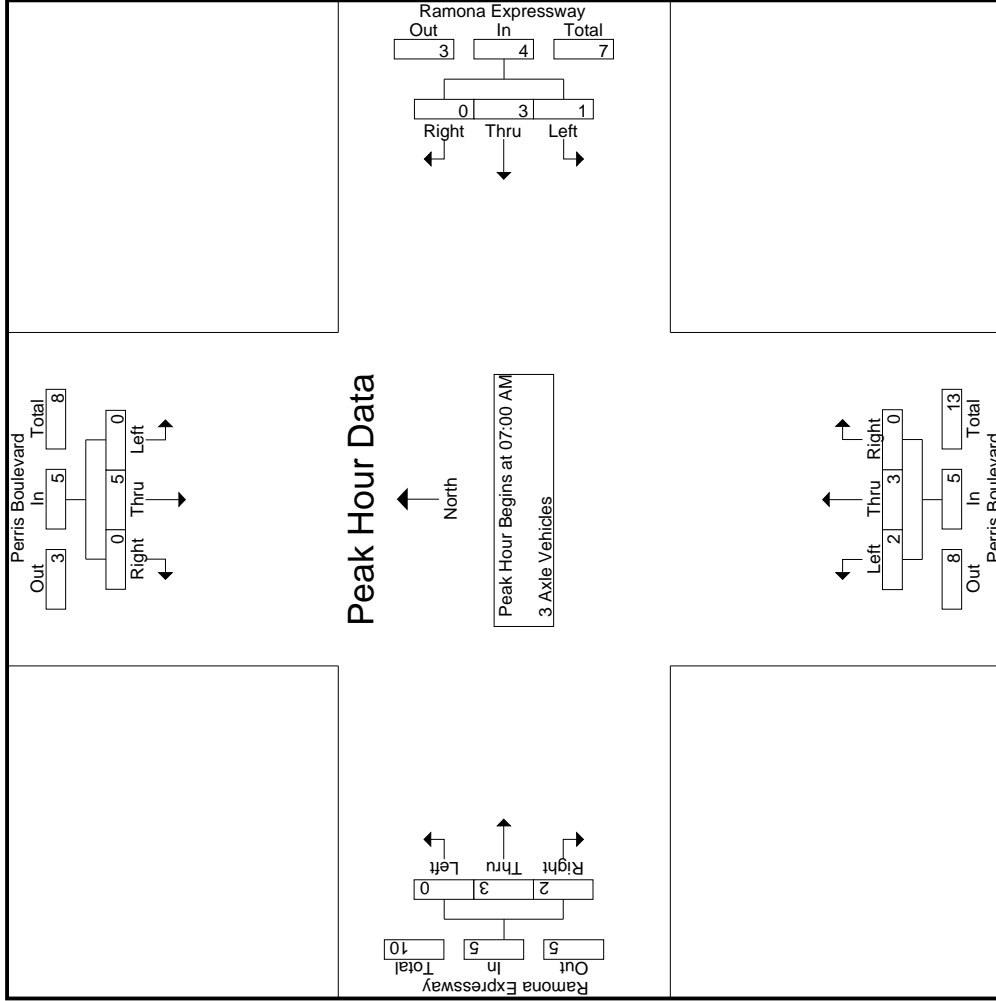
Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	App. Total	Int. Total		
07:00 AM	0	0	0	0	0	2	0	0	2	3	0	0	5	0	0	0	1	0	0	0	1	1	1	8
07:15 AM	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3
07:30 AM	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	1	3
07:45 AM	0	3	0	0	3	0	0	0	3	0	0	0	0	0	1	1	0	2	0	0	2	0	5	5
Total Volume	0	5	0	0	5	1	3	0	4	2	3	0	5	0	3	2	0	5	0	3	2	5	19	19
% App. Total	0	100	0	0	10	90	0	0	23.8	7.1	21.4	0	28.6	20	66.7	13.3	35.7	8.7	8.7	91.3	8.7	91.3		
PHF	.000	.417	.000	.000	.417	.250	.375	.000	.500	.250	.250	.000	.000	.250	.750	.500	.625	.625	.625	.594	.625	.594		

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:												
	07:00 AM			07:00 AM			07:00 AM			07:00 AM			
+0 mins.	0	0	0	0	2	0	2	3	0	0	0	0	1
+15 mins.	0	1	0	0	1	0	1	0	0	0	0	1	0
+30 mins.	0	1	0	1	0	0	1	0	0	0	0	1	0
+45 mins.	0	3	0	0	0	0	0	0	0	0	0	1	2
Total Volume	0	5	0	1	3	0	4	3	0	0	0	3	2
% App. Total	0	100	0	25	75	0	40	60	0	0	0	60	40
PHF	.000	.417	.000	.250	.375	.000	.500	.250	.000	.000	.750	.500	.625

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	2	0	0	3	0	6	0	0	6	1	0	0	0	1	1	1	0	0	2	0	12	12
07:15 AM	1	3	1	0	5	0	4	0	0	4	0	1	0	0	1	1	3	1	0	5	0	15	15
07:30 AM	1	3	3	1	7	0	2	0	0	2	1	0	0	0	1	1	3	3	0	7	1	17	18
07:45 AM	0	5	0	0	5	0	4	0	0	4	2	0	0	0	2	3	3	1	1	7	1	18	19
<b>Total</b>	<b>3</b>	<b>13</b>	<b>4</b>	<b>1</b>	<b>20</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>21</b>	<b>2</b>	<b>62</b>	<b>64</b>
08:00 AM	0	1	1	1	2	0	0	0	0	0	1	0	0	0	1	1	2	1	0	4	1	7	8
08:15 AM	0	4	2	0	6	0	2	0	0	2	2	0	0	0	2	2	1	0	0	3	0	13	13
08:30 AM	0	1	0	0	1	0	0	0	0	0	5	2	0	0	7	4	2	1	0	7	0	15	15
08:45 AM	2	1	2	0	5	1	1	1	0	3	1	0	0	0	1	2	2	0	0	4	0	13	13
<b>Total</b>	<b>2</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>14</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>9</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>18</b>	<b>1</b>	<b>48</b>	<b>49</b>
<b>Grand Total</b>	<b>5</b>	<b>20</b>	<b>9</b>	<b>2</b>	<b>34</b>	<b>1</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>21</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>15</b>	<b>17</b>	<b>7</b>	<b>1</b>	<b>39</b>	<b>3</b>	<b>110</b>	<b>113</b>
Approch %	14.7	58.8	26.5			4.8	90.5	4.8			81.2	18.8	0		14.5	38.5	43.6	17.9		35.5	2.7	97.3	
Total %	4.5	18.2	8.2		30.9	0.9	17.3	0.9		19.1	11.8	2.7	0			13.6	15.5	6.4					

3.1-390

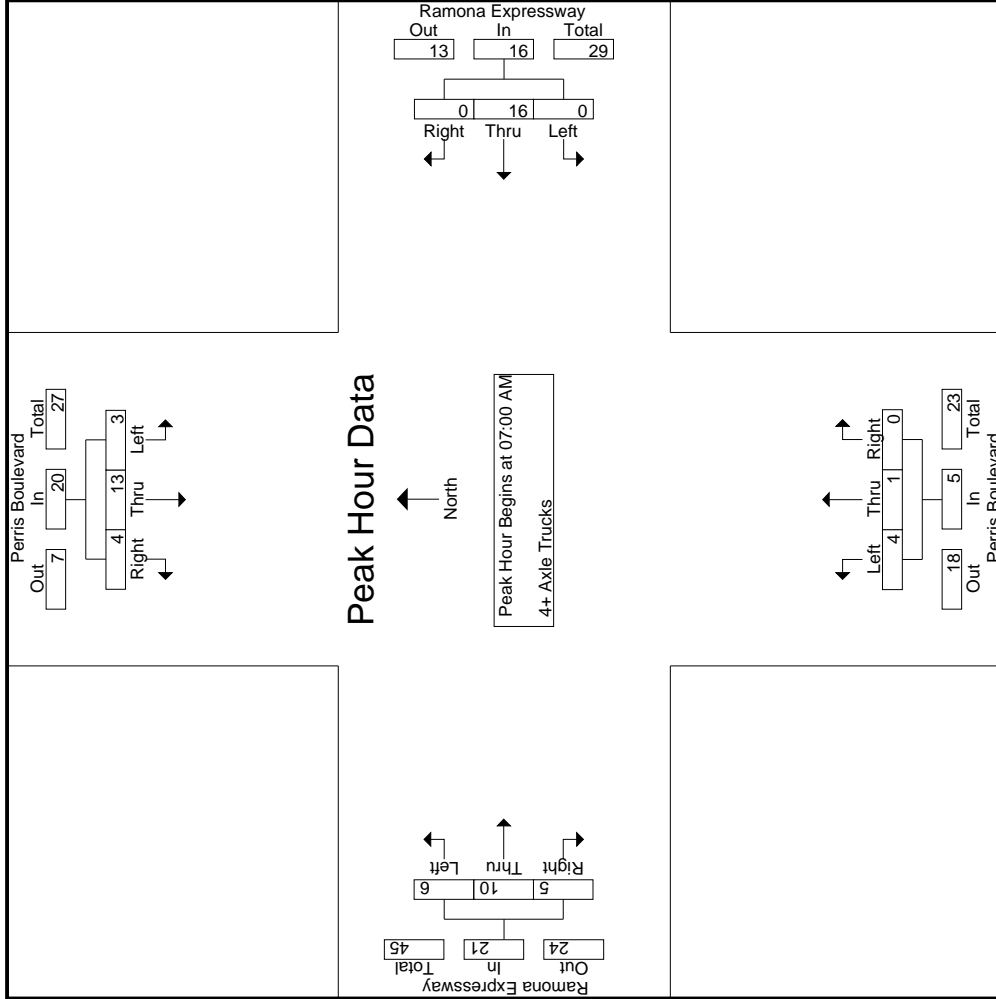
Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	2	0	0	3	0	6	0	0	6	1	0	0	0	1	1	1	0	0	2	0	12	12
07:15 AM	1	3	1	0	5	0	4	0	0	4	0	1	0	0	1	1	3	1	0	5	0	15	15
07:30 AM	1	3	3	1	7	0	2	0	0	2	1	0	0	0	1	1	3	3	0	7	1	17	18
07:45 AM	0	5	0	0	5	0	4	0	0	4	2	0	0	0	2	3	3	1	1	7	1	18	19
<b>Total Volume</b>	<b>3</b>	<b>13</b>	<b>4</b>	<b>1</b>	<b>20</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>21</b>	<b>2</b>	<b>62</b>	<b>64</b>
% App. Total	15	65	20			0	100	0			80	20	0		28.6	47.6	23.8						
PHF	.750	.650	.333		.714	.000	.667	.000		.667	.500	.250	.000		.625	.500	.833	.417		.750		.861	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
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 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	1	2	0	0	6	0	1	0	0	1	1	0
+15 mins.	1	3	1	0	4	0	0	1	0	1	3	1
+30 mins.	1	3	3	0	2	0	1	0	0	1	3	3
+45 mins.	0	5	0	0	4	0	2	0	0	3	3	1
Total Volume	3	13	4	0	16	0	4	1	0	6	10	5
% App. Total	15	65	20	0	100	0	80	20	0	28.6	47.6	23.8
PHF	.750	.650	.333	.000	.667	.000	.500	.250	.000	.500	.833	.417

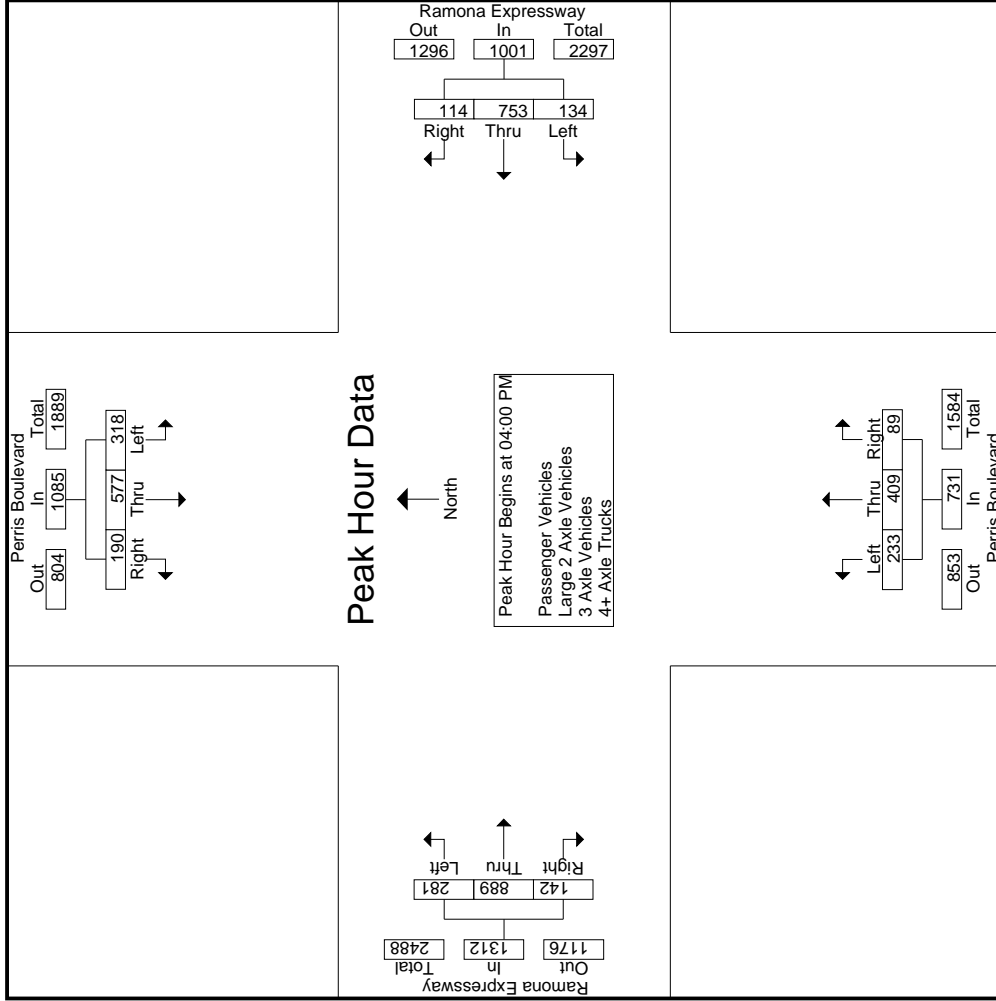




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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
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City of Perris  
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File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	89	153	40	35	178	22	53	107	17	78	208	33	319
+15 mins.	87	138	46	34	192	32	66	100	17	67	225	42	334
+30 mins.	81	163	54	25	183	33	48	113	24	64	235	28	327
+45 mins.	69	148	71	40	200	27	80	101	32	72	221	39	332
Total Volume	326	602	211	134	753	114	247	421	90	281	889	142	1312
% App. Total	28.6	52.9	18.5	13.4	75.2	11.4	32.6	55.5	11.9	21.4	67.8	10.8	98.2
PHF	.916	.923	.743	.838	.941	.864	.772	.931	.703	.901	.946	.845	.982

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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total
04:00 PM	62	119	43	12	224	34	167	21	1	222	49	106	21	12	176	74	200	30	7	304	32	926	958	
04:15 PM	75	136	57	15	268	34	182	30	2	246	58	82	25	8	165	61	217	37	10	315	35	994	1029	
04:30 PM	89	152	40	13	281	24	169	32	6	225	63	104	26	6	193	61	225	25	5	311	30	1010	1040	
04:45 PM	84	152	37	13	273	39	188	25	4	252	51	102	16	4	169	66	216	36	8	318	29	1012	1041	
<b>Total</b>	<b>310</b>	<b>559</b>	<b>177</b>	<b>53</b>	<b>1046</b>	<b>131</b>	<b>706</b>	<b>108</b>	<b>13</b>	<b>945</b>	<b>221</b>	<b>394</b>	<b>88</b>	<b>30</b>	<b>703</b>	<b>262</b>	<b>858</b>	<b>128</b>	<b>30</b>	<b>1248</b>	<b>126</b>	<b>3942</b>	<b>4068</b>	
05:00 PM	86	135	44	11	265	15	118	14	3	147	65	100	17	6	182	64	192	28	10	284	30	878	908	
05:15 PM	80	160	50	14	290	25	196	14	1	235	44	113	24	9	181	60	226	36	12	322	36	1028	1064	
05:30 PM	68	145	67	13	280	28	164	27	3	219	77	98	31	15	206	50	260	29	11	339	42	1044	1086	
05:45 PM	78	131	55	12	264	23	188	22	6	233	42	97	19	10	158	37	243	23	6	303	34	958	992	
<b>Total</b>	<b>312</b>	<b>571</b>	<b>216</b>	<b>50</b>	<b>1099</b>	<b>91</b>	<b>666</b>	<b>77</b>	<b>13</b>	<b>834</b>	<b>228</b>	<b>408</b>	<b>91</b>	<b>40</b>	<b>727</b>	<b>211</b>	<b>921</b>	<b>116</b>	<b>39</b>	<b>1248</b>	<b>142</b>	<b>3908</b>	<b>4050</b>	
<b>Grand Total</b>	<b>622</b>	<b>1130</b>	<b>393</b>	<b>103</b>	<b>2145</b>	<b>222</b>	<b>1372</b>	<b>185</b>	<b>26</b>	<b>1779</b>	<b>449</b>	<b>802</b>	<b>179</b>	<b>70</b>	<b>1430</b>	<b>473</b>	<b>1779</b>	<b>244</b>	<b>69</b>	<b>2496</b>	<b>268</b>	<b>7850</b>	<b>8118</b>	
Apprch %	29	52.7	18.3			12.5	77.1	10.4		22.7	31.4	56.1	12.5		18.2	19	71.3	9.8		31.8	3.3	96.7		
Total %	7.9	14.4	5		27.3	2.8	17.5	2.4			5.7	10.2	2.3			6	22.7	3.1						

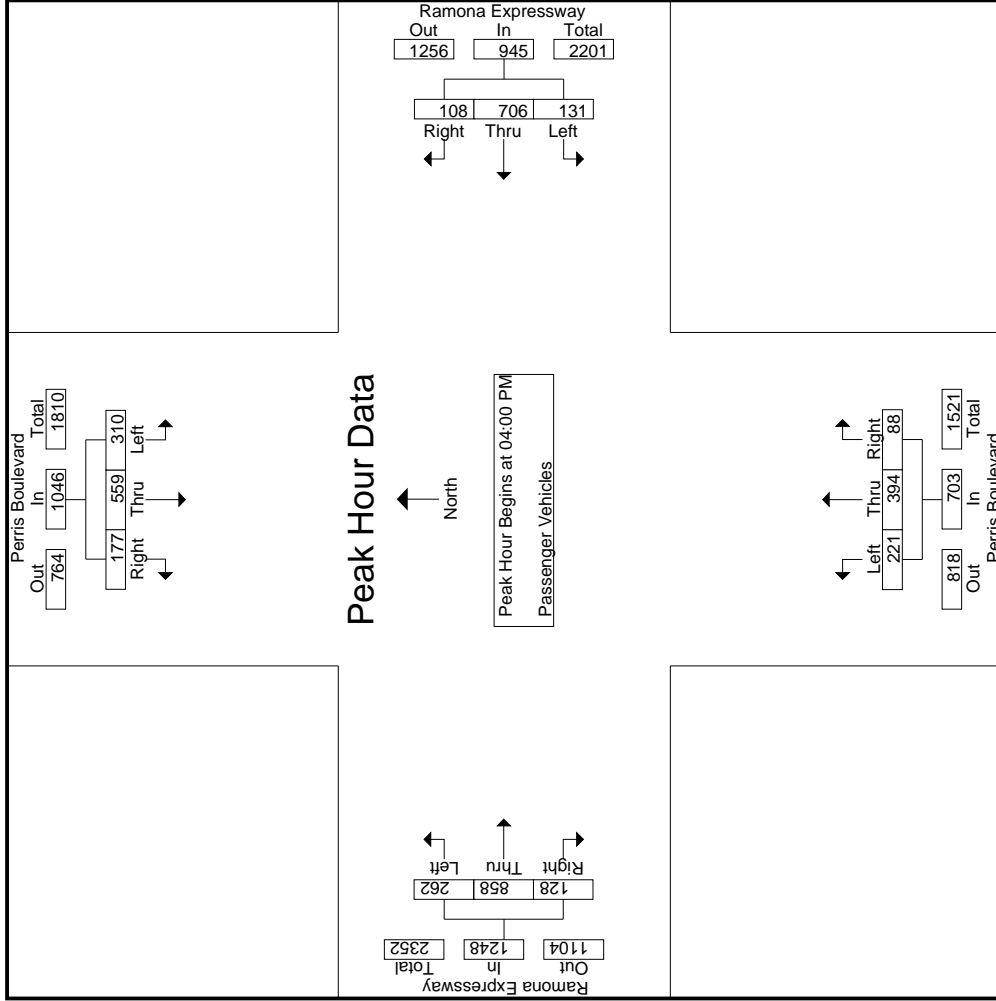
  

Start Time	Perris Boulevard Southbound						Ramona Expressway Westbound						Perris Boulevard Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1	62	119	43	12	224	34	167	21	1	222	49	106	21	12	176	74	200	30	7	304	32	926	958	
Peak Hour for Entire Intersection Begins at 04:00 PM	89	152	40	13	281	24	169	32	6	225	63	104	26	6	193	61	225	25	5	311	30	1010	1040	
04:00 PM	62	119	43	12	224	34	167	21	1	222	49	106	21	12	176	74	200	30	7	304	32	926	958	
04:15 PM	75	136	57	15	268	34	182	30	2	246	58	82	25	8	165	61	217	37	10	315	35	994	1029	
04:30 PM	89	152	40	13	281	24	169	32	6	225	63	104	26	6	193	61	225	25	5	311	30	1010	1040	
04:45 PM	84	152	37	13	273	39	188	25	4	252	51	102	16	4	169	66	216	36	8	318	29	1012	1041	
Total Volume	310	559	177	53	1046	131	706	108	13	945	221	394	88	30	703	262	858	128	30	1248	126	3942	4068	
% App. Total	29.6	53.4	16.9			13.9	74.7	11.4		22.7	31.4	56.1	12.5		18.2	19	71.3	9.8		31.8	3.3	96.7		
PHF	.871	.919	.776		.931	.840	.939	.844		.938	.877	.929	.846		.911	.885	.953	.865		.981			.974	

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 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1	Peak Hour for Each Approach Begins at:													
	04:00 PM													
+0 mins.	62	119	43	34	167	21	49	106	21	176	74	200	30	304
+15 mins.	75	136	57	34	182	30	58	82	25	165	61	217	37	315
+30 mins.	89	152	40	24	169	32	63	104	26	193	61	225	25	311
+45 mins.	84	152	37	39	188	25	51	102	16	169	66	216	36	318
Total Volume	310	559	177	131	706	108	221	394	88	703	262	858	128	1248
% App. Total	29.6	53.4	16.9	13.9	74.7	11.4	31.4	56	12.5	21	68.8	10.3		
PHF	.871	.919	.776	.840	.939	.844	.877	.929	.846	.911	.885	.953	.865	.981

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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	6	4	1	13	1	4	1	0	6	1	3	0	0	4	3	6	2	2	11	3	34	37
04:15 PM	0	4	1	0	5	0	4	0	0	4	1	3	0	0	4	3	5	1	0	9	0	22	22
04:30 PM	0	5	1	0	6	1	7	0	0	8	3	1	0	0	4	1	5	1	0	7	0	25	25
04:45 PM	5	1	2	2	8	0	3	1	1	4	2	4	0	0	6	3	2	2	0	7	3	25	28
<b>Total</b>	<b>8</b>	<b>16</b>	<b>8</b>	<b>3</b>	<b>32</b>	<b>2</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>22</b>	<b>7</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>10</b>	<b>18</b>	<b>6</b>	<b>2</b>	<b>34</b>	<b>6</b>	<b>106</b>	<b>112</b>
05:00 PM	1	3	1	0	5	0	3	0	0	3	0	0	0	0	0	1	4	2	0	7	0	15	15
05:15 PM	0	2	3	1	5	1	2	1	0	4	0	0	0	0	0	0	3	1	0	4	1	13	14
05:30 PM	1	3	1	0	5	1	2	0	0	3	2	0	0	2	2	2	2	2	0	6	0	16	16
05:45 PM	1	3	2	1	6	0	2	0	0	2	2	0	0	0	2	2	2	1	1	5	2	15	17
<b>Total</b>	<b>3</b>	<b>11</b>	<b>7</b>	<b>2</b>	<b>21</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>11</b>	<b>6</b>	<b>1</b>	<b>22</b>	<b>3</b>	<b>59</b>	<b>62</b>
<b>Grand Total</b>	<b>11</b>	<b>27</b>	<b>15</b>	<b>5</b>	<b>53</b>	<b>4</b>	<b>27</b>	<b>3</b>	<b>1</b>	<b>34</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>15</b>	<b>29</b>	<b>12</b>	<b>3</b>	<b>56</b>	<b>9</b>	<b>165</b>	<b>174</b>
Approch %	20.8	50.9	28.3			11.8	79.4	8.8		20.6	6.7	6.7			26.8	51.8	21.4			33.9	5.2	94.8	
Total %	6.7	16.4	9.1		32.1	2.4	16.4	1.8							9.1	17.6	7.3						

3.1-399

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	6	4	1	13	1	4	1	0	6	1	3	0	0	4	3	6	2	2	11	3	34	37
04:15 PM	0	4	1	0	5	0	4	0	0	4	1	3	0	0	4	3	5	1	0	9	0	22	22
04:30 PM	0	5	1	0	6	1	7	0	0	8	3	1	0	0	4	1	5	1	0	7	0	25	25
04:45 PM	5	1	2	2	8	0	3	1	1	4	2	4	0	0	6	3	2	2	0	7	3	25	28
<b>Total</b>	<b>8</b>	<b>16</b>	<b>8</b>	<b>3</b>	<b>32</b>	<b>2</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>22</b>	<b>7</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>10</b>	<b>18</b>	<b>6</b>	<b>2</b>	<b>34</b>	<b>6</b>	<b>106</b>	<b>112</b>
05:00 PM	1	3	1	0	5	0	3	0	0	3	0	0	0	0	0	1	4	2	0	7	0	15	15
05:15 PM	0	2	3	1	5	1	2	1	0	4	0	0	0	0	0	0	3	1	0	4	1	13	14
05:30 PM	1	3	1	0	5	1	2	0	0	3	2	0	0	2	2	2	2	2	0	6	0	16	16
05:45 PM	1	3	2	1	6	0	2	0	0	2	2	0	0	0	2	2	2	1	1	5	2	15	17
<b>Total</b>	<b>3</b>	<b>11</b>	<b>7</b>	<b>2</b>	<b>21</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>11</b>	<b>6</b>	<b>1</b>	<b>22</b>	<b>3</b>	<b>59</b>	<b>62</b>
<b>Grand Total</b>	<b>11</b>	<b>27</b>	<b>15</b>	<b>5</b>	<b>53</b>	<b>4</b>	<b>27</b>	<b>3</b>	<b>1</b>	<b>34</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>15</b>	<b>29</b>	<b>12</b>	<b>3</b>	<b>56</b>	<b>9</b>	<b>165</b>	<b>174</b>
Approch %	20.8	50.9	28.3			11.8	79.4	8.8		20.6	6.7	6.7			26.8	51.8	21.4			33.9	5.2	94.8	
Total %	6.7	16.4	9.1		32.1	2.4	16.4	1.8							9.1	17.6	7.3						

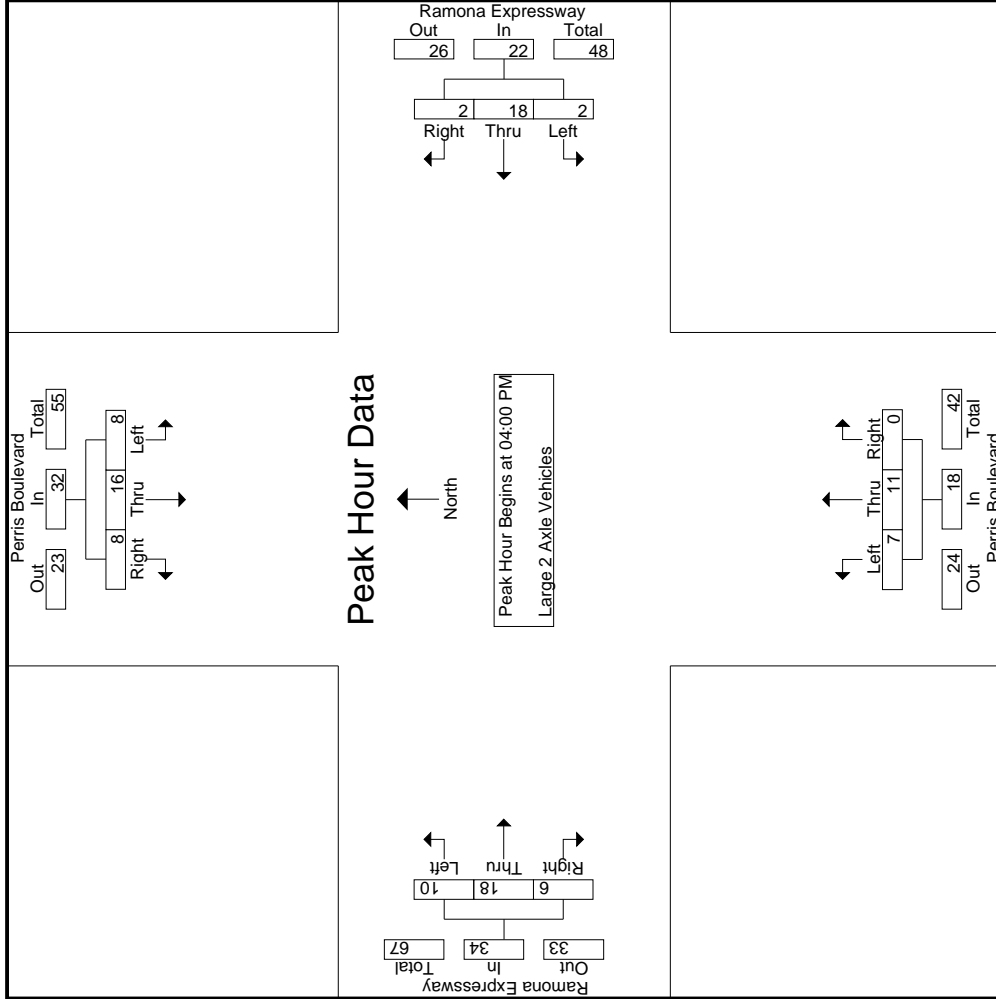
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	6	4	1	13	1	4	1	0	6	1	3	0	0	4	3	6	2	2	11	3	34	37
04:15 PM	0	4	1	0	5	0	4	0	0	4	1	3	0	0	4	3	5	1	0	9	0	22	22
04:30 PM	0	5	1	0	6	1	7	0	0	8	3	1	0	0	4	1	5	1	0	7	0	25	25
04:45 PM	5	1	2	2	8	0	3	1	1	4	2	4	0	0	6	3	2	2	0	7	3	25	28
<b>Total Volume</b>	<b>8</b>	<b>16</b>	<b>8</b>	<b>3</b>	<b>32</b>	<b>2</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>22</b>	<b>7</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>10</b>	<b>18</b>	<b>6</b>	<b>2</b>	<b>34</b>	<b>6</b>	<b>106</b>	<b>112</b>
% App. Total	25	50	25			9.1	81.8	9.1		9.1	38.9	61.1			29.4	52.9	17.6			17.6	5.2	94.8	
PHF	.400	.667	.500		.615	.500	.643	.500		.688	.583	.688			.750	.833	.750			.773		.779	

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





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 PO Box 1178  
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File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound									
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right							
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																			
Peak Hour for Each Approach Begins at:																			
+0 mins.	3	6	4	13	04:00 PM	1	4	1	6	04:00 PM	1	3	0	4	04:00 PM	3	6	2	11
+15 mins.	0	4	1	5	0	4	0	4	4	1	3	0	4	3	3	5	1	9	
+30 mins.	0	5	1	6	1	7	0	8	8	3	1	0	4	1	5	1	7		
+45 mins.	5	1	2	8	0	3	1	4	4	2	4	0	6	3	2	2	7		
Total Volume	8	16	8	32	2	18	2	22	22	7	11	0	18	10	18	6	34		
% App. Total	25	50	25	61.5	9.1	81.8	9.1	68.8	68.8	38.9	61.1	0	75.0	29.4	52.9	17.6	77.3		
PHF	.400	.667	.500	.615	.500	.643	.500	.688	.688	.583	.688	.000	.750	.833	.750	.750	.773		

Counts Unlimited  
 PO Box 1178  
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File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	4
04:15 PM	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
04:30 PM	0	0	0	0	0	2	1	0	0	0	1	0	0	0	1	1	1	1	3	0	0	1	7	8
04:45 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
Total	0	2	0	0	0	8	3	0	0	0	1	0	0	0	2	3	1	1	6	1	1	1	20	21
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:15 PM	0	1	0	0	0	2	3	0	0	1	0	0	0	0	2	0	0	0	2	0	0	0	9	9
05:30 PM	0	0	1	1	0	1	0	0	0	1	0	0	0	0	2	0	0	0	2	1	1	1	5	6
05:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	5	5
Total	0	1	1	1	0	5	3	0	0	2	0	0	0	0	7	1	1	0	8	1	1	1	20	21
Grand Total	0	3	1	1	0	13	6	0	0	2	1	0	0	2	10	2	1	14	2	2	2	40	42	
Approch %	0	75	25		0	68.4	31.6		66.7	33.3	0		14.3	71.4	14.3		35	4.8	95.2					
Total %	0	7.5	2.5		0	32.5	15		47.5	7.5	0		5	25	5		35	4.8	95.2					

3.1-402

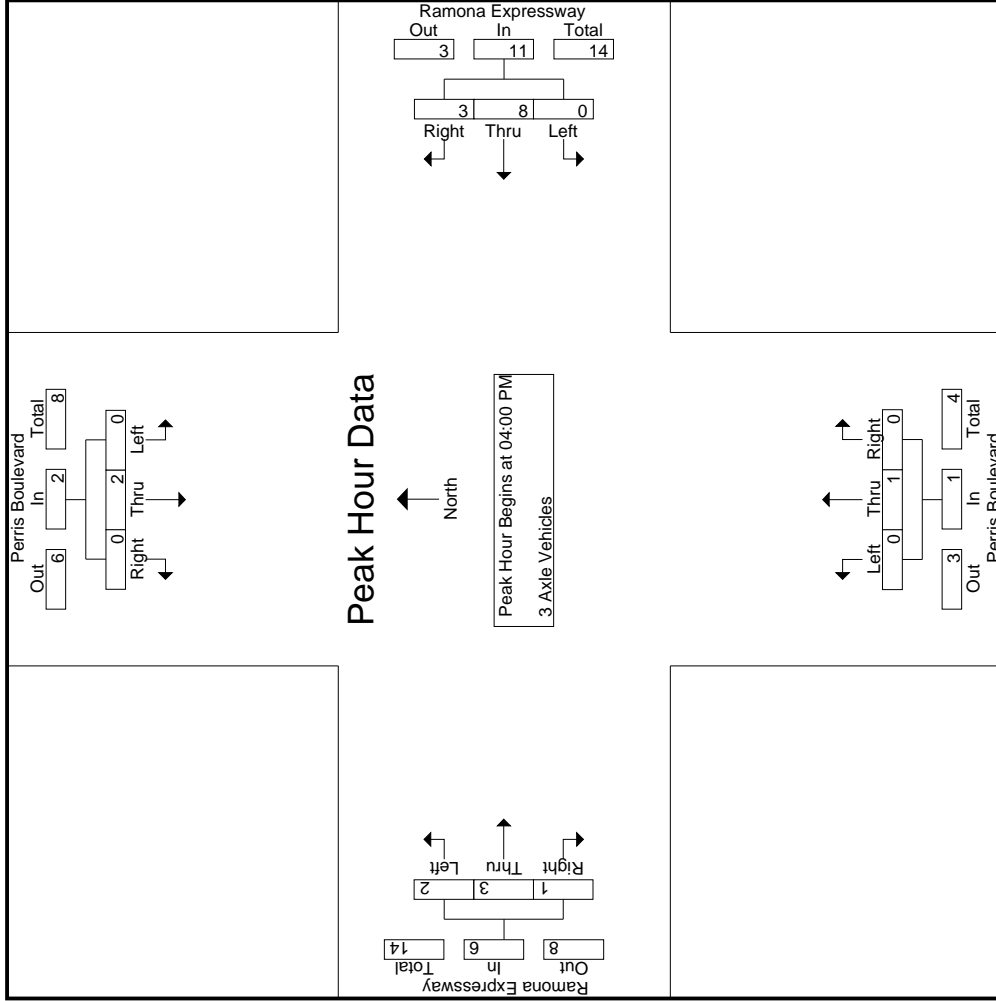
Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound											
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
04:15 PM	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6
04:30 PM	0	0	0	0	0	2	1	0	0	0	1	0	0	0	1	1	1	1	3	0	0	1	7	8
04:45 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
Total Volume	0	2	0	0	0	8	3	0	0	0	1	0	0	0	3	1	1	6	1	1	1	20	21	
% App. Total	0	100	0	0	0	72.7	27.3		66.7	33.3	0		14.3	71.4	14.3		33.3	50	16.7		4.8	95.2		
PHF	.000	.250	.000		.000	.550	.750		.550	.250	.000		.250	.375	.250		.500	.500		.250	.500	.714		

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Ramona Expressway Westbound			Perris Boulevard Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	2	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	5	0	0	0	1	0	0
+30 mins.	0	0	0	0	2	1	0	1	0	1	1	1
+45 mins.	0	0	0	0	2	1	0	0	0	0	0	0
Total Volume	0	2	0	0	8	3	0	1	0	2	3	1
% App. Total	0	100	0	0	72.7	27.3	0	100	0	33.3	50	16.7
PHF	.000	.250	.000	.000	.500	.750	.000	.250	.000	.500	.375	.250

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	2	0	2	0	7	0	0	7	2	0	0	0	2	1	0	0	0	2	0	13	13
04:15 PM	0	0	2	1	2	2	1	1	0	3	2	0	0	0	2	2	3	4	0	9	2	16	18
04:30 PM	0	0	0	0	0	5	0	0	0	5	1	2	0	0	3	1	4	1	0	6	0	14	14
04:45 PM	0	0	1	0	1	7	0	0	0	8	0	1	1	0	2	3	3	1	0	7	0	18	18
<b>Total</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>21</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>23</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>24</b>	<b>2</b>	<b>61</b>	<b>63</b>
05:00 PM	0	0	1	1	1	2	2	0	0	4	1	0	0	0	1	1	2	0	0	3	1	9	10
05:15 PM	1	0	1	0	2	1	1	0	0	2	3	0	0	0	3	0	3	0	0	3	0	10	10
05:30 PM	0	0	2	0	2	4	1	0	0	5	0	3	1	0	4	2	2	1	0	5	0	16	16
05:45 PM	0	0	2	1	2	3	0	0	0	3	0	0	0	0	0	1	3	1	0	5	1	10	11
<b>Total</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>7</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>4</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>45</b>	<b>47</b>
<b>Grand Total</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>12</b>	<b>1</b>	<b>31</b>	<b>5</b>	<b>1</b>	<b>37</b>	<b>9</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>17</b>	<b>11</b>	<b>20</b>	<b>9</b>	<b>0</b>	<b>40</b>	<b>4</b>	<b>106</b>	<b>110</b>
Approch %	8.3	0	91.7			2.7	83.8	13.5		34.9	52.9	35.3	11.8		16	27.5	50	22.5		37.7	3.6	96.4	
Total %	0.9	0	10.4		11.3	0.9	29.2	4.7			8.5	5.7	1.9			10.4	18.9	8.5					

3.1-405

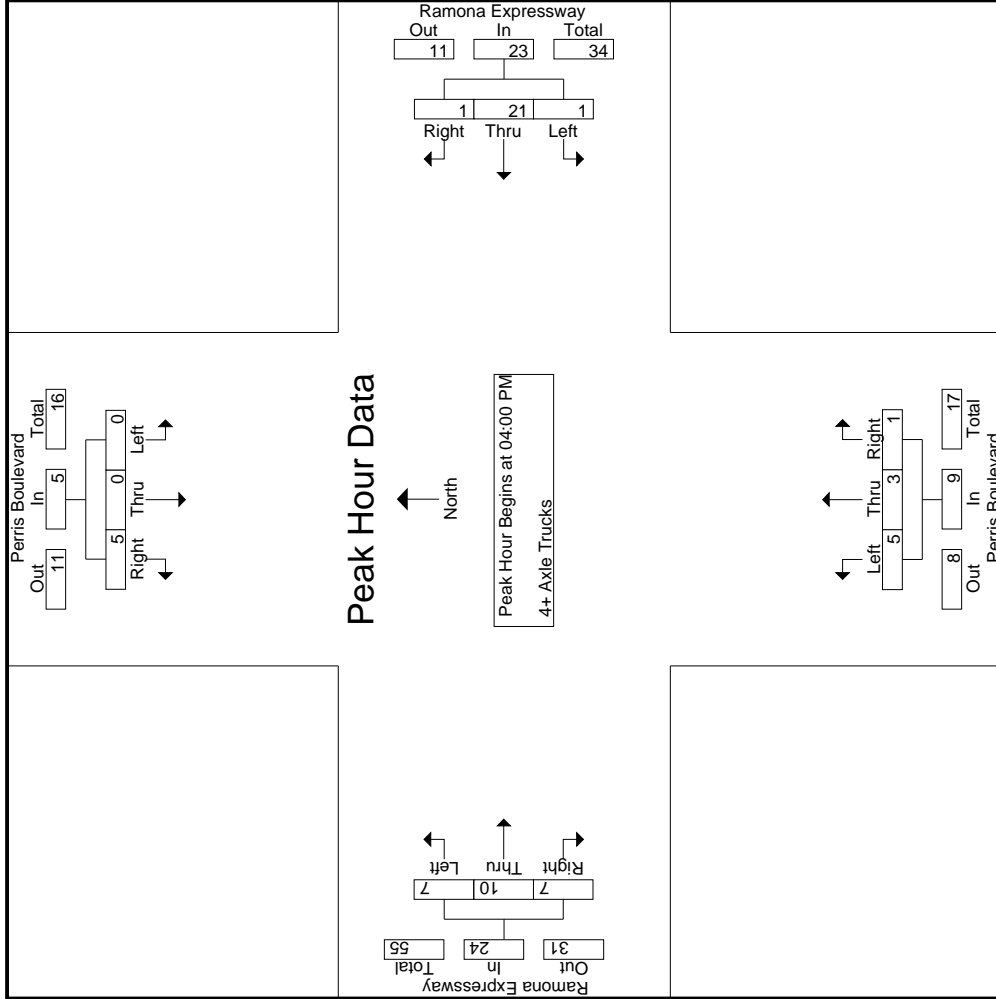
Start Time	Perris Boulevard Southbound					Ramona Expressway Westbound					Perris Boulevard Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	7	0	0	7	2	0	0	0	2	1	0	0	0	2	0	13	13
04:15 PM	0	0	0	0	0	2	2	1	1	3	2	0	0	0	2	2	3	4	0	9	2	16	18
04:30 PM	0	0	0	0	0	5	0	0	0	5	1	2	0	0	3	1	4	1	0	6	0	14	14
04:45 PM	0	0	1	0	1	7	0	0	0	8	0	1	1	0	2	3	3	1	0	7	0	18	18
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>21</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>23</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>24</b>	<b>2</b>	<b>61</b>	<b>61</b>
% App. Total	0	0	100			4.3	91.3	4.3		34.9	55.6	33.3	11.1		16	29.2	41.7	29.2		37.7	3.6	96.4	
PHF	.000	.000	.625		.625	.250	.750	.250		.719	.625	.375	.250		.750	.583	.625	.438		.667		.847	

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 13\_PER\_Perris Blvd\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound				Ramona Expressway Westbound				Perris Boulevard Northbound				Ramona Expressway Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
	Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																	
	04:00 PM																
+0 mins.	0	0	2	2	0	7	0	7	2	0	0	0	2	1	0	1	2
+15 mins.	0	0	2	2	0	3	1	3	2	0	0	0	2	2	3	4	9
+30 mins.	0	0	0	0	0	5	0	5	1	2	0	0	3	1	4	1	6
+45 mins.	0	0	1	1	1	7	0	8	0	1	1	1	2	3	3	1	7
Total Volume	0	0	5	5	1	21	1	23	5	3	1	9	7	10	7	24	
% App. Total	0	0	100	62.5	4.3	91.3	4.3	71.9	55.6	33.3	11.1	75.0	29.2	41.7	29.2	66.7	
PHF	.000	.000	.625	.625	.250	.750	.250	.719	.625	.375	.250	.750	.583	.625	.438	.667	

Location: City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Perris Boulevard Pedestrians	East Leg Ramona Expressway Pedestrians	South Leg Perris Boulevard Pedestrians	West Leg Ramona Expressway Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	1	1
7:30 AM	0	1	0	0	1
7:45 AM	1	2	0	0	3
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	2	0	0	2
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	1	5	0	1	7

	North Leg Perris Boulevard Pedestrians	East Leg Ramona Expressway Pedestrians	South Leg Perris Boulevard Pedestrians	West Leg Ramona Expressway Pedestrians	
4:00 PM	1	2	0	0	3
4:15 PM	0	1	0	2	3
4:30 PM	1	0	0	2	3
4:45 PM	6	0	0	0	6
5:00 PM	0	1	0	3	4
5:15 PM	0	0	0	1	1
5:30 PM	1	1	1	1	4
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	9	5	1	9	24



Location: City of Perris  
 N/S: Perris Boulevard  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Perris Boulevard			Westbound Ramona Expressway			Northbound Perris Boulevard			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	1	0	0	0	0	0	2

	Southbound Perris Boulevard			Westbound Ramona Expressway			Northbound Perris Boulevard			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	1	0	0	1	0	0	0	0	0	1	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	2	0	0	2	0	0	3	0	8

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
07:00 AM	1	88	11	1	100	3	1	1	0	5	8	240	6	0	254	4	2	3	2	9	3	368	371		
07:15 AM	0	101	17	2	118	3	4	1	1	8	8	230	5	1	243	2	1	2	1	5	5	374	379		
07:30 AM	1	108	21	2	130	4	6	0	0	10	3	242	1	0	246	8	1	2	2	11	4	397	401		
07:45 AM	3	135	24	5	162	6	14	1	1	21	12	215	5	1	232	16	11	10	9	37	16	452	468		
<b>Total</b>	<b>5</b>	<b>432</b>	<b>73</b>	<b>10</b>	<b>510</b>	<b>16</b>	<b>25</b>	<b>3</b>	<b>2</b>	<b>44</b>	<b>31</b>	<b>927</b>	<b>17</b>	<b>2</b>	<b>975</b>	<b>30</b>	<b>15</b>	<b>17</b>	<b>14</b>	<b>62</b>	<b>28</b>	<b>1591</b>	<b>1619</b>		
08:00 AM	1	81	10	2	92	3	1	1	1	5	6	146	1	0	153	6	0	3	2	9	5	259	264		
08:15 AM	0	106	20	3	126	1	2	1	0	4	5	132	4	0	141	5	4	2	2	11	5	282	287		
08:30 AM	2	84	11	1	97	2	2	1	0	5	7	144	2	0	153	10	3	4	4	17	5	272	277		
08:45 AM	3	99	9	1	111	4	1	1	1	6	16	134	1	0	151	7	1	11	10	19	12	287	299		
<b>Total</b>	<b>6</b>	<b>370</b>	<b>50</b>	<b>7</b>	<b>426</b>	<b>10</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>20</b>	<b>34</b>	<b>556</b>	<b>8</b>	<b>0</b>	<b>598</b>	<b>28</b>	<b>8</b>	<b>20</b>	<b>18</b>	<b>56</b>	<b>27</b>	<b>1100</b>	<b>1127</b>		
<b>Grand Total</b>	<b>11</b>	<b>802</b>	<b>123</b>	<b>17</b>	<b>936</b>	<b>26</b>	<b>31</b>	<b>7</b>	<b>4</b>	<b>64</b>	<b>65</b>	<b>1483</b>	<b>25</b>	<b>2</b>	<b>1573</b>	<b>58</b>	<b>23</b>	<b>37</b>	<b>32</b>	<b>118</b>	<b>55</b>	<b>2691</b>	<b>2746</b>		
Approach %	1.2	85.7	13.1			40.6	48.4	10.9			4.1	94.3	1.6			49.2	19.5	31.4							
Total %	0.4	29.8	4.6		34.8	1	1.2	0.3		2.4	2.4	55.1	0.9		58.5	2.2	0.9	1.4		4.4	2	98			
Passenger Vehicles	10	746	100		869	26	30	5		65	62	1415	24		1503	47	22	32		130	0	0	2567		
Large 2 Axle Vehicles	90.9	93	81.3		76.5	100	96.8	71.4		100	95.4	95.4	96		100	81	95.7	86.5		90.6	0	0	93.5		
3 Axle Vehicles	9.1	35	2		39	0	1	0		1	2	45	1		48	3	1	2		8	0	0	96		
4+ Axle Trucks	0	11	2		14	0	0	0		0	3.1	3	4		3	5.2	4.3	5.4		6.2	0	0	3.5		
% 3 Axle Vehicles	0	1.4	1.6		5.9	0	0	0		0	0	0.8	0		0	6.9	0	2.7		0	0	0	1.1		
% 4+ Axle Trucks	0	10	19		31	0	0	2		2	1	11	0		12	4	0	2		7	0	0	52		
	0	1.2	15.4		11.8	0	0	28.6		2.9	1.5	0.7	0		0.8	6.9	0	5.4		3.1	0	0	1.9		

Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	1	88	11		100	3	1	1		5	8	240	6		254	4	2	3		9	3	368	371	
07:15 AM	0	101	17		118	3	4	1		8	8	230	5		243	2	1	2		5	5	374	379	
07:30 AM	1	108	21		130	4	6	0		10	3	242	1		246	8	1	2		11	4	397	401	
07:45 AM	3	135	24		162	6	14	1		21	12	215	5		232	16	11	10		37	16	452	468	
<b>Total Volume</b>	<b>5</b>	<b>432</b>	<b>73</b>		<b>510</b>	<b>16</b>	<b>25</b>	<b>3</b>		<b>44</b>	<b>31</b>	<b>927</b>	<b>17</b>		<b>975</b>	<b>30</b>	<b>15</b>	<b>17</b>		<b>62</b>	<b>28</b>	<b>1591</b>	<b>1619</b>	
% App. Total	1	84.7	14.3		14.3	36.4	56.8	6.8		6.8	3.2	95.1	1.7		1.7	48.4	24.2	27.4		4.7	0	0	1.9	
PHF	.417	.800	.760		.760	.667	.446	.750		.750	.646	.958	.708		.708	.960	.341	.425		.419				

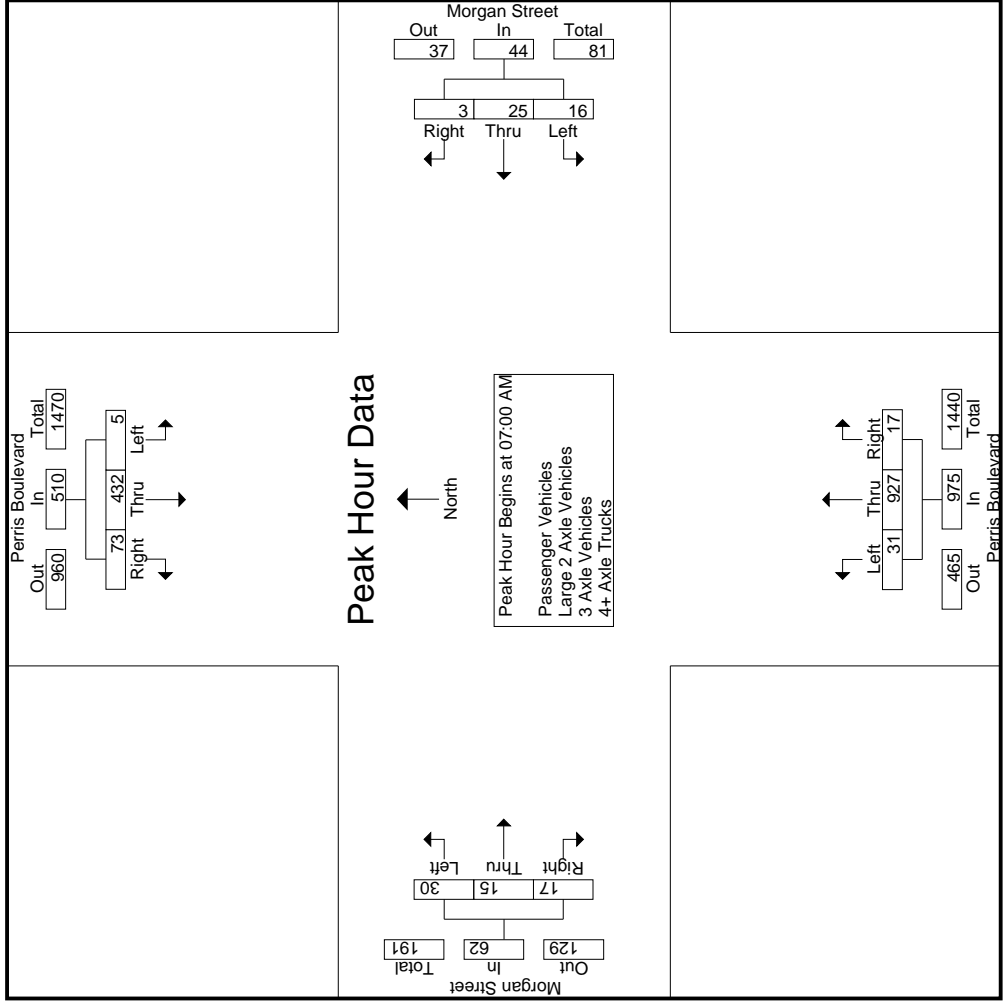
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound				
	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total	
	Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Each Approach Begins at:																				
	07:00 AM					07:00 AM					07:00 AM					07:45 AM				
+0 mins.	1	88	11	100		3	1	1	5		8	240	6	254		16	11	10	37	
+15 mins.	0	101	17	118		3	4	1	8		8	230	5	243		6	0	3	9	
+30 mins.	1	108	21	130		4	6	0	10		3	242	1	246		5	4	2	11	
+45 mins.	3	135	24	162		6	14	1	21		12	215	5	232		10	3	4	17	
Total Volume	5	432	73	510		16	25	3	44		31	927	17	975		37	18	19	74	
% App. Total	1	84.7	14.3			36.4	56.8	6.8			3.2	95.1	1.7			50	24.3	25.7		
PHF	.417	.800	.760	.787		.667	.446	.750	.524		.646	.958	.708	.960		.578	.409	.475	.500	

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

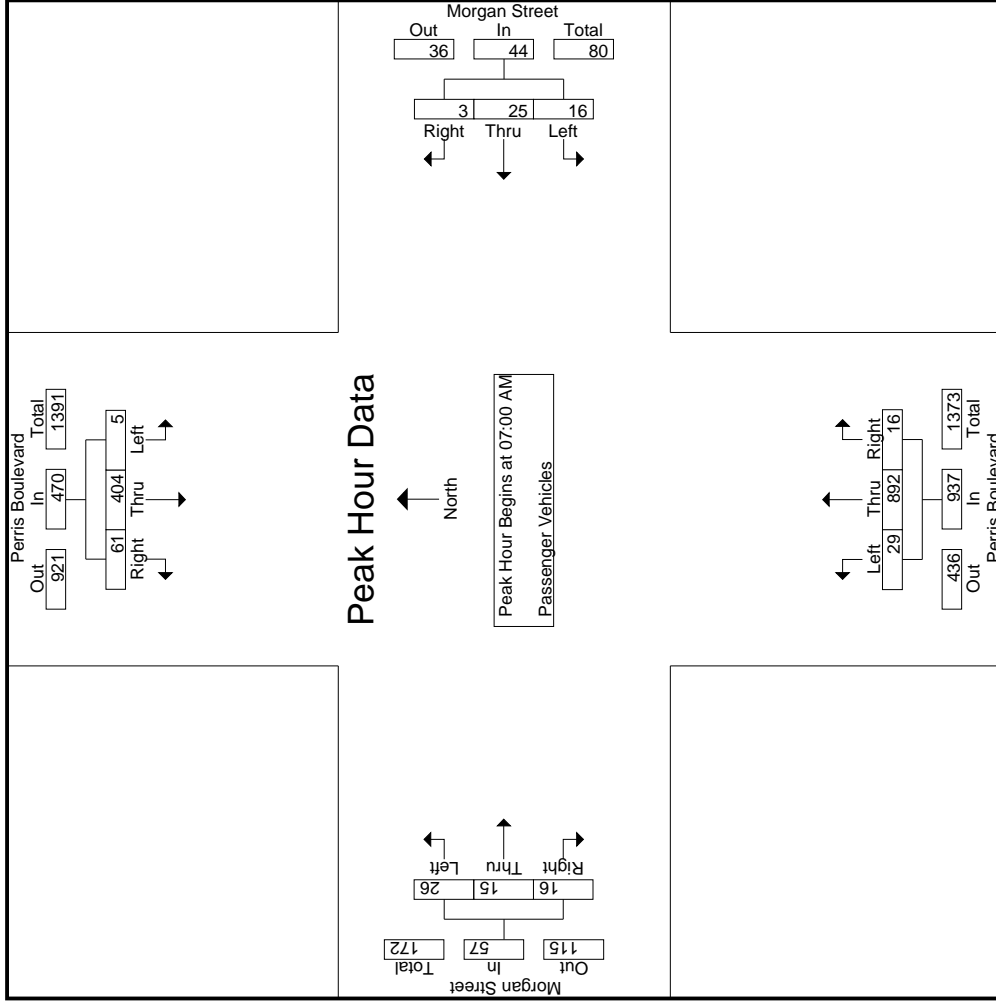
Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	86	10	1	97	3	1	1	0	5	8	226	6	0	240	3	2	3	2	8	3	350	353
07:15 AM	0	98	14	2	112	3	4	1	1	8	8	226	4	1	238	2	1	1	1	4	5	362	367
07:30 AM	1	97	18	2	116	4	6	0	0	10	2	233	1	0	236	8	1	2	2	11	4	373	377
07:45 AM	3	123	19	4	145	6	14	1	1	21	11	207	5	1	223	13	11	10	9	34	15	423	438
Total	5	404	61	9	470	16	25	3	2	44	29	892	16	2	937	26	15	16	14	57	27	1508	1535
08:00 AM	1	78	9	1	88	3	1	1	1	5	6	140	1	0	147	4	0	2	2	6	4	246	250
08:15 AM	0	99	13	2	112	1	2	0	0	3	5	124	4	0	133	4	3	2	2	9	4	257	261
08:30 AM	2	74	9	0	85	2	1	0	0	3	7	132	2	0	141	8	3	3	14	3	3	243	246
08:45 AM	2	91	8	1	101	4	1	1	1	6	15	127	1	0	143	5	1	9	8	15	10	265	275
Total	5	342	39	4	386	10	5	2	2	17	33	523	8	0	564	21	7	16	15	44	21	1011	1032
Grand Total	10	746	100	13	856	26	30	5	4	61	62	1415	24	2	1501	47	22	32	29	101	48	2519	2567
Apprch %	1.2	87.1	11.7		42.6	49.2	8.2			2.4	4.1	94.3	1.6		59.6	46.5	21.8	31.7		4	1.9	98.1	
Total %	0.4	29.6	4		34	1	1.2	0.2			2.5	56.2	1			1.9	0.9	1.3					
Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 07:00 AM																							
07:00 AM	1	86	10		97	3	1	1		5	8	226	6		240	3	2	3		8	3	350	350
07:15 AM	0	98	14		112	3	4	1		8	8	226	4		238	2	1	1		4	5	362	362
07:30 AM	1	97	18		116	4	6	0		10	2	233	1		236	8	1	2		11	4	373	373
07:45 AM	3	123	19		145	6	14	1		21	11	207	5		223	13	11	10		34	15	423	423
Total Volume	5	404	61		470	16	25	3		44	29	892	16		937	26	15	16		57	27	1508	1508
% App. Total	1.1	86	13		34	36.4	56.8	6.8		6.8	3.1	95.2	1.7		1.7	45.6	26.3	28.1		4	1.9	98.1	
PHF	.417	.821	.803		.810	.667	.446	.750		.524	.659	.957	.667		.976	.500	.341	.400		.419		.891	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound				Morgan Street Westbound				Perris Boulevard Northbound				Morgan Street Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
	Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	1	86	10	97	3	1	1	5	8	226	6	240	3	2	3	8	
+15 mins.	0	98	14	112	3	4	1	8	8	226	4	238	2	1	1	4	
+30 mins.	1	97	18	116	4	6	0	10	2	233	1	236	8	1	2	11	
+45 mins.	3	123	19	145	6	14	1	21	11	207	5	223	13	11	10	34	
Total Volume	5	404	61	470	16	25	3	44	29	892	16	937	26	15	16	57	
% App. Total	1.1	86	13		36.4	56.8	6.8		3.1	95.2	1.7		45.6	26.3	28.1		
PHF	.417	.821	.803	.810	.667	.446	.750	.524	.659	.957	.667	.976	.500	.341	.400	.419	

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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	9	9
07:15 AM	0	1	0	0	1	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5	5
07:30 AM	0	4	0	0	4	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	11	11
07:45 AM	0	6	0	0	6	0	0	0	0	0	1	6	0	0	7	1	0	0	0	1	0	0	14	14
Total	0	11	0	0	11	0	0	0	0	0	1	25	1	0	27	1	0	0	0	1	0	0	39	39
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	0	6	6
08:15 AM	0	7	1	0	8	0	0	0	0	0	4	0	0	0	4	0	1	0	0	1	0	0	13	13
08:30 AM	0	9	1	1	10	0	1	0	0	1	7	0	0	0	7	0	0	0	0	0	0	1	18	19
08:45 AM	1	6	0	0	7	0	0	0	0	0	1	6	0	0	7	1	0	2	2	3	2	2	17	19
Total	1	24	2	1	27	0	1	0	0	1	1	20	0	0	21	2	1	2	2	5	3	54	57	57
Grand Total	1	35	2	1	38	0	1	0	0	1	2	45	1	0	48	3	1	2	2	6	3	93	96	96
Approch %	2.6	92.1	5.3		40.9	0	100	0		1.1	4.2	93.8	2.1		51.6	50	16.7	33.3		6.5	3.1	96.9		
Total %	1.1	37.6	2.2			0	1.1	0			2.2	48.4	1.1			3.2	1.1	2.2						

3.1-416

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	0
07:30 AM	0	4	0	0	4	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0
07:45 AM	0	6	0	0	6	0	0	0	0	0	1	6	0	0	7	1	0	0	0	1	0	0	1	14
Total Volume	0	11	0	0	11	0	0	0	0	0	1	25	1	0	27	1	0	0	0	1	0	0	1	39
% App. Total	0	100	0	0	0	0	0	0	0	0	3.7	92.6	3.7	0	3.7	100	0	0	0	0	0	0	0	0
PHF	.000	.458	.000		.458	.000	.000	.000		.000	.250	.694	.250		.750	.250	.000	.000		.250	.000	.250	.696	.696

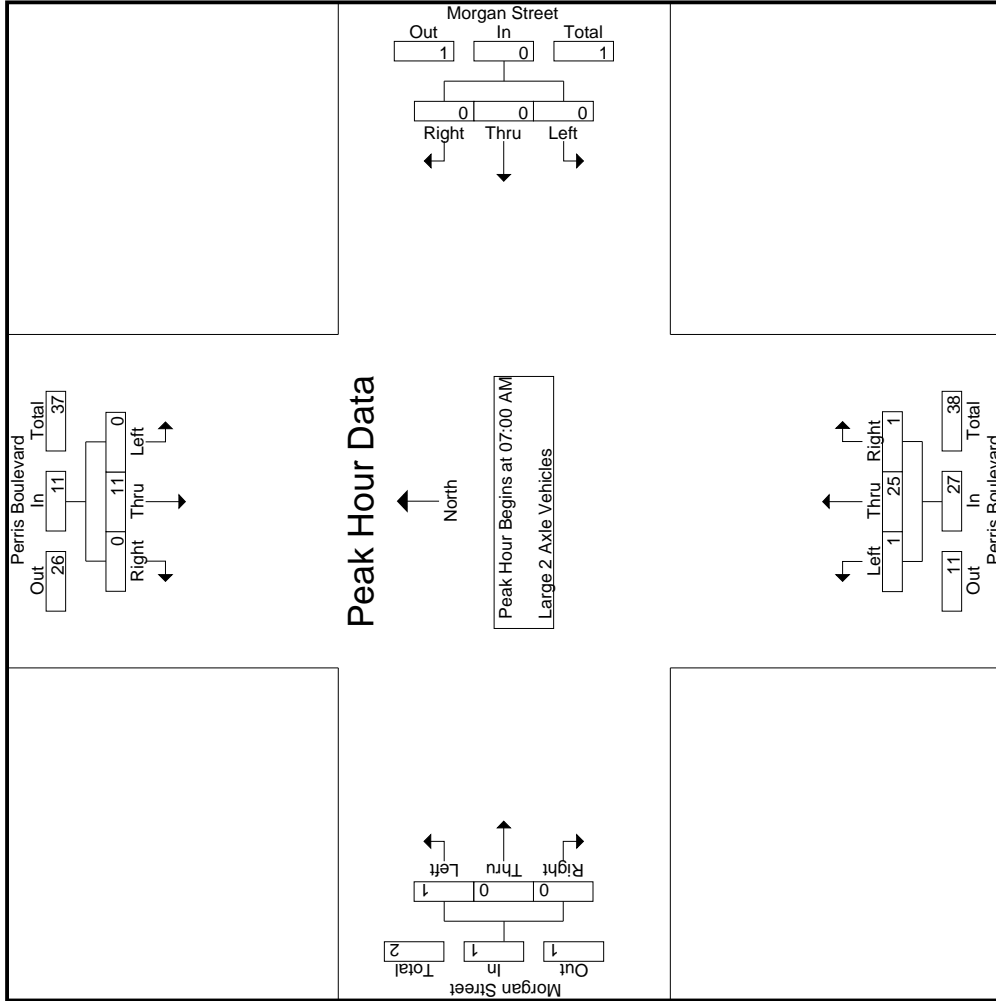
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Perris Boulevard Northbound			Morgan Street Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	9	0	0
+15 mins.	0	1	0	0	0	0	0	3	1	4	0	0
+30 mins.	0	4	0	0	0	0	0	7	0	7	0	0
+45 mins.	0	6	0	0	0	0	1	6	0	7	0	1
Total Volume	0	11	0	0	0	0	1	25	1	27	0	0
% App. Total	0	100	0	0	0	0	3.7	92.6	3.7	100	0	0
PHF	.000	.458	.000	.000	.000	.000	.250	.694	.250	.750	.000	.250

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	6	6
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	4
07:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	6
Total	0	10	0	0	10	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	17	17
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	4	4
08:15 AM	0	0	2	1	2	0	0	0	0	0	2	0	0	0	2	1	0	0	0	1	1	5	6
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
08:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	3	3
Total	0	1	2	1	3	0	0	0	0	0	0	6	0	0	6	3	0	1	0	4	1	13	14
Grand Total	0	11	2	1	13	0	0	0	0	0	0	12	0	0	12	4	0	1	0	5	1	30	31
Approch %	0	84.6	15.4		43.3	0	0	0		0	80	0	20	3.3	16.7	3.2	96.8						
Total %	0	36.7	6.7			0	0	0		0	13.3	0	3.3										

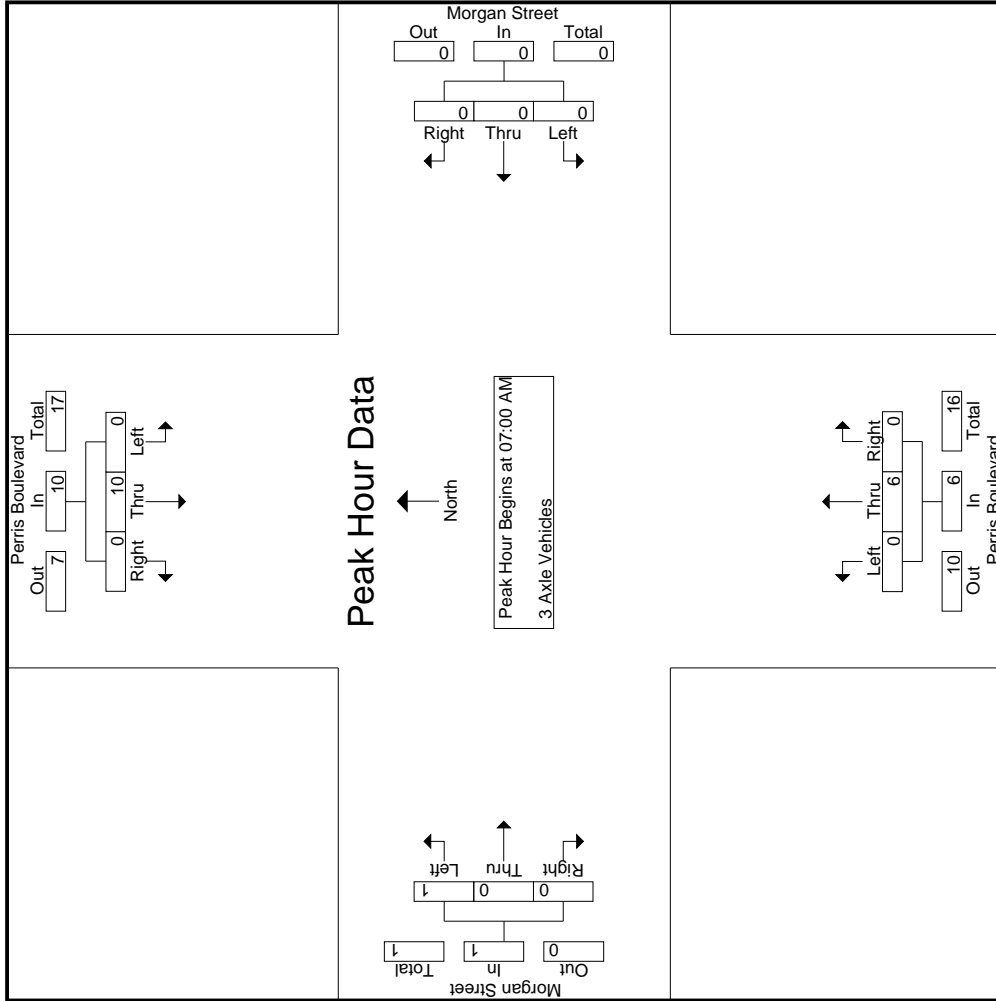
  

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	0	6	6
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	4
07:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	6
Total Volume	0	10	0	0	10	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	17	17
% App. Total	0	100	0	0	100	0	0	0	0	0	0	100	0	0	100	100	0	0	0	0	0	0	0
PHF	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.250	.000	.000	.000	.250	.000	.250	.708

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Perris Boulevard Northbound			Morgan Street Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	1	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	3	0	0	0	0	0	1	0	0	0	0
+45 mins.	0	5	0	0	0	0	0	1	0	0	0	0
Total Volume	0	10	0	0	0	0	0	6	0	1	0	0
% App. Total	0	100	0	0	0	0	0	100	0	100	0	0
PHF	.000	.500	.000	.000	.000	.000	.000	.375	.000	.250	.000	.000

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound										
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total					
07:00 AM	0	1	1	0	2	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	1	3	0	4	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	1	0	1	6
07:30 AM	0	4	3	0	7	0	0	0	0	0	0	2	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	9
07:45 AM	0	1	5	1	6	0	0	0	0	0	0	1	0	1	0	0	1	2	0	0	0	2	1	1	0	0	0	1	10
Total	0	7	12	1	19	0	0	0	0	0	0	5	1	4	0	0	5	2	0	1	0	3	1	2	1	27	0	1	28
08:00 AM	0	1	1	1	2	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	4
08:15 AM	0	0	4	0	4	0	0	0	1	0	1	2	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	7	
08:30 AM	0	1	1	0	2	0	0	0	1	0	1	4	4	0	0	4	2	0	1	1	3	1	1	1	10	0	1	11	
08:45 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	7	1	10	0	0	0	2	0	2	7	7	0	0	7	2	0	1	1	3	2	2	2	22	0	2	24	
Grand Total	0	10	19	2	29	0	0	0	2	0	2	12	11	0	0	12	4	0	2	1	6	3	4	3	49	0	3	52	
Approch %	0	34.5	65.5			0	0	0	100				8.3	91.7	0			66.7	0	33.3			5.8	94.2					
Total %	0	20.4	38.8		59.2	0	0	0	4.1		4.1		2	22.4	0		24.5	8.2	0	4.1		12.2	5.8	94.2					

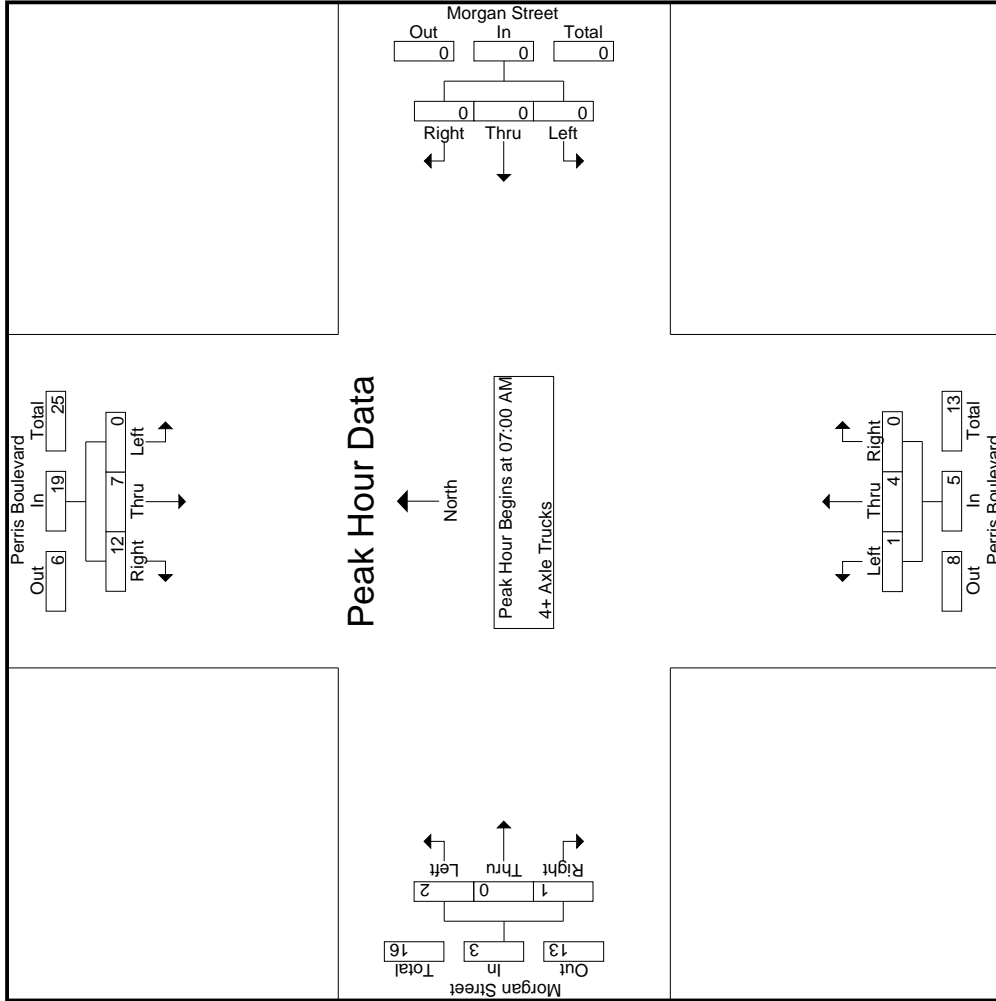
  

Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound										
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total					
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour for Entire Intersection Begins at 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	1	1	0	2	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	1	3	0	4	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	0	1	0	1	6
07:30 AM	0	4	3	0	7	0	0	0	0	0	0	2	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	9
07:45 AM	0	1	5	1	6	0	0	0	0	0	0	1	0	1	0	0	1	2	0	0	0	2	1	1	0	2	0	1	9
Total Volume	0	7	12	1	19	0	0	0	0	0	0	5	1	4	0	0	5	2	0	1	0	3	1	2	2	27	0	3	27
% App. Total	0	36.8	63.2			0	0	0	0		0		20	80	0		66.7	0	0	33.3			0	33.3	0	3			
PHF	.000	.438	.600		.679	.000	.000	.000	.000		.000	.000	.250	1.00	.000		.625	.250	.000	.250		.375	.000	.375	.000	.750		.750	.750

Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Perris Boulevard Northbound			Morgan Street Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM				07:00 AM				07:00 AM				07:00 AM		
+0 mins.	0	1	1	2	0	0	0	0	1	0	0	0	0	0	
+15 mins.	0	1	3	4	0	0	0	0	1	0	0	0	1	1	
+30 mins.	0	4	3	7	0	0	0	0	1	0	0	0	0	0	
+45 mins.	0	1	5	6	0	0	0	0	0	0	0	0	0	2	
Total Volume	0	7	12	19	0	0	0	0	1	4	0	0	1	3	
% App. Total	0	36.8	63.2		0	0	0	0	20	80	0	0	33.3		
PHF	.000	.438	.600	.679	.000	.000	.000	.000	.250	1.000	.000	.000	.250	.375	



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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound											
	Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total	
	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total		
04:00 PM	6	182	10	2	198	4	5	4	16	3	175	2	0	180	9	3	7	7	19	13	413	426								
04:15 PM	5	191	4	0	200	3	3	0	6	5	164	1	0	170	4	6	4	2	14	2	390	392								
04:30 PM	2	208	4	0	214	4	2	1	15	3	176	4	0	183	12	8	10	3	30	4	442	446								
04:45 PM	3	259	2	0	264	11	1	0	12	2	176	1	0	179	8	8	7	6	23	6	478	484								
<b>Total</b>	16	840	20	2	876	30	12	7	5	49	13	691	8	0	712	33	25	28	18	86	25	1723	1748							
05:00 PM	2	198	4	0	204	7	0	3	2	10	8	189	4	0	201	4	2	9	4	15	6	430	436							
05:15 PM	0	209	3	1	212	5	0	5	0	10	0	163	2	0	165	2	2	2	2	6	3	393	396							
05:30 PM	3	210	3	0	216	7	0	6	5	13	10	183	4	0	197	9	0	0	9	5	435	440								
05:45 PM	3	186	5	1	194	10	1	0	0	11	5	161	4	2	170	5	2	2	2	9	5	384	389							
<b>Total</b>	8	803	15	2	826	29	1	14	7	44	23	696	14	2	733	20	6	13	8	39	19	1642	1661							
<b>Grand Total</b>	24	1643	35	4	1702	59	13	21	12	93	36	1387	22	2	1445	53	31	41	26	125	44	3365	3409							
<b>Approch %</b>	1.4	96.5	2.1		63.4	14	22.6			2.8	2.5	96	1.5		42.9	1.6	0.9	1.2		3.7	1.3	98.7								
<b>Total %</b>	0.7	48.8	1		50.6	1.8	0.4	0.6		2.8	1.1	41.2	0.7		42.9	1.6	0.9	1.2		3.7	1.3	98.7								
Passenger Vehicles	20	1602	24		1648	57	11	17		97	35	1360	21		1418	45	28	39		136	0	3299								
Large 2 Axle Vehicles	83.3	97.5	68.6	50	96.6	96.6	84.6	81	100	92.4	97.2	98.1	95.5	100	98	84.9	90.3	95.1	92.3	90.1	0	96.8								
3 Axle Vehicles	0	33	9		43	1	1	0		2	1	22	1		24	0	0	2		4	0	73								
4+ Axle Trucks	0	2	25.7	25	2.5	1.7	7.7	0	0	1.9	2.8	1.6	4.5	0	1.7	0	0	4.9	7.7	2.6	0	2.1								
% 3 Axle Vehicles	0	5	2		8	1	0	1		2	0	0	0		0	1	2	0		3	0	13								
% 4+ Axle Trucks	0	0.3	5.7	25	0.5	1.7	0	4.8	0	1.9	0	0	0		0	1.9	6.5	0		2	0	0.4								
% 4+ Axle Trucks	4	3	0		7	0	1	3		4	0	5	0		5	7	1	0		8	0	24								
% 4+ Axle Trucks	16.7	0.2	0		0.4	0	7.7	14.3	0	3.8	0	0.4	0		0.3	13.2	3.2	0		5.3	0	0.7								
<b>Start Time</b>	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound											
<b>Start Time</b>	Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total		Left		Thru		Right		RTOR		App. Total	
<b>Start Time</b>	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total	Exclu. Total	Inclu. Total		
04:30 PM	2	208	4		214	9	4		15	3	176	4		183	4	2	8		183	4	12	8	10	3	30	4	442	446		
04:45 PM	3	259	2	0	264	11	1	0	12	2	176	1	0	179	8	8	7	6	23	6	478	484								
05:00 PM	2	198	4	0	204	7	0	3	2	10	8	189	4	0	201	4	2	9	4	15	6	430	436							
05:15 PM	0	209	3	1	212	5	0	5	0	10	0	163	2	0	165	2	2	2	2	6	3	393	396							
05:30 PM	3	210	3	0	216	7	0	6	5	13	10	183	4	0	197	9	0	0	9	5	435	440								
05:45 PM	3	186	5	1	194	10	1	0	0	11	5	161	4	2	170	5	2	2	2	9	5	384	389							
<b>Total</b>	16	840	20	2	876	30	12	7	5	49	13	691	8	0	712	33	25	28	18	86	25	1723	1748							
<b>% App. Total</b>	0.8	97.8	1.5		68.1	10.6	21.3		.783	1.8	96.7	1.5		.905	35.1	27	37.8		.912	44	3365	3409								
<b>PHF</b>	.583	.844	.813		.847	.727	.313	.500		.406	.931	.688		.905	.542	.625	.700		.617	.700	.625	.700	.617		.912		.912			

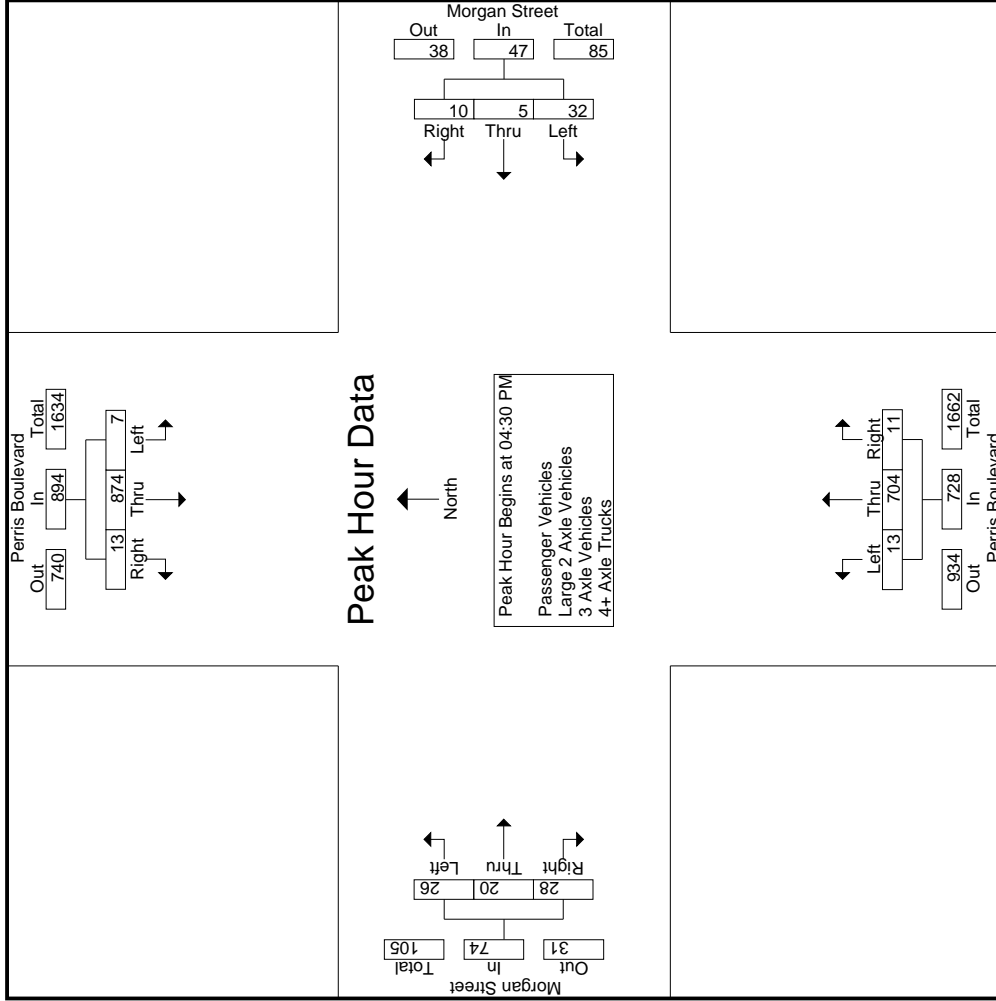
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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City of Perris  
 N/S: Perris Boulevard  
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File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Perris Boulevard Northbound			Morgan Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:45 PM			04:00 PM			04:45 PM			04:00 PM			
+0 mins.	3	259	2	4	5	16	2	176	1	2	179	3	7
+15 mins.	2	198	4	3	0	6	8	189	4	8	201	6	4
+30 mins.	0	209	3	4	2	15	0	163	2	0	165	8	14
+45 mins.	3	210	3	1	0	12	10	183	4	10	197	8	30
Total Volume	8	876	12	12	7	49	20	711	11	11	742	25	28
% App. Total	0.9	97.8	1.3	61.2	24.5	14.3	2.7	95.8	1.5	38.4	29.1	32.6	86
PHF	.667	.846	.750	.682	.750	.766	.500	.940	.688	.688	.923	.781	.700

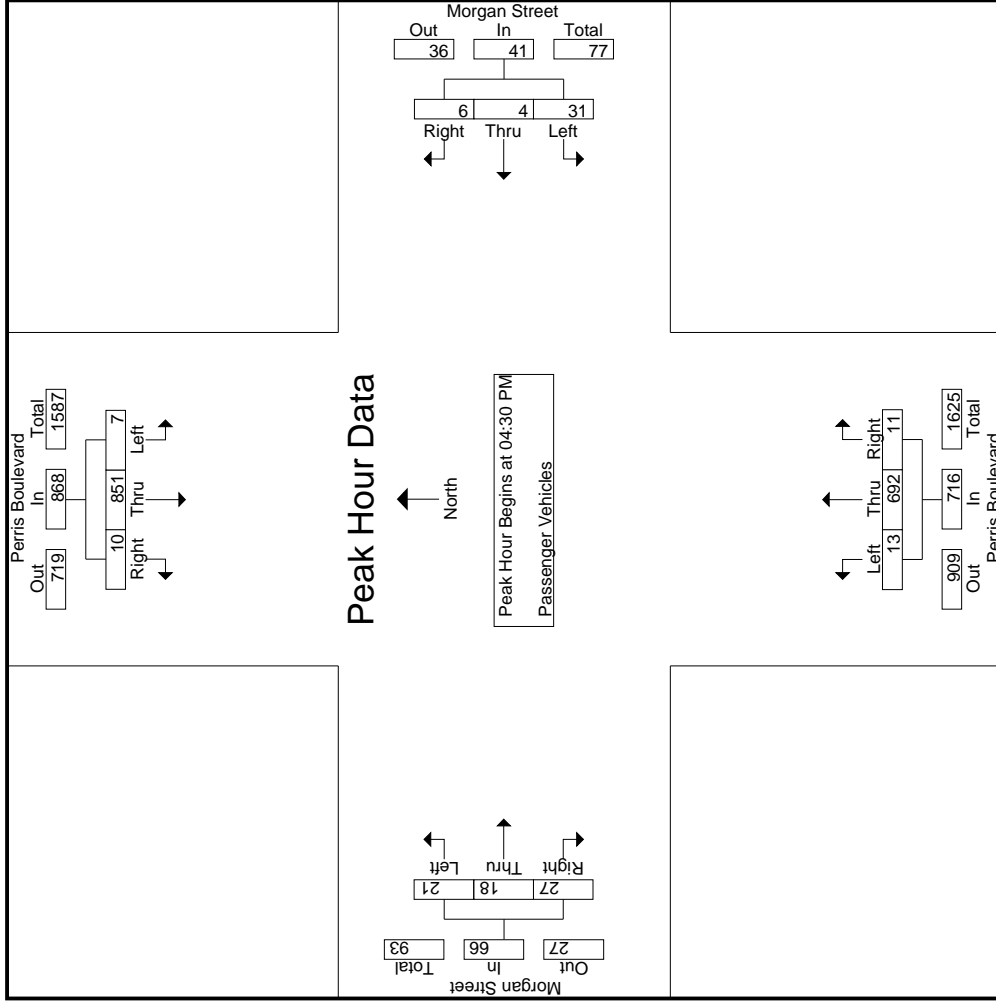
Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	6	178	5	1	189	7	4	5	4	16	3	169	2	0	174	9	3	6	6	18	11	397	408			
04:15 PM	1	185	4	0	190	3	3	0	0	6	4	158	0	0	162	4	5	4	2	13	2	371	373			
04:30 PM	2	200	4	0	206	9	4	2	1	15	3	174	4	0	181	8	8	10	3	26	4	428	432			
04:45 PM	3	253	2	0	258	10	0	0	0	10	2	169	1	0	172	7	7	7	6	21	6	461	467			
<b>Total</b>	<b>12</b>	<b>816</b>	<b>15</b>	<b>1</b>	<b>843</b>	<b>29</b>	<b>11</b>	<b>7</b>	<b>5</b>	<b>47</b>	<b>12</b>	<b>670</b>	<b>7</b>	<b>0</b>	<b>689</b>	<b>28</b>	<b>23</b>	<b>27</b>	<b>17</b>	<b>78</b>	<b>23</b>	<b>1657</b>	<b>1680</b>			
05:00 PM	2	194	3	0	199	7	0	3	2	10	8	188	4	0	200	4	2	8	3	14	5	423	428			
05:15 PM	0	204	1	0	205	5	0	1	0	6	0	161	2	0	163	2	1	2	2	5	2	379	381			
05:30 PM	3	206	1	0	210	6	0	6	5	12	10	182	4	0	196	6	0	0	0	6	5	424	429			
05:45 PM	3	182	4	1	189	10	0	0	0	10	5	159	4	2	168	5	2	2	2	9	5	376	381			
<b>Total</b>	<b>8</b>	<b>786</b>	<b>9</b>	<b>1</b>	<b>803</b>	<b>28</b>	<b>0</b>	<b>10</b>	<b>7</b>	<b>38</b>	<b>23</b>	<b>690</b>	<b>14</b>	<b>2</b>	<b>727</b>	<b>17</b>	<b>5</b>	<b>12</b>	<b>7</b>	<b>34</b>	<b>17</b>	<b>1602</b>	<b>1619</b>			
<b>Grand Total</b>	<b>20</b>	<b>1602</b>	<b>24</b>	<b>2</b>	<b>1646</b>	<b>57</b>	<b>11</b>	<b>17</b>	<b>12</b>	<b>85</b>	<b>35</b>	<b>1360</b>	<b>21</b>	<b>2</b>	<b>1416</b>	<b>45</b>	<b>28</b>	<b>39</b>	<b>24</b>	<b>112</b>	<b>40</b>	<b>3259</b>	<b>3299</b>			
Approch %	1.2	97.3	1.5			67.1	12.9	20		2.6	2.5	96	1.5		43.4	40.2	25	34.8		3.4	1.2	98.8				
Total %	0.6	49.2	0.7		50.5	1.7	0.3	0.5			1.1	41.7	0.6			1.4	0.9	1.2								
Start Time	Perris Boulevard Southbound						Morgan Street Westbound						Perris Boulevard Northbound						Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total			
04:30 PM	2	200	4		206	9	4	2		15	3	174	4		181	4	8	10		26	10	26	428			
04:45 PM	3	253	2		258	10	0	0		10	2	169	1		172	1	7	7		21	7	21	461			
05:00 PM	2	194	3		199	7	0	3		10	8	188	4		196	6	0	0		6	5	6	423			
05:15 PM	3	182	4		189	10	0	0		10	5	159	4		168	5	2	2		9	5	9	379			
Total Volume	7	851	10		868	31	4	6		41	13	692	11		716	21	18	27		66	27	66	1691			
% App. Total	0.8	98	1.2			75.6	9.8	14.6		1.5	1.8	96.6	1.5			31.8	27.3	40.9			40.9					
PHF	.583	.841	.625		.841	.775	.250	.500		.683	.406	.920	.688		.895	.656	.563	.675		.635	.675	.917				

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City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Perris Boulevard  
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File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Perris Boulevard Northbound			Morgan Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:30 PM			04:30 PM			04:30 PM			04:30 PM			
+0 mins.	2	200	4	4	2	15	3	174	4	181	8	10	26
+15 mins.	3	253	2	0	0	10	2	169	1	172	7	7	21
+30 mins.	2	194	3	0	3	10	8	188	4	200	4	2	14
+45 mins.	0	204	1	0	1	6	0	161	2	163	2	1	5
Total Volume	7	851	10	4	6	41	13	692	11	716	21	18	66
% App. Total	0.8	98	1.2	9.8	14.6	68.3	1.8	96.6	1.5	31.8	27.3	40.9	
PHF	.583	.841	.625	.250	.500	.683	.406	.920	.688	.895	.656	.675	.635

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	4	4	1	8	0	0	0	0	0	0	4	0	0	4	0	0	0	1	1	2	13	15
04:15 PM	0	5	0	0	5	0	0	0	0	0	1	6	1	0	8	0	0	0	0	0	0	13	13
04:30 PM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	8	8
04:45 PM	0	5	0	0	5	1	1	0	0	2	0	5	0	0	5	0	0	0	0	0	0	12	12
Total	0	20	4	1	24	1	1	0	0	2	1	17	1	0	19	0	0	0	1	1	2	46	48
05:00 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	5	6
05:15 PM	0	4	1	0	5	0	0	0	0	0	2	2	0	0	2	0	0	0	0	0	0	7	7
05:30 PM	0	4	2	0	6	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	7	7
05:45 PM	0	2	1	0	3	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5	5
Total	0	13	5	0	18	0	0	0	0	0	0	5	0	0	5	0	0	0	1	1	1	24	25
Grand Total	0	33	9	1	42	1	1	0	0	2	1	22	1	0	24	0	0	2	2	2	3	70	73
Approch %	0	78.6	21.4		50	1.4	50	0		2.9	4.2	91.7	4.2		34.3	0	0	100	2.9	2.9	4.1	95.9	
Total %	0	47.1	12.9		60	1.4	1.4	0		2.9	1.4	31.4	1.4			0	0	2.9	2.9	2.9	4.1	95.9	

3.1-431

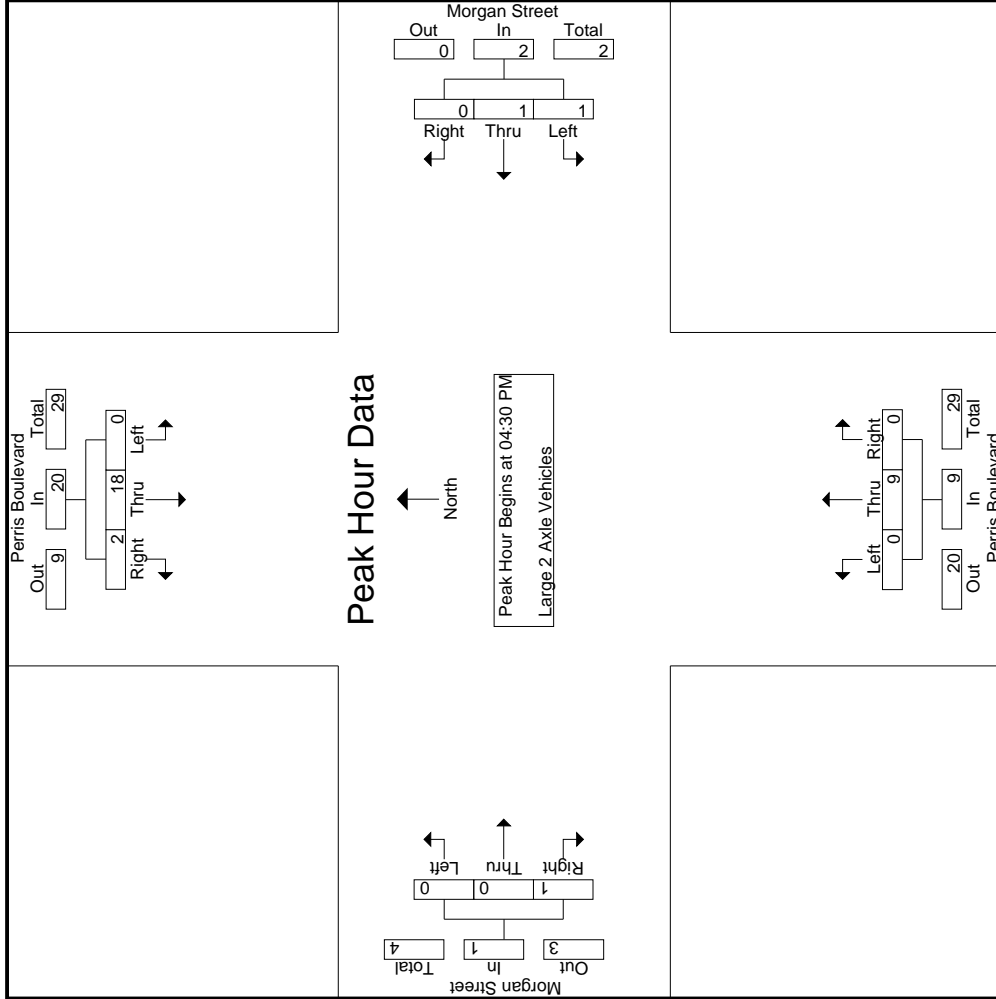
Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	8
04:45 PM	0	5	0	0	5	1	1	0	0	2	0	5	0	0	5	0	0	0	0	0	0	0	12
05:00 PM	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	
05:15 PM	0	4	1	0	5	0	0	0	0	0	2	2	0	0	2	0	0	0	0	0	0	0	7
Total Volume	0	18	2	0	20	1	1	0	0	2	0	9	0	0	9	0	0	0	0	0	1	1	32
% App. Total	0	90	10		10	50	50	0		0	0	100	0		0	0	0	100	0	0	0	.250	.667
PHF	.000	.750	.500		.833	.250	.250	.000		.250	.000	.450	.000		.450	.000	.000	.250	.250	.250	4.1	.667	

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

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City of Perris  
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File Name : 15\_PER\_Perris Blvd\_Morgan PM  
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File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound				Morgan Street Westbound				Perris Boulevard Northbound				Morgan Street Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
	Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:																
	04:30 PM															
+0 mins.	0	6	0	6	0	0	0	0	0	0	2	0	2	0	0	0
+15 mins.	0	5	0	5	1	1	0	2	0	5	0	5	0	0	0	0
+30 mins.	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	1
+45 mins.	0	4	1	5	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	18	2	20	1	1	0	2	0	9	0	9	0	0	0	1
% App. Total	0	90	10	833	50	50	0	100	0	100	0	100	0	0	0	100
PHF	.000	.750	.500	.833	.250	.250	.000	.250	.000	.450	.000	.450	.000	.000	.250	.250

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Morgan Street Westbound				Perris Boulevard Northbound				Morgan Street Eastbound			
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
04:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	2	1	0	0	0	0	0	0	0	0	0	1	2	0	0
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	1	1	0	1	0	2	0	0	0	0	0	0	0
Grand Total	0	5	2	1	1	0	1	0	2	0	0	0	1	2	0	0
Approch %	0	71.4	28.6		50	0	50		16.7	0	0	0	33.3	66.7	0	0
Total %	0	41.7	16.7		8.3	0	8.3		16.7	0	0	0	8.3	16.7	0	0

3.1-434

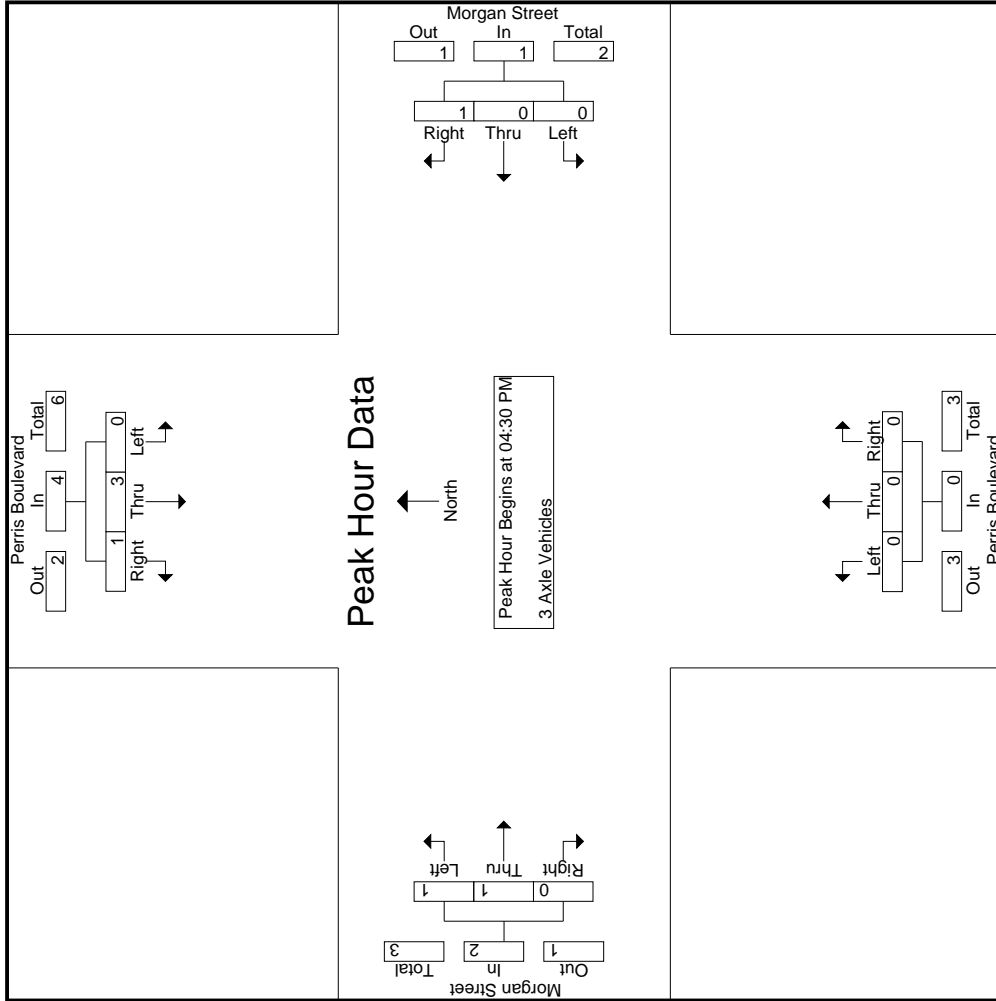
Start Time	Perris Boulevard Southbound				Morgan Street Westbound				Perris Boulevard Northbound				Morgan Street Eastbound			
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0
Total Volume	0	3	1	1	0	0	1	1	1	0	0	0	1	1	0	0
% App. Total	0	.75	.25		.00	.00	.25	.25	.25	.00	.00	.00	.25	.50	.00	.00
PHF	.000	.750	.250		.500	.500	.250	.250	.000	.000	.000	.000	.250	.250	.000	.500
Total %	0	41.7	16.7		8.3	0	8.3		16.7	0	0	0	8.3	16.7	0	0

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Perris Boulevard Northbound			Morgan Street Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:30 PM				04:30 PM				04:30 PM				04:30 PM		
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	1	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	1	1	2	0	0	1	1	0	0	0	0	0	0	
Total Volume	0	3	1	4	0	0	1	1	0	0	0	0	1	2	
% App. Total	0	.75	.25	.500	.000	.000	.250	.250	.000	.000	.000	.000	.250	.500	
PHF	.000	.750	.250	.500	.000	.000	.250	.250	.000	.000	.000	.000	.250	.500	

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2	2
04:15 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	4	4
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1	0	4	4
<b>Total</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	1	0	4	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	3	3
05:45 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>
<b>Grand Total</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>24</b>
Approch %	57.1	42.9	0	0	0	0	25	75	0	0	100	0	0	0	0	87.5	12.5	0	0	0	0	0	24	24
Total %	16.7	12.5	0	0	29.2	0	4.2	12.5	0	16.7	0	20.8	0	0	20.8	29.2	4.2	0	0	0	33.3	0	100	100

3.1-437

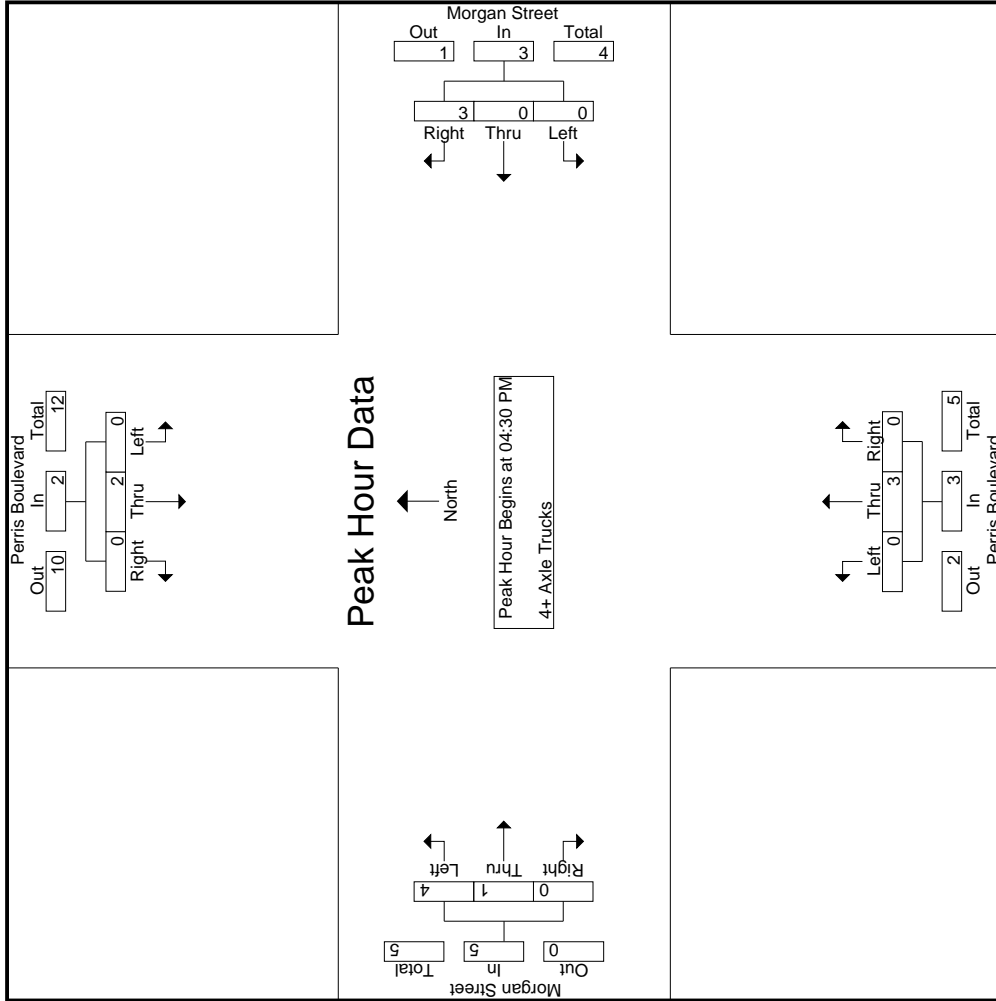
Start Time	Perris Boulevard Southbound					Morgan Street Westbound					Perris Boulevard Northbound					Morgan Street Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	4
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	0	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	0	0	0	1	4
<b>Total Volume</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>13</b>
% App. Total	0	100	0	0	0	0	0	100	0	0	0	100	0	0	0	80	20	0	0	0	0	0	13	13
PHF	.000	.500	.000	.000	.500	.000	.000	.250	.000	.250	.000	.375	.000	.375	.375	.333	.250	.000	.000	.417	.000	.417	.813	.813

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street  
 Weather: Clear

File Name : 15\_PER\_Perris Blvd\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Morgan Street Westbound			Morgan Street Eastbound			Perris Boulevard Northbound			Morgan Street Eastbound						
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																			
Peak Hour for Each Approach Begins at:																			
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				04:30 PM		
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	3	3	3	0	0	0	0	0	0	0	0	1	
Total Volume	0	2	0	2	0	0	3	3	3	0	0	0	3	4	1	0	0	5	
% App. Total	0	100	0	0	0	0	100	250	250	0	0	0	100	80	20	0	0	20	
PHF	.000	.500	.000	.500	.000	.000	.250	.250	.250	.000	.000	.375	.375	.333	.250	.000	.000	.417	

Location: City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Perris Boulevard Pedestrians	East Leg Morgan Street Pedestrians	South Leg Perris Boulevard Pedestrians	West Leg Morgan Street Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	1	0	0	0	1
<b>TOTAL VOLUMES:</b>	1	1	0	0	2

	North Leg Perris Boulevard Pedestrians	East Leg Morgan Street Pedestrians	South Leg Perris Boulevard Pedestrians	West Leg Morgan Street Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	1	0	0	1



Location: City of Perris  
 N/S: Perris Boulevard  
 E/W: Morgan Street



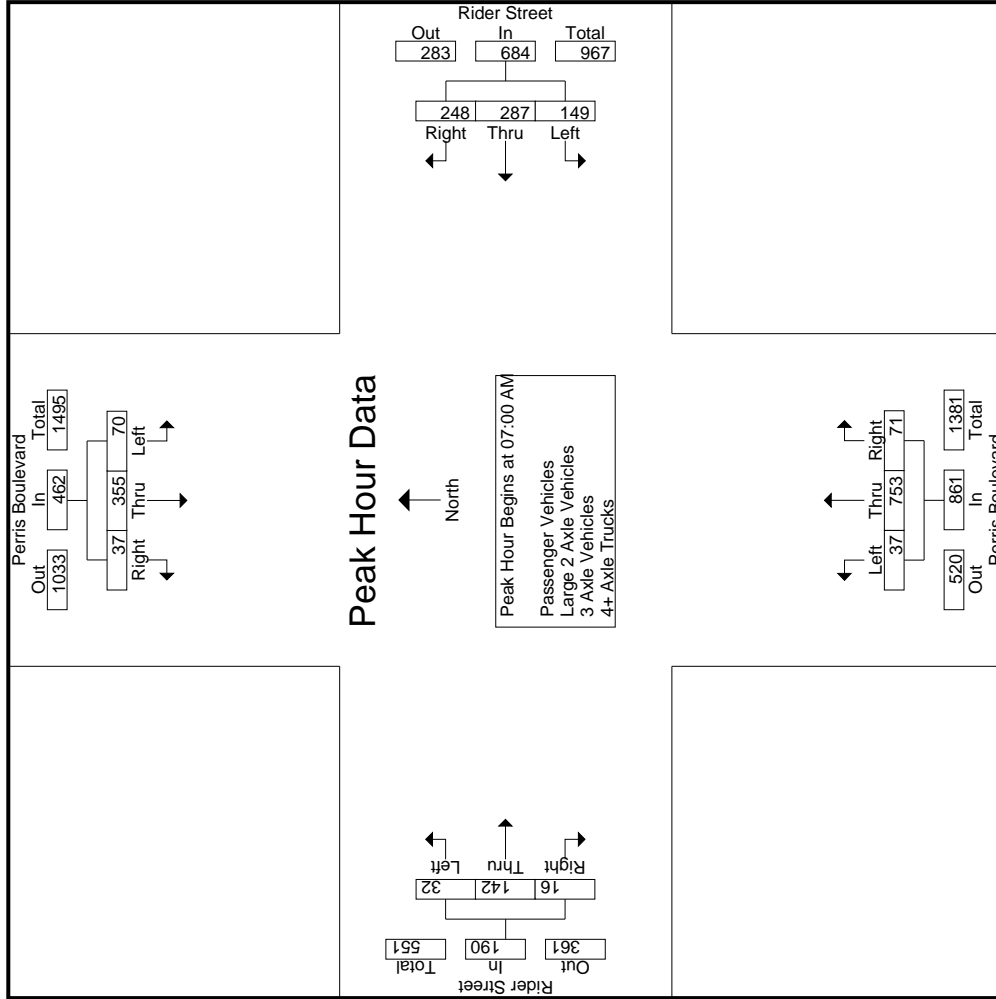
Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Perris Boulevard			Westbound Morgan Street			Northbound Perris Boulevard			Eastbound Morgan Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	0	0	0	0	0	0	0	0	0	2

	Southbound Perris Boulevard			Westbound Morgan Street			Northbound Perris Boulevard			Eastbound Morgan Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			07:00 AM			07:15 AM				
+0 mins.	16	91	5	112	33	68	64	165	9	219	11	239	1	33
+15 mins.	24	89	8	121	34	74	65	173	8	200	20	228	8	60
+30 mins.	17	82	12	111	39	70	63	172	13	183	17	213	16	67
+45 mins.	13	93	12	118	43	75	56	174	7	151	23	181	6	38
Total Volume	70	355	37	462	149	287	248	684	37	753	71	861	31	198
% App. Total	15.2	76.8	8	21.8	42	36.3	36.3	87.5	4.3	87.5	8.2	90.1	15.7	10.1
PHF	.729	.954	.771	.955	.866	.957	.954	.983	.712	.860	.772	.901	.484	.739

Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Rider Street Westbound					Perris Boulevard Northbound					Rider Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	15	91	4	1	110	33	67	64	36	164	9	206	11	4	226	6	18	4	4	28	45	528	573
07:15 AM	23	88	8	3	119	33	74	64	28	171	7	194	20	10	221	1	29	2	2	32	43	543	586
07:30 AM	16	75	12	6	103	38	70	62	37	170	10	175	16	7	201	7	47	5	3	59	53	533	586
07:45 AM	12	84	12	5	108	43	73	56	31	172	7	145	23	11	175	16	46	5	3	67	50	522	572
<b>Total</b>	66	338	36	15	440	147	284	246	132	677	33	720	70	32	823	30	140	16	12	186	191	2126	2317
08:00 AM	11	85	3	1	99	34	39	43	22	116	6	130	11	4	147	5	23	7	3	35	30	397	427
08:15 AM	4	83	5	1	92	22	22	34	21	78	6	109	15	3	130	1	15	5	3	21	28	321	349
08:30 AM	6	70	4	1	80	15	11	37	28	63	5	110	20	2	135	7	6	3	3	16	34	294	328
08:45 AM	10	74	6	1	90	20	14	30	26	64	6	105	15	8	126	3	5	4	2	12	37	292	329
<b>Total</b>	31	312	18	4	361	91	86	144	97	321	23	454	61	17	538	16	49	19	11	84	129	1304	1433
<b>Grand Total</b>	97	650	54	19	801	238	370	390	229	998	56	1174	131	49	1361	46	189	35	23	270	320	3430	3750
Apprch %	12.1	81.1	6.7			23.8	37.1	39.1		29.1	4.1	86.3	9.6		17	70	13		7.9		8.5	91.5	
Total %	2.8	19	1.6		23.4	6.9	10.8	11.4			1.6	34.2	3.8		1.3	5.5	1						

3.1-445

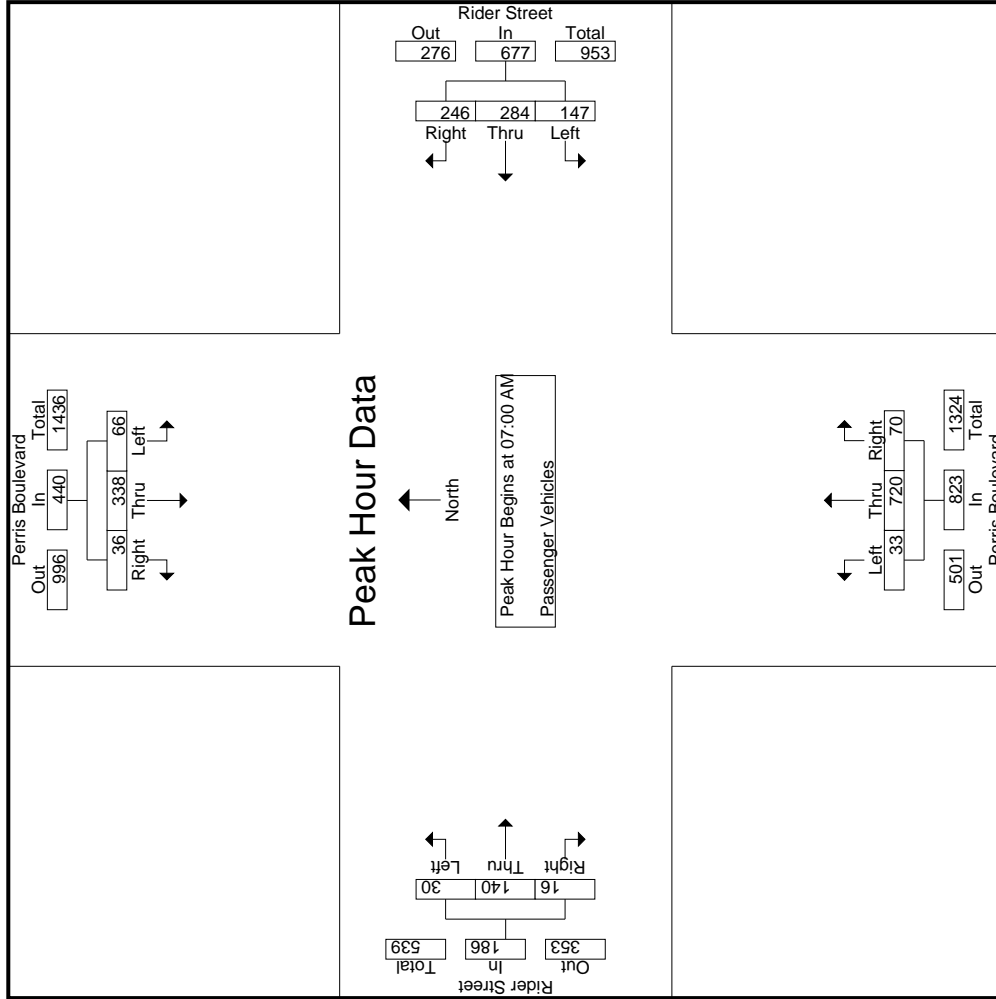
Start Time	Perris Boulevard Southbound					Rider Street Westbound					Perris Boulevard Northbound					Rider Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	15	91	4	1	110	33	67	64	36	164	9	206	11	4	226	6	18	4	4	28	45	528	573
07:15 AM	23	88	8	3	119	33	74	64	28	171	7	194	20	10	221	1	29	2	2	32	43	543	586
07:30 AM	16	75	12	6	103	38	70	62	37	170	10	175	16	7	201	7	47	5	3	59	53	533	586
07:45 AM	12	84	12	5	108	43	73	56	31	172	7	145	23	11	175	16	46	5	3	67	50	522	572
<b>Total Volume</b>	66	338	36	15	440	147	284	246	132	677	33	720	70	32	823	30	140	16	12	186	191	2126	2317
% App. Total	15	76.8	8.2			21.7	41.9	36.3		29.1	4	87.5	8.5		16.1	75.3	8.6						
PHF	.717	.929	.750		.924	.855	.959	.961		.984	.825	.874	.761		.910	.469	.745			.800	.694		.979

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			07:00 AM			07:00 AM				
+0 mins.	15	91	4	110	33	67	64	164	9	206	11	226	6	28
+15 mins.	23	88	8	119	33	74	64	171	7	194	20	221	1	32
+30 mins.	16	75	12	103	38	70	62	170	10	175	16	201	7	59
+45 mins.	12	84	12	108	43	73	56	172	7	145	23	175	16	67
Total Volume	66	338	36	440	147	284	246	677	33	720	70	823	30	186
% App. Total	15	76.8	8.2	21.7	41.9	36.3	98.4	82.5	4	87.5	8.5	910	16.1	75.3
PHF	.717	.929	.750	.924	.855	.959	.961	.984	.825	.874	.761	.910	.469	.800

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	9	0	0	0	0	11	11
07:15 AM	1	0	0	0	1	1	0	1	1	2	4	0	0	0	1	1	8	9
07:30 AM	1	4	0	0	5	1	0	1	1	2	6	0	0	0	0	1	15	16
07:45 AM	0	4	0	0	4	0	2	0	0	2	6	0	0	0	0	0	12	12
<b>Total</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>46</b>	<b>48</b>
08:00 AM	0	3	0	0	3	0	2	0	0	2	4	1	1	1	1	2	11	13
08:15 AM	1	1	1	0	3	0	0	1	1	1	5	0	0	0	1	1	10	11
08:30 AM	1	7	5	0	13	2	0	0	0	2	6	1	0	0	0	0	23	23
08:45 AM	0	2	1	1	3	0	0	1	1	1	4	0	0	0	2	2	10	12
<b>Total</b>	<b>2</b>	<b>13</b>	<b>7</b>	<b>1</b>	<b>22</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>19</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>54</b>	<b>59</b>	
<b>Grand Total</b>	<b>5</b>	<b>21</b>	<b>7</b>	<b>1</b>	<b>33</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>12</b>	<b>44</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>100</b>	<b>107</b>	
Apprch %	15.2	63.6	21.2		33.3	33.3	33.3	33.3	33.3	4.2	91.7	4.2	48	28.6	57.1	6.5	93.5	
Total %	5	21	7		33	4	4	4	4	12	44	2	48	2	7	7	107	

3.1-448

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	1	0	0	0	1	1	0	1	1	2	4	0	0	0	1	1	8	9
07:30 AM	1	4	0	0	5	1	0	1	1	2	6	0	0	0	0	1	15	16
07:45 AM	0	4	0	0	4	0	2	0	0	2	6	0	0	0	0	0	12	12
<b>Total Volume</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>46</b>	<b>48</b>
% App. Total	27.3	72.7	0		33.3	33.3	33.3	33.3	33.3	4.2	92.6	4.2	48	28.6	57.1	6.5	93.5	
PHF	.750	.500	.000		.550	.500	.250	.500	.500	.750	.250	.694	.000	.750	.500	.000	.500	

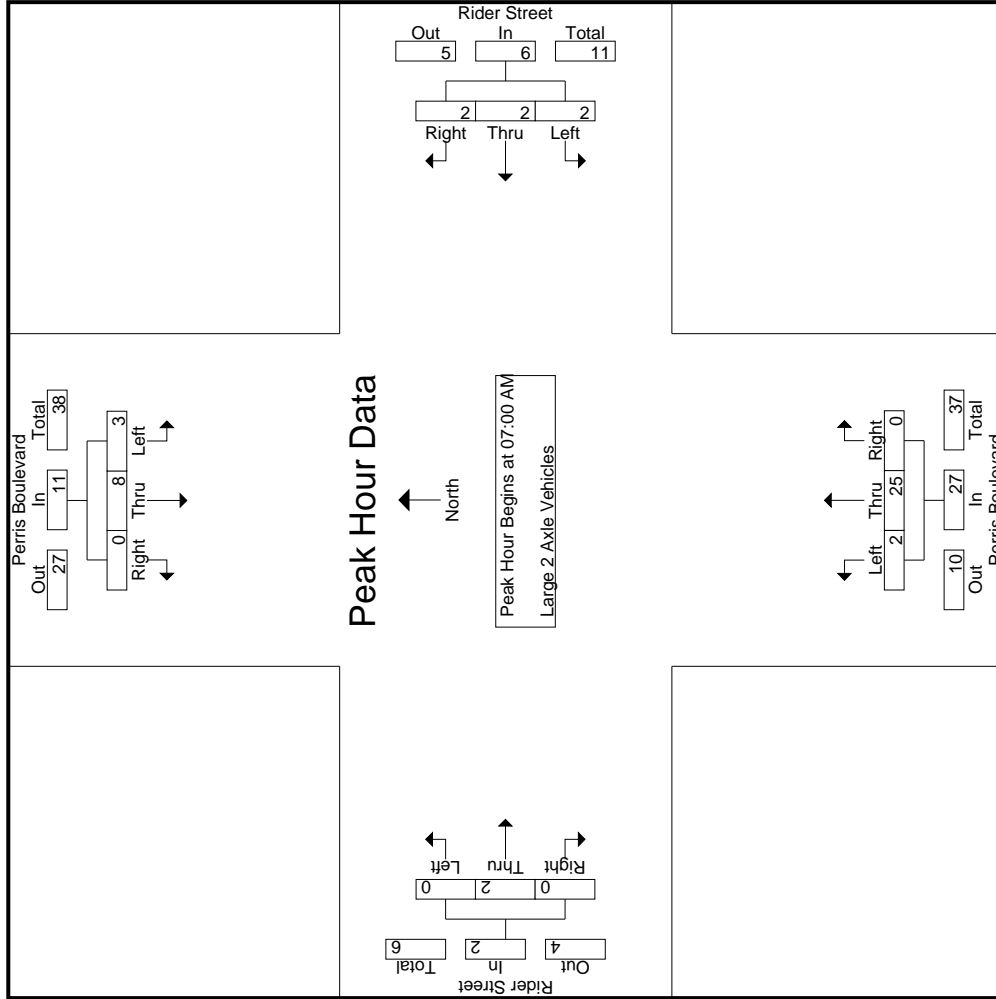
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM				07:00 AM				07:00 AM				07:00 AM		
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	1	
+15 mins.	1	0	0	1	1	0	1	2	0	4	0	4	0	1	
+30 mins.	1	4	0	5	1	0	1	2	2	8	0	8	0	0	
+45 mins.	0	4	0	4	0	2	0	2	0	6	0	6	0	0	
Total Volume	3	8	0	11	2	2	2	6	2	25	0	27	0	2	
% App. Total	27.3	72.7	0	33.3	33.3	33.3	0	7.4	92.6	0	100	0	0	0	
PHF	.750	.500	.000	.550	.500	.250	.500	.750	.250	.694	.000	.750	.000	.500	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0	0	5	5
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	2	2
07:30 AM	0	2	0	0	2	0	0	0	0	0	2	0	0	0	0	0	4	4
07:45 AM	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4
<b>Total</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>15</b>
08:00 AM	1	1	0	0	2	1	1	0	0	1	2	0	0	0	1	1	7	8
08:15 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	3	3
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>11</b>	<b>13</b>
<b>Grand Total</b>	<b>3</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>	<b>28</b>
Apprch %	27.3	63.6	9.1			0	66.7	33.3			20	70	10		100	0	0	0
Total %	11.5	26.9	3.8		42.3	0	7.7	3.8		11.5	7.7	26.9	3.8		7.7	7.1	92.9	

3.1-451

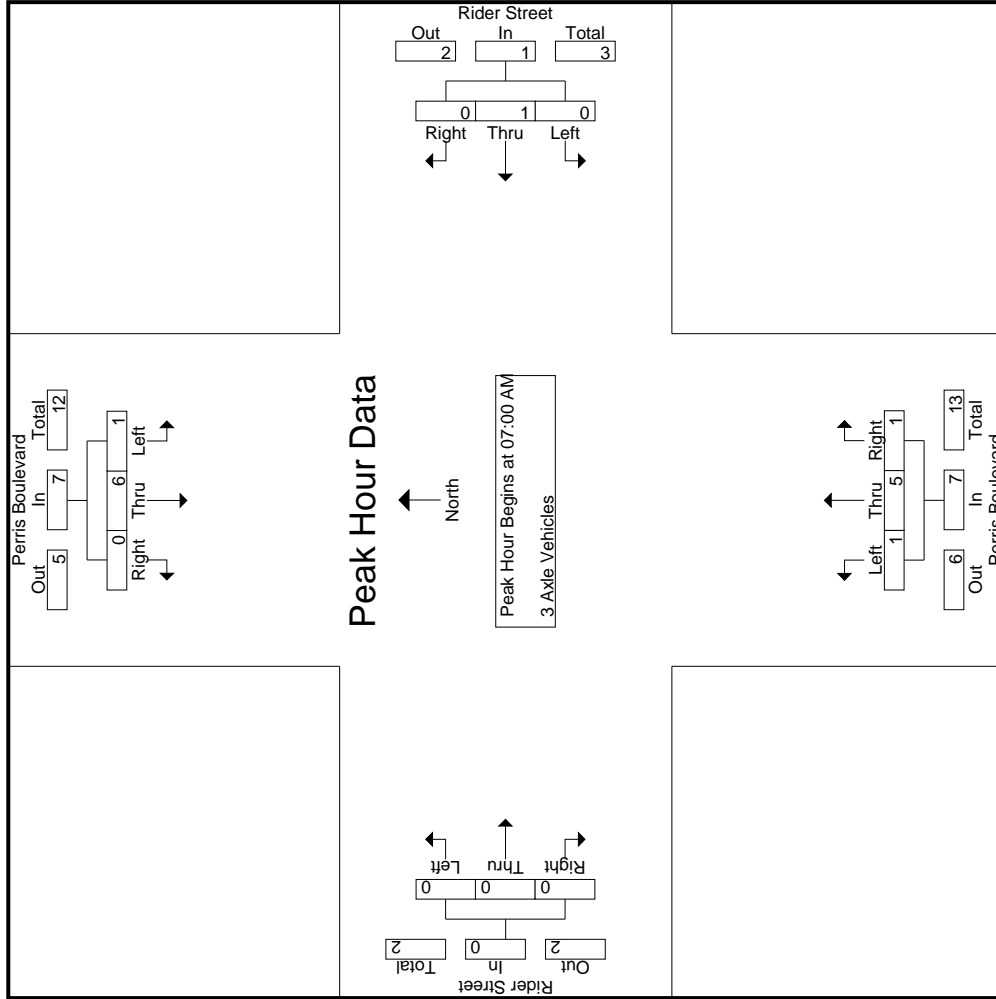
Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>
% App. Total	14.3	85.7	0			0	100	0			14.3	71.4	14.3		0	0	0	0
PHF	.250	.500	.000		.438	.000	.250	.000		.250	.250	.313	.250		.438	.000	.000	.750

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	1	0	0	1	4	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	1	0	0	0	0	0
+30 mins.	0	2	0	2	0	0	0	0	1	1	0	0	0
+45 mins.	1	3	0	4	0	0	0	0	0	0	0	0	0
Total Volume	1	6	0	7	1	1	0	1	5	1	0	0	0
% App. Total	14.3	85.7	0	0	14.3	71.4	14.3	0	25.0	31.3	2.5	0	0
PHF	.250	.500	.000	.438	.250	.000	.000	.250	.438	.313	.250	.438	.000

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	2
07:30 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	4	4
07:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	3	1	0	4	0	0	0	0	1	3	0	0	0	4	0	10	10
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	2	0	3	3
08:30 AM	0	0	1	0	1	0	0	0	0	3	0	0	0	0	0	0	5	5
08:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	2	1	0	3	0	0	0	0	1	4	0	0	0	5	0	11	11
Grand Total	0	5	2	0	7	0	0	0	0	2	7	0	0	0	9	3	1	1
Apprch %	0	71.4	28.6			0	0	0		22.2	77.8	0	0		60	20	20	21
Total %	0	23.8	9.5		33.3	0	0	0		9.5	33.3	0	0		42.9	14.3	4.8	100

3.1-454

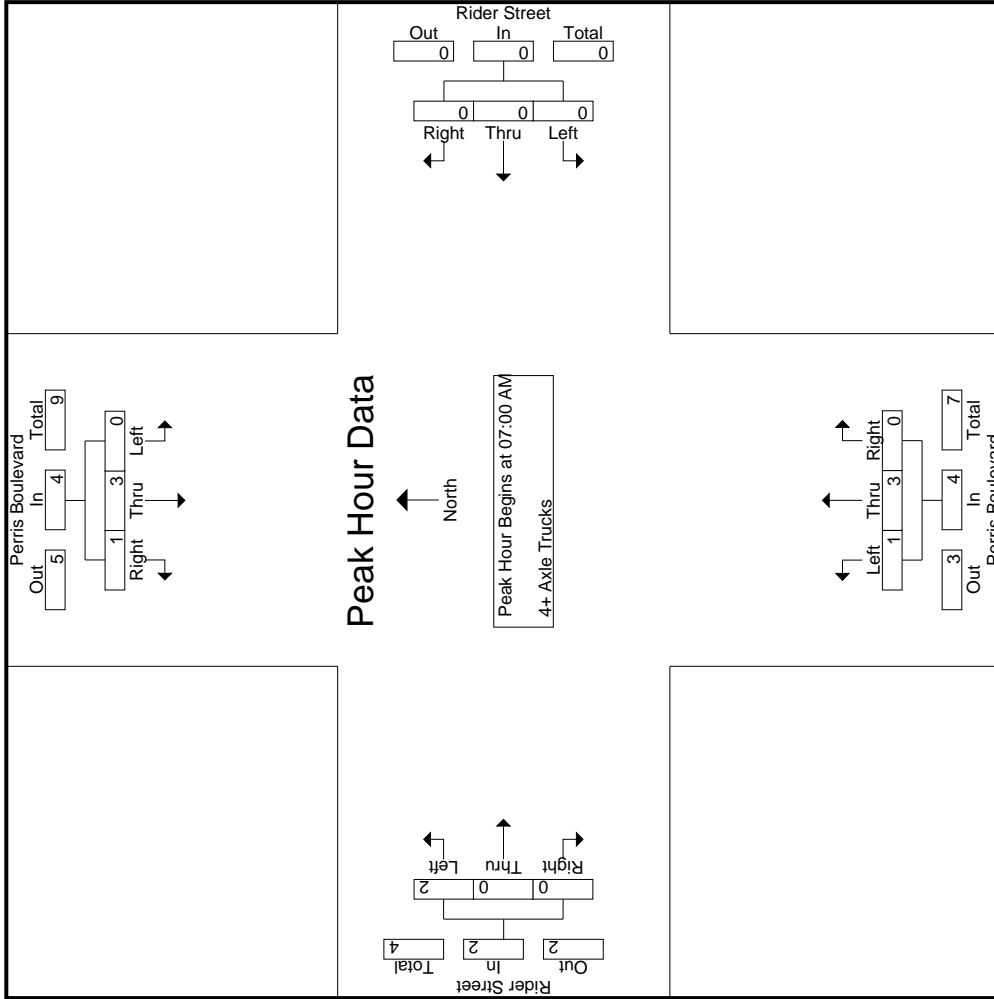
Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	0	1	0	0	0	0	1	0	0	0	0	2	0	1	1
07:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	1		4	0	0	0		1	3	0	0		4	2	0	2
% App. Total	0	.75	.25		.500	.000	.000	.000		.25	.75	.000	.000		.500	.000	.500	.625
PHF	.000	.375	.250		.500	.000	.000	.000		.250	.375	.000	.000		.500	.000	.500	.625

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour for Each Approach Begins at:															
	07:00 AM				07:00 AM				07:00 AM				07:00 AM		
+0 mins.	0	0	1		0	0	0		0	0	0		0	0	1
+15 mins.	0	0	0		0	0	0		2	0	0		0	0	0
+30 mins.	0	1	0		0	0	0		1	0	0		0	0	1
+45 mins.	0	2	0		0	0	0		0	0	0		0	0	0
Total Volume	0	3	1	4	0	0	0	4	1	3	0	4	2	0	2
% App. Total	0	.75	.25	.500	0	0	0	.500	.25	.75	0	.500	0	0	.500
PHF	.000	.375	.250	.500	.000	.000	.000	.000	.250	.375	.000	.500	.000	.000	.500



Counts Unlimited  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

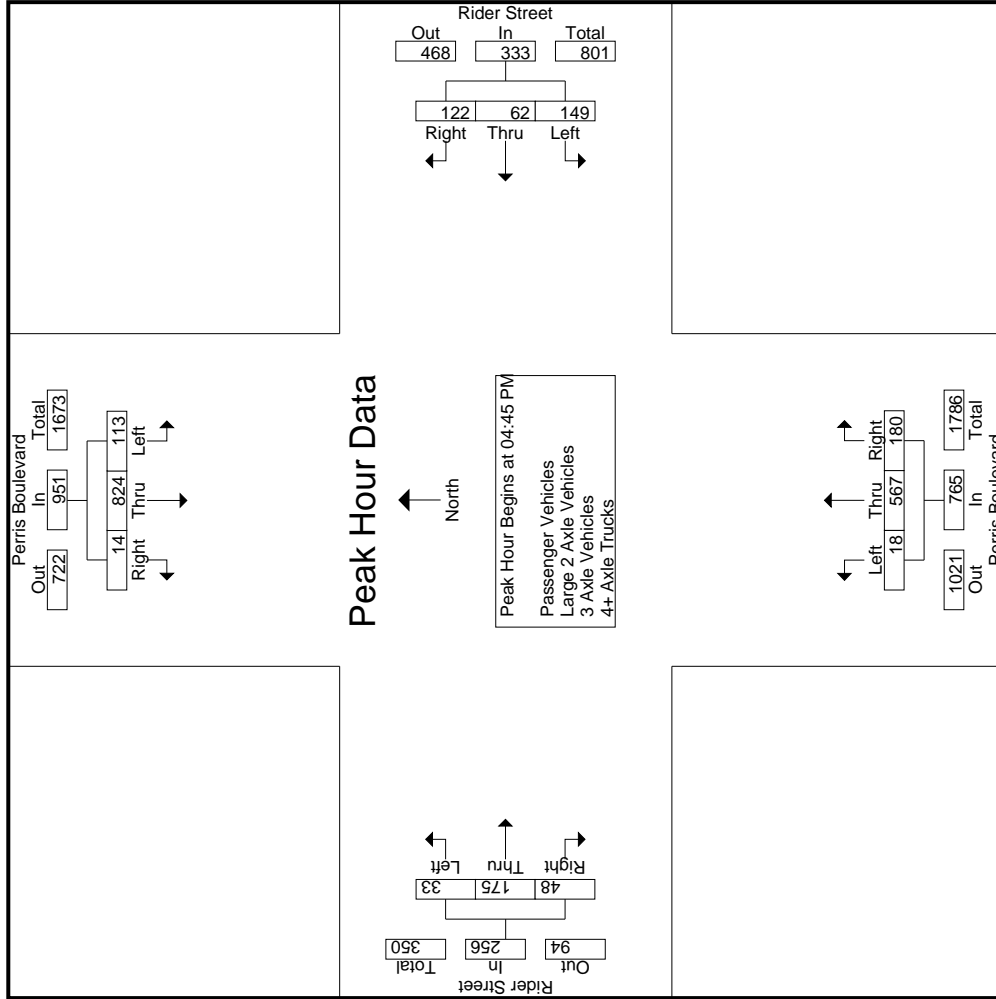
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Perris Boulevard Southbound						Rider Street Westbound						Perris Boulevard Northbound						Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total
04:00 PM	34	164	2	1	200	86	41	14	31	22	13	83	6	131	36	15	173	47	7	38	18	9	63	522
04:15 PM	28	178	4	3	210	65	27	14	24	19	20	72	5	135	48	21	188	49	7	39	11	6	57	520
04:30 PM	31	177	10	5	218	89	41	15	33	23	22	89	8	126	53	22	187	56	13	50	10	6	73	567
04:45 PM	30	230	2	2	262	88	45	11	32	27	76	332	5	126	42	13	173	48	10	45	11	6	66	589
<b>Total</b>	123	749	18	11	890	328	154	54	120	91	328	328	24	518	179	71	721	200	37	172	50	27	259	2198
05:00 PM	26	194	4	3	224	83	45	16	22	13	83	1	141	38	11	180	35	11	40	10	8	61	548	
05:15 PM	20	215	7	3	242	72	29	13	30	20	20	72	5	149	45	15	199	49	8	37	14	11	59	572
05:30 PM	37	185	1	1	223	90	30	22	38	21	90	90	7	151	55	19	213	44	4	53	13	8	70	596
05:45 PM	21	180	5	3	206	87	30	22	35	22	76	332	2	134	42	11	178	61	6	44	11	8	61	532
<b>Total</b>	104	774	17	10	895	332	134	73	125	76	332	332	15	575	180	56	770	177	29	174	48	35	251	2248
<b>Grand Total</b>	227	1523	35	21	1785	660	288	127	245	167	1491	1491	39	1093	359	127	1491	377	66	346	98	62	510	4446
<b>Approach % Total %</b>	12.7	85.3	2	5.1	34.3	40.1	43.6	19.2	37.1	14.8	2.9	5.5	2.6	73.3	24.1	33.5	12.9	67.8	19.2	11.5	7.8	92.2		
Passenger Vehicles	219	1492	32	1762	815	282	126	242	815	39	1077	358	100	98.5	99.7	100	93.9	98.3	99	100	561	0		
% Passenger Vehicles	96.5	98	91.4	90.5	97.6	97.9	99.2	98.8	98.8	98.5	98.9	98.9	93.9	98.3	99	100	98.1	0	0	0	98.3	0		
Large 2 Axle Vehicles	5	29	2	38	11	5	1	3	11	0	14	1	0	1.3	0.3	0	1.5	1.4	1	0	7	0		
% Large 2 Axle Vehicles	2.2	1.9	5.7	9.5	2.1	1.3	1.7	0.8	1.2	1.2	0.9	0.9	0	0.1	0.1	0	0.1	0.3	0	0	1.2	0		
3 Axle Vehicles	2	2	0	4	1	1	0	0	1	0	1	0	0	0.1	0	0	0	0	0	0	0	0		
% 3 Axle Vehicles	0.9	0.1	0	0.2	0.3	0.1	0.3	0	0	0	0.1	0.1	0	0.1	0	0	0	0	0	0	0	0		
4+ Axle Trucks	1	0	1	2	0	0	0	0	0	0	1	0	0	0.1	0	0	0	0.3	0	0	0.7	0		
% 4+ Axle Trucks	0.4	0	2.9	0	0.1	0	0	0	0	0	0.1	0.1	0	0.1	0	0	0.1	0.3	0	0	0.7	0		

Start Time	Perris Boulevard Southbound						Rider Street Westbound						Perris Boulevard Northbound						Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total
04:45 PM	30	230	2	262	88	45	11	32	27	76	332	5	126	42	13	173	48	10	45	11	6	66	589	
05:00 PM	26	194	4	224	83	45	16	22	13	83	1	141	38	11	180	35	11	40	10	8	61	548		
05:15 PM	20	215	7	242	72	29	13	30	20	20	72	5	149	45	15	199	49	8	37	14	11	59	572	
05:30 PM	37	185	1	223	90	30	22	38	21	90	90	7	151	55	19	213	44	4	53	13	8	70	596	
05:45 PM	21	180	5	206	87	30	22	35	22	76	332	2	134	42	11	178	61	6	44	11	8	61	532	
<b>Total Volume</b>	113	824	14	951	333	149	62	122	91	328	328	18	567	180	71	721	200	37	172	50	27	259	2398	
<b>% App. Total</b>	11.9	86.6	1.5	500	36.6	44.7	18.6	36.6	36.6	36.6	36.6	2.4	74.1	23.5	23.5	12.9	68.4	18.8	11.5	7.8	92.2			
PHF	.764	.896	.500	.907	.803	.828	.705	.803	.803	.925	.803	.643	.939	.818	.818	.750	.825	.857	.857	.914	.914			

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:45 PM			04:45 PM			05:00 PM			04:00 PM				
+0 mins.	30	230	2	262	11	32	88	141	38	180	7	38	18	63
+15 mins.	26	194	4	224	16	22	83	149	45	199	7	39	11	57
+30 mins.	20	215	7	242	13	30	72	151	55	213	13	50	10	73
+45 mins.	37	185	1	223	22	38	90	134	42	178	10	45	11	66
Total Volume	113	824	14	951	62	122	333	575	180	770	37	172	50	259
% App. Total	11.9	86.6	1.5	907	18.6	36.6	925	74.7	23.4	904	14.3	66.4	19.3	887
PHF	.764	.896	.500	.907	.828	.705	.803	.952	.818	.904	.712	.860	.694	.887

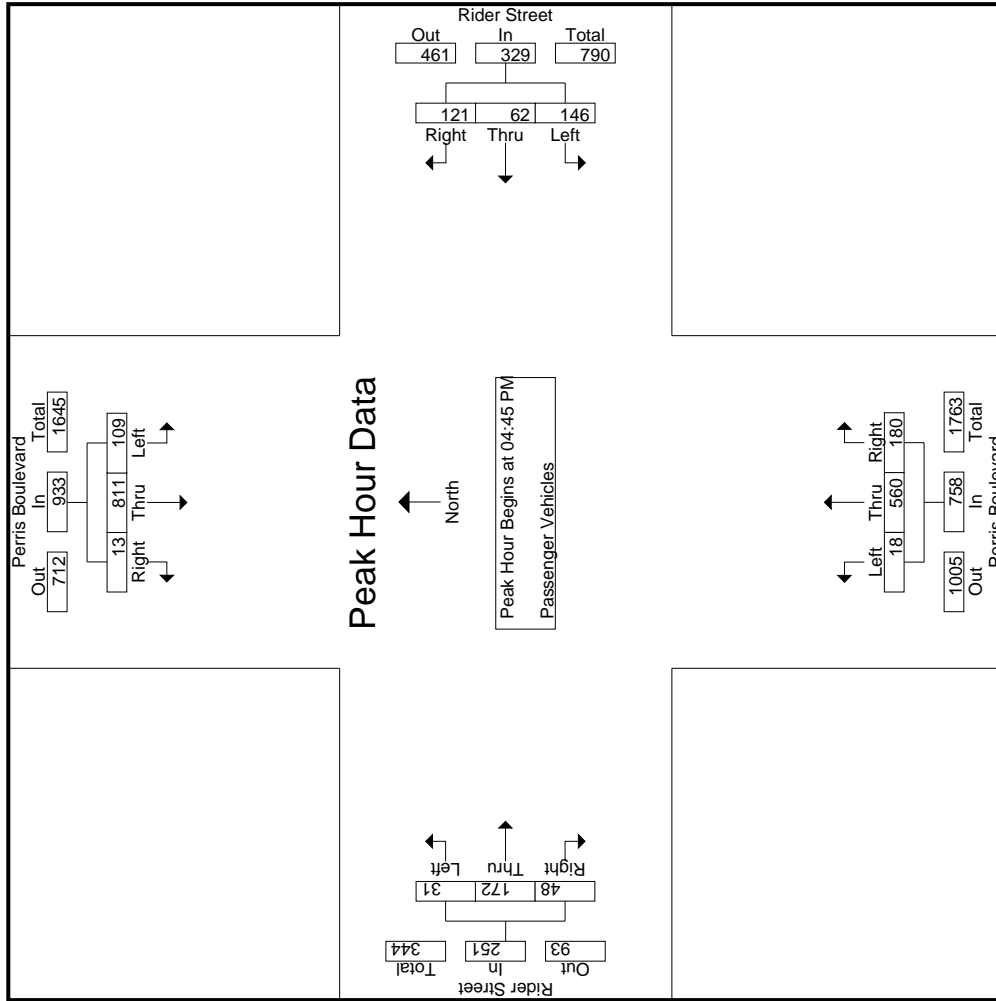
Groups Printed- Passenger Vehicles

Start Time	Perris Boulevard Southbound					Rider Street Westbound					Perris Boulevard Northbound					Rider Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	34	159	2	1	195	40	14	31	22	85	6	129	36	15	171	6	38	18	9	62	47	513	560
04:15 PM	28	173	2	2	203	27	14	24	19	65	5	131	48	21	184	6	39	11	6	56	48	508	556
04:30 PM	28	171	10	5	209	40	15	32	22	87	8	125	53	22	186	13	48	9	6	70	55	552	607
04:45 PM	29	228	1	1	258	42	11	32	27	85	5	121	42	13	168	9	42	11	6	62	47	573	620
<b>Total</b>	119	731	15	9	865	149	54	119	90	322	24	506	179	71	709	34	167	49	27	250	197	2146	2343
05:00 PM	24	190	4	3	218	45	16	22	13	83	1	141	38	11	180	10	40	10	8	60	35	541	576
05:15 PM	20	212	7	3	239	29	13	30	20	72	5	147	45	15	197	8	37	14	11	59	49	567	616
05:30 PM	36	181	1	1	218	30	22	37	21	89	7	151	55	19	213	4	53	13	8	70	49	590	639
05:45 PM	20	178	5	3	203	29	21	34	21	84	2	132	41	11	175	6	43	11	8	60	43	522	565
<b>Total</b>	100	761	17	10	878	133	72	123	75	328	15	571	179	56	765	28	173	48	35	249	176	2220	2396
<b>Grand Total</b>	219	1492	32	19	1743	282	126	242	165	650	39	1077	358	127	1474	62	340	97	62	499	373	4366	4739
Apprch %	12.6	85.6	1.8			43.4	19.4	37.2		14.9	2.6	73.1	24.3		33.8	12.4	68.1	19.4		11.4	7.9	92.1	
Total %	5	34.2	0.7			6.5	2.9	5.5			0.9	24.7	8.2			1.4	7.8	2.2					

3.1-460

Start Time	Perris Boulevard Southbound					Rider Street Westbound					Perris Boulevard Northbound					Rider Street Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:45 PM	29	228	1		258	42	11	32		85	5	121	42		168	9	42	11		62		62	573
05:00 PM	24	190	4		218	45	16	22		83	1	141	38		180	10	40	10		60		60	541
05:15 PM	20	212	7		239	29	13	30		72	5	147	45		197	8	37	14		59		59	567
05:30 PM	36	181	1		218	30	22	37		89	7	151	55		213	4	53	13		70		70	590
<b>Total Volume</b>	109	811	13		933	146	62	121		329	18	560	180		758	31	172	48		251		251	2271
% App. Total	11.7	86.9	1.4			44.4	18.8	36.8		14.9	2.4	73.9	23.7		33.8	12.4	68.5	19.1		11.4		92.1	
PHF	.757	.889	.464		.904	.811	.705	.818		.924	.643	.927	.818		.890	.775	.811	.857		.896		.896	.962

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM



Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	04:45 PM													
+0 mins.	29	228	1	258	42	11	32	85	5	121	42	168	9	62
+15 mins.	24	190	4	218	45	16	22	83	1	141	38	180	10	60
+30 mins.	20	212	7	239	29	13	30	72	5	147	45	197	8	59
+45 mins.	36	181	1	218	30	22	37	89	7	151	55	213	4	70
Total Volume	109	811	13	933	146	62	121	329	18	560	180	758	31	48
% App. Total	11.7	86.9	1.4	904	44.4	18.8	36.8	73.9	2.4	73.9	23.7	890	12.4	19.1
PHF	.757	.889	.464	.904	.811	.705	.818	.924	.643	.927	.818	.890	.775	.857
														.896

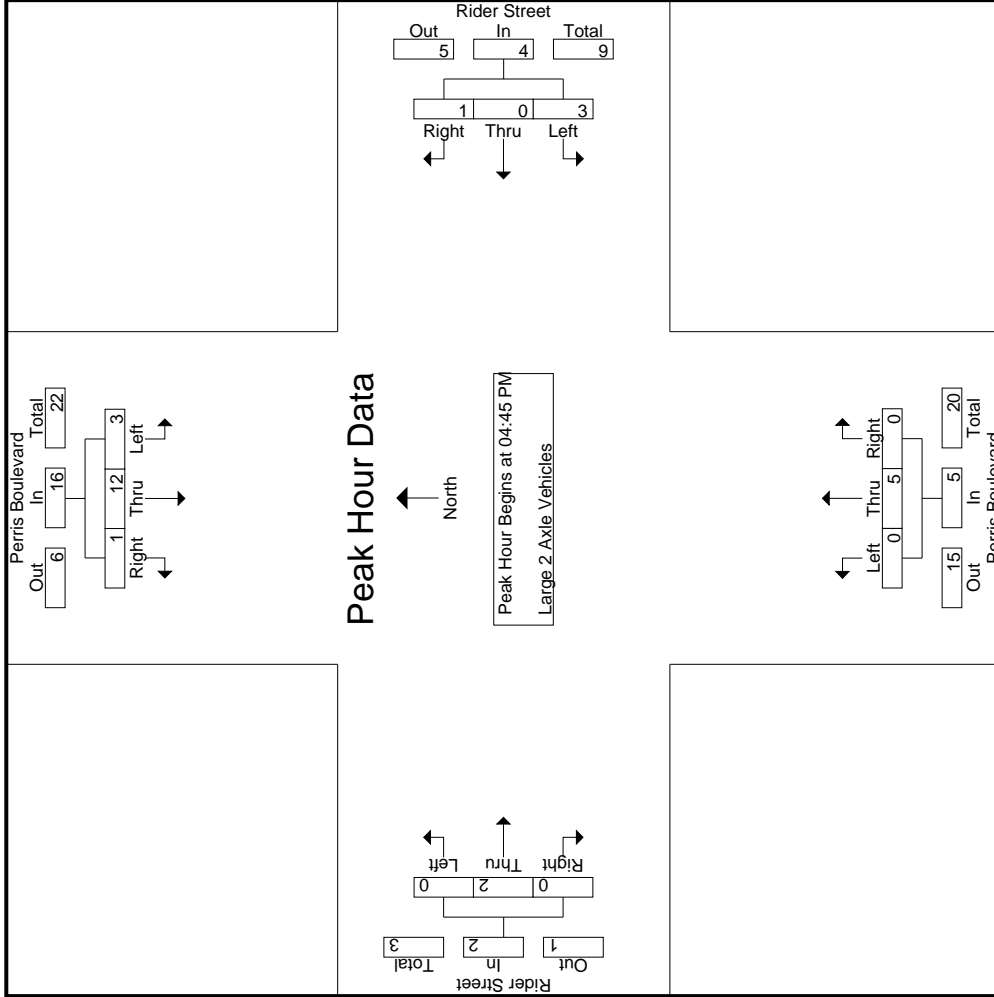
Groups Printed- Large 2 Axle Vehicles

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound										
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total					
04:00 PM	0	5	0	0	5	1	0	0	0	1	0	2	0	0	0	0	8	8					
04:15 PM	0	4	1	1	5	0	0	0	0	0	4	0	0	0	1	1	10	11					
04:30 PM	1	6	0	0	7	0	0	1	1	1	0	1	0	0	3	1	12	13					
04:45 PM	1	2	1	1	4	3	0	0	0	3	0	4	0	0	2	1	13	14					
<b>Total</b>	<b>2</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>21</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>43</b>	<b>46</b>					
05:00 PM	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	5					
05:15 PM	0	3	0	0	3	0	0	0	0	0	1	0	0	0	0	0	4	4					
05:30 PM	1	3	0	0	4	0	0	1	0	1	0	0	0	0	0	0	5	5					
05:45 PM	1	2	0	0	3	1	1	1	1	3	0	2	1	0	0	1	10	11					
<b>Total</b>	<b>3</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>24</b>	<b>25</b>					
<b>Grand Total</b>	<b>5</b>	<b>29</b>	<b>2</b>	<b>2</b>	<b>36</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>4</b>	<b>67</b>	<b>71</b>
Approch %	13.9	80.6	5.6			55.6	11.1	33.3		13.4	0	93.3	6.7	14.3	22.4	1.5	7.5	1.5		10.4	5.6	94.4	
Total %	7.5	43.3	3		53.7	7.5	1.5	4.5			0	20.9	1.5										

3.1-463

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:45 PM	1	2	1		4	3	0	0		3	0	4	0	0	0	0	2	2	13
05:00 PM	1	4	0		5	0	0	0		0	0	0	0	0	0	0	0	0	5
05:15 PM	0	3	0		3	0	0	0		0	0	1	0	0	0	0	0	0	4
05:30 PM	1	3	0		4	0	0	0		1	0	0	0	0	0	0	0	0	5
<b>Total Volume</b>	<b>3</b>	<b>12</b>	<b>1</b>		<b>16</b>	<b>3</b>	<b>0</b>	<b>0</b>		<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>27</b>	
% App. Total	18.8	75	6.2		800	.250	.000	.250		.333	.000	.313	.000	.000	.250	.000	.250	.519	
PHF	.750	.750	.250		.800	.250	.000	.250		.333	.000	.313	.000	.000	.250	.000	.250	.519	

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM





Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:45 PM				04:45 PM				04:45 PM				
+0 mins.	1	2	1	4	3	0	0	3	4	0	0	4	2
+15 mins.	1	4	0	5	0	0	0	0	0	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	1	0	0	1	0
+45 mins.	1	3	0	4	0	0	1	1	0	0	0	0	0
Total Volume	3	12	1	16	3	0	1	4	5	0	0	5	2
% App. Total	18.8	75	6.2	800	.75	0	.25	.333	.000	.313	.000	.313	.250
PHF	.750	.750	.250	.800	.250	.000	.250	.333	.000	.313	.000	.313	.250

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound			Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right				App. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
05:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>Grand Total</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
Approch %	50	50	0	100	0	0	100	0	100	0	0	0	0	0	0	6
Total %	33.3	33.3	0	16.7	0	0	16.7	0	16.7	0	0	0	0	0	0	100

3.1-466

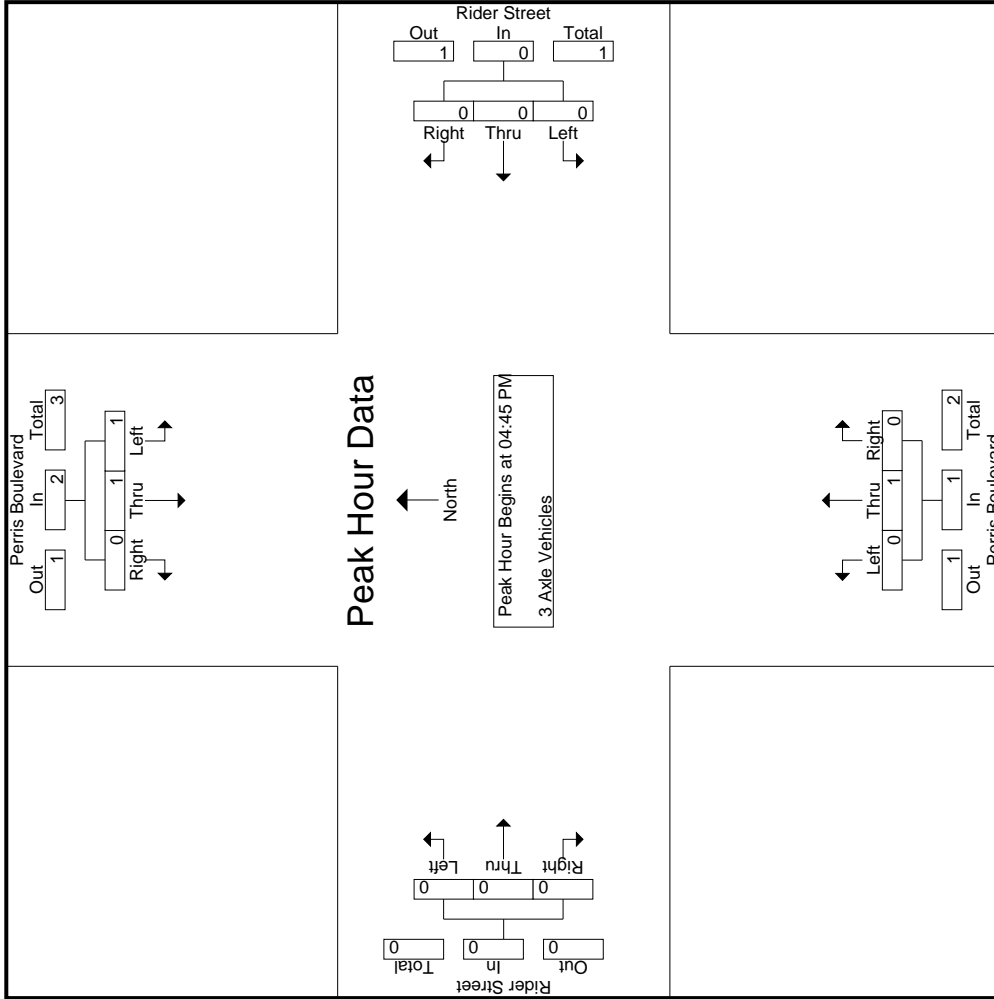
Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound			Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right				App. Total
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total Volume</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
% App. Total	50	50	0	0	0	0	100	0	100	0	0	0	0	0	0	3
PHF	.250	.250	.000	.500	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.750

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:45 PM			04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	0	0	0	0	0	0	0	0	0	0
% App. Total	50	50	0	0	0	0	0	100	0	0	0	0
PHF	.250	.250	.000	.500	.000	.000	.000	.250	.000	.000	.000	.000
App. Total												
.250 .250 .000 .500 .000 .000 .000 .250 .000 .000 .000 .000 .000												

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	3	3
<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>6</b>
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>7</b>
Apprch %	50	0	50			0	100	0		14.3	75	25	0		57.1	0	100	
Total %	14.3	0	14.3		28.6	0	14.3	0		14.3	42.9	14.3	0			0		

3.1-469

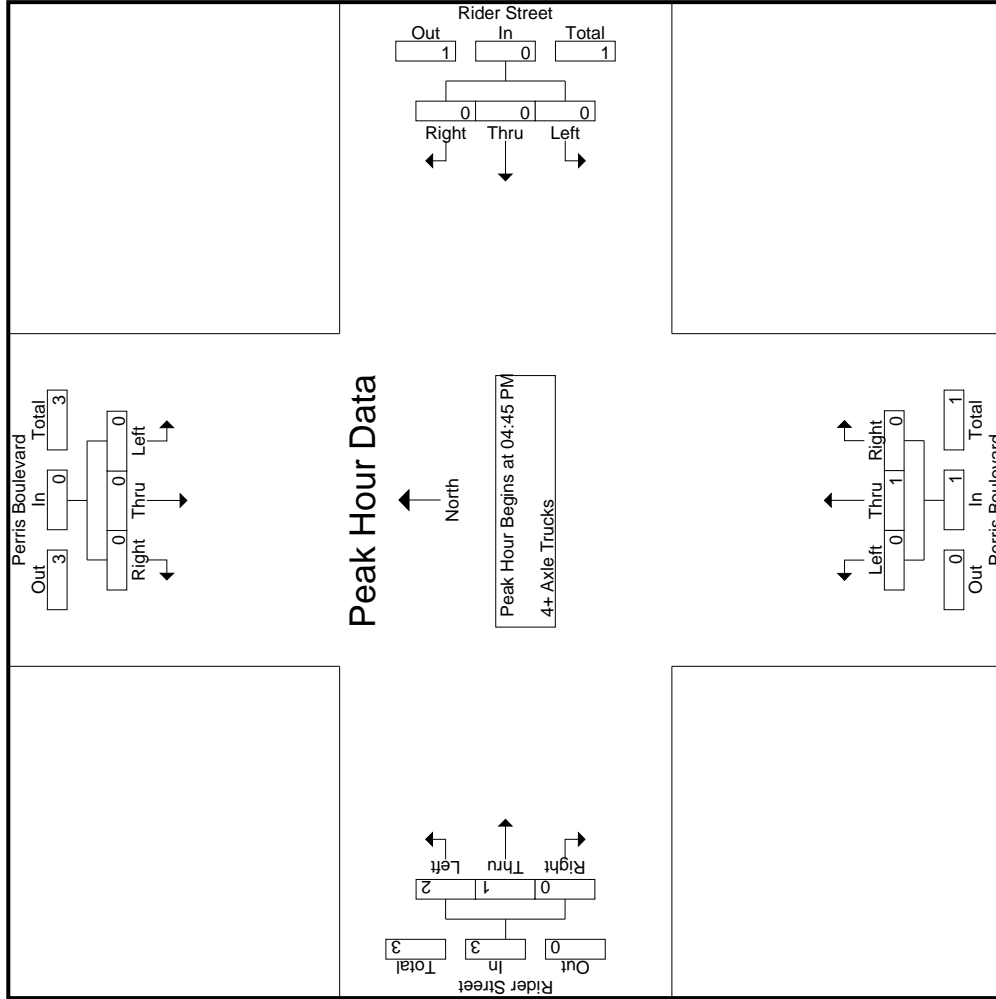
Start Time	Perris Boulevard Southbound				Rider Street Westbound				Perris Boulevard Northbound				Rider Street Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
% App. Total	0	0	0			0	100	0		.250	66.7	33.3	0		.375	0	.333	
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.500	.250	.000		.375	.000	.333	

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street  
 Weather: Clear

File Name : 17\_PER\_Perris Blvd\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Perris Boulevard Southbound			Rider Street Westbound			Perris Boulevard Northbound			Rider Street Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
	04:45 PM				04:45 PM				04:45 PM				
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	0	1	0	0
% App. Total	0	0	0	0	0	0	0	100	0	0	33.3	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.375

Location: City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Perris Boulevard	East Leg Rider Street	South Leg Perris Boulevard	West Leg Rider Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	1	1	0	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	2	2	0	4

	North Leg Perris Boulevard	East Leg Rider Street	South Leg Perris Boulevard	West Leg Rider Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	1	3	1	5
4:45 PM	0	0	1	1	2
5:00 PM	0	0	0	0	0
5:15 PM	0	1	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	3	4	2	9



Location: City of Perris  
 N/S: Perris Boulevard  
 E/W: Rider Street



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Perris Boulevard			Westbound Rider Street			Northbound Perris Boulevard			Eastbound Rider Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	1	1	0	0	0	0	3

	Southbound Perris Boulevard			Westbound Rider Street			Northbound Perris Boulevard			Eastbound Rider Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	4	0	0	0	0	5

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 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	0	1	0	0	1	0	0	0	0	0	96	0	0	0	96	0	0	0	10	4	10	4	107	111
07:15 AM	0	0	0	0	0	0	0	0	0	0	86	1	0	0	87	2	0	11	7	7	99	106		
07:30 AM	0	0	0	0	0	0	0	0	0	0	76	1	0	0	77	0	0	2	0	0	78	78		
07:45 AM	0	0	2	0	2	0	0	0	0	0	64	1	0	0	65	3	0	16	4	4	85	89		
<b>Total</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>322</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>325</b>	<b>5</b>	<b>0</b>	<b>39</b>	<b>15</b>	<b>15</b>	<b>369</b>	<b>384</b>		
08:00 AM	0	1	0	0	1	0	0	0	0	0	26	0	0	0	26	0	0	9	0	0	36	36		
08:15 AM	0	0	0	0	0	0	0	0	0	0	27	0	0	0	27	2	0	12	0	14	41	41		
08:30 AM	0	0	1	0	1	0	0	0	0	0	28	1	0	0	29	0	0	3	0	3	32	32		
08:45 AM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18	2	0	4	0	6	24	24		
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>4</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>32</b>	<b>133</b>	<b>133</b>		
<b>Grand Total</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>421</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>425</b>	<b>9</b>	<b>0</b>	<b>67</b>	<b>15</b>	<b>15</b>	<b>502</b>	<b>517</b>		
Approach %	0	40	60			0	0	0			11.8	0	88.2			11.8	0	88.2			15.1	97.1		
Total %	0	0.4	0.6			0	0	0			83.9	0.8	13.3			1.8	0	13.3			2.9	97.1		
Passenger Vehicles	0	1	1	0	2	0	0	0	0	0	407	3	0	0	410	6	0	53	72	0	0	481		
Large 2 Axle Vehicles	0	50	33.3	0	40	0	0	0	0	0	96.7	75	0	0	171.7	66.7	0	79.1	86.7	79.1	0	93		
Large 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	1	0	4		
Large 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0.7	0	0	1.5	0	1.1	0	0.8		
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	1	0	4	5	0	0	8		
% 4+ Axle Trucks	0	1	2	0	3	0	0	0	0	0	8	0	0	0	8	2	0	9	13	0	0	24		
% 4+ Axle Trucks	0	50	66.7	0	60	0	0	0	0	0	1.9	0	0	0	1.9	22.2	0	13.4	13.3	14.3	0	4.6		

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	85	1	0	0	86	2	0	11	7	13	7	99			
07:30 AM	0	0	0	0	0	0	0	0	0	0	75	1	0	0	76	0	0	2	0	2	0	78			
07:45 AM	0	0	0	0	0	0	0	0	0	0	63	1	0	0	64	3	0	16	4	19	4	85			
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>319</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>322</b>	<b>5</b>	<b>0</b>	<b>39</b>	<b>15</b>	<b>44</b>	<b>15</b>	<b>369</b>			
08:00 AM	0	1	0	0	1	0	0	0	0	0	26	0	0	0	26	0	0	9	0	9	0	36			
08:15 AM	0	0	0	0	0	0	0	0	0	0	27	0	0	0	27	2	0	12	0	14	0	41			
08:30 AM	0	0	1	0	1	0	0	0	0	0	27	1	0	0	28	0	0	3	0	3	0	32			
08:45 AM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18	2	0	4	0	6	0	24			
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>4</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>133</b>			
<b>Grand Total</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>421</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>425</b>	<b>9</b>	<b>0</b>	<b>67</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>502</b>			
Approach %	0	40	60			0	0	0			11.8	0	88.2			11.8	0	88.2			15.1	97.1			
Total %	0	0.4	0.6			0	0	0			83.9	0.8	13.3			1.8	0	13.3			2.9	97.1			
Passenger Vehicles	0	1	1	0	2	0	0	0	0	0	407	3	0	0	410	6	0	53	72	0	0	481			
Large 2 Axle Vehicles	0	50	33.3	0	40	0	0	0	0	0	96.7	75	0	0	171.7	66.7	0	79.1	86.7	79.1	0	93			
Large 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	1	0	4			
Large 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0.7	0	0	1.5	0	1.1	0	0.8			
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	1	0	4	5	0	0	8			
% 4+ Axle Trucks	0	1	2	0	3	0	0	0	0	0	8	0	0	0	8	2	0	9	13	0	0	24			
% 4+ Axle Trucks	0	50	66.7	0	60	0	0	0	0	0	1.9	0	0	0	1.9	22.2	0	13.4	13.3	14.3	0	4.6			

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

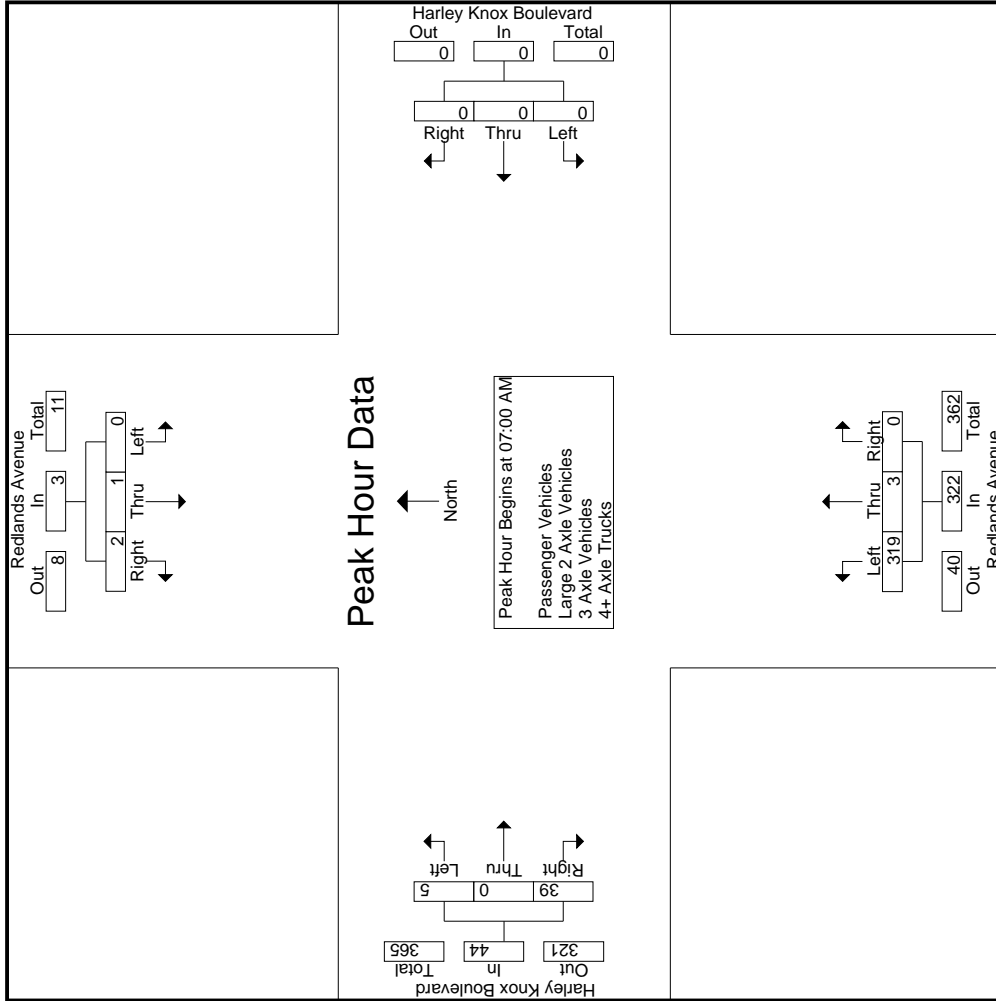
Peak Hour for Entire Intersection Begins at 07:00 AM

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound						
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	85	1	0	0	86	2	0	11	7	13	7	99			
07:30 AM	0	0	0	0	0	0	0	0	0	0	75	1	0	0	76	0	0	2	0	2	0	78			
07:45 AM	0	0	0	0	0	0	0	0	0	0	63	1	0	0	64	3	0	16	4	19	4	85			
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>319</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>322</b>	<b>5</b>	<b>0</b>	<b>39</b>	<b>15</b>	<b>44</b>	<b>15</b>	<b>369</b>			
<b>% App. Total</b>	<b>0</b>	<b>0</b>	<b>33.3</b>	<b>0</b>	<b>66.7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99.1</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>11.4</b>	<b>0</b>	<b>88.6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>369</b>			
PHF	.000	.250	.250		.375	.000	.000	.000		.000	.831	.750	.000	.839	.417	.609	.579		.862						

Counts Unlimited  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:45 AM			07:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	0	2	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	85	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	75	1	0	2	0	0
+45 mins.	0	0	1	0	0	0	63	1	0	0	0	0
Total Volume	0	1	3	0	0	0	319	3	0	5	0	40
% App. Total	0	.25	.75	0	0	0	99.1	0.9	0	11.1	0	88.9
PHF	.000	.250	.375	.000	.000	.000	.831	.750	.000	.417	.000	.625
			.500			.000		.839				.592

Counts Unlimited  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	95	0	0	0	0	95	0	0	0	6	3	6
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	82	0	0	0	82	1	0	10	6	11	11	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	74	1	0	0	75	0	0	1	0	1	1	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	62	1	0	0	63	2	0	15	4	17	17	
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>313</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>315</b>	<b>3</b>	<b>0</b>	<b>32</b>	<b>13</b>	<b>35</b>	<b>35</b>	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	23	0	0	6	0	6	6	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	25	2	0	10	0	12	12	
08:30 AM	0	0	1	0	1	1	0	0	0	0	0	0	26	1	0	0	27	0	0	2	0	2	2	
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	17	1	0	3	0	4	4	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>92</b>	<b>3</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>24</b>	<b>24</b>	
<b>Grand Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>404</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>407</b>	<b>6</b>	<b>0</b>	<b>53</b>	<b>13</b>	<b>59</b>	<b>59</b>	
Approch %	0	50	0.2	0	0.4		0	0	0	0	0	0	99.3	0.7	0	0	10.2	10.2	0	89.8	0	12.6	12.6	
Total %	0	0.2	0.2	0	0.4		0	0	0	0	0	0	86.3	0.6	0	0	87	1.3	0	11.3	0	2.7	2.7	

3.1-477

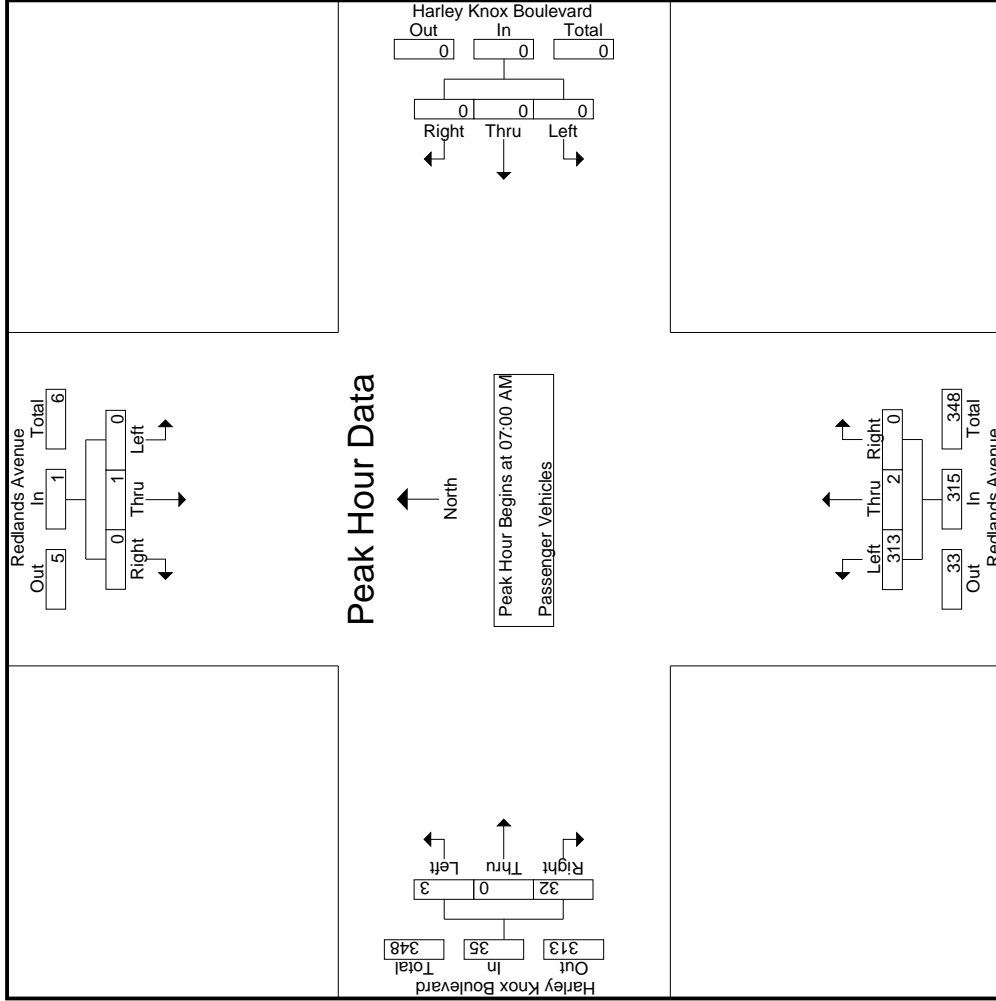
Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
07:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	95	0	0	0	95	0	0	6	0	6	6	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	82	0	0	0	82	1	0	10	0	11	11	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	74	1	0	0	75	0	0	1	0	1	1	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	62	1	0	0	63	2	0	15	0	17	17	
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>313</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>315</b>	<b>3</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>35</b>	<b>35</b>	
% App. Total	0	100	0	0	0	0	0	0	0	0	0	0	99.4	0.6	0	0	10.2	10.2	0	89.8	0	12.6	12.6	
PHF	.000	.250	.000	.000	.250		.000	.000	.000	.000	.000	.000	.824	.500	.000	.000	.829	.375	.000	.533	.000	.515	.860	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	1	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	0
+30 mins.	0	0	0	0	0	0	74	1	0	0	0	1
+45 mins.	0	0	0	0	0	0	62	1	0	2	0	15
Total Volume	0	1	0	0	0	0	313	2	0	3	0	32
% App. Total	0	100	0	0	0	0	99.4	0.6	0	8.6	0	91.4
PHF	.000	.250	.000	.000	.000	.000	.824	.500	.000	.375	.000	.533

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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					Harley Knox Boulevard Westbound					Redlands Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	1	0	0	0	0	4
Approch %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	75	0	0	100	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	0	0	75	0	0	0	75	0	0	25	0	0	0	0	100

3.1-480

Start Time	Redlands Avenue Southbound					Harley Knox Boulevard Westbound					Redlands Avenue Northbound					Harley Knox Boulevard Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2
% App. Total	0	0	0	0	0	0	0	0	0	0	100	0	0	0	50	0	0	0	0	0	0	0	50
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.500	

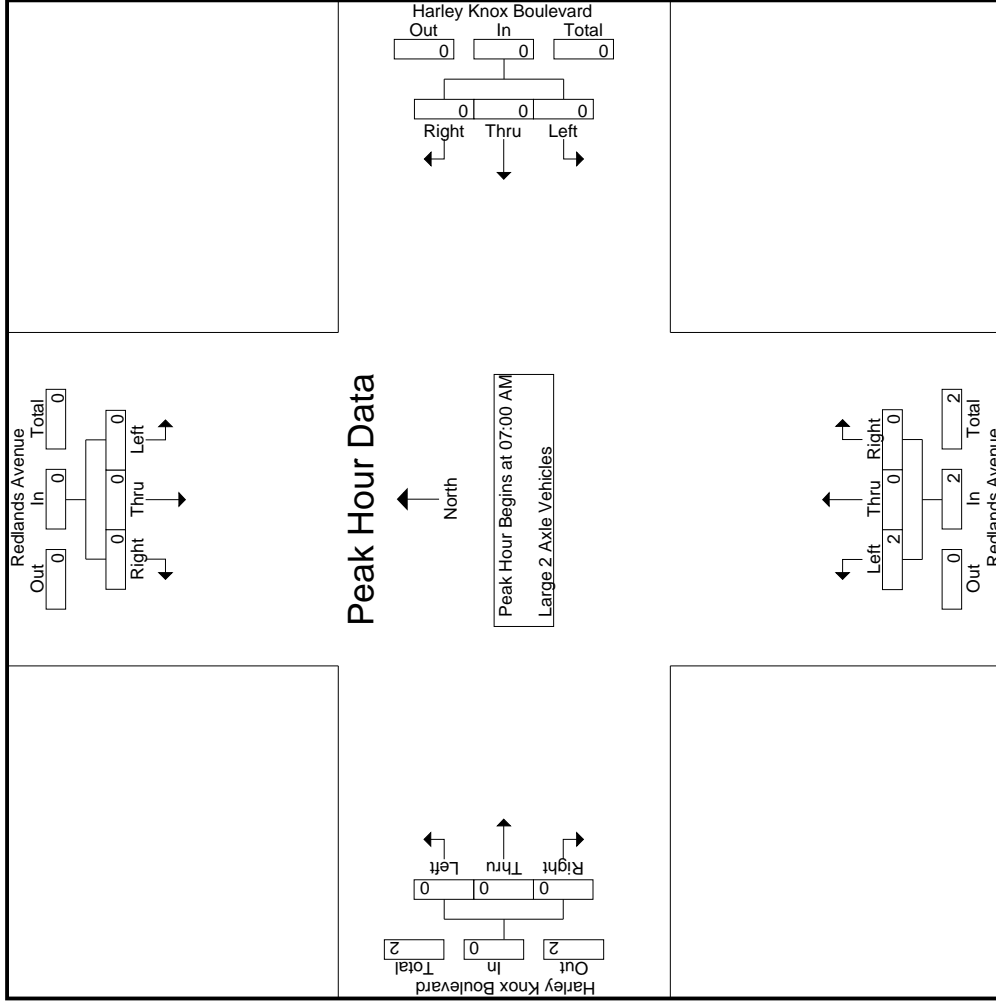
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
Peak Hour for Each Approach Begins at:	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	100	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.000	.000	.000	.000

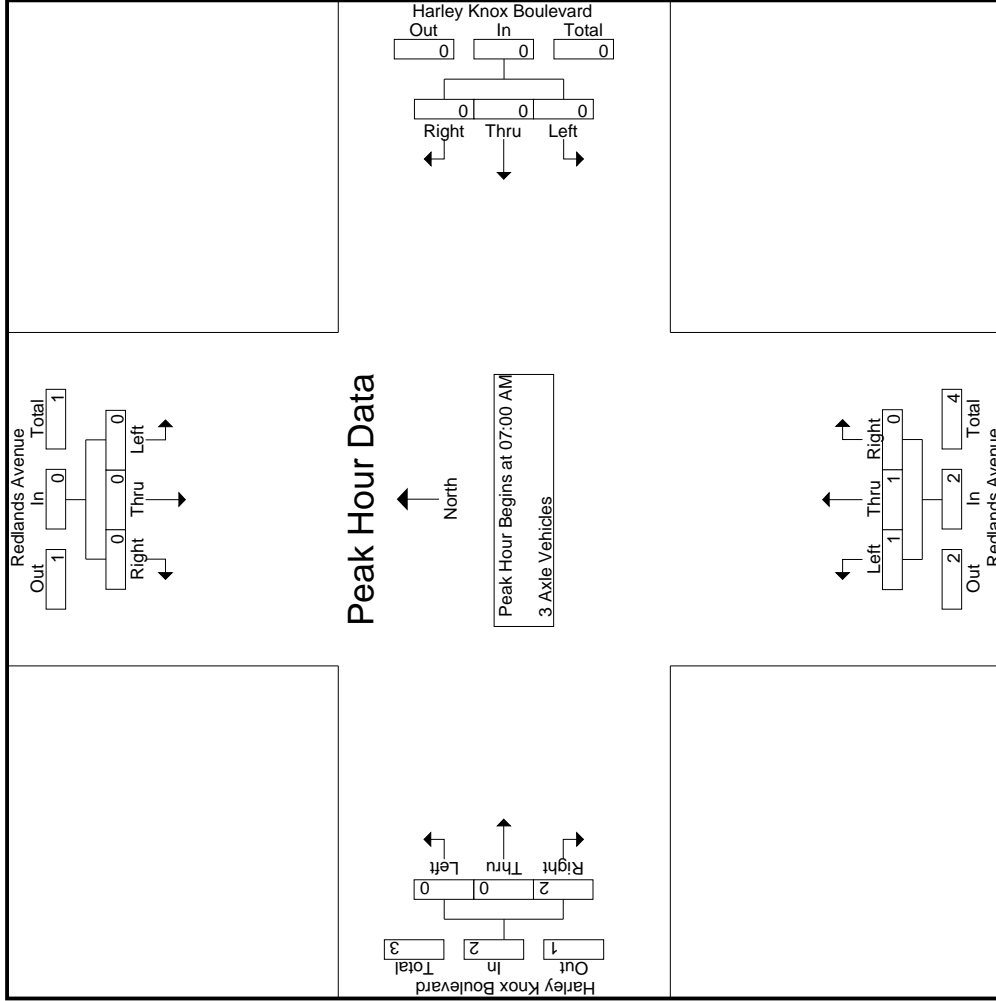
Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound														
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Exclu. Total	Inclu. Total	Int. Total						
07:00 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0
07:15 AM	0	0	0	0	0		0	0	0	0	0		1	1	0	0	2		0	0	0	0	0		0	0	0	0	0		0	0	0
07:30 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0
07:45 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0
Total	0	0	0	0	0		0	0	0	0	0		1	1	0	0	2		0	0	0	0	0		0	0	0	0	0		0	0	0
08:00 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0
08:15 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0
08:30 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0
08:45 AM	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0
Total	0	0	0	0	0		0	0	0	0	0		1	0	0	0	1		0	0	0	0	0		0	0	0	0	0		0	0	0
Grand Total	0	0	0	0	0		0	0	0	0	0		2	1	0	0	3		1	0	0	0	0		0	0	0	0	0		0	0	0
Approch %	0	0	0	0	0		0	0	0	0	0		66.7	33.3	0	0	37.5		20	0	0	0	5		0	0	0	0	0		0	0	0
Total %	0	0	0	0	0		0	0	0	0	0		25	12.5	0	0	37.5		12.5	0	0	0	62.5		0	0	0	0	0		0	0	0
PHF	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000		.000	.250	.000	.000	.250		.000	.000	.000	.000	.250		.000	.500	.500						

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	07:00 AM				07:00 AM				07:00 AM				07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
+15 mins.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	1	0	0	0	0	0	2	
% App. Total	0	0	0	0	0	0	0	50	50	0	0	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.500	

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

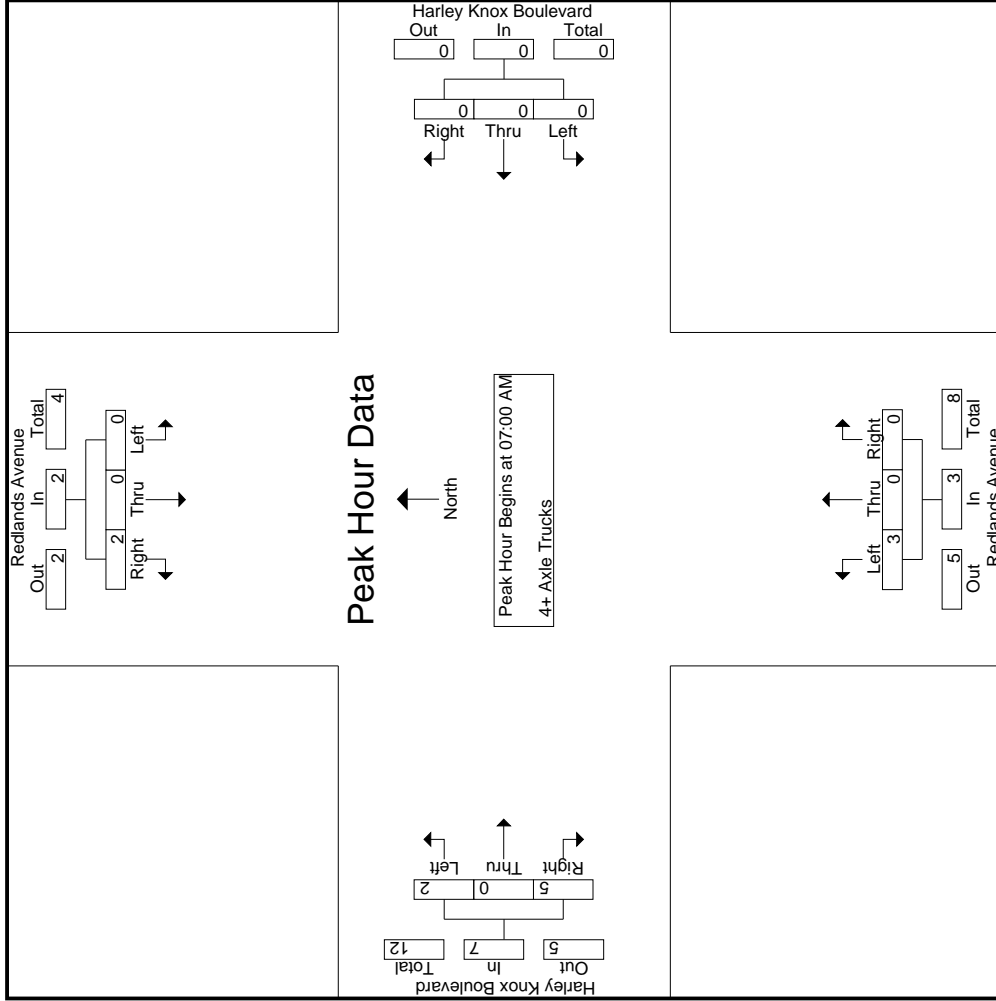
Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	1	1	2	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	2	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	2	0
Total	0	0	2	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	2	0	5	2	7	0
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	2	0	2	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	4	0	4	0
Grand Total	0	1	2	0	3	0	8	0	0	0	8	0	8	0	0	0	8	0	2	0	9	2	11	0
Approch %	0	33.3	66.7				100	0	0		36.4	0	18.2	0	81.8			50	8.3	91.7			22	
Total %	0	4.5	9.1		13.6		36.4	0	0		36.4	0	9.1	0	40.9			50	8.3	91.7			22	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 07:00 AM																								
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	1	1	2	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	2	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	2	0
Total Volume	0	0	2	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	2	0	5	2	7	0
% App. Total	0	0	100				100	0	0		37.5	0	28.6	0	71.4			71.4	0	91.7			22	
PHF	.000	.000	.250		.250		.000	.000	.000		.000	.000	.375	.000	.583		.375	.500	.417	.583		.583	.600	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	07:00 AM			07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	2	0	0	0	1	0	0	1	0	1
Total Volume	0	0	2	0	0	0	3	0	0	2	0	5
% App. Total	0	0	100	0	0	0	100	0	0	28.6	0	71.4
PHF	.000	.000	.250	.000	.000	.000	.375	.000	.000	.500	.000	.417
										.583		



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound									
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total					
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total							
04:00 PM	0	1	1	0	2		0	0	0	0	0		15	0	0	0	15		0	0	0	0	0		43	3	60	63
04:15 PM	0	2	1	0	3		0	0	0	0	0		17	1	0	0	18		4	0	38	3	42		3	63	66	87
04:30 PM	0	1	2	0	3		0	0	0	0	0		24	0	0	0	24		1	0	57	2	58		2	85	87	82
04:45 PM	0	0	1	1	1		0	0	0	0	0		27	0	0	0	27		1	0	51	1	52		2	80	82	298
Total	0	4	5	1	9		0	0	0	0	0		83	1	0	0	84		6	0	189	9	195		10	288	298	64
05:00 PM	0	1	1	0	2		0	0	0	0	0		21	1	0	0	22		0	0	40	0	40		0	64	64	81
05:15 PM	0	0	1	0	1		0	0	0	0	0		21	1	0	0	22		1	0	55	2	56		2	79	81	71
05:30 PM	0	1	0	0	1		0	0	0	0	0		23	0	0	0	23		0	0	47	0	47		0	71	71	68
05:45 PM	0	0	1	0	1		0	0	0	0	0		27	0	0	0	27		0	0	39	1	39		1	67	68	284
Total	0	2	3	0	5		0	0	0	0	0		92	2	0	0	94		1	0	181	3	182		3	281	284	582
Grand Total	0	6	8	1	14		0	0	0	0	0		175	3	0	0	178		7	0	370	12	377		13	569	582	92.8
Approach %	0	42.9	57.1				0	0	0	0	0		98.3	1.7	0	0	31.3		1.9	0	98.1		66.3		2.2	97.8	92.8	540
Total %	0	1.1	1.4		2.5		0	0	0	0	0		30.8	0.5	0	0	160		2	0	358		371		0	0	0	92.8
Passenger Vehicles	0	4	5		9		0	0	0	0	0		157	3	0	0	160		2	0	358		371		0	0	0	540
Passenger Vehicles	0	66.7	62.5		60		0	0	0	0	0		89.7	100	0	0	89.9		28.6	0	96.8		95.4		0	0	0	92.8
Large 2 Axle Vehicles	0	2	0		2		0	0	0	0	0		1	0	0	0	1		2	0	1		3		0	0	0	6
Large 2 Axle Vehicles	0	33.3	0		13.3		0	0	0	0	0		0.6	0	0	0	0.6		28.6	0	0.3		0.8		0	0	0	1
3 Axle Vehicles	0	0	0		0		0	0	0	0	0		6	0	0	0	6		1	0	3		4		0	0	0	10
3 Axle Vehicles	0	0	0		0		0	0	0	0	0		3.4	0	0	0	3.4		14.3	0	0.8		1		0	0	0	1.7
4+ Axle Trucks	0	0	3		4		0	0	0	0	0		11	0	0	0	11		2	0	8		11		0	0	0	26
4+ Axle Trucks	0	0	37.5		100		0	0	0	0	0		6.3	0	0	0	6.2		28.6	0	2.2		2.8		0	0	0	4.5

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound									
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total					
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total							
04:30 PM	0	1	1	0	2		0	0	0	0	0		24	0	0	0	24		0	0	1		0		0	0	0	58
04:45 PM	0	0	0		1		0	0	0	0	0		27	0	0	0	27		0	0	1		0		0	0	0	80
05:00 PM	0	0	1		1		0	0	0	0	0		21	1	0	0	22		0	0	0		0		0	0	0	64
05:15 PM	0	0	0		1		0	0	0	0	0		21	1	1	0	22		1	0	1		0		0	0	0	79
Total Volume	0	2	5		7		0	0	0	0	0		93	2	0	0	95		3	0	203		206		0	0	0	308
% App. Total	0	28.6	71.4				0	0	0	0	0		97.9	2.1	0	0	100		1.5	0	98.5		100		0	0	0	906
PHF	.000	.500	.625		.583		.000	.000	.000	.000	.000		.861	.500	.000	.880	.000	.750	.890	.888		.888		.000	.888	.906		

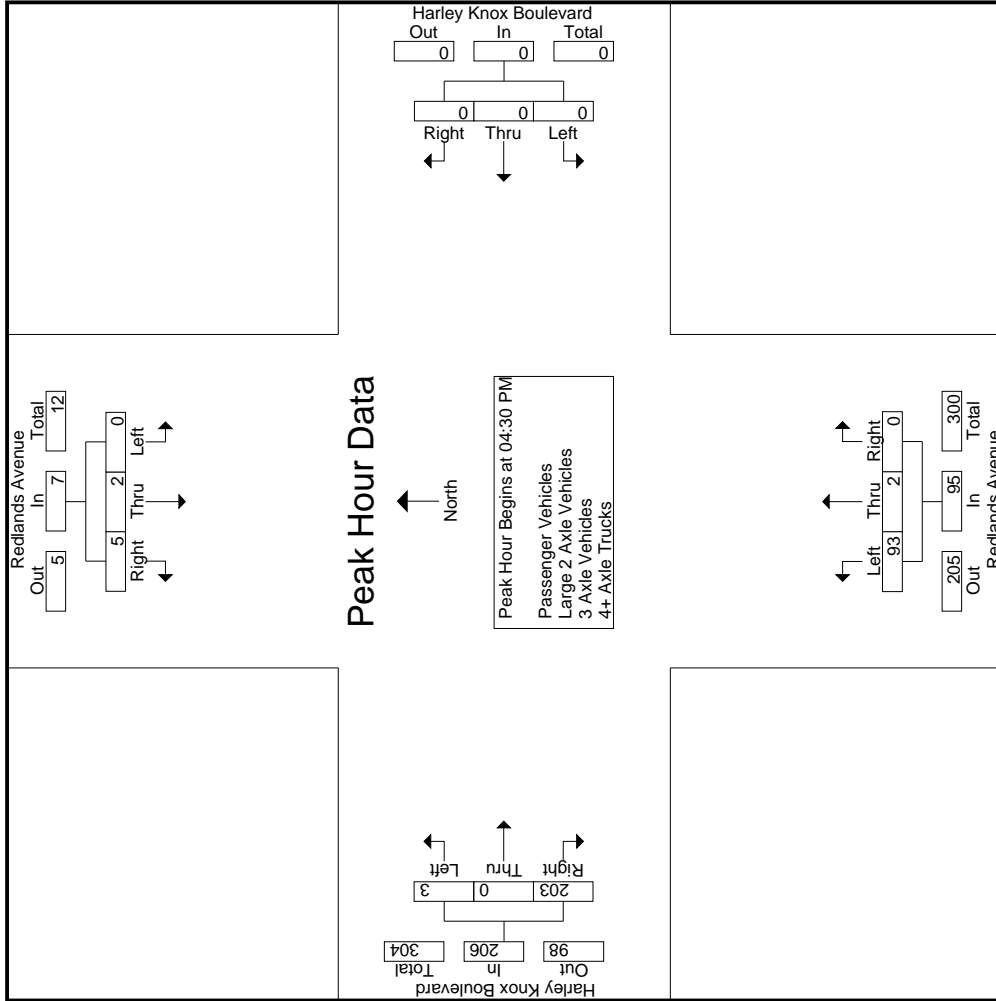
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Intersection Begins at 04:30 PM

Counts Unlimited  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound							
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total				
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:30 PM				04:30 PM				
+0 mins.	0	1	1	2	0	0	0	0	24	0	0	0	1	0	0	57	58
+15 mins.	0	2	1	3	0	0	0	0	27	0	0	0	1	0	0	51	52
+30 mins.	0	1	2	3	0	0	0	0	21	1	0	0	0	0	0	40	40
+45 mins.	0	0	1	1	0	0	0	0	21	1	0	0	1	0	0	55	56
Total Volume	0	4	5	9	0	0	0	0	93	2	0	0	3	0	0	203	206
% App. Total	0	44.4	55.6	.750	0	0	0	0	97.9	2.1	0	0	1.5	0	0	98.5	100
PHF	.000	.500	.625	.750	.000	.000	.000	.000	.861	.500	.000	.000	.750	.000	.890	.888	.888

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound											
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total							
04:00 PM	0	1	1	0	0	2	0	0	0	0	0	0	13	0	0	0	13	0	0	0	39	3	39	0	0	0	39	3	39	
04:15 PM	0	1	0	0	1	1	0	0	0	0	0	0	13	1	0	0	14	1	0	36	2	37	2	54	2	52	54	2	52	54
04:30 PM	0	0	2	0	2	2	0	0	0	0	0	0	22	0	0	0	22	0	0	55	2	55	2	79	2	79	81	2	79	81
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	1	0	50	1	51	1	77	1	77	78	1	77	78
Total	0	2	3	0	5	5	0	0	0	0	0	0	74	1	0	0	75	2	0	180	8	182	8	262	8	262	270	8	262	270
05:00 PM	0	1	0	0	1	1	0	0	0	0	0	0	17	1	0	0	18	0	0	39	0	39	0	58	0	58	58	0	58	58
05:15 PM	0	0	1	0	1	1	0	0	0	0	0	0	18	1	0	0	19	0	0	55	2	55	2	75	2	75	77	2	75	77
05:30 PM	0	1	0	0	1	1	0	0	0	0	0	0	22	0	0	0	22	0	0	46	0	46	0	69	0	69	69	0	69	69
05:45 PM	0	0	1	0	1	1	0	0	0	0	0	0	26	0	0	0	26	0	0	38	1	38	1	65	1	65	66	1	65	66
Total	0	2	2	0	4	4	0	0	0	0	0	0	83	2	0	0	85	0	0	178	3	178	3	267	3	267	270	3	267	270
Grand Total	0	4	5	0	9	9	0	0	0	0	0	0	157	3	0	0	160	2	0	358	11	360	11	529	11	529	540	11	529	540
Approch %	0	44.4	55.6				0	0	0				98.1	1.9	0		30.2	0.6	0	99.4		68.1		98	2	98		2	98	
Total %	0	0.8	0.9		1.7		0	0	0				29.7	0.6	0			0.4	0	67.7					2			2		

3.1-492

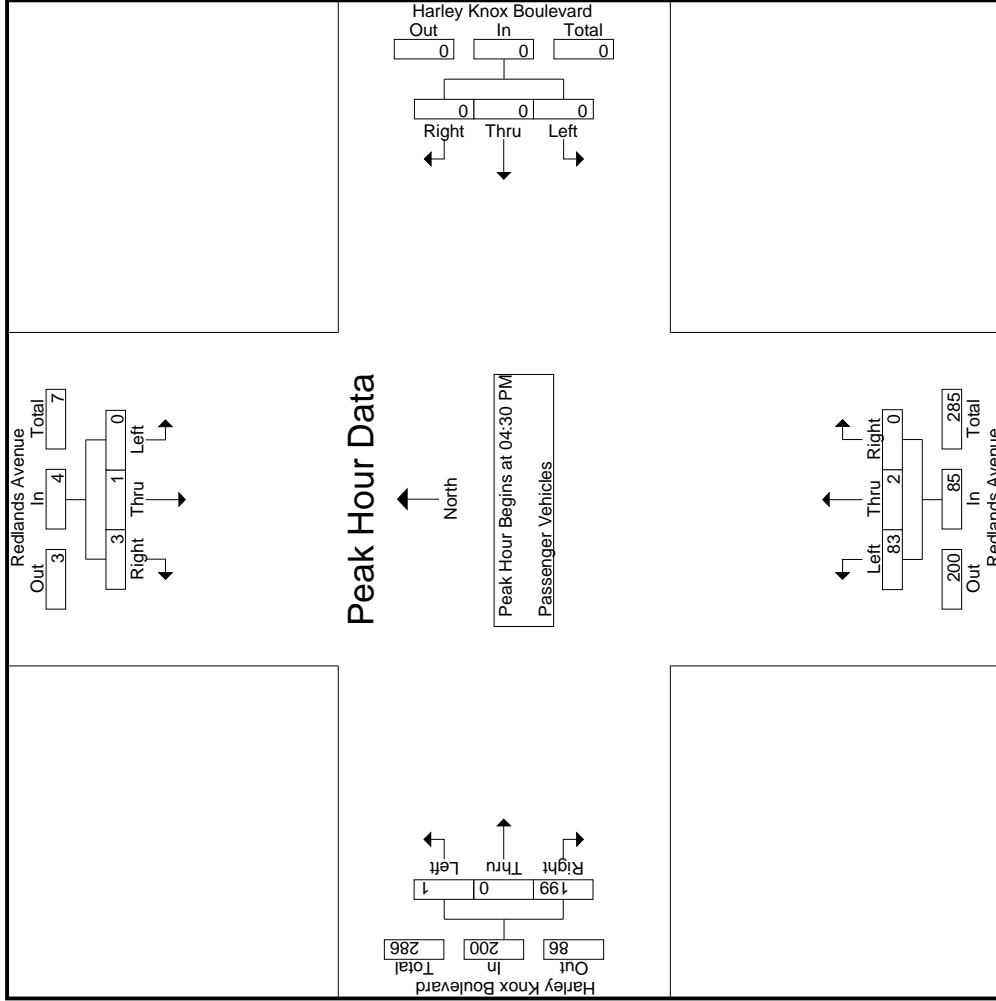
Start Time	Redlands Avenue Southbound						Harley Knox Boulevard Westbound						Redlands Avenue Northbound						Harley Knox Boulevard Eastbound										
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total						
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	22	0	0	55	0	55	55	0	55	79	0	55	79
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	1	0	50	0	50	51	1	50	77	0	50	77
05:00 PM	0	0	1	0	1	1	0	0	0	0	0	0	17	1	0	0	18	0	0	39	0	39	39	0	39	58	0	39	58
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	18	1	0	0	19	0	0	55	0	55	55	0	55	75	0	55	75
Total Volume	0	1	3		4		0	0	0	0	0	0	83	2	0	0	85	1	0	199	0	199	200	1	199	289	0	199	289
% App. Total	0	.25	.75				0	0	0	0	0	0	97.6	2.4	0	0	99.5	0.5	0	99.5	0	99.5	99.5	0.5	99.5	915	0	99.5	915
PHF	.000	.250	.375		.500		.000	.000	.000	.000	.000	.000	.798	.500	.000	.817	.905	.250	.000	.905		.909	.915	.250	.909		.250	.909	

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound						
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total			
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																
Peak Hour for Each Approach Begins at:																
04:30 PM					04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	55
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	50
+30 mins.	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	39
+45 mins.	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	55
Total Volume	0	1	3	4	0	0	0	0	2	0	0	0	1	0	0	199
% App. Total	0	25	75		0	0	0	0	2.4	0	0	0	0.5	0	0	99.5
PHF	.000	.250	.375	.500	.000	.000	.000	.000	.798	.500	.000	.000	.250	.000	.905	.909

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					Harley Knox Boulevard Westbound					Redlands Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	4	4
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	0	0	6	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	0	0	6	6
Approch %	0	100	0	0	0	0	0	0	0	0	100	0	0	0	0	66.7	0	0	33.3	0	0	0	6	6
Total %	0	33.3	0	0	33.3	0	0	0	0	0	16.7	0	0	0	16.7	33.3	0	0	16.7	0	0	0	100	100

3.1-495

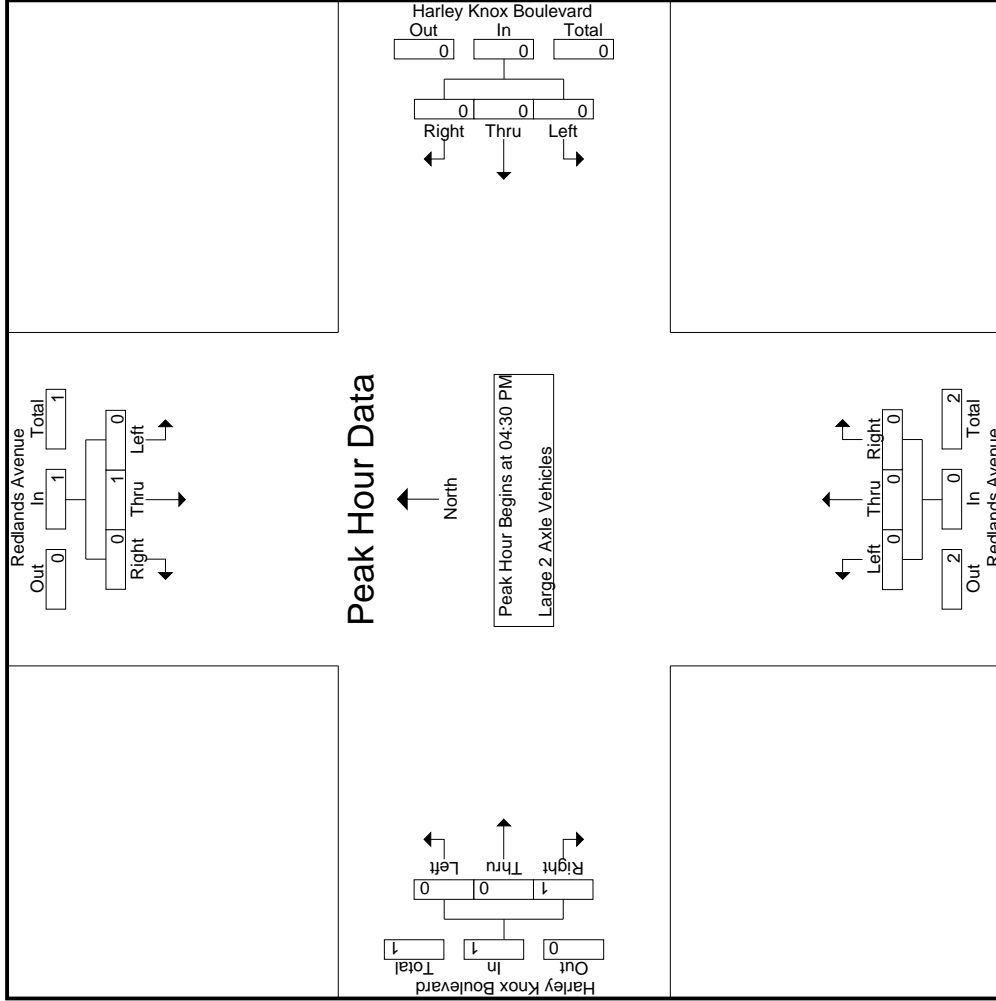
Start Time	Redlands Avenue Southbound					Harley Knox Boulevard Westbound					Redlands Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.500

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





Counts Unlimited  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
04:30 PM												
+0 mins.	0	1	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0	0	0	0	0	0	0	0	100
PHF	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					Harley Knox Boulevard Westbound					Redlands Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	2	1	0	1	0	2	0	0	4	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	0	0	2	0	0	0	0	2	1	0	2	0	3	0	0	5	5
05:00 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	4	0	0	0	4	0	0	0	0	4	0	0	1	0	1	0	0	5	5
Grand Total	0	0	0	0	0	6	0	0	0	6	1	0	0	0	6	1	0	3	0	4	0	0	10	10
Approch %	0	0	0	0	0	100	0	0	0	60	25	0	0	0	75	10	0	30	0	40	0	0	100	
Total %	0	0	0	0	0	60	0	0	0	60	10	0	0	0	40	10	0	30	0	40	0	0	100	

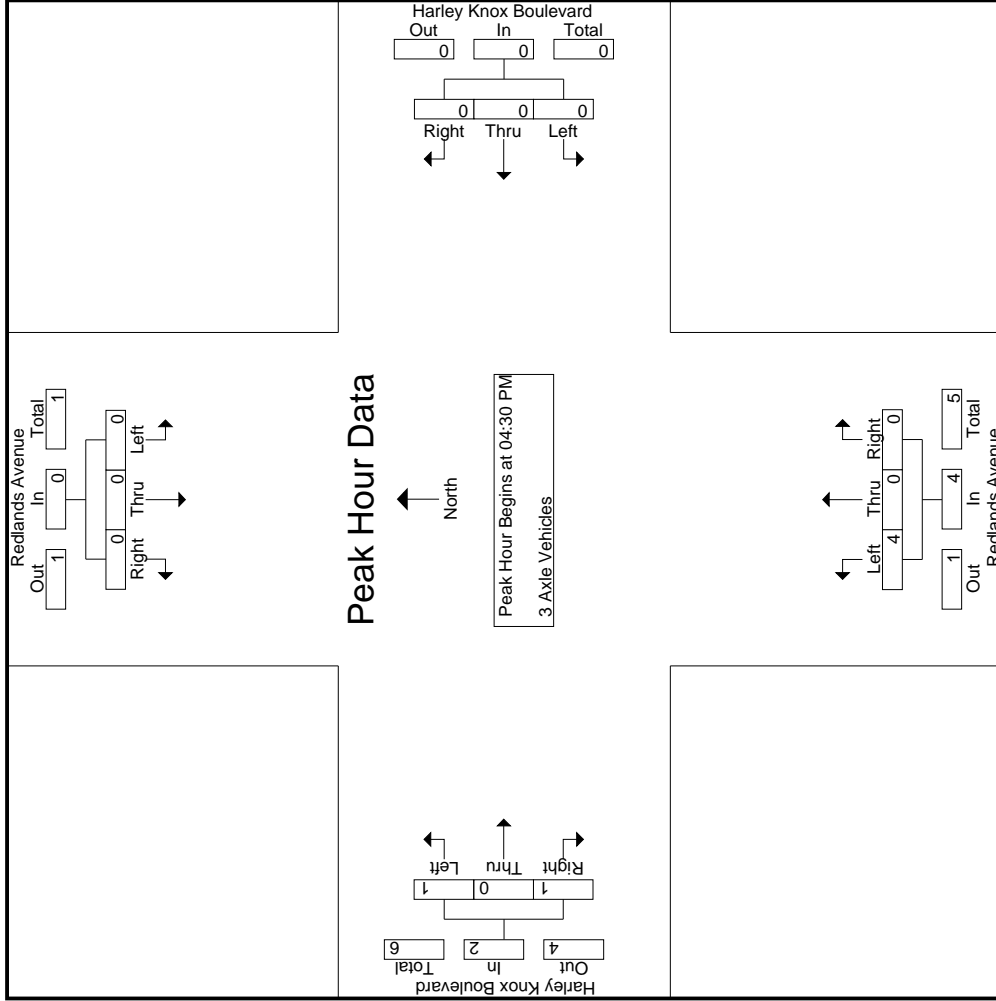
  

Start Time	Redlands Avenue Southbound					Harley Knox Boulevard Westbound					Redlands Avenue Northbound					Harley Knox Boulevard Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	1	0	1	0	2	0	0	2	6
% App. Total	0	0	0	0	0	0	0	0	0	0	100	0	0	0	50	50	0	50	0	100	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.000	.250	.500	.250	.000	.250	.000	.250	.000	.250	.375	

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:30 PM			04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	2	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	4	0	0	0	0	0
% App. Total	0	0	0	0	0	0	100	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.000	.250
	04:30 PM			04:30 PM			04:30 PM			04:30 PM		
	0	0	0	0	0	0	2	0	0	2	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	4	0	0	1	0	1
	0	0	0	0	0	0	100	0	0	50	0	50
	.000			.000			.000			.250		

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				Harley Knox Boulevard Westbound				Redlands Avenue Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	5
04:15 PM	0	0	1	0	1	0	0	0	0	3	0	0	2	1	3	1	7	8
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	2	3
Total	0	0	2	1	2	0	0	0	0	6	1	0	6	1	7	2	15	17
05:00 PM	0	0	1	0	1	0	0	0	0	2	0	0	0	1	0	0	4	4
05:15 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	1	0	4	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	1	0	1	0	0	0	0	5	1	0	2	0	3	0	9	9
Grand Total	0	0	3	1	3	0	0	0	0	11	2	0	8	1	10	2	24	26
Approch %	0	0	100			0	0	0		100	20	0	80					
Total %	0	0	12.5		12.5	0	0	0		45.8	8.3	0	33.3		41.7	7.7	92.3	

3.1-501

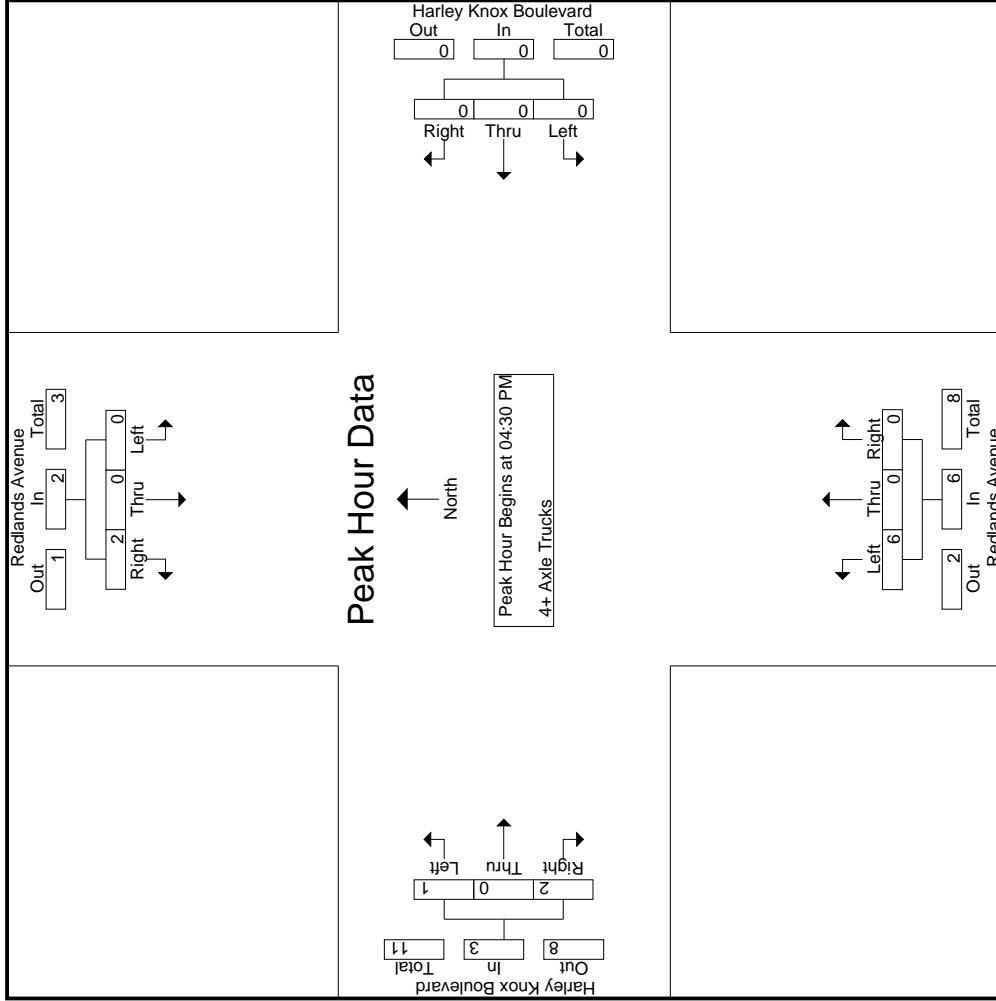
Start Time	Redlands Avenue Southbound				Harley Knox Boulevard Westbound				Redlands Avenue Northbound				Harley Knox Boulevard Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:45 PM	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	2
05:00 PM	0	0	0	1	1	0	0	0	0	0	2	0	0	1	0	0	1	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	1	4
Total Volume	0	0	2	2	2	0	0	0	0	6	6	1	0	2	3		11	11
% App. Total	0	0	100			0	0	0		100	33.3	0	66.7					
PHF	.000	.000	.500		.500	.000	.000	.000		.500	.250	.000	.500		.750		.688	

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard  
 Weather: Clear

File Name : 07\_PER\_Redlands\_Harley Knox PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Harley Knox Boulevard Westbound			Redlands Avenue Northbound			Harley Knox Boulevard Eastbound					
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1															
Peak Hour for Each Approach Begins at:															
	04:30 PM				04:30 PM				04:30 PM				04:30 PM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
+15 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	1	1	0	0	0	0	2	0	0	0	0	1	
+45 mins.	0	0	0	0	0	0	0	0	3	0	0	0	0	1	
Total Volume	0	0	2	2	0	0	0	0	6	0	0	0	0	2	
% App. Total	0	0	100	.500	0	0	0	.000	100	0	0	0	0	66.7	
PHF	.000	.000	.500	.500	.000	.000	.000	.000	.500	.000	.000	.000	.250	.750	

Location: Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Redlands Avenue	East Leg Harley Knox Boulevard	South Leg Redlands Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Redlands Avenue	East Leg Harley Knox Boulevard	South Leg Redlands Avenue	West Leg Harley Knox Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0



Location: Perris  
 N/S: Redlands Avenue  
 E/W: Harley Knox Boulevard



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound Harley Knox Boulevard			Northbound Redlands Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Redlands Avenue			Westbound Harley Knox Boulevard			Northbound Redlands Avenue			Eastbound Harley Knox Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

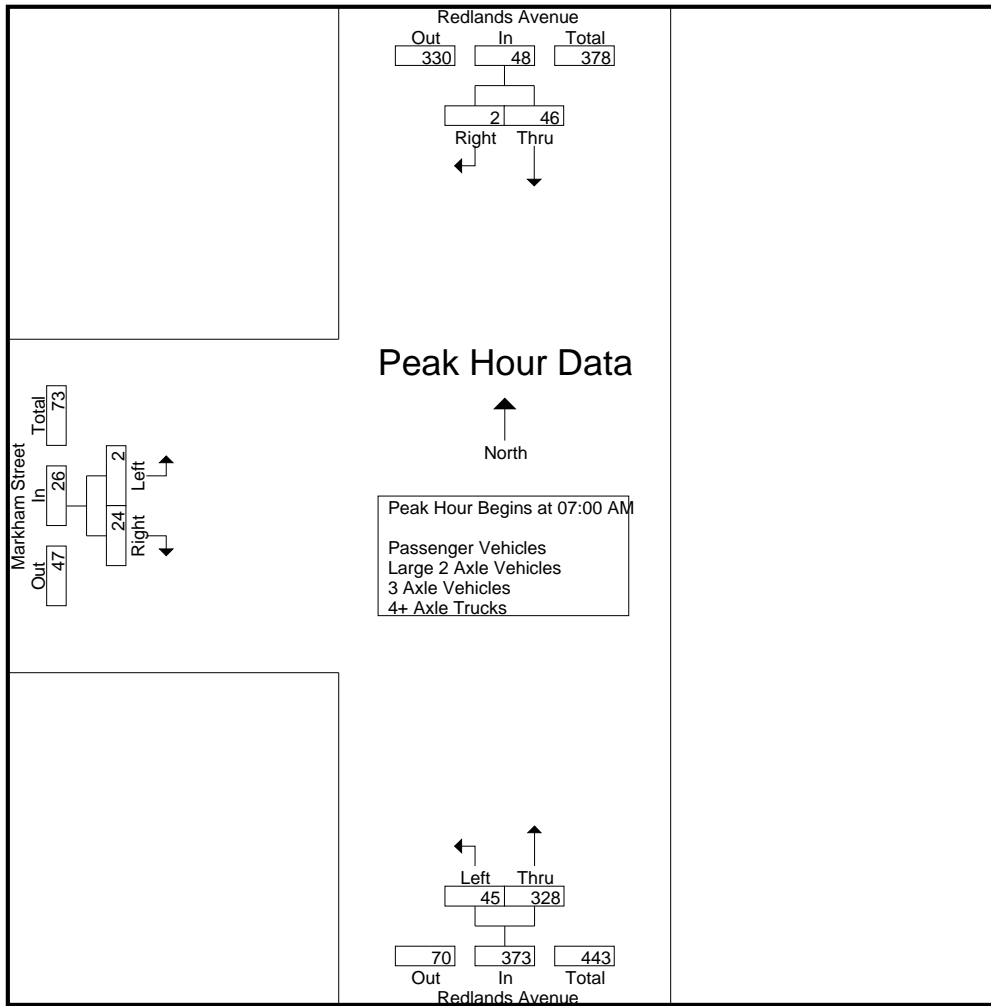
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	10	2	12	10	103	113	0	3	3	128
07:15 AM	12	0	12	14	74	88	2	8	10	110
07:30 AM	5	0	5	14	84	98	0	8	8	111
07:45 AM	19	0	19	7	67	74	0	5	5	98
Total	46	2	48	45	328	373	2	24	26	447
08:00 AM	10	0	10	3	23	26	1	3	4	40
08:15 AM	9	0	9	2	25	27	0	2	2	38
08:30 AM	5	0	5	4	32	36	1	1	2	43
08:45 AM	3	1	4	0	18	18	0	0	0	22
Total	27	1	28	9	98	107	2	6	8	143
Grand Total	73	3	76	54	426	480	4	30	34	590
Apprch %	96.1	3.9		11.2	88.8		11.8	88.2		
Total %	12.4	0.5	12.9	9.2	72.2	81.4	0.7	5.1	5.8	
Passenger Vehicles	66	1	67	48	415	463	1	26	27	557
% Passenger Vehicles	90.4	33.3	88.2	88.9	97.4	96.5	25	86.7	79.4	94.4
Large 2 Axle Vehicles	2	0	2	4	7	11	1	4	5	18
% Large 2 Axle Vehicles	2.7	0	2.6	7.4	1.6	2.3	25	13.3	14.7	3.1
3 Axle Vehicles	2	0	2	0	0	0	2	0	2	4
% 3 Axle Vehicles	2.7	0	2.6	0	0	0	50	0	5.9	0.7
4+ Axle Trucks	3	2	5	2	4	6	0	0	0	11
% 4+ Axle Trucks	4.1	66.7	6.6	3.7	0.9	1.2	0	0	0	1.9

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	10	2	12	10	103	113	0	3	3	128
07:15 AM	12	0	12	14	74	88	2	8	10	110
07:30 AM	5	0	5	14	84	98	0	8	8	111
07:45 AM	19	0	19	7	67	74	0	5	5	98
Total Volume	46	2	48	45	328	373	2	24	26	447
% App. Total	95.8	4.2		12.1	87.9		7.7	92.3		
PHF	.605	.250	.632	.804	.796	.825	.250	.750	.650	.873

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:15 AM		
+0 mins.	10	2	12	10	103	113	2	8	10
+15 mins.	12	0	12	14	74	88	0	8	8
+30 mins.	5	0	5	14	84	98	0	5	5
+45 mins.	19	0	19	7	67	74	1	3	4
Total Volume	46	2	48	45	328	373	3	24	27
% App. Total	95.8	4.2		12.1	87.9		11.1	88.9	
PHF	.605	.250	.632	.804	.796	.825	.375	.750	.675

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

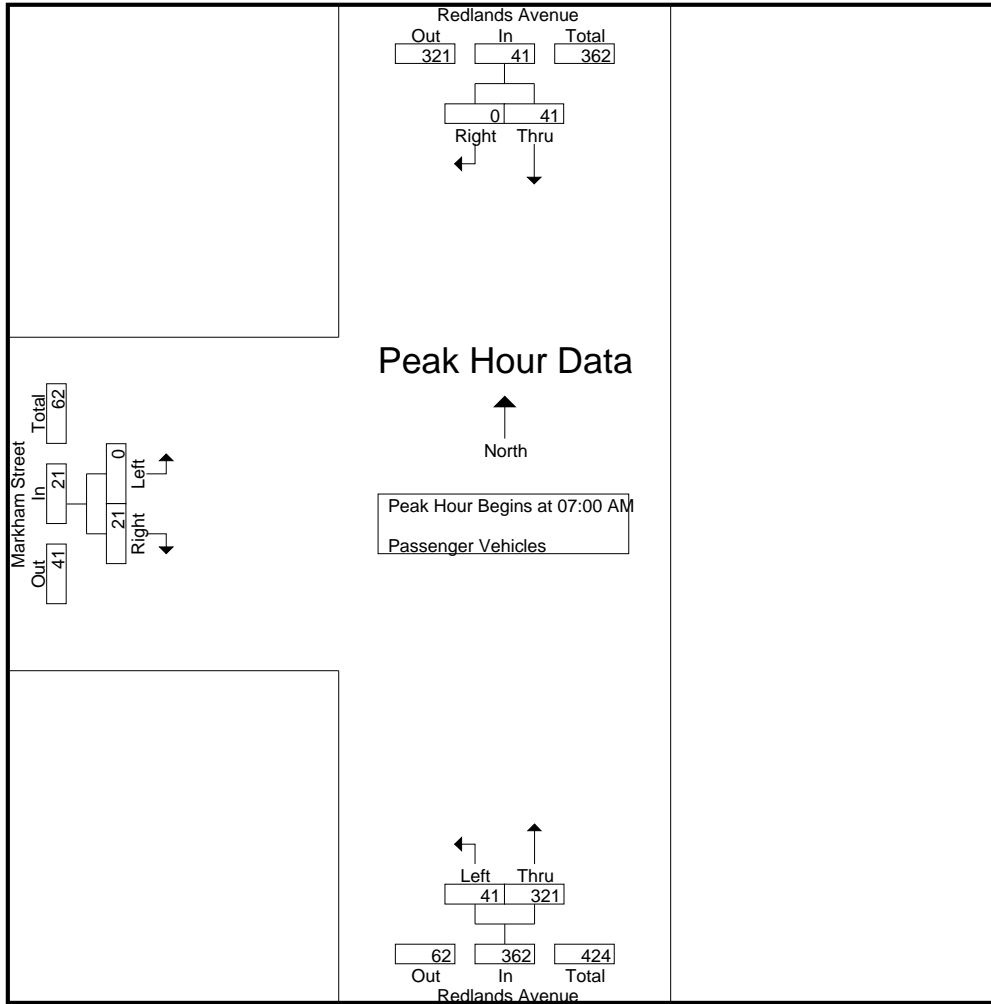
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	8	0	8	9	101	110	0	3	3	121
07:15 AM	11	0	11	12	74	86	0	8	8	105
07:30 AM	5	0	5	13	81	94	0	6	6	105
07:45 AM	17	0	17	7	65	72	0	4	4	93
Total	41	0	41	41	321	362	0	21	21	424
08:00 AM	8	0	8	2	22	24	0	3	3	35
08:15 AM	9	0	9	2	24	26	0	2	2	37
08:30 AM	5	0	5	3	31	34	1	0	1	40
08:45 AM	3	1	4	0	17	17	0	0	0	21
Total	25	1	26	7	94	101	1	5	6	133
Grand Total	66	1	67	48	415	463	1	26	27	557
Apprch %	98.5	1.5		10.4	89.6		3.7	96.3		
Total %	11.8	0.2	12	8.6	74.5	83.1	0.2	4.7	4.8	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	8	0	8	9	<b>101</b>	<b>110</b>	0	3	3	<b>121</b>
07:15 AM	11	0	11	12	74	86	0	<b>8</b>	<b>8</b>	105
07:30 AM	5	0	5	<b>13</b>	81	94	0	6	6	105
07:45 AM	<b>17</b>	0	<b>17</b>	7	65	72	0	4	4	93
Total Volume	41	0	41	41	321	362	0	21	21	424
% App. Total	100	0		11.3	88.7		0	100		
PHF	.603	.000	.603	.788	.795	.823	.000	.656	.656	.876

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	8	0	8	9	<b>101</b>	<b>110</b>	0	3	3
+15 mins.	11	0	11	12	74	86	0	<b>8</b>	<b>8</b>
+30 mins.	5	0	5	<b>13</b>	81	94	0	6	6
+45 mins.	<b>17</b>	0	<b>17</b>	7	65	72	0	4	4
Total Volume	41	0	41	41	321	362	0	21	21
% App. Total	100	0		11.3	88.7		0	100	
PHF	.603	.000	.603	.788	.795	.823	.000	.656	.656

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

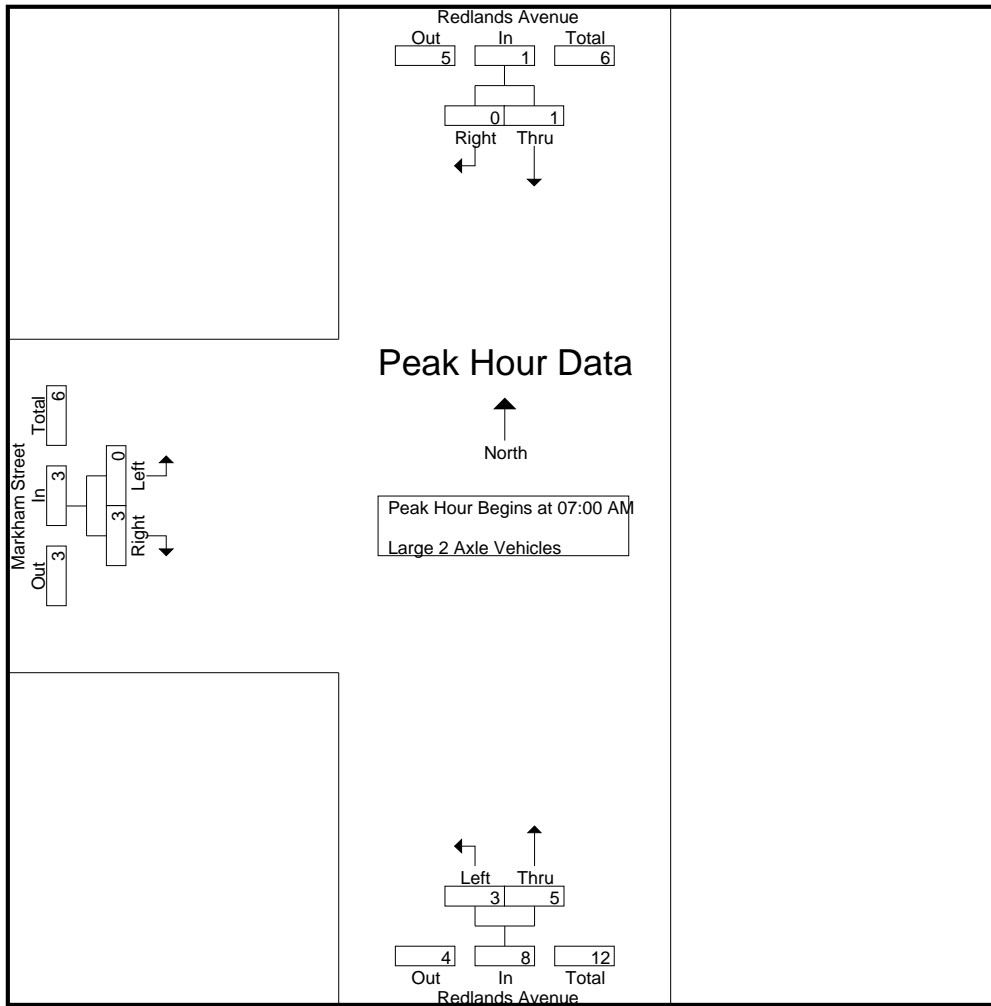
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	0	2	2	0	0	0	2
07:15 AM	0	0	0	2	0	2	0	0	0	2
07:30 AM	0	0	0	1	3	4	0	2	2	6
07:45 AM	1	0	1	0	0	0	0	1	1	2
Total	1	0	1	3	5	8	0	3	3	12
08:00 AM	1	0	1	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	1	1	0	0	0	1
08:30 AM	0	0	0	1	1	2	0	1	1	3
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	1	2	3	1	1	2	6
Grand Total	2	0	2	4	7	11	1	4	5	18
Apprch %	100	0		36.4	63.6		20	80		
Total %	11.1	0	11.1	22.2	38.9	61.1	5.6	22.2	27.8	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	0	2	2	0	0	0	2
07:15 AM	0	0	0	2	0	2	0	0	0	2
07:30 AM	0	0	0	1	3	4	0	2	2	6
07:45 AM	1	0	1	0	0	0	0	1	1	2
Total Volume	1	0	1	3	5	8	0	3	3	12
% App. Total	100	0		37.5	62.5		0	100		
PHF	.250	.000	.250	.375	.417	.500	.000	.375	.375	.500

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	2	2	0	0	0
+15 mins.	0	0	0	2	0	2	0	0	0
+30 mins.	0	0	0	1	3	4	0	2	2
+45 mins.	1	0	1	0	0	0	0	1	1
Total Volume	1	0	1	3	5	8	0	3	3
% App. Total	100	0		37.5	62.5		0	100	
PHF	.250	.000	.250	.375	.417	.500	.000	.375	.375

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	2	0	2	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	2	0	2	0	0	0	2	0	2	4
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	2	0	2	0	0	0	2	0	2	4
Apprch %	100	0		0	0		100	0		
Total %	50	0	50	0	0	0	50	0	50	

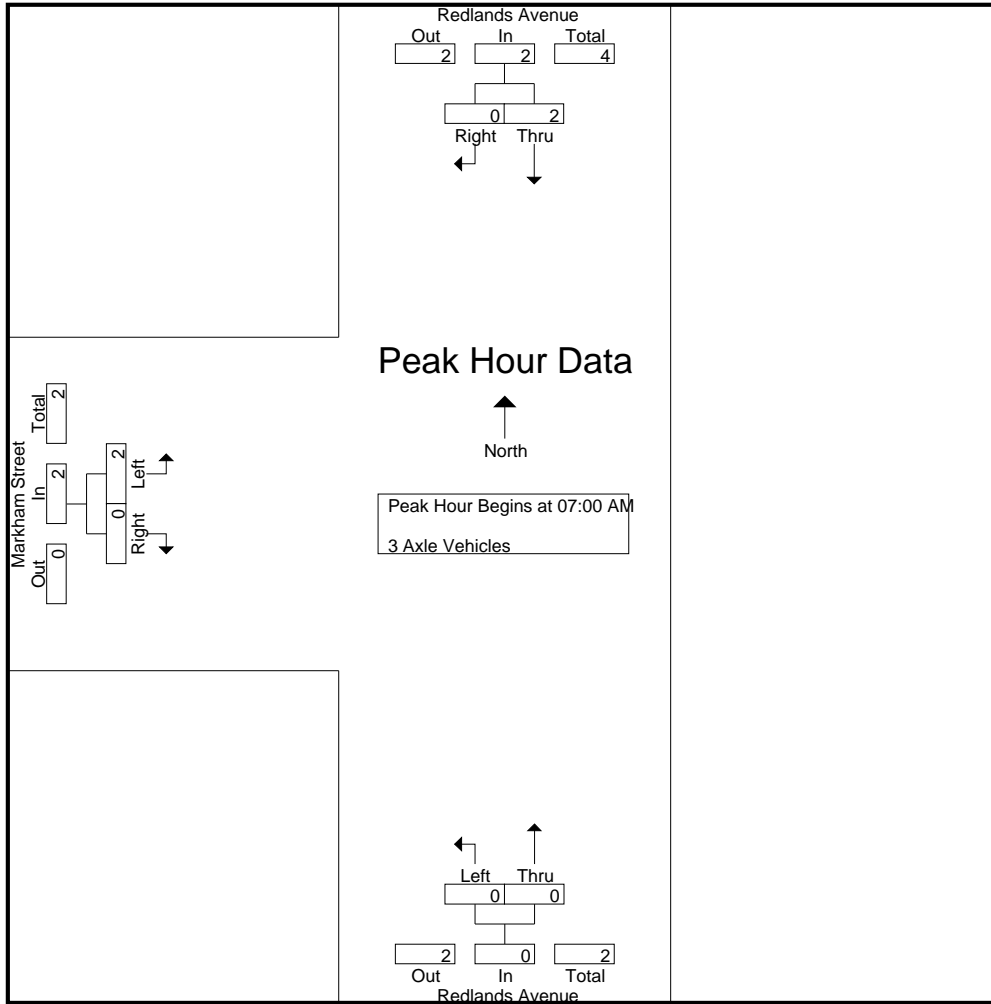
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	2	0	2	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	0	0	0	2	0	2	4
% App. Total	100	0		0	0		100	0		
PHF	.250	.000	.250	.000	.000	.000	.250	.000	.250	.500

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	2	0	2	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	2	0	2	0	0	0	2	0	2
% App. Total	100	0		0	0		100	0	
PHF	.250	.000	.250	.000	.000	.000	.250	.000	.250

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Groups Printed- 4+ Axle Trucks

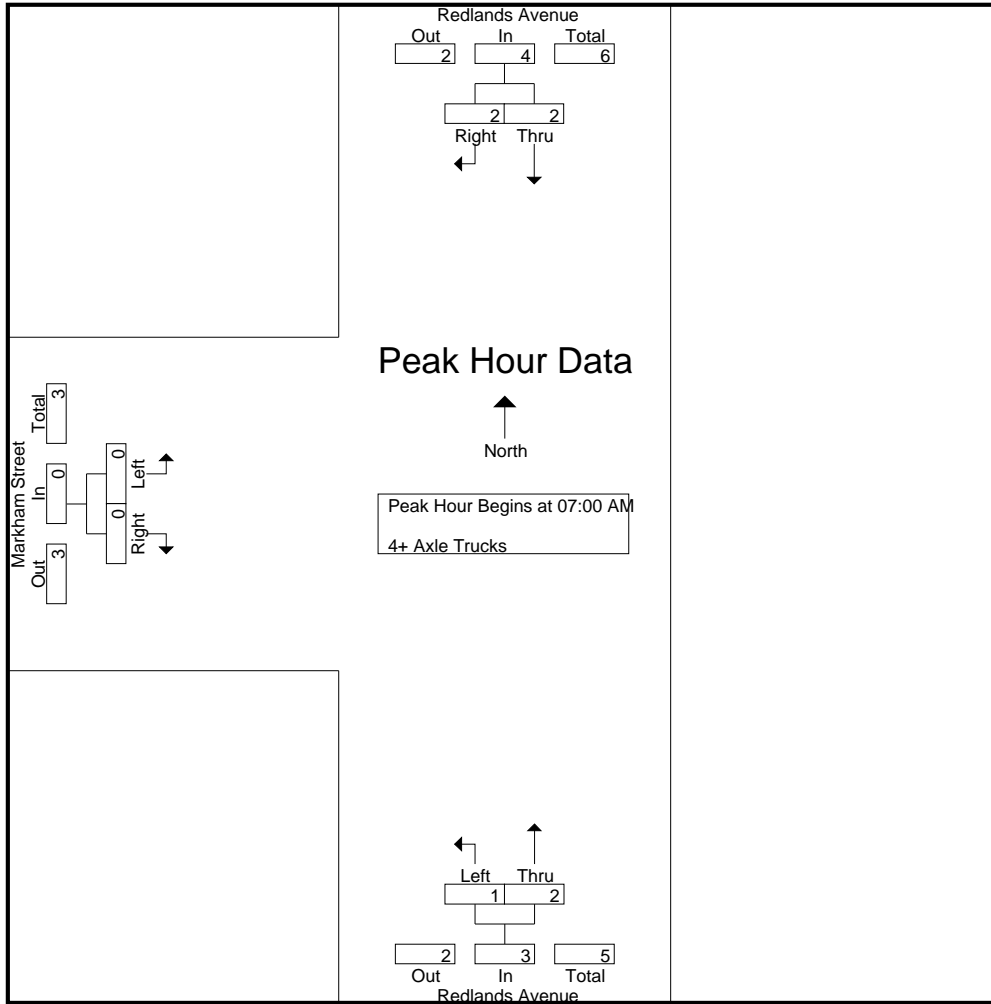
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	2	2	1	0	1	0	0	0	3
07:15 AM	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	1	0	2	2	0	0	0	3
Total	2	2	4	1	2	3	0	0	0	7
08:00 AM	1	0	1	1	1	2	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	1	1	0	0	0	1
Total	1	0	1	1	2	3	0	0	0	4
Grand Total	3	2	5	2	4	6	0	0	0	11
Apprch %	60	40		33.3	66.7		0	0		
Total %	27.3	18.2	45.5	18.2	36.4	54.5	0	0	0	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	2	2	1	0	1	0	0	0	3
07:15 AM	1	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	1	0	2	2	0	0	0	3
Total Volume	2	2	4	1	2	3	0	0	0	7
% App. Total	50	50		33.3	66.7		0	0		
PHF	.500	.250	.500	.250	.250	.375	.000	.000	.000	.583

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	2	2	1	0	1	0	0	0
+15 mins.	1	0	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	1	0	2	2	0	0	0
Total Volume	2	2	4	1	2	3	0	0	0
% App. Total	50	50		33.3	66.7		0	0	
PHF	.500	.250	.500	.250	.250	.375	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

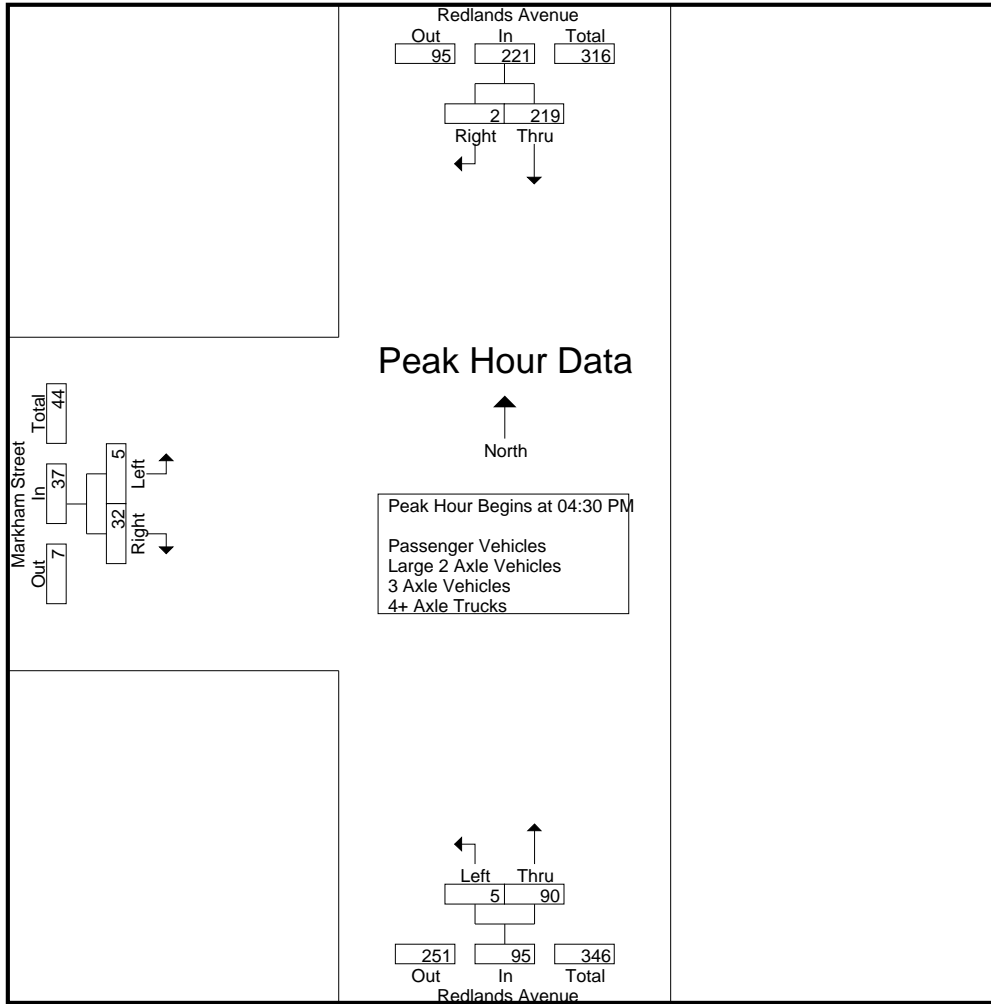
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	48	1	49	0	15	15	0	3	3	67
04:15 PM	38	2	40	1	18	19	2	8	10	69
04:30 PM	62	1	63	1	23	24	0	11	11	98
04:45 PM	54	1	55	2	26	28	1	5	6	89
Total	202	5	207	4	82	86	3	27	30	323
05:00 PM	46	0	46	1	22	23	2	8	10	79
05:15 PM	57	0	57	1	19	20	2	8	10	87
05:30 PM	48	2	50	1	26	27	0	8	8	85
05:45 PM	45	0	45	0	27	27	0	10	10	82
Total	196	2	198	3	94	97	4	34	38	333
Grand Total	398	7	405	7	176	183	7	61	68	656
Apprch %	98.3	1.7		3.8	96.2		10.3	89.7		
Total %	60.7	1.1	61.7	1.1	26.8	27.9	1.1	9.3	10.4	
Passenger Vehicles	386	3	389	7	162	169	3	59	62	620
% Passenger Vehicles	97	42.9	96	100	92	92.3	42.9	96.7	91.2	94.5
Large 2 Axle Vehicles	4	2	6	0	2	2	2	2	4	12
% Large 2 Axle Vehicles	1	28.6	1.5	0	1.1	1.1	28.6	3.3	5.9	1.8
3 Axle Vehicles	4	1	5	0	5	5	0	0	0	10
% 3 Axle Vehicles	1	14.3	1.2	0	2.8	2.7	0	0	0	1.5
4+ Axle Trucks	4	1	5	0	7	7	2	0	2	14
% 4+ Axle Trucks	1	14.3	1.2	0	4	3.8	28.6	0	2.9	2.1

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	62	1	63	1	23	24	0	11	11	98
04:45 PM	54	1	55	2	26	28	1	5	6	89
05:00 PM	46	0	46	1	22	23	2	8	10	79
05:15 PM	57	0	57	1	19	20	2	8	10	87
Total Volume	219	2	221	5	90	95	5	32	37	353
% App. Total	99.1	0.9		5.3	94.7		13.5	86.5		
PHF	.883	.500	.877	.625	.865	.848	.625	.727	.841	.901

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
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 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:45 PM			05:00 PM		
+0 mins.	<b>62</b>	<b>1</b>	<b>63</b>	<b>2</b>	<b>26</b>	<b>28</b>	<b>2</b>	<b>8</b>	<b>10</b>
+15 mins.	54	1	55	1	22	23	2	8	10
+30 mins.	46	0	46	1	19	20	0	8	8
+45 mins.	57	0	57	1	26	27	0	<b>10</b>	10
Total Volume	219	2	221	5	93	98	4	34	38
% App. Total	99.1	0.9		5.1	94.9		10.5	89.5	
PHF	.883	.500	.877	.625	.894	.875	.500	.850	.950

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

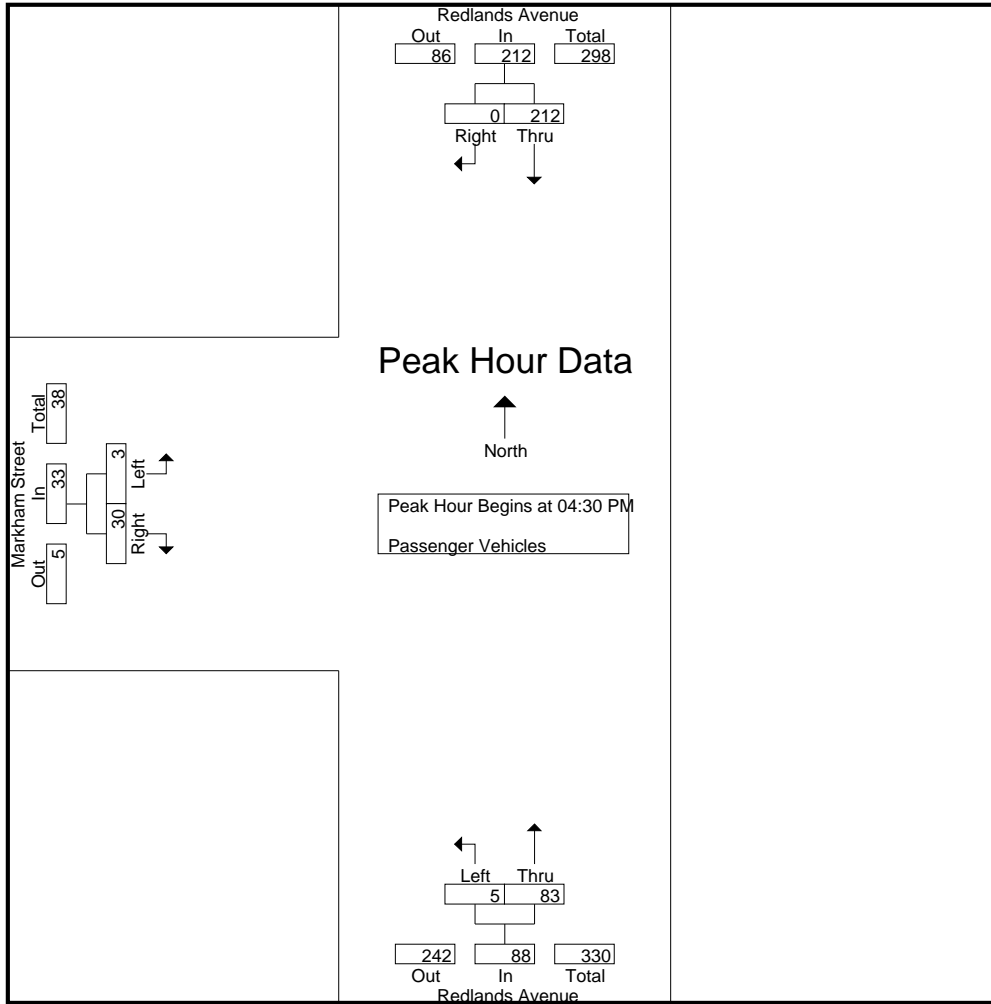
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	46	1	47	0	12	12	0	3	3	62
04:15 PM	36	1	37	1	17	18	0	8	8	63
04:30 PM	59	0	59	1	22	23	0	10	10	92
04:45 PM	51	0	51	2	25	27	0	5	5	83
Total	192	2	194	4	76	80	0	26	26	300
05:00 PM	45	0	45	1	19	20	2	7	9	74
05:15 PM	57	0	57	1	17	18	1	8	9	84
05:30 PM	47	1	48	1	25	26	0	8	8	82
05:45 PM	45	0	45	0	25	25	0	10	10	80
Total	194	1	195	3	86	89	3	33	36	320
Grand Total	386	3	389	7	162	169	3	59	62	620
Apprch %	99.2	0.8		4.1	95.9		4.8	95.2		
Total %	62.3	0.5	62.7	1.1	26.1	27.3	0.5	9.5	10	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	<b>59</b>	0	<b>59</b>	1	22	23	0	<b>10</b>	<b>10</b>	<b>92</b>
04:45 PM	51	0	51	2	25	27	0	5	5	83
05:00 PM	45	0	45	1	19	20	2	7	9	74
05:15 PM	57	0	57	1	17	18	1	8	9	84
Total Volume	212	0	212	5	83	88	3	30	33	333
% App. Total	100	0		5.7	94.3		9.1	90.9		
PHF	.898	.000	.898	.625	.830	.815	.375	.750	.825	.905

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	<b>59</b>	0	<b>59</b>	1	22	23	0	<b>10</b>	<b>10</b>
+15 mins.	51	0	51	<b>2</b>	<b>25</b>	<b>27</b>	0	5	5
+30 mins.	45	0	45	1	19	20	<b>2</b>	7	9
+45 mins.	57	0	57	1	17	18	1	8	9
Total Volume	212	0	212	5	83	88	3	30	33
% App. Total	100	0		5.7	94.3		9.1	90.9	
PHF	.898	.000	.898	.625	.830	.815	.375	.750	.825

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	0	1	1	0	0	0	1
04:15 PM	1	0	1	0	1	1	1	0	1	3
04:30 PM	1	1	2	0	0	0	0	1	1	3
04:45 PM	1	1	2	0	0	0	1	0	1	3
Total	3	2	5	0	2	2	2	1	3	10
05:00 PM	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	1	1	2
Grand Total	4	2	6	0	2	2	2	2	4	12
Apprch %	66.7	33.3		0	100		50	50		
Total %	33.3	16.7	50	0	16.7	16.7	16.7	16.7	33.3	

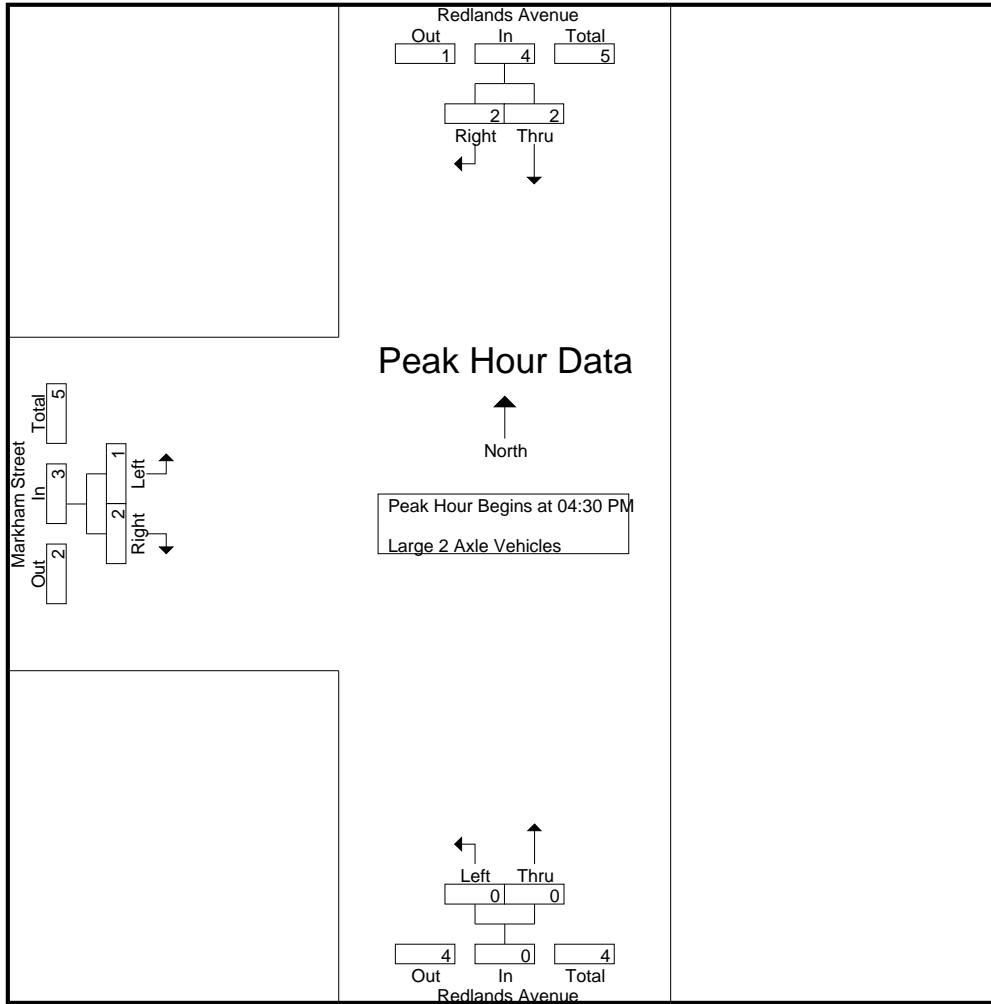
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	1	1	2	0	0	0	0	1	1	3
04:45 PM	1	1	2	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	2	2	4	0	0	0	1	2	3	7
% App. Total	50	50		0	0		33.3	66.7		
PHF	.500	.500	.500	.000	.000	.000	.250	.500	.750	.583

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM



City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	1	1	2	0	0	0	0	1	1
+15 mins.	1	1	2	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	2	2	4	0	0	0	1	2	3
% App. Total	50	50		0	0		33.3	66.7	
PHF	.500	.500	.500	.000	.000	.000	.250	.500	.750

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

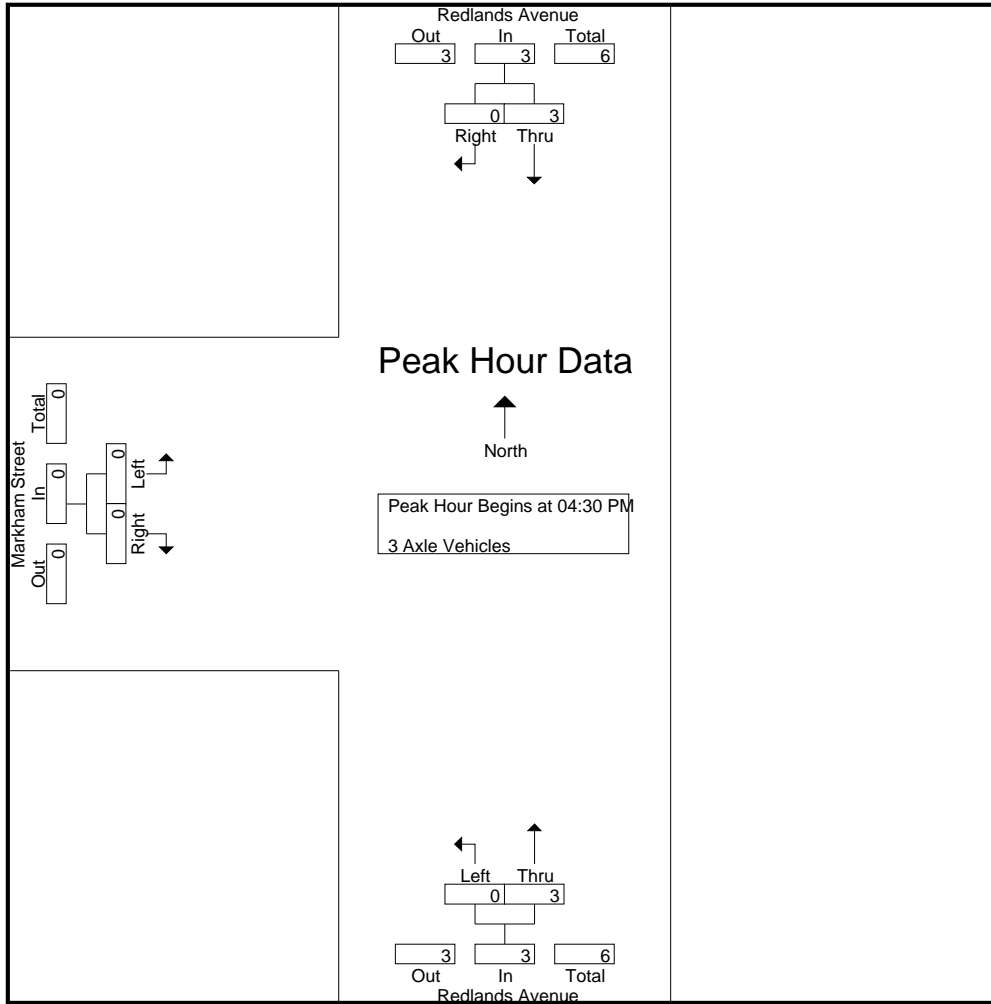
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	1	0	1	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	1	0	1	1	0	0	0	2
04:45 PM	2	0	2	0	0	0	0	0	0	2
Total	4	0	4	0	1	1	0	0	0	5
05:00 PM	0	0	0	0	2	2	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	1	1	0	0	0	2
05:45 PM	0	0	0	0	1	1	0	0	0	1
Total	0	1	1	0	4	4	0	0	0	5
Grand Total	4	1	5	0	5	5	0	0	0	10
Apprch %	80	20		0	100		0	0		
Total %	40	10	50	0	50	50	0	0	0	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	1	0	1	0	1	1	0	0	0	2
04:45 PM	2	0	2	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	2	2	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	3	0	3	0	3	3	0	0	0	6
% App. Total	100	0		0	100		0	0		
PHF	.375	.000	.375	.000	.375	.375	.000	.000	.000	.750

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	1	0	1	0	1	1	0	0	0
+15 mins.	2	0	2	0	0	0	0	0	0
+30 mins.	0	0	0	0	2	2	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	3	0	3	0	3	3	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.375	.000	.375	.000	.375	.375	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

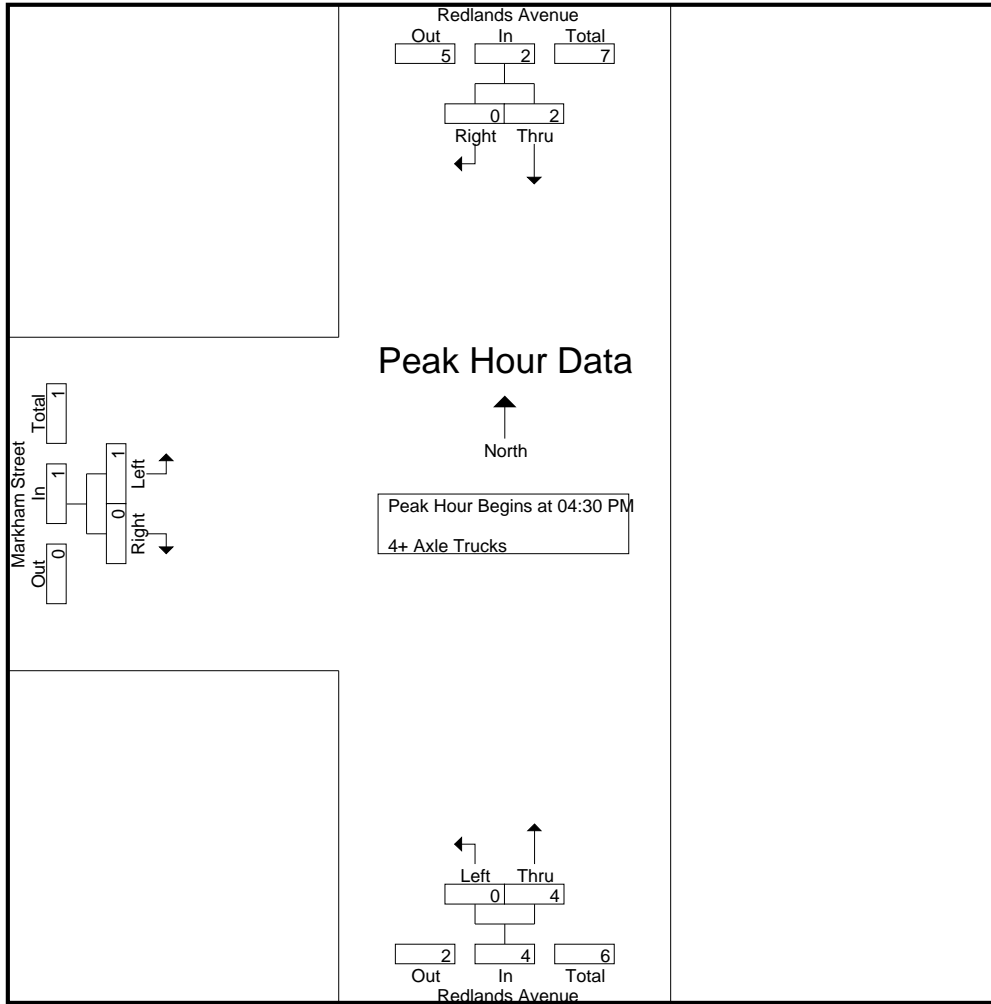
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	1	0	1	0	2	2	0	0	0	3
04:15 PM	1	1	2	0	0	0	1	0	1	3
04:30 PM	1	0	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	1	1	0	0	0	1
Total	3	1	4	0	3	3	1	0	1	8
05:00 PM	1	0	1	0	1	1	0	0	0	2
05:15 PM	0	0	0	0	2	2	1	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	1	0	0	0	1
Total	1	0	1	0	4	4	1	0	1	6
Grand Total	4	1	5	0	7	7	2	0	2	14
Apprch %	80	20		0	100		100	0		
Total %	28.6	7.1	35.7	0	50	50	14.3	0	14.3	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Markham Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:30 PM	1	0	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	1	1	0	0	0	1
05:00 PM	1	0	1	0	1	1	0	0	0	2
05:15 PM	0	0	0	0	2	2	1	0	1	3
Total Volume	2	0	2	0	4	4	1	0	1	7
% App. Total	100	0		0	100		100	0		
PHF	.500	.000	.500	.000	.500	.500	.250	.000	.250	.583

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street  
 Weather: Clear

File Name : 08\_PER\_Redlands\_Markham PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	1	0	1	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	1	0	0	0
+30 mins.	1	0	1	0	1	1	0	0	0
+45 mins.	0	0	0	0	2	2	1	0	1
Total Volume	2	0	2	0	4	4	1	0	1
% App. Total	100	0		0	100		100	0	
PHF	.500	.000	.500	.000	.500	.500	.250	.000	.250

Location: Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Redlands Avenue	East Leg Markham Street	South Leg Redlands Avenue	West Leg Markham Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Redlands Avenue	East Leg Markham Street	South Leg Redlands Avenue	West Leg Markham Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: Perris  
 N/S: Redlands Avenue  
 E/W: Markham Street



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound Markham Street			Northbound Redlands Avenue			Eastbound Markham Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Redlands Avenue			Westbound Markham Street			Northbound Redlands Avenue			Eastbound Markham Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	11	0	3	1	14	9	345	100	25	454	4	1	32	14	37	7	164	1	0	172	40	677	717	
07:15 AM	13	0	1	0	14	19	349	84	16	452	3	1	19	15	23	5	181	3	2	189	33	678	711	
07:30 AM	9	1	1	1	11	17	382	91	11	490	5	0	17	13	22	6	178	7	1	191	26	714	740	
07:45 AM	13	0	1	1	14	32	383	64	11	479	3	2	21	19	26	7	202	3	0	212	31	731	762	
<b>Total</b>	<b>46</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>53</b>	<b>77</b>	<b>1459</b>	<b>339</b>	<b>63</b>	<b>1875</b>	<b>15</b>	<b>4</b>	<b>89</b>	<b>61</b>	<b>108</b>	<b>25</b>	<b>725</b>	<b>14</b>	<b>3</b>	<b>764</b>	<b>130</b>	<b>2800</b>	<b>2930</b>	
08:00 AM	9	1	8	7	18	11	296	21	3	328	0	1	10	7	11	4	180	3	1	187	18	544	562	
08:15 AM	10	0	1	1	11	12	265	22	2	299	0	0	9	4	9	2	166	5	2	173	9	492	501	
08:30 AM	2	0	5	3	7	7	249	31	2	287	1	1	10	8	12	1	151	7	0	159	13	465	478	
08:45 AM	3	0	0	0	3	8	253	14	0	275	1	1	4	2	6	3	127	7	1	137	3	421	424	
<b>Total</b>	<b>24</b>	<b>1</b>	<b>14</b>	<b>11</b>	<b>39</b>	<b>38</b>	<b>1063</b>	<b>88</b>	<b>7</b>	<b>1189</b>	<b>2</b>	<b>3</b>	<b>33</b>	<b>21</b>	<b>38</b>	<b>10</b>	<b>624</b>	<b>22</b>	<b>4</b>	<b>656</b>	<b>43</b>	<b>1922</b>	<b>1965</b>	
<b>Grand Total</b>	<b>70</b>	<b>2</b>	<b>20</b>	<b>14</b>	<b>92</b>	<b>115</b>	<b>2522</b>	<b>427</b>	<b>70</b>	<b>3064</b>	<b>17</b>	<b>7</b>	<b>122</b>	<b>82</b>	<b>146</b>	<b>35</b>	<b>1349</b>	<b>36</b>	<b>7</b>	<b>1420</b>	<b>173</b>	<b>4722</b>	<b>4895</b>	
<b>Approch %</b>	<b>76.1</b>	<b>2.2</b>	<b>21.7</b>			<b>3.8</b>	<b>82.3</b>	<b>13.9</b>			<b>11.6</b>	<b>4.8</b>	<b>83.6</b>			<b>2.5</b>	<b>95</b>	<b>2.5</b>			<b>3.5</b>	<b>96.5</b>		
<b>Total %</b>	<b>1.5</b>	<b>0</b>	<b>0.4</b>			<b>1.9</b>	<b>2.4</b>	<b>53.4</b>	<b>9</b>	<b>64.9</b>	<b>0.4</b>	<b>0.1</b>	<b>2.6</b>			<b>0.7</b>	<b>28.6</b>	<b>0.8</b>			<b>30.1</b>			
% Passenger Vehicles	67	2	17		99	113	2466	422	97.1	3069	6	6	120	97.6	212	30	1287	28		1352	0	0	4732	
% Passenger Vehicles	95.7	100	85	92.9	93.4	98.3	97.8	98.8	97.1	97.9	35.3	85.7	98.4	97.6	93	85.7	95.4	77.8	100	94.7	0	0	96.7	
% Large 2 Axle Vehicles	2.9	0	0	0	1.9	1.7	1.6	1.2	2.9	1.6	5.9	0	1.6	2.4	2.2	5.7	3.3	2.8	0	3.3	0	0	10.3	
% 3 Axle Vehicles	1	0	1		2	0	4	0	0	4	2	0	0	0	2	0	4	3		7	0	0	15	
% 4+ Axle Trucks	1.4	0	5	0	1.9	0	0.2	0	0	0.1	11.8	0	0	0	0.9	0	0.3	8.3	0	0.5	0	0	0.3	
% 4+ Axle Trucks	0	0	2		3	0	12	0	0	12	8	1	0	9	9	3	14	4		21	0	0	45	
% 4+ Axle Trucks	0	0	10	7.1	2.8	0	0.5	0	0	0.4	47.1	14.3	0	0	3.9	8.6	1	11.1	0	1.5	0	0	0.9	

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total		Left	Thru	Right	RTOR	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:00 AM	11	0	3	1	14	9	345	100	25	454	4	1	32	14	37	7	164	1	0	172	40	677	717	
07:15 AM	13	0	1	0	14	19	349	84	16	452	3	1	19	15	23	5	181	3	2	189	33	678	711	
07:30 AM	9	1	1	1	11	17	382	91	11	490	5	0	17	13	22	6	178	7	1	191	26	714	740	
07:45 AM	13	0	1	1	14	32	383	64	11	479	3	2	21	19	26	7	202	3	0	212	31	731	762	
<b>Total Volume</b>	<b>46</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>53</b>	<b>77</b>	<b>1459</b>	<b>339</b>	<b>63</b>	<b>1875</b>	<b>15</b>	<b>4</b>	<b>89</b>	<b>61</b>	<b>108</b>	<b>25</b>	<b>725</b>	<b>14</b>	<b>3</b>	<b>764</b>	<b>130</b>	<b>2800</b>	<b>2930</b>	
<b>% App. Total</b>	<b>86.8</b>	<b>1.9</b>	<b>11.3</b>			<b>4.1</b>	<b>77.8</b>	<b>18.1</b>			<b>13.9</b>	<b>3.7</b>	<b>82.4</b>			<b>3.3</b>	<b>94.9</b>	<b>1.8</b>			<b>3.5</b>	<b>96.5</b>		
<b>PHF</b>	<b>.885</b>	<b>.250</b>	<b>.500</b>			<b>.946</b>	<b>.602</b>	<b>.952</b>	<b>.848</b>	<b>.957</b>	<b>.750</b>	<b>.500</b>	<b>.695</b>			<b>.730</b>	<b>.897</b>	<b>.500</b>			<b>.901</b>		<b>.958</b>	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

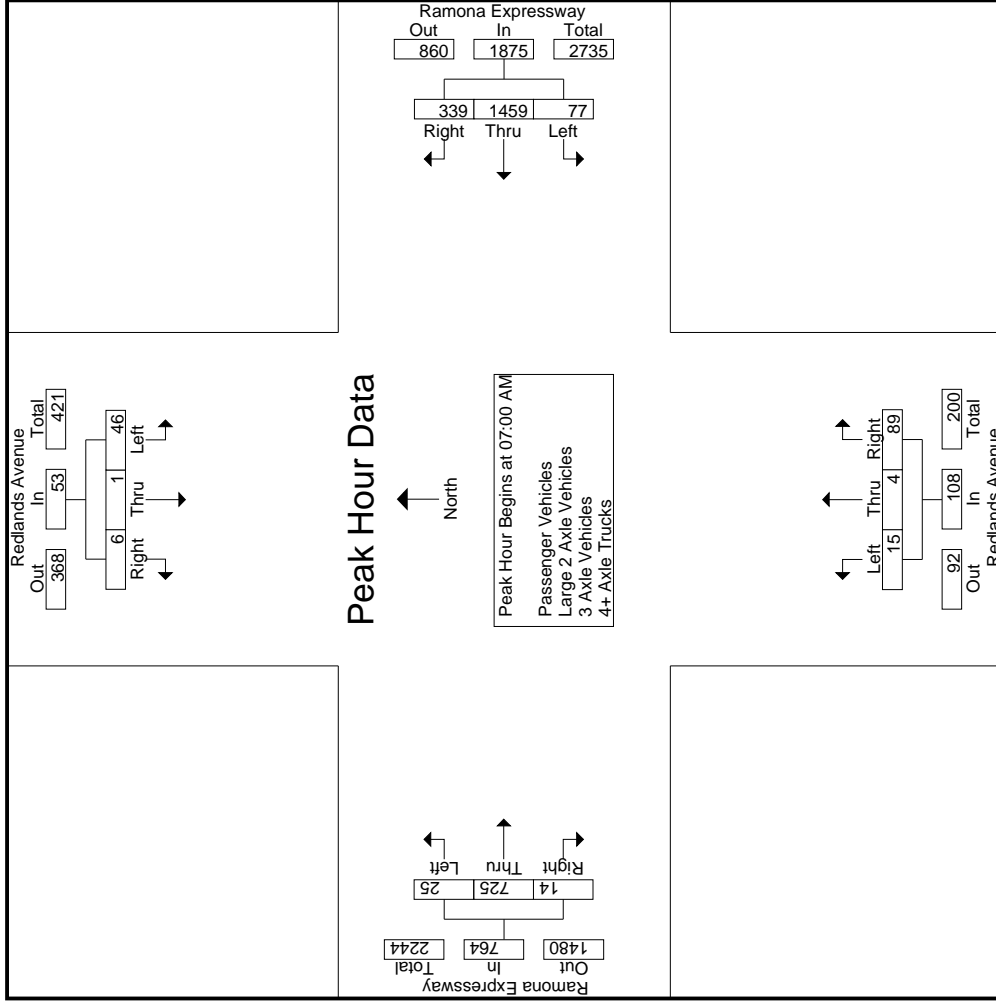
Peak Hour for Entire Intersection Begins at 07:00 AM



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Each Approach Begins at:													
+0 mins.	13	0	1	9	345	100	4	1	32	5	181	3	189
+15 mins.	9	1	1	19	349	84	3	1	19	6	178	7	191
+30 mins.	13	0	1	17	382	91	5	0	17	7	202	3	212
+45 mins.	9	1	8	32	383	64	3	2	21	4	180	3	187
Total Volume	44	2	11	77	1459	339	15	4	89	22	741	16	779
% App. Total	77.2	3.5	19.3	4.1	77.8	18.1	13.9	3.7	82.4	2.8	95.1	2.1	
PHF	.846	.500	.344	.602	.952	.848	.750	.500	.695	.786	.917	.571	.919

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	07:00 AM	10	0	2	1	12	9	338	99	24	446	1	0	30	12	31	7	160	0	0	167	7	160	0	0	167	37	656
07:15 AM	13	0	0	0	13	19	341	83	16	443	1	1	19	15	21	4	173	2	2	179	33	179	2	2	179	33	656	689
07:30 AM	9	1	1	1	11	17	377	90	11	484	3	0	17	13	20	5	169	5	1	179	26	179	5	1	179	26	694	720
07:45 AM	12	0	1	1	13	32	375	64	11	471	1	2	21	19	24	6	194	3	0	203	31	203	3	0	203	31	711	742
Total	44	1	4	3	49	77	1431	336	62	1844	6	3	87	59	96	22	696	10	3	728	127	728	10	3	728	127	2717	2844
08:00 AM	8	1	7	6	16	11	291	21	3	323	0	1	10	7	11	3	175	3	1	181	3	175	3	1	181	17	531	548
08:15 AM	10	0	1	1	11	11	259	21	1	291	0	0	9	4	9	2	156	4	2	162	2	156	4	2	162	8	473	481
08:30 AM	2	0	5	3	7	6	237	30	2	273	0	1	10	8	11	1	139	6	0	146	1	139	6	0	146	13	437	450
08:45 AM	3	0	0	0	3	8	248	14	0	270	0	1	4	2	5	2	121	5	1	128	3	121	5	1	128	3	406	409
Total	23	1	13	10	37	36	1035	86	6	1157	0	3	33	21	36	8	591	18	4	617	41	617	18	4	617	41	1847	1888
Grand Total	67	2	17	13	86	113	2466	422	68	3001	6	6	120	80	132	30	1287	28	7	1345	168	1345	28	7	1345	168	4564	4732
Approch %	77.9	2.3	19.8			3.8	82.2	14.1		65.8	4.5	4.5	90.9		2.9	2.2	95.7	2.1		29.5	3.6	29.5	2.1	0.6	29.5	3.6	96.4	
Total %	1.5	0	0.4		1.9	2.5	54	9.2			0.1	0.1	2.6			0.7	28.2	0.6										

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	07:00 AM	10	0	2	1	12	9	338	99	24	446	1	0	30	12	31	7	160	0	0	167	7	160	0	0	167	37	656
07:15 AM	13	0	0	0	13	19	341	83	16	443	1	1	19	15	21	4	173	2	2	179	33	179	2	2	179	33	656	689
07:30 AM	9	1	1	1	11	17	377	90	11	484	3	0	17	13	20	5	169	5	1	179	26	179	5	1	179	26	694	720
07:45 AM	12	0	1	1	13	32	375	64	11	471	1	2	21	19	24	6	194	3	0	203	31	203	3	0	203	31	711	742
Total	44	1	4	3	49	77	1431	336	62	1844	6	3	87	59	96	22	696	10	3	728	127	728	10	3	728	127	2717	2844
08:00 AM	8	1	7	6	16	11	291	21	3	323	0	1	10	7	11	3	175	3	1	181	3	175	3	1	181	17	531	548
08:15 AM	10	0	1	1	11	11	259	21	1	291	0	0	9	4	9	2	156	4	2	162	2	156	4	2	162	8	473	481
08:30 AM	2	0	5	3	7	6	237	30	2	273	0	1	10	8	11	1	139	6	0	146	1	139	6	0	146	13	437	450
08:45 AM	3	0	0	0	3	8	248	14	0	270	0	1	4	2	5	2	121	5	1	128	3	121	5	1	128	3	406	409
Total	23	1	13	10	37	36	1035	86	6	1157	0	3	33	21	36	8	591	18	4	617	41	617	18	4	617	41	1847	1888
Grand Total	67	2	17	13	86	113	2466	422	68	3001	6	6	120	80	132	30	1287	28	7	1345	168	1345	28	7	1345	168	4564	4732
Approch %	77.9	2.3	19.8			3.8	82.2	14.1		65.8	4.5	4.5	90.9		2.9	2.2	95.7	2.1		29.5	3.6	29.5	2.1	0.6	29.5	3.6	96.4	
Total %	1.5	0	0.4		1.9	2.5	54	9.2			0.1	0.1	2.6			0.7	28.2	0.6										

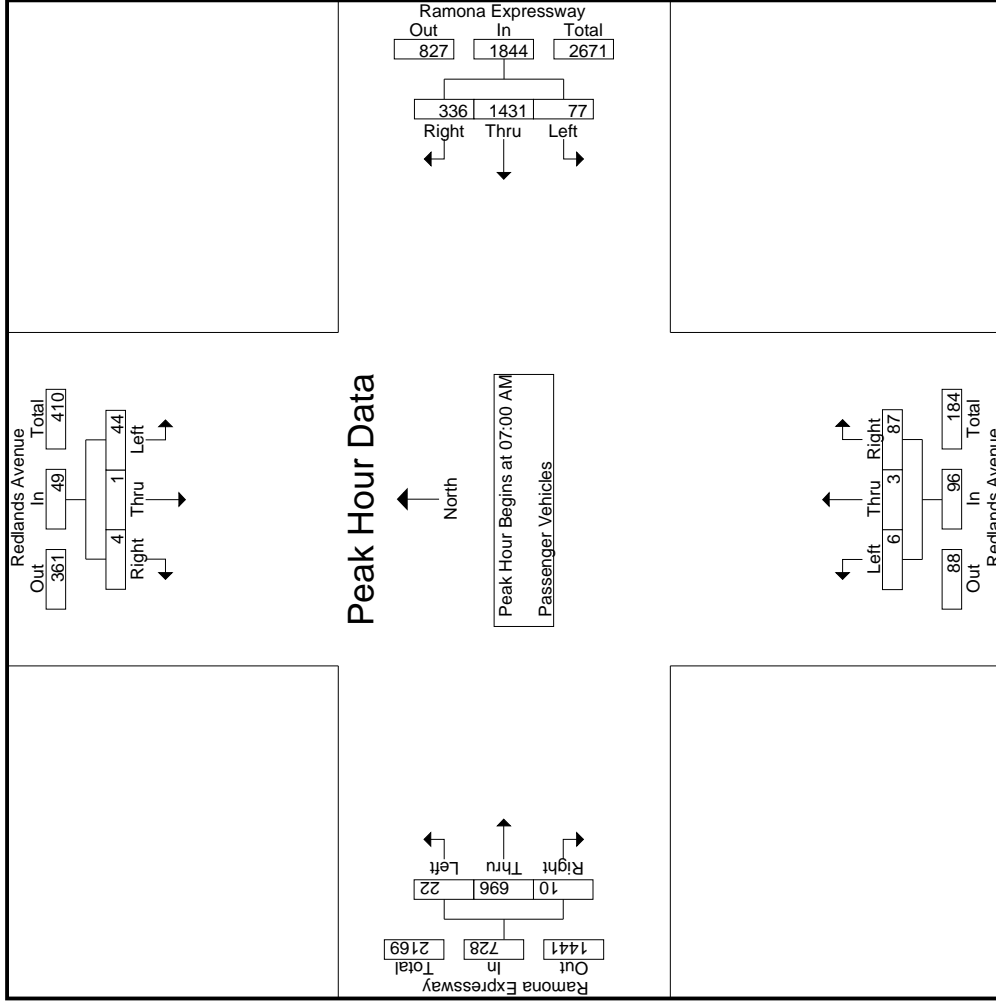
  

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound									
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
	07:00 AM	10	0	2	1	12	9	338	99	24	446	1	0	30	12	31	7	160	0	0	167	7	160	0	0	167	37	656
07:15 AM	13	0	0	0	13	19	341	83	16	443	1	1	19	15	21	4	173	2	2	179	33	179	2	2	179	33	656	689
07:30 AM	9	1	1	1	11	17	377	90	11	484	3	0	17	13	20	5	169	5	1	179	26	179	5	1	179	26	694	720
07:45 AM	12	0	1	1	13	32	375	64	11	471	1	2	21	19	24	6	194	3	0	203	31	203	3	0	203	31	711	742
Total	44	1	4	3	49	77	1431	336	62	1844	6	3	87	59	96	22	696	10	3	728	127	728	10	3	728	127	2717	2844
08:00 AM	8	1	7	6	16	11	291	21	3	323	0	1	10	7	11	3	175	3	1	181	3	175	3	1	181	17	531	548
08:15 AM	10	0	1	1	11	11	259	21	1	291	0	0	9	4	9	2	156	4	2	162	2	156	4	2	162	8	473	481
08:30 AM	2	0	5	3	7	6	237	30	2	273	0	1	10	8	11	1	139	6	0	146	1	139	6	0	146	13	437	450
08:45 AM	3	0	0	0	3	8	248	14	0	270	0	1	4	2	5	2	121	5	1	128	3	121	5	1	128	3	406	409
Total	23	1	13	10	37	36	1035	86	6	1157	0	3	33	21	36	8	591	18	4	617	41	617	18	4	617	41	1847	1888
Grand Total	67	2	17	13	86	113	2466	422	68	3001	6	6	120	80	132	30	1287	28	7	1345	168	1345	28	7	1345	168	4564	4732
Approch %	77.9	2.3	19.8			3.8	82.2	14.1		65.8	4.5	4.5	90.9		2.9	2.2	95.7	2.1		29.5	3.6	29.5	2.1	0.6	29.5	3.6	96.4	
Total %	1.5	0	0.4		1.9	2.5	54	9.2			0.1	0.1	2.6			0.7	28.2	0.6										

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	10	0	2	9	338	99	1	0	30	7	160	0
+15 mins.	13	0	0	19	341	83	1	1	19	4	173	2
+30 mins.	9	1	1	17	377	90	3	0	17	5	169	5
+45 mins.	12	0	1	32	375	64	1	2	21	6	194	3
Total Volume	44	1	4	77	1431	336	6	3	87	22	696	10
% App. Total	89.8	2	8.2	4.2	77.6	18.2	6.2	3.1	90.6	3	95.6	1.4
PHF	.846	.250	.500	.602	.949	.848	.500	.375	.725	.786	.897	.500

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	3	1	1	4	0	0	2	2	2	0	3	0	0	3	3	9	12
07:15 AM	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	1	5	0	0	6	0	14	14
07:30 AM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	1	6	0	0	7	0	12	12
07:45 AM	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	0	14	14
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>3</b>	<b>1</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>49</b>	<b>52</b>
08:00 AM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	7	7
08:15 AM	0	0	0	0	0	1	6	1	1	8	0	0	0	0	0	0	9	1	0	10	1	18	19
08:30 AM	0	0	0	0	0	1	10	1	0	12	0	0	0	0	0	0	8	0	0	8	0	20	20
08:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>21</b>	<b>2</b>	<b>1</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>0</b>	<b>24</b>	<b>1</b>	<b>50</b>	<b>51</b>
<b>Grand Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>40</b>	<b>5</b>	<b>2</b>	<b>47</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>44</b>	<b>1</b>	<b>0</b>	<b>47</b>	<b>4</b>	<b>99</b>	<b>103</b>
Approch %	100	0	0	0	0	4.3	85.1	10.6		33.3	0	66.7			4.3	93.6	2.1			47.5	3.9	96.1	
Total %	2	0	0	0	2	2	40.4	5.1		47.5	1	0	2		2	44.4	1			47.5	3.9	96.1	

3.1-534

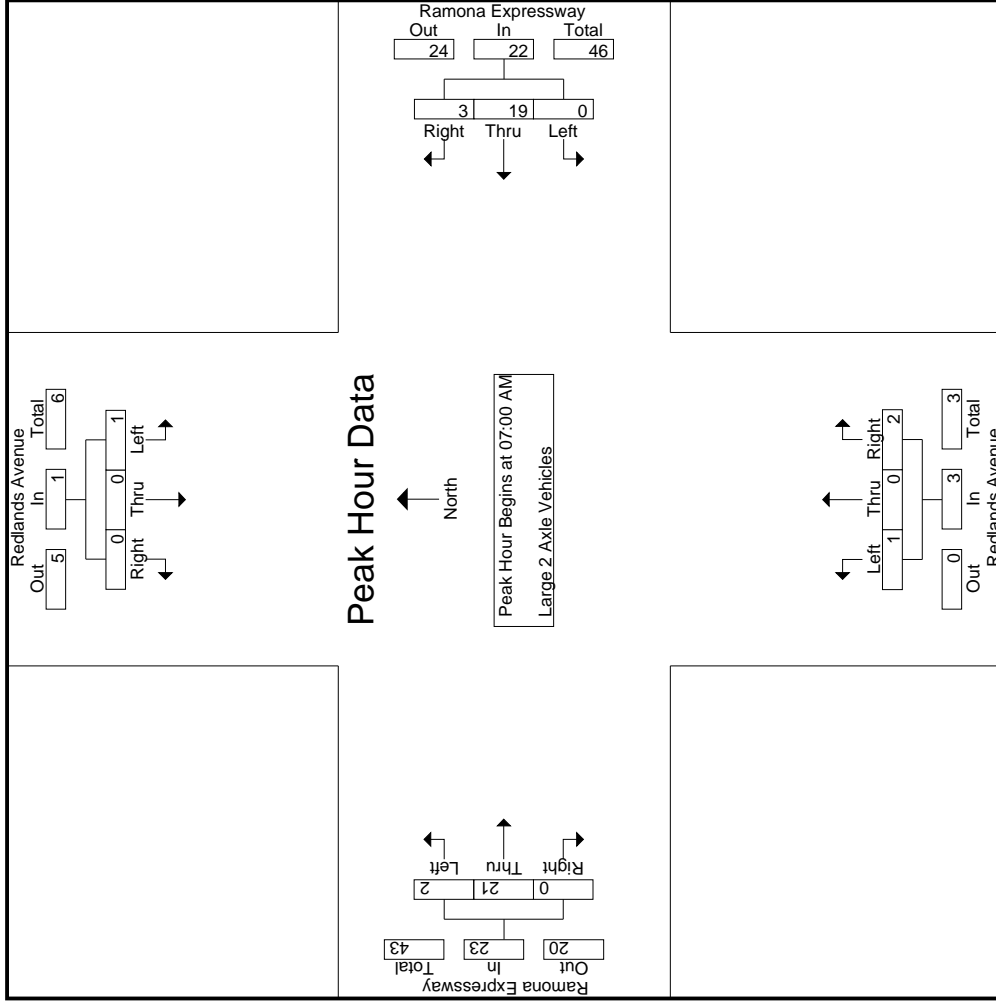
Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	3	1	4	0	0	2	2	2	0	3	0	0	3	3	9	12
07:15 AM	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	1	5	0	0	6	0	14	14
07:30 AM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	1	6	0	0	7	0	12	12
07:45 AM	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	0	14	14
<b>Total Volume</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>3</b>	<b>1</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>49</b>	<b>52</b>
% App. Total	100	0	0	0	0	0	86.4	13.6		86.4	0	66.7			8.7	91.3	0			91.3	0	87.5	
PHF	.250	.000	.000	.000	.250	.000	.786	.750		.786	.250	.000	.250		.375	.500	.000			.750	.000	.821	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
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 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1														
Peak Hour for Each Approach Begins at:														
	07:00 AM			07:00 AM			07:00 AM			07:00 AM				
+0 mins.	0	0	0	0	0	4	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	7	0	0	0	0	0	6	0	6
+30 mins.	0	0	0	0	0	5	0	0	0	0	0	7	0	7
+45 mins.	1	0	0	0	0	6	0	0	0	0	0	7	0	7
Total Volume	1	0	0	0	19	3	0	2	0	2	2	21	0	23
% App. Total	100	0	0	0	86.4	13.6	0	66.7	0	66.7	8.7	91.3	0	82.1
PHF	.250	.000	.000	.250	.000	.786	.000	.250	.000	.250	.500	.750	.000	.821



Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	0	1	0	2	0	1	0	0	1	1	0	0	0	0	0	4	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	2	0	2	0	0	2	1	0	0	1	2	0	7	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3	0	5	5
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	2	0	3	3
Total	0	0	0	0	0	0	2	0	0	2	1	0	0	2	5	0	8	8
Grand Total	1	0	1	0	2	0	4	0	0	4	2	0	0	3	7	0	15	15
Approch %	50	0	50		13.3	100	0	0		26.7	13.3	0	0	42.9	46.7	0	100	
Total %	6.7	0	6.7		13.3	26.7	0	0		26.7	13.3	0	0	20	46.7	0	100	

3.1-537

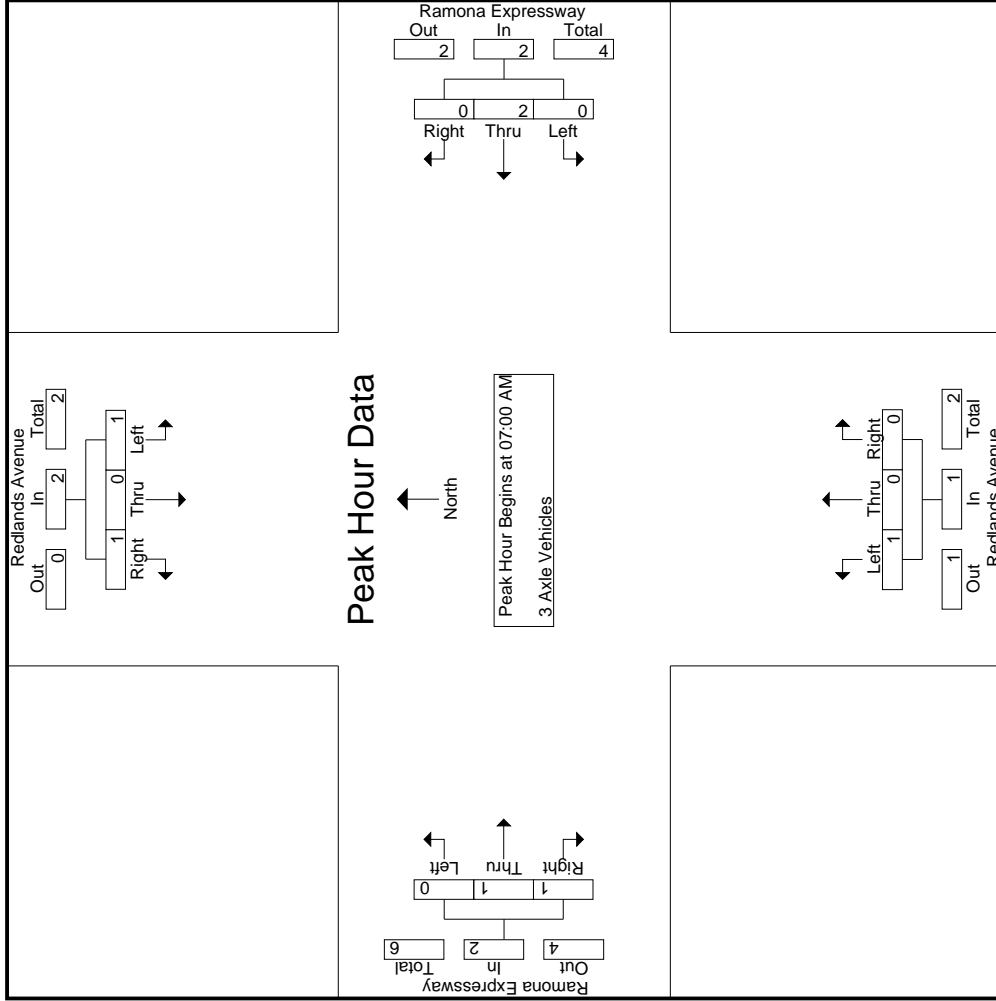
Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	2	0	0	2	1	0	0	0	2	0	7	7
% App. Total	50	0	0	0	25.0	100	0	0	0	50.0	25.0	0	0	0	50.0	0	100.0	
PHF	.250	.000	.250		.250	.500	.000	.000		.250	.250	.000	.250	.250	.500	.250	.438	

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1	Peak Hour for Each Approach Begins at:													
	07:00 AM			07:00 AM			07:00 AM			07:00 AM				
+0 mins.	1	0	1	0	0	0	1	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1
+30 mins.	0	0	0	0	0	0	1	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	2	0	0	0	1	0	1	2
% App. Total	50	0	50	0	0	0	100	0	0	0	100	0	50	50
PHF	.250	.000	.250	.000	.000	.000	.500	.000	.000	.250	.000	.250	.250	.500

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
07:00 AM	0	0	0	0	0	0	3	0	0	3	2	1	0	0	3	0	1	0	2
07:15 AM	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	0	3	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2	0	4
07:45 AM	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	0	1	0	2
Total	0	0	1	0	1	0	7	0	0	7	7	1	0	0	8	1	7	3	11
08:00 AM	0	0	1	1	1	0	2	0	0	2	0	0	0	0	0	1	2	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	2
08:45 AM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	1	2	1	4
Total	0	0	1	1	1	0	5	0	0	5	1	0	0	0	1	2	7	1	10
Grand Total	0	0	2	1	2	0	12	0	0	12	8	1	0	0	9	3	14	4	21
Approch %	0	0	100			0	100	0			88.9	11.1	0		14.3	66.7	19		44
Total %	0	0	4.5		4.5	0	27.3	0		27.3	18.2	2.3	0		20.5	31.8	9.1		47.7

3.1-540

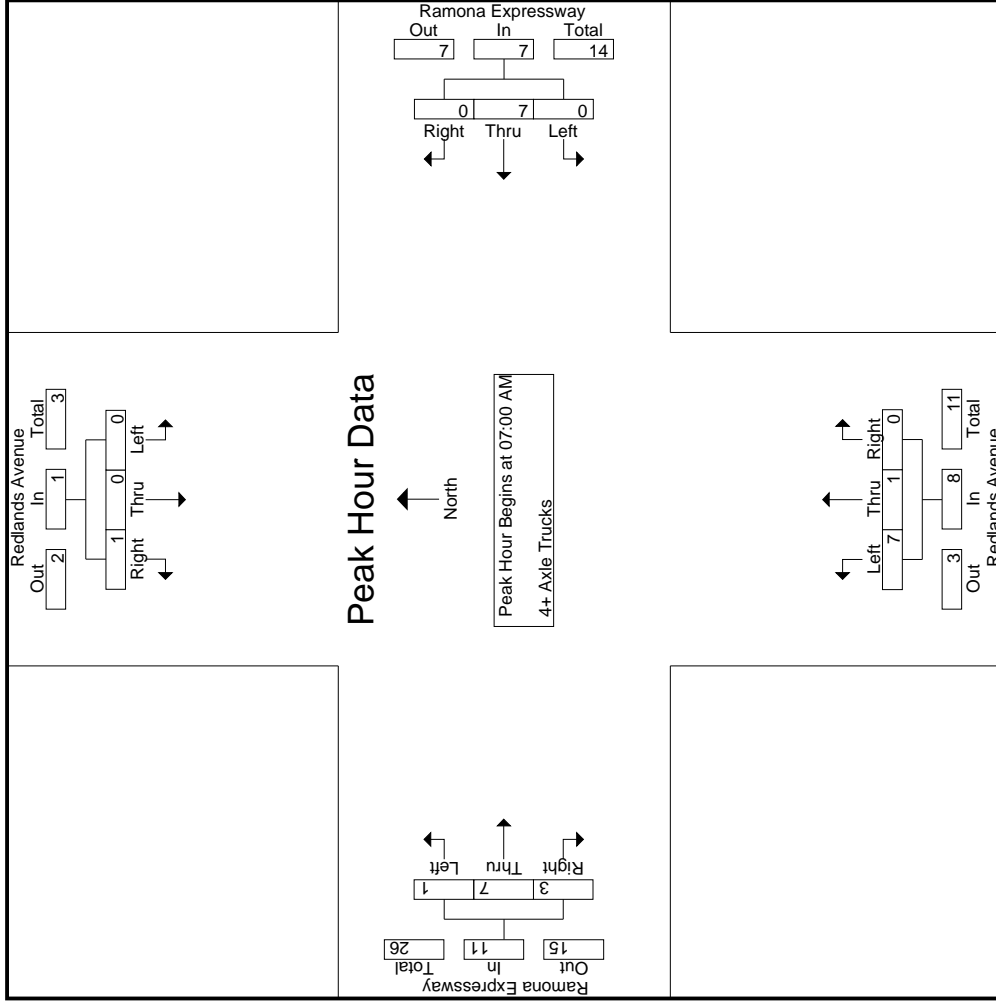
Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	3	0	0	3	2	1	0	0	3	0	1	0	2	8
07:15 AM	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	0	3	0	3	7
07:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	2	0	4	6
07:45 AM	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	1	1	0	2	6
Total Volume	0	0	1	1	1	0	7	0	0	7	7	1	0	0	8	1	7	3	11	27
% App. Total	0	0	100			0	100	0			87.5	12.5	0		63.6	27.3				
PHF	.000	.000	.250		.250	.000	.583	.000		.583	.875	.250	.000		.667	.250	.583	.375	.688	.844

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound			Int. Total					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total				
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																		
Peak Hour for Each Approach Begins at:																		
	07:00 AM			07:00 AM			07:00 AM			07:00 AM								
+0 mins.	0	0	0	0	0	0	3	0	0	1	0	0	0	0	1	1	0	2
+15 mins.	0	0	1	0	0	2	2	0	0	0	0	0	0	0	3	0	0	3
+30 mins.	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	4	4
+45 mins.	0	0	0	0	0	2	2	0	0	2	2	0	0	2	1	1	0	2
Total Volume	0	0	1	0	0	7	7	0	0	7	1	0	0	1	7	3	11	11
% App. Total	.000	.000	.250	.000	.000	.583	.583	.000	.000	.875	.250	.000	.000	.250	.636	.27.3	.688	.688
PHF																		

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total
	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total
04:00 PM	43	2	3	2	48	6	221	13	3	240	5	1	10	3	16	2	309	3	0	314	8	618	626	
04:15 PM	40	3	2	1	45	7	290	17	4	314	3	0	5	1	8	5	353	6	0	364	6	731	737	
04:30 PM	63	5	0	0	68	5	231	18	9	254	4	1	15	9	20	1	354	9	3	364	21	706	727	
04:45 PM	63	2	2	2	67	6	234	26	7	266	3	1	13	5	17	3	321	8	5	332	19	682	701	
<b>Total</b>	<b>209</b>	<b>12</b>	<b>7</b>	<b>5</b>	<b>228</b>	<b>24</b>	<b>976</b>	<b>74</b>	<b>23</b>	<b>1074</b>	<b>15</b>	<b>3</b>	<b>43</b>	<b>18</b>	<b>61</b>	<b>11</b>	<b>1337</b>	<b>26</b>	<b>8</b>	<b>1374</b>	<b>54</b>	<b>2737</b>	<b>2791</b>	
05:00 PM	47	2	5	1	54	3	213	17	7	233	5	2	10	3	17	6	353	4	0	363	11	667	678	
05:15 PM	64	0	0	0	64	6	242	12	5	260	6	1	4	2	11	5	306	4	2	315	9	650	659	
05:30 PM	51	1	3	1	55	6	226	29	6	261	3	1	10	8	14	6	365	6	1	377	16	707	723	
05:45 PM	41	0	3	1	44	8	268	22	12	298	2	3	9	2	14	3	365	0	0	368	15	724	739	
<b>Total</b>	<b>203</b>	<b>3</b>	<b>11</b>	<b>3</b>	<b>217</b>	<b>23</b>	<b>949</b>	<b>80</b>	<b>30</b>	<b>1052</b>	<b>16</b>	<b>7</b>	<b>33</b>	<b>15</b>	<b>56</b>	<b>20</b>	<b>1389</b>	<b>14</b>	<b>3</b>	<b>1423</b>	<b>51</b>	<b>2748</b>	<b>2799</b>	
<b>Grand Total</b>	<b>412</b>	<b>15</b>	<b>18</b>	<b>8</b>	<b>445</b>	<b>47</b>	<b>1925</b>	<b>154</b>	<b>53</b>	<b>2126</b>	<b>31</b>	<b>10</b>	<b>76</b>	<b>33</b>	<b>117</b>	<b>31</b>	<b>2726</b>	<b>40</b>	<b>11</b>	<b>2797</b>	<b>105</b>	<b>5485</b>	<b>5590</b>	
Approch %	92.6	3.4	4			2.2	90.5	7.2			26.5	8.5	65			1.1	97.5	1.4						
Total %	7.5	0.3	0.3		8.1	0.9	35.1	2.8		38.8	0.6	0.2	1.4		2.1	0.6	49.7	0.7		51	1.9	98.1		
Passenger Vehicles	408	6	15		435	44	1872	146		2113	8	4	74		119	31	2680	21		2739	0	0	5406	
Passenger Vehicles	99	40	83.3	75	96	93.6	97.2	94.8	96.2	97	25.8	40	97.4	100	79.3	100	98.3	52.5	63.6	97.5	0	0	96.7	
Large 2 Axle Vehicles	4	1	2		9	1	21	1		23	0	0	1		1	0	30	2		32	0	0	65	
Large 2 Axle Vehicles	1	6.7	11.1	25	2	2.1	1.1	0.6	0	1.1	0	0	1.3	0	0.7	0	1.1	5	0	1.1	0	0	1.2	
3 Axle Vehicles	0	4	0		4	1	10	5		18	9	0	0		9	0	7	6		15	0	0	46	
3 Axle Vehicles	0	26.7	0	0	0.9	2.1	0.5	3.2	3.8	0.8	29	0	0	0	6	0	0.3	15	18.2	0.5	0	0	0.8	
4+ Axle Trucks	0	4	1		5	1	22	2		25	14	6	1		21	0	9	11		22	0	0	73	
4+ Axle Trucks	0	26.7	5.6	0	1.1	2.1	1.1	1.3	0	1.1	45.2	60	1.3	0	14	0	0.3	27.5	18.2	0.8	0	0	1.3	

Start Time	Redlands Avenue Southbound						Ramona Expressway Westbound						Redlands Avenue Northbound						Ramona Expressway Eastbound					
	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total
	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total
04:15 PM	40	3	2		45	7	290	17		314	3	0	5		8	5	353	6		364	6	731	737	
04:30 PM	63	5	0		68	5	231	18		254	4	1	15		20	1	354	9		364	21	706	727	
04:45 PM	63	2	2		67	6	234	26		266	3	1	13		17	3	321	8		332	19	682	701	
<b>Total Volume</b>	<b>213</b>	<b>12</b>	<b>9</b>		<b>234</b>	<b>21</b>	<b>968</b>	<b>78</b>		<b>1067</b>	<b>15</b>	<b>4</b>	<b>43</b>		<b>62</b>	<b>15</b>	<b>1381</b>	<b>27</b>		<b>1423</b>	<b>54</b>	<b>2737</b>	<b>2791</b>	
% App. Total	91	5.1	3.8		7.3	2	90.7	7.3		7.3	24.2	6.5	69.4		97	1.1	1381	27		1423	19	2737	2791	
PHF	.845	.600	.450		.860	.750	.834	.750		.850	.750	.500	.717		.775	.625	.975	.750		.977	.750	.977	.953	

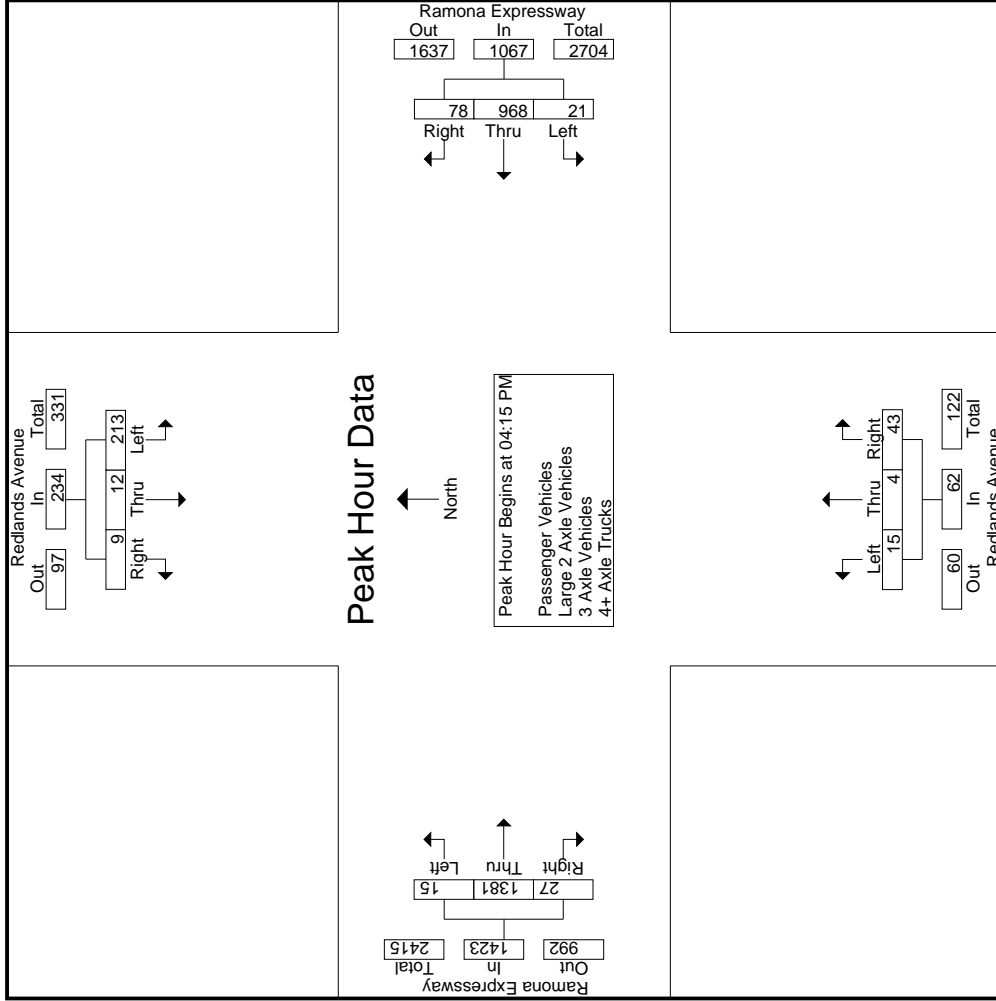
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2





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City of Perris  
 N/S: Redlands Avenue  
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File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
	04:30 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	63	5	0	68	6	221	13	240	4	1	15	20	5	353	6	364
+15 mins.	63	2	2	67	7	290	17	314	3	1	13	17	1	354	9	364
+30 mins.	47	2	5	54	5	231	18	254	5	2	10	17	3	321	8	332
+45 mins.	64	0	0	64	6	234	26	266	6	1	4	11	6	353	4	363
Total Volume	237	9	7	253	24	976	74	1074	18	5	42	65	15	1381	27	1423
% App. Total	93.7	3.6	2.8	93.0	2.2	90.9	6.9	85.5	27.7	7.7	64.6	81.3	1.1	97	1.9	97.7
PHF	.926	.450	.350	.930	.857	.841	.712	.855	.750	.625	.700	.813	.625	.975	.750	.977

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	43	1	1	1	45	6	215	12	3	233	1	0	9	3	10	2	302	1	0	305	7	593	600
04:15 PM	40	1	1	0	42	5	282	16	4	303	0	0	5	1	5	5	349	2	0	356	5	706	711
04:30 PM	61	2	0	0	63	5	221	17	8	243	2	1	15	9	18	1	349	4	1	354	18	678	696
04:45 PM	63	0	2	2	65	6	228	26	7	260	0	0	12	5	12	3	315	4	3	322	17	659	676
<b>Total</b>	<b>207</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>215</b>	<b>22</b>	<b>946</b>	<b>71</b>	<b>22</b>	<b>1039</b>	<b>3</b>	<b>1</b>	<b>41</b>	<b>18</b>	<b>45</b>	<b>11</b>	<b>1315</b>	<b>11</b>	<b>4</b>	<b>1337</b>	<b>47</b>	<b>2636</b>	<b>2683</b>
05:00 PM	46	1	5	1	52	3	209	14	6	226	2	1	10	3	13	6	348	2	0	356	10	647	657
05:15 PM	64	0	0	0	64	5	239	12	5	256	1	0	4	2	5	5	299	4	2	308	9	633	642
05:30 PM	50	1	3	1	54	6	219	28	6	253	1	1	10	8	12	6	360	4	1	370	16	689	705
05:45 PM	41	0	3	1	44	8	259	21	12	288	1	1	9	2	11	3	358	0	0	361	15	704	719
<b>Total</b>	<b>201</b>	<b>2</b>	<b>11</b>	<b>3</b>	<b>214</b>	<b>22</b>	<b>926</b>	<b>75</b>	<b>29</b>	<b>1023</b>	<b>5</b>	<b>3</b>	<b>33</b>	<b>15</b>	<b>41</b>	<b>20</b>	<b>1365</b>	<b>10</b>	<b>3</b>	<b>1395</b>	<b>50</b>	<b>2673</b>	<b>2723</b>
<b>Grand Total</b>	<b>408</b>	<b>6</b>	<b>15</b>	<b>6</b>	<b>429</b>	<b>44</b>	<b>1872</b>	<b>146</b>	<b>51</b>	<b>2062</b>	<b>8</b>	<b>4</b>	<b>74</b>	<b>33</b>	<b>86</b>	<b>31</b>	<b>2680</b>	<b>21</b>	<b>7</b>	<b>2732</b>	<b>97</b>	<b>5309</b>	<b>5406</b>
Approch %	95.1	1.4	3.5		8.1	2.1	90.8	7.1		38.8	9.3	4.7	86		1.6	1.1	98.1	0.8		51.5	1.8	98.2	
Total %	7.7	0.1	0.3		8.1	0.8	35.3	2.8		38.8	0.2	0.1	1.4		1.6	0.6	50.5	0.4		51.5	1.8	98.2	

3.1-546

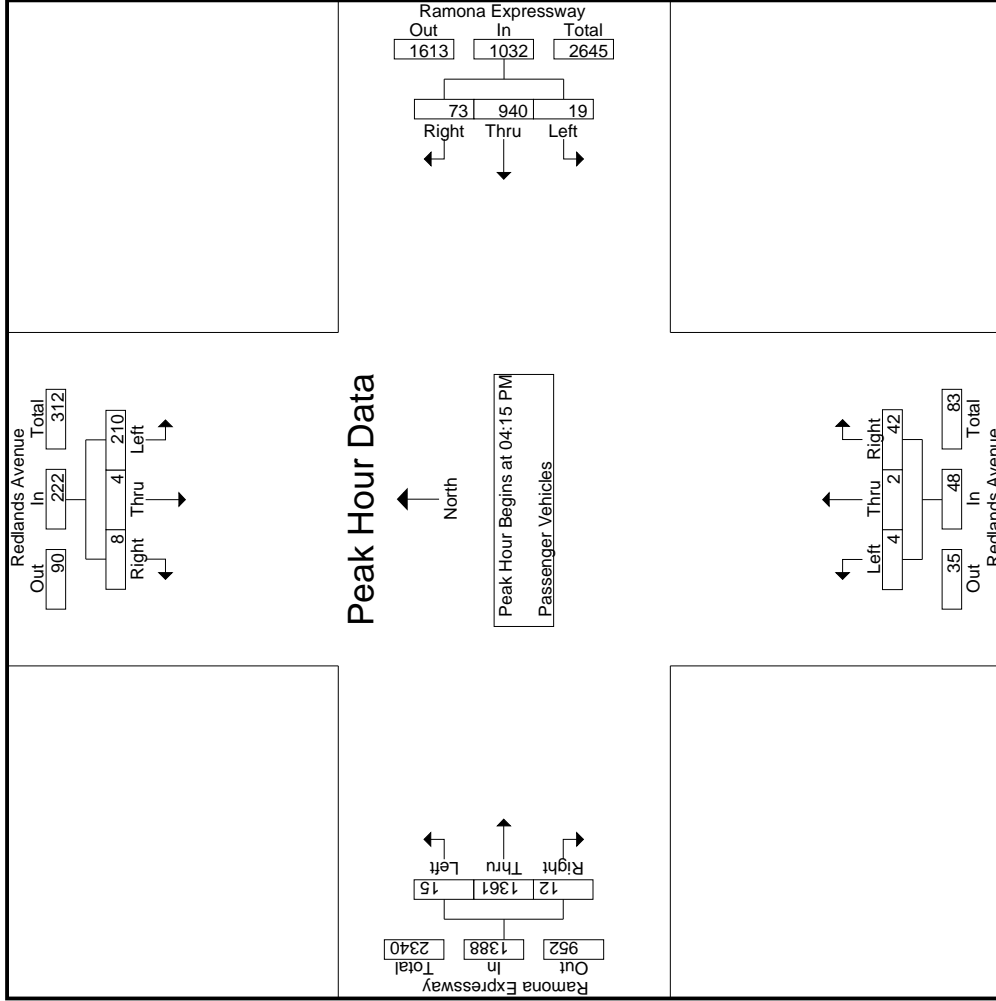
Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	40	1	1	1	42	5	282	16	3	303	0	0	5	5	5	5	349	2	0	356	2	356	706
04:30 PM	61	2	0	0	63	5	221	17	4	243	2	1	15	9	18	1	349	4	1	354	4	354	678
04:45 PM	63	0	2	2	65	6	228	26	8	260	0	0	12	5	12	3	315	4	3	322	17	322	659
05:00 PM	46	1	5	1	52	8	259	21	12	288	1	1	9	2	11	6	348	2	0	356	2	356	647
Total Volume	210	4	8	3	222	19	940	73	1032	1032	4	2	42	48	48	15	1361	12	12	1388	12	1388	2690
% App. Total	94.6	1.8	3.6		8.1	1.8	91.1	7.1		38.8	8.3	4.2	87.5		1.6	1.1	98.1	0.9		51.5	1.8	98.2	
PHF	.833	.500	.400		.854	.792	.833	.702		.851	.500	.500	.700		.667	.625	.975	.750		.975	.975	.975	.953

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:15 PM

Counts Unlimited  
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City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
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File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	40	1	1	5	16	303	0	0	5	5	349	2
+15 mins.	61	2	0	5	17	243	2	1	18	1	349	4
+30 mins.	63	0	2	6	26	260	0	0	12	3	315	4
+45 mins.	46	1	5	3	14	226	2	1	13	6	348	2
Total Volume	210	4	8	19	73	1032	4	2	48	15	1361	12
% App. Total	94.6	1.8	3.6	1.8	7.1	85.1	8.3	4.2	87.5	1.1	98.1	0.9
PHF	.833	.500	.400	.792	.833	.851	.500	.500	.667	.625	.975	.750

Groups Printed- Large 2 Axle Vehicles

Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	1	1	1	0	2	0	0	2	0	0	0	0	0	0	7	0	0	0	7	1	10	11
04:15 PM	0	0	1	1	1	1	3	1	0	5	0	0	0	0	0	0	3	1	0	4	1	10	11	
04:30 PM	2	1	0	0	3	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	12	12	
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	6	6	
<b>Total</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>2</b>	<b>38</b>	<b>40</b>	
05:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	9	9	
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3	
05:30 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	0	7	7	
05:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	6	6	
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>25</b>	<b>25</b>	
<b>Grand Total</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>21</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>30</b>	<b>2</b>	<b>0</b>	<b>32</b>	<b>2</b>	<b>63</b>	<b>65</b>	
Approch %	57.1	14.3	28.6			4.3	91.3	4.3			0	0	100			0	93.8	6.2			3.1	96.9		
Total %	6.3	1.6	3.2		11.1	1.6	33.3	1.6		36.5	0	0	1.6		1.6	0	47.6	3.2		50.8	3.1	96.9		

3.1-549

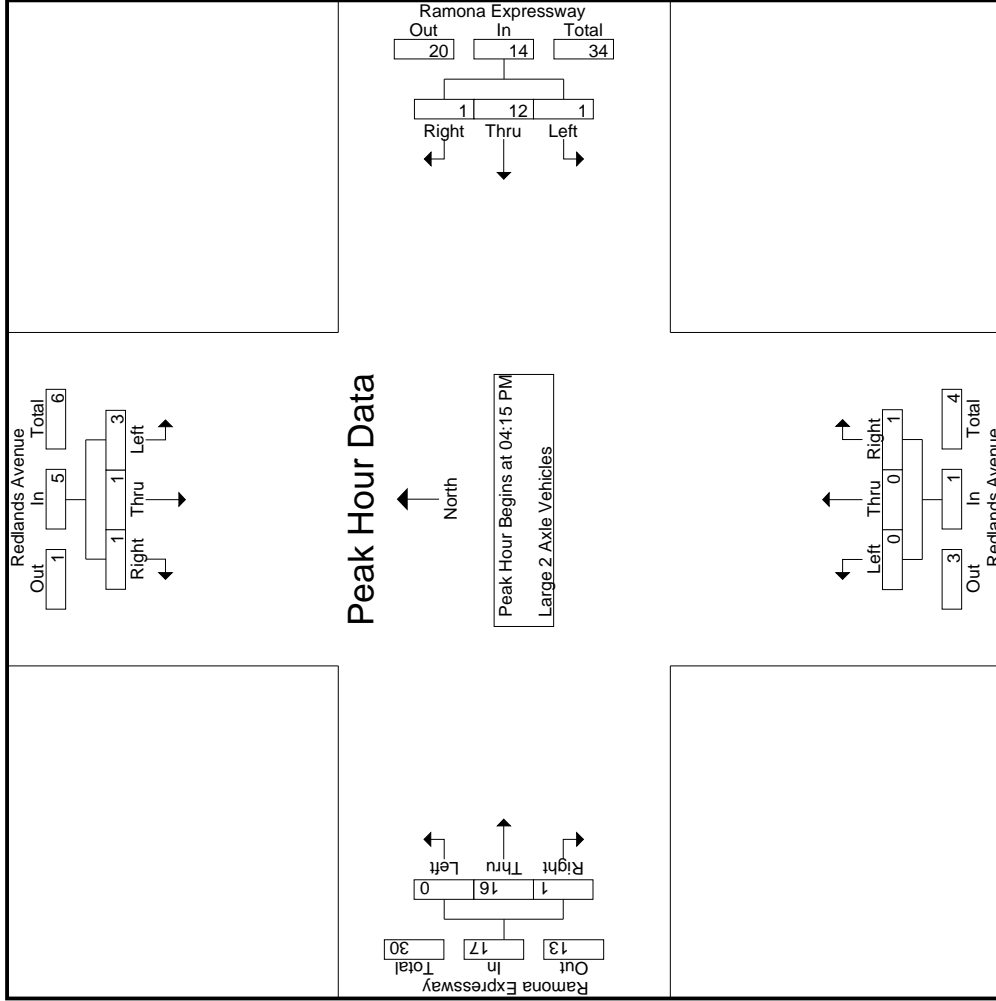
Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	0	0	0	0	0	1	3	1		5	0	0	0		0	0	0	0		0	1	4	10
04:30 PM	2	1	0	0	3	0	4	0		4	0	0	0		0	0	0	0		0	5	5	12
04:45 PM	0	0	0	0	0	0	2	0		2	0	0	1		1	0	0	0		0	0	3	6
05:00 PM	1	0	0	0	1	0	3	0		3	0	0	0		0	0	0	0		0	0	5	9
Total Volume	3	1	1	1	5	1	12	1		14	0	0	1		1	0	16	1		17	1	17	37
% App. Total	60	20	20			7.1	85.7	7.1		100	0	0	100		94.1	0	94.1	5.9		5.9	0	850	771
PHF	.375	.250	.250		.417	.250	.750	.250		.700	.000	.000	.250		.250	.000	.800	.250		.850			

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:15 PM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



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City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
+0 mins.	0	0	1	1	1	5	0	0	0	0	0	3
+15 mins.	2	1	0	0	0	4	0	0	0	0	0	5
+30 mins.	0	0	0	0	0	2	0	0	1	0	0	0
+45 mins.	1	0	0	0	0	3	0	0	0	0	0	0
Total Volume	3	1	1	1	12	14	0	0	1	0	16	1
% App. Total	60	20	20	7.1	85.7	7.1	0	0	100	0	94.1	5.9
PHF	.375	.250	.250	.250	.750	.250	.000	.000	.250	.000	.800	.250

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound							
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5	5
04:15 PM	0	0	0	0	0	1	2	0	0	3	2	0	0	0	2	0	1	0	0	0	0	6	6
04:30 PM	0	1	0	0	1	0	3	1	1	4	0	0	0	0	0	0	0	1	0	0	1	6	7
04:45 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	3	2	3	2	6	8
<b>Total</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>23</b>	<b>26</b>
05:00 PM	0	0	0	0	0	0	0	2	1	2	1	0	0	0	1	0	0	0	0	0	1	3	4
05:15 PM	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	0	3	0	0	3	0	7	7
05:30 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	1	0	0	0	1	4	4
05:45 PM	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	0	2	0	0	2	0	5	5
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>19</b>	<b>20</b>
<b>Grand Total</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>2</b>	<b>16</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>7</b>	<b>6</b>	<b>2</b>	<b>13</b>	<b>4</b>	<b>42</b>	<b>46</b>
Approch %	0	100	0	0	6.2	62.5	31.2			100	0	0	0	0	21.4	0	53.8	46.2		0	8.7	91.3	
Total %	0	9.5	0	0	9.5	2.4	23.8	11.9		38.1	21.4	0	0	0	21.4	0	16.7	14.3		31	8.7	91.3	

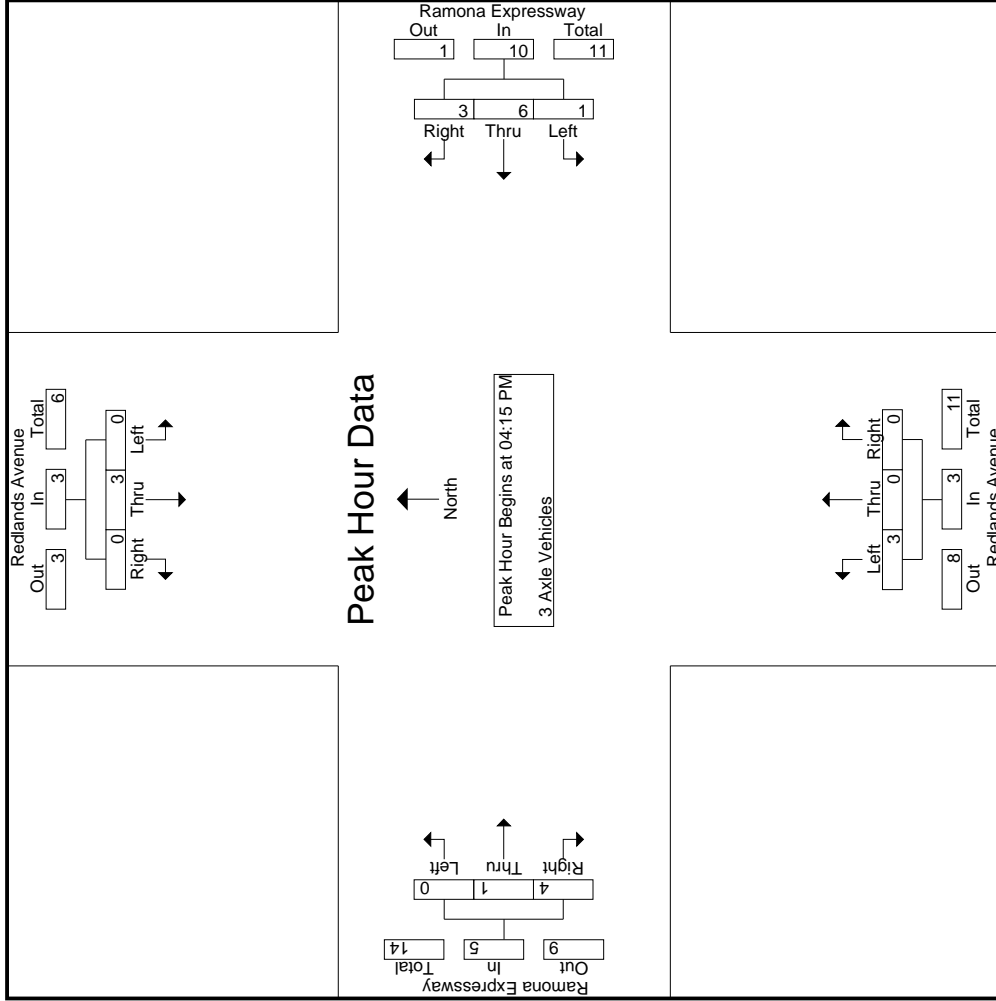
Start Time	Redlands Avenue Southbound					Ramona Expressway Westbound					Redlands Avenue Northbound					Ramona Expressway Eastbound								
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:15 PM	0	0	0	0	0	1	2	0	0	3	2	0	0	0	2	0	0	0	0	0	0	1	1	6
04:30 PM	0	1	0	0	1	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	1	1	6
04:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	3	0	0	3	1	6	3	10	10	3	0	0	0	3	0	0	0	0	0	0	4	5	21
<b>Total Volume</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>60</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>0</b>	<b>21</b>	<b>21</b>	
% App. Total	.000	.375	.000	.000	.375	.250	.500	.375	.375	.625	.375	.000	.000	.000	.375	.000	.250	.333	.417	.417	.875	.875		



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
App. Total	App. Total			App. Total			App. Total			App. Total		
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1												
Peak Hour for Each Approach Begins at:												
	04:15 PM			04:15 PM			04:15 PM			04:15 PM		
+0 mins.	0	0	0	0	0	0	2	0	0	0	0	0
+15 mins.	0	1	0	0	0	0	3	1	0	0	0	0
+30 mins.	0	2	0	0	1	0	1	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	2	0	0	0	0	0
Total Volume	0	3	0	1	6	3	10	3	0	0	1	4
% App. Total	0	100	0	10	60	30	100	0	0	0	20	80
PHF	.000	.375	.000	.250	.500	.375	.625	.375	.000	.000	.250	.333
										.000		

Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	1	0	1	0	4	1	0	5	2	1	1	0	4	0	0	0	10
04:15 PM	0	2	0	0	2	0	3	0	0	3	1	0	0	0	1	0	3	0	9
04:30 PM	0	1	0	0	1	0	3	0	0	3	2	0	0	0	2	0	4	2	12
04:45 PM	0	0	0	0	0	0	3	0	0	3	3	1	0	0	4	0	4	0	11
Total	0	3	1	0	4	0	13	1	0	14	8	2	1	0	11	0	3	8	42
05:00 PM	0	1	0	0	1	0	1	1	0	2	2	1	0	0	3	0	0	2	8
05:15 PM	0	0	0	0	0	1	1	0	0	2	2	1	0	0	3	0	2	0	7
05:30 PM	0	0	0	0	0	2	0	0	0	2	2	0	0	0	2	0	2	1	7
05:45 PM	0	0	0	0	0	0	5	0	0	5	0	2	0	0	2	0	2	0	9
Total	0	1	0	0	1	1	9	1	0	11	6	4	0	0	10	0	6	3	31
Grand Total	0	4	1	0	5	1	22	2	0	25	14	6	1	0	21	0	9	11	73
Approch %	0	80	20			4	88	8			66.7	28.6	4.8		29.6	0	45	55	
Total %	0	5.6	1.4			1.4	31	2.8		35.2	19.7	8.5	1.4		29.6	0	12.7	15.5	97.3

3.1-555

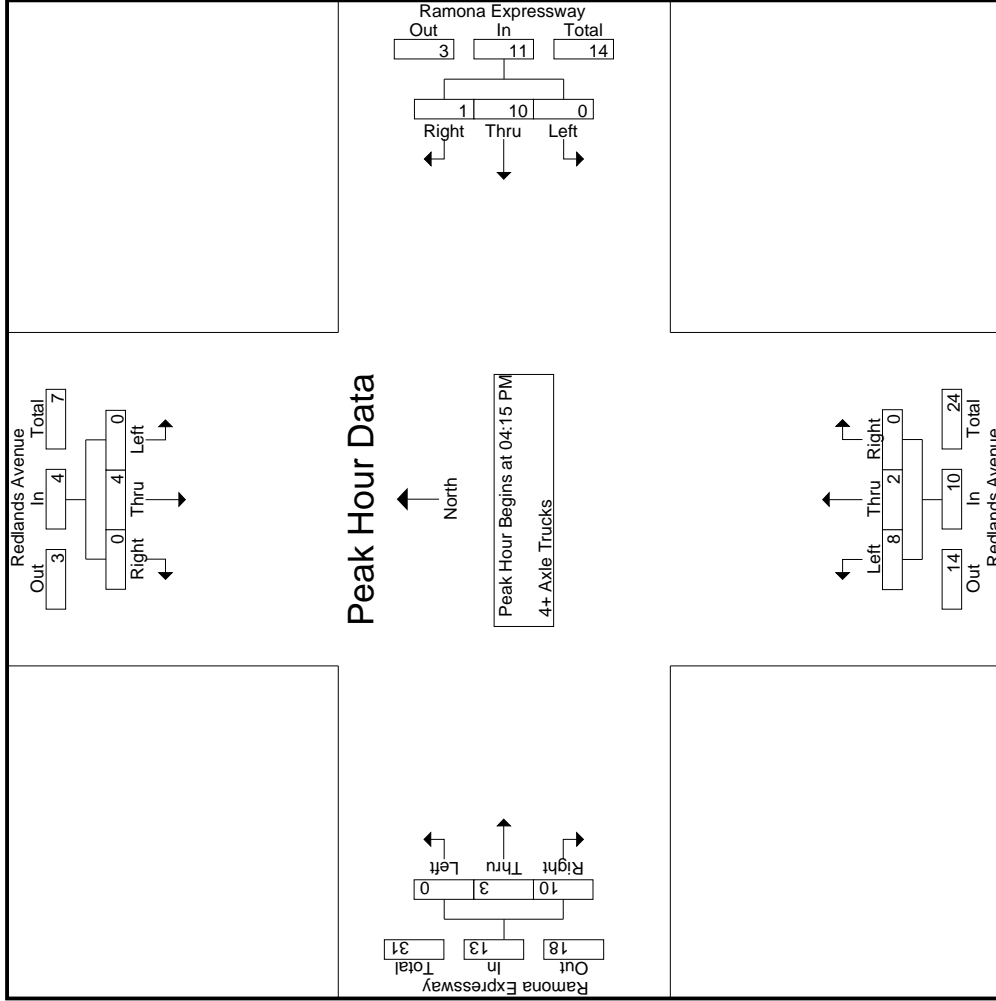
Start Time	Redlands Avenue Southbound				Ramona Expressway Westbound				Redlands Avenue Northbound				Ramona Expressway Eastbound						
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total	
04:15 PM	0	2	0	0	2	0	3	0	0	3	1	0	0	0	1	0	3	0	9
04:30 PM	0	1	0	0	1	0	3	0	0	3	2	0	0	0	2	0	4	0	10
04:45 PM	0	0	0	0	0	0	3	0	0	3	3	1	0	0	4	0	4	0	11
05:00 PM	0	1	0	0	1	0	1	1	0	2	2	2	1	0	5	0	2	0	8
Total Volume	0	4	0	0	4	0	10	1	0	11	8	2	0	0	10	0	3	10	38
% App. Total	0	100	0			0	90.9	9.1			80	20	0		23.1	0	76.9	0	
PHF	.000	.500	.000		.500	.000	.833	.250		.917	.667	.500	.000		.625	.000	.625	.813	.864

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:15 PM

Counts Unlimited  
 PO Box 1178  
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 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Counts Unlimited  
 PO Box 1178  
 Corona, CA 92878  
 (951) 268-6268

City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway  
 Weather: Clear

File Name : 14\_PER\_Redlands\_Ramona PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 3

Start Time	Redlands Avenue Southbound			Ramona Expressway Westbound			Redlands Avenue Northbound			Ramona Expressway Eastbound			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1	Peak Hour for Each Approach Begins at:													
	04:15 PM			04:15 PM			04:15 PM			04:15 PM				
+0 mins.	0	2	0	0	0	0	3	0	0	0	0	0	0	3
+15 mins.	0	1	0	0	0	0	3	0	0	0	0	0	0	4
+30 mins.	0	0	0	0	0	0	3	0	0	0	0	0	3	1
+45 mins.	0	1	0	0	0	1	2	1	0	0	0	0	0	2
Total Volume	0	4	0	0	0	10	11	1	2	0	3	10	3	10
% App. Total	0	100	0	0	0	90.9	9.1	0	20	0	23.1	76.9	0	13
PHF	.000	.500	.000	.000	.000	.833	.250	.000	.500	.000	.000	.625	.250	.625
							.917							.813

Location: City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Redlands Avenue	East Leg Ramona Expressway	South Leg Redlands Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	1	0	1

	North Leg Redlands Avenue	East Leg Ramona Expressway	South Leg Redlands Avenue	West Leg Ramona Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	1	1	1	0	3
4:30 PM	0	0	2	0	2
4:45 PM	1	1	2	0	4
5:00 PM	0	0	0	0	0
5:15 PM	0	1	2	0	3
5:30 PM	0	0	1	0	1
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	2	3	8	0	13

Location: City of Perris  
 N/S: Redlands Avenue  
 E/W: Ramona Expressway



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound Ramona Expressway			Northbound Redlands Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	1	2

	Southbound Redlands Avenue			Westbound Ramona Expressway			Northbound Redlands Avenue			Eastbound Ramona Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	1	0	0	0	2	0	6

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

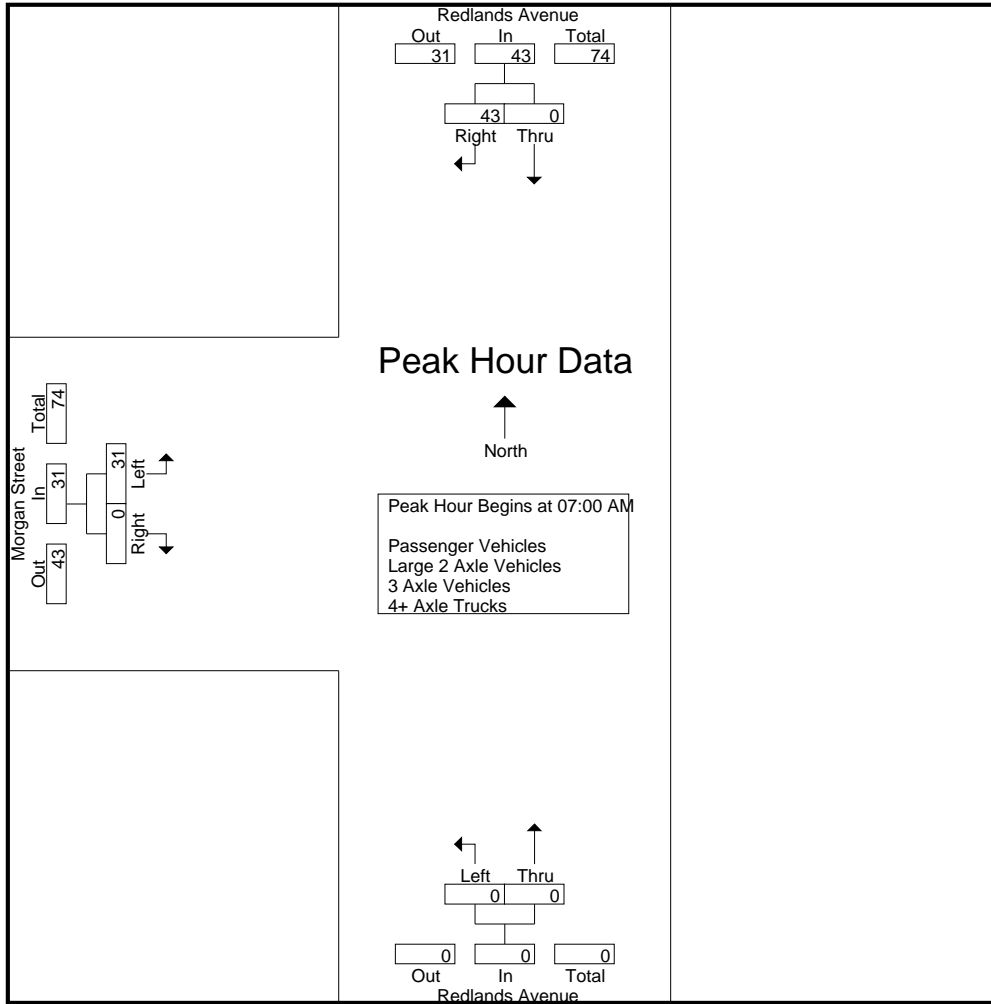
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	3	3	0	0	0	9	0	9	12
07:15 AM	0	9	9	0	0	0	6	0	6	15
07:30 AM	0	13	13	0	0	0	2	0	2	15
07:45 AM	0	18	18	0	0	0	14	0	14	32
Total	0	43	43	0	0	0	31	0	31	74
08:00 AM	0	5	5	0	0	0	2	0	2	7
08:15 AM	0	11	11	0	0	0	5	0	5	16
08:30 AM	0	5	5	0	0	0	7	0	7	12
08:45 AM	0	4	4	0	0	0	3	0	3	7
Total	0	25	25	0	0	0	17	0	17	42
Grand Total	0	68	68	0	0	0	48	0	48	116
Apprch %	0	100		0	0		100	0		
Total %	0	58.6	58.6	0	0	0	41.4	0	41.4	
Passenger Vehicles	0	65	65	0	0	0	46	0	46	111
% Passenger Vehicles	0	95.6	95.6	0	0	0	95.8	0	95.8	95.7
Large 2 Axle Vehicles	0	1	1	0	0	0	2	0	2	3
% Large 2 Axle Vehicles	0	1.5	1.5	0	0	0	4.2	0	4.2	2.6
3 Axle Vehicles	0	1	1	0	0	0	0	0	0	1
% 3 Axle Vehicles	0	1.5	1.5	0	0	0	0	0	0	0.9
4+ Axle Trucks	0	1	1	0	0	0	0	0	0	1
% 4+ Axle Trucks	0	1.5	1.5	0	0	0	0	0	0	0.9

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	9	0	9	12
07:15 AM	0	9	9	0	0	0	6	0	6	15
07:30 AM	0	13	13	0	0	0	2	0	2	15
07:45 AM	0	18	18	0	0	0	14	0	14	32
Total Volume	0	43	43	0	0	0	31	0	31	74
% App. Total	0	100		0	0		100	0		
PHF	.000	.597	.597	.000	.000	.000	.554	.000	.554	.578



City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	0	13	13	0	0	0	9	0	9
+15 mins.	0	<b>18</b>	<b>18</b>	0	0	0	6	0	6
+30 mins.	0	5	5	0	0	0	2	0	2
+45 mins.	0	11	11	0	0	0	<b>14</b>	0	<b>14</b>
Total Volume	0	47	47	0	0	0	31	0	31
% App. Total	0	100		0	0		100	0	
PHF	.000	.653	.653	.000	.000	.000	.554	.000	.554

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

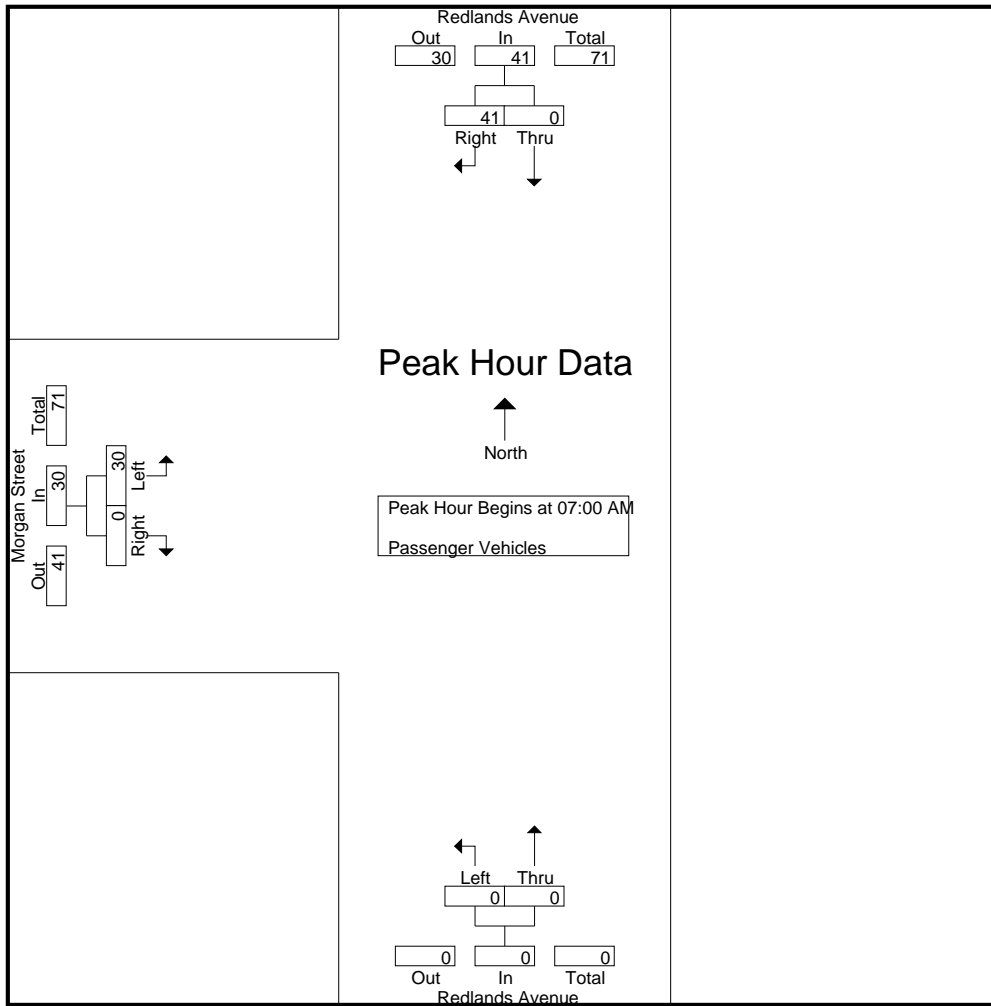
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	2	2	0	0	0	9	0	9	11
07:15 AM	0	9	9	0	0	0	5	0	5	14
07:30 AM	0	12	12	0	0	0	2	0	2	14
07:45 AM	0	18	18	0	0	0	14	0	14	32
Total	0	41	41	0	0	0	30	0	30	71
08:00 AM	0	5	5	0	0	0	2	0	2	7
08:15 AM	0	11	11	0	0	0	4	0	4	15
08:30 AM	0	4	4	0	0	0	7	0	7	11
08:45 AM	0	4	4	0	0	0	3	0	3	7
Total	0	24	24	0	0	0	16	0	16	40
Grand Total	0	65	65	0	0	0	46	0	46	111
Apprch %	0	100		0	0		100	0		
Total %	0	58.6	58.6	0	0	0	41.4	0	41.4	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	2	2	0	0	0	9	0	9	11
07:15 AM	0	9	9	0	0	0	5	0	5	14
07:30 AM	0	12	12	0	0	0	2	0	2	14
07:45 AM	0	18	18	0	0	0	14	0	14	32
Total Volume	0	41	41	0	0	0	30	0	30	71
% App. Total	0	100		0	0		100	0		
PHF	.000	.569	.569	.000	.000	.000	.536	.000	.536	.555

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	2	2	0	0	0	9	0	9
+15 mins.	0	9	9	0	0	0	5	0	5
+30 mins.	0	12	12	0	0	0	2	0	2
+45 mins.	0	<b>18</b>	<b>18</b>	0	0	0	<b>14</b>	0	<b>14</b>
Total Volume	0	41	41	0	0	0	30	0	30
% App. Total	0	100		0	0		100	0	
PHF	.000	.569	.569	.000	.000	.000	.536	.000	.536

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

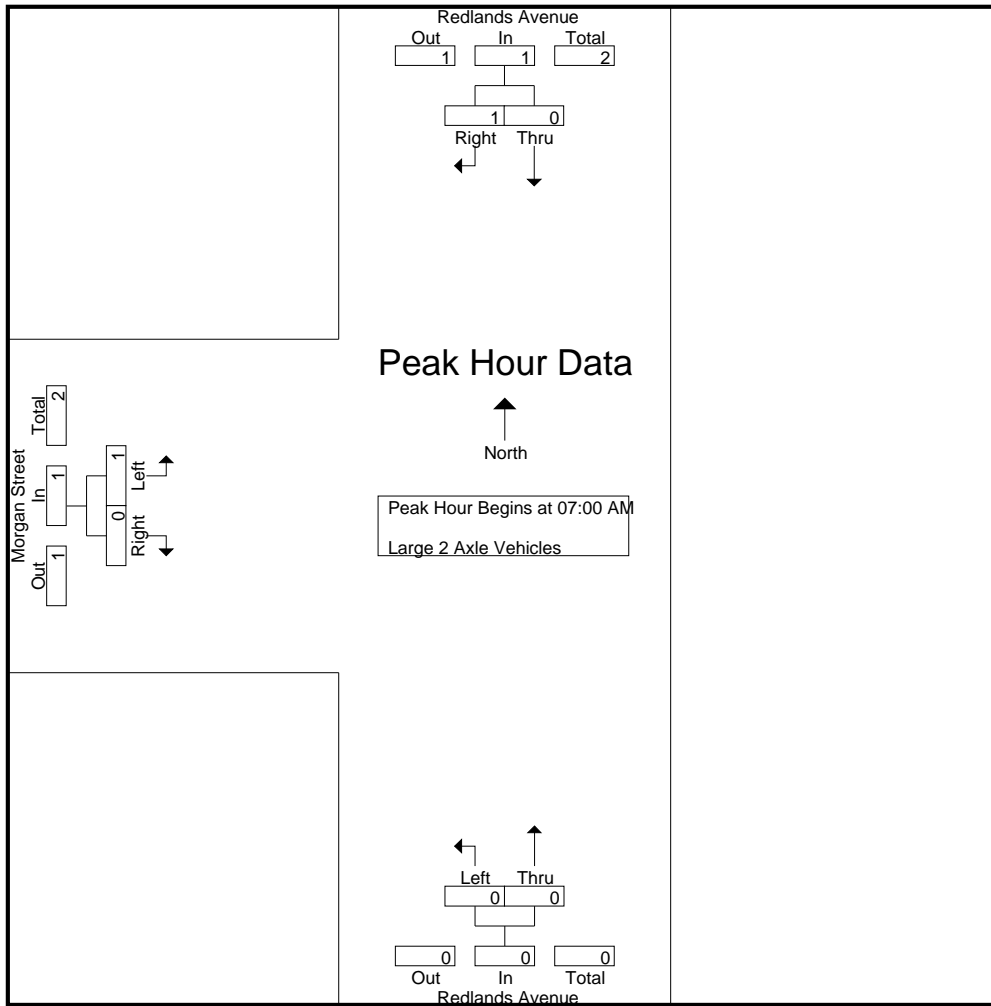
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
Grand Total	0	1	1	0	0	0	2	0	2	3
Apprch %	0	100		0	0		100	0		
Total %	0	33.3	33.3	0	0	0	66.7	0	66.7	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

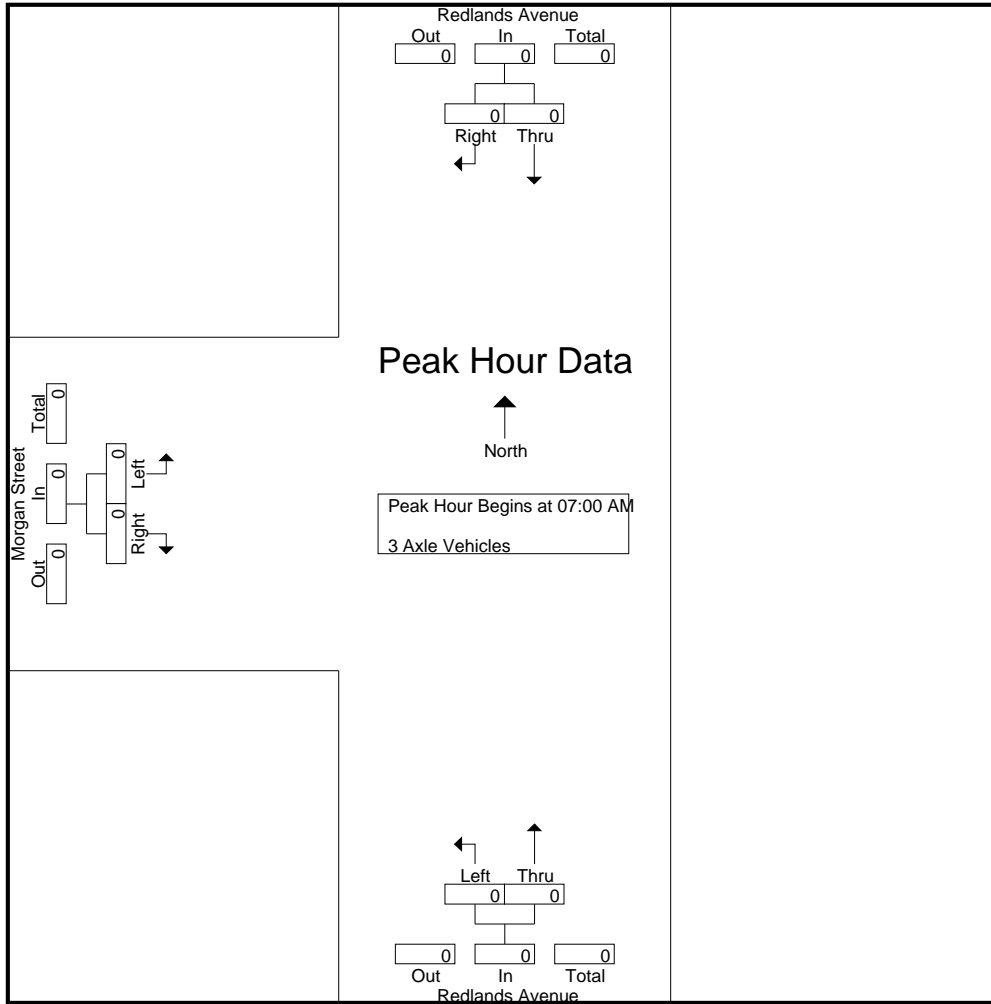
Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	1	1	0	0	0	0	0	0	1
Apprch %	0	100		0	0		0	0		
Total %	0	100	100	0	0	0	0	0	0	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	1	0	0	0	0	0	0	1
Apprch %	0	100		0	0		0	0		
Total %	0	100	100	0	0	0	0	0	0	

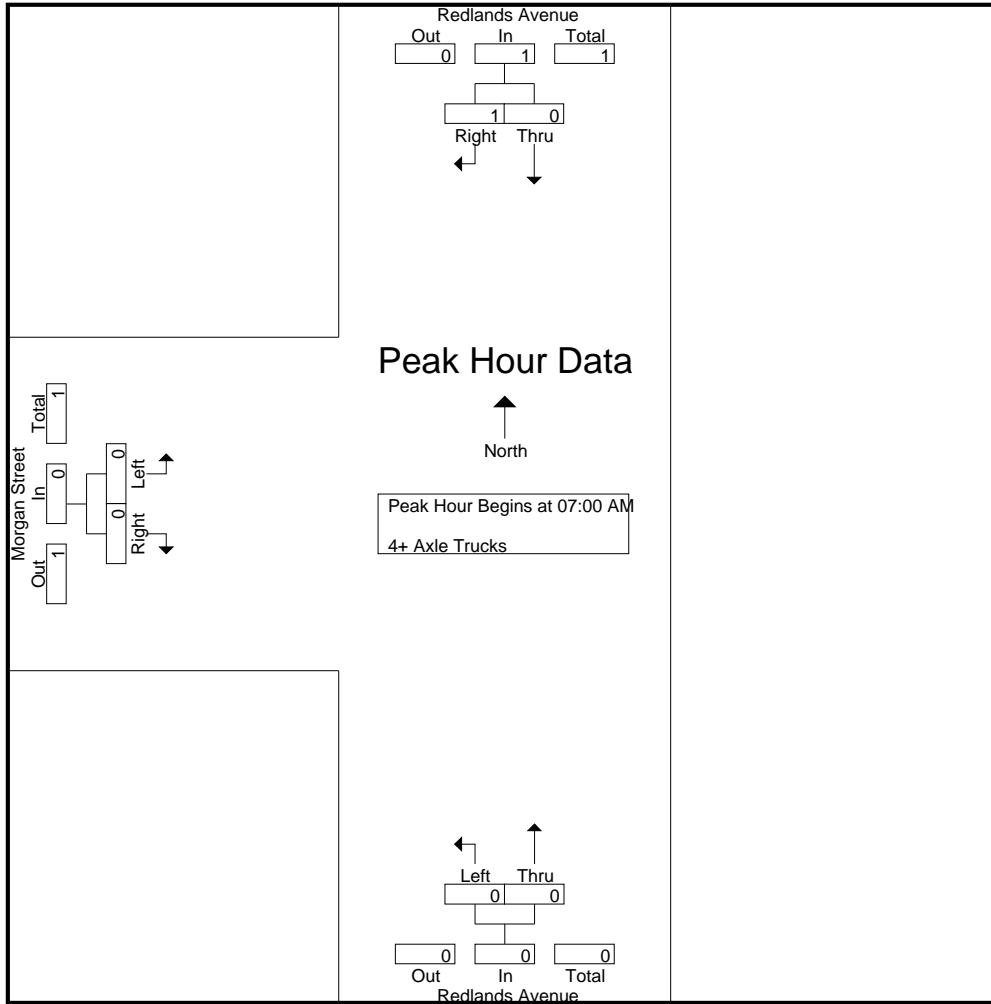
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 07:00 AM



City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0
% App. Total	0	100	100	0	0	0	0	0	0
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

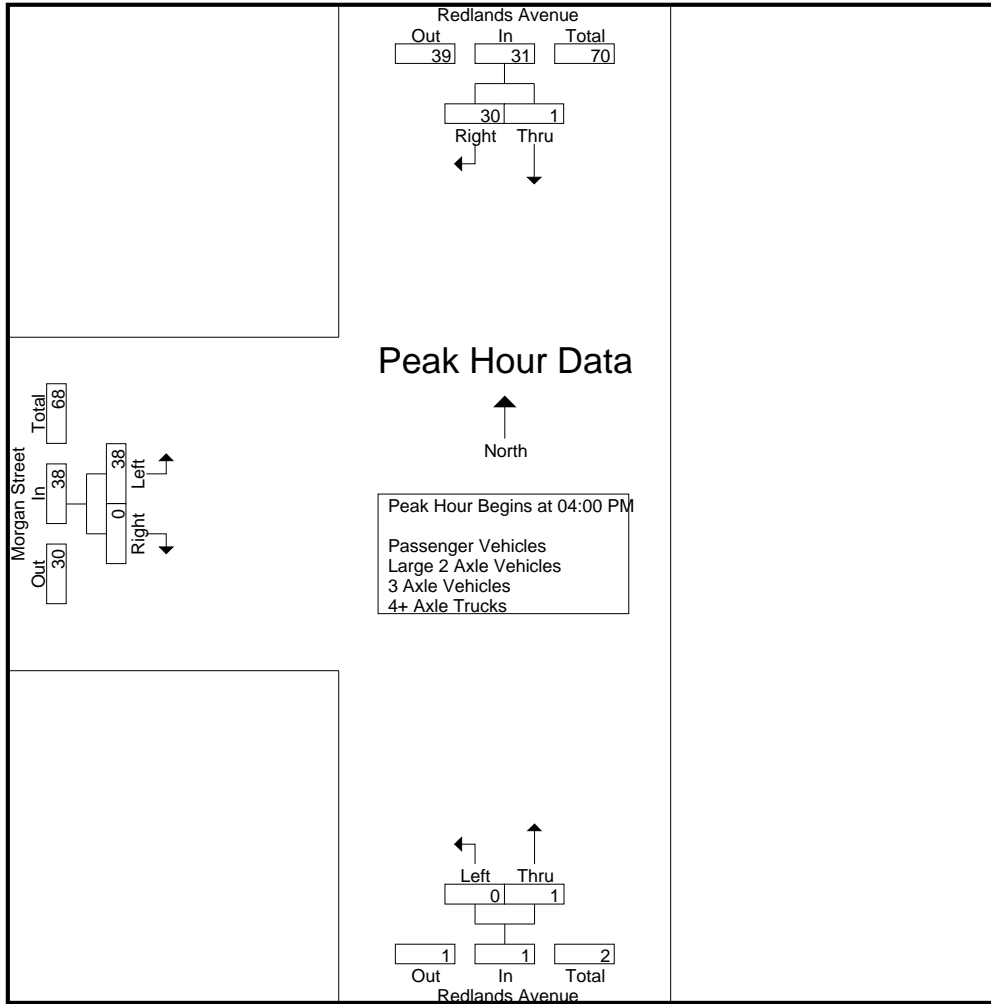
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	1	7	8	0	1	1	7	0	7	16
04:15 PM	0	4	4	0	0	0	8	0	8	12
04:30 PM	0	12	12	0	0	0	13	0	13	25
04:45 PM	0	7	7	0	0	0	10	0	10	17
Total	1	30	31	0	1	1	38	0	38	70
05:00 PM	0	3	3	0	0	0	7	0	7	10
05:15 PM	0	3	3	0	0	0	4	0	4	7
05:30 PM	0	8	8	0	0	0	4	0	4	12
05:45 PM	0	4	4	0	0	0	7	0	7	11
Total	0	18	18	0	0	0	22	0	22	40
Grand Total	1	48	49	0	1	1	60	0	60	110
Apprch %	2	98		0	100		100	0		
Total %	0.9	43.6	44.5	0	0.9	0.9	54.5	0	54.5	
Passenger Vehicles	0	44	44	0	0	0	55	0	55	99
% Passenger Vehicles	0	91.7	89.8	0	0	0	91.7	0	91.7	90
Large 2 Axle Vehicles	0	2	2	0	0	0	2	0	2	4
% Large 2 Axle Vehicles	0	4.2	4.1	0	0	0	3.3	0	3.3	3.6
3 Axle Vehicles	1	1	2	0	1	1	2	0	2	5
% 3 Axle Vehicles	100	2.1	4.1	0	100	100	3.3	0	3.3	4.5
4+ Axle Trucks	0	1	1	0	0	0	1	0	1	2
% 4+ Axle Trucks	0	2.1	2	0	0	0	1.7	0	1.7	1.8

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	1	7	8	0	1	1	7	0	7	16
04:15 PM	0	4	4	0	0	0	8	0	8	12
04:30 PM	0	12	12	0	0	0	13	0	13	25
04:45 PM	0	7	7	0	0	0	10	0	10	17
Total Volume	1	30	31	0	1	1	38	0	38	70
% App. Total	3.2	96.8		0	100		100	0		
PHF	.250	.625	.646	.000	.250	.250	.731	.000	.731	.700

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	7	8	0	1	1	7	0	7
+15 mins.	0	4	4	0	0	0	8	0	8
+30 mins.	0	12	12	0	0	0	13	0	13
+45 mins.	0	7	7	0	0	0	10	0	10
Total Volume	1	30	31	0	1	1	38	0	38
% App. Total	3.2	96.8		0	100		100	0	
PHF	.250	.625	.646	.000	.250	.250	.731	.000	.731

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

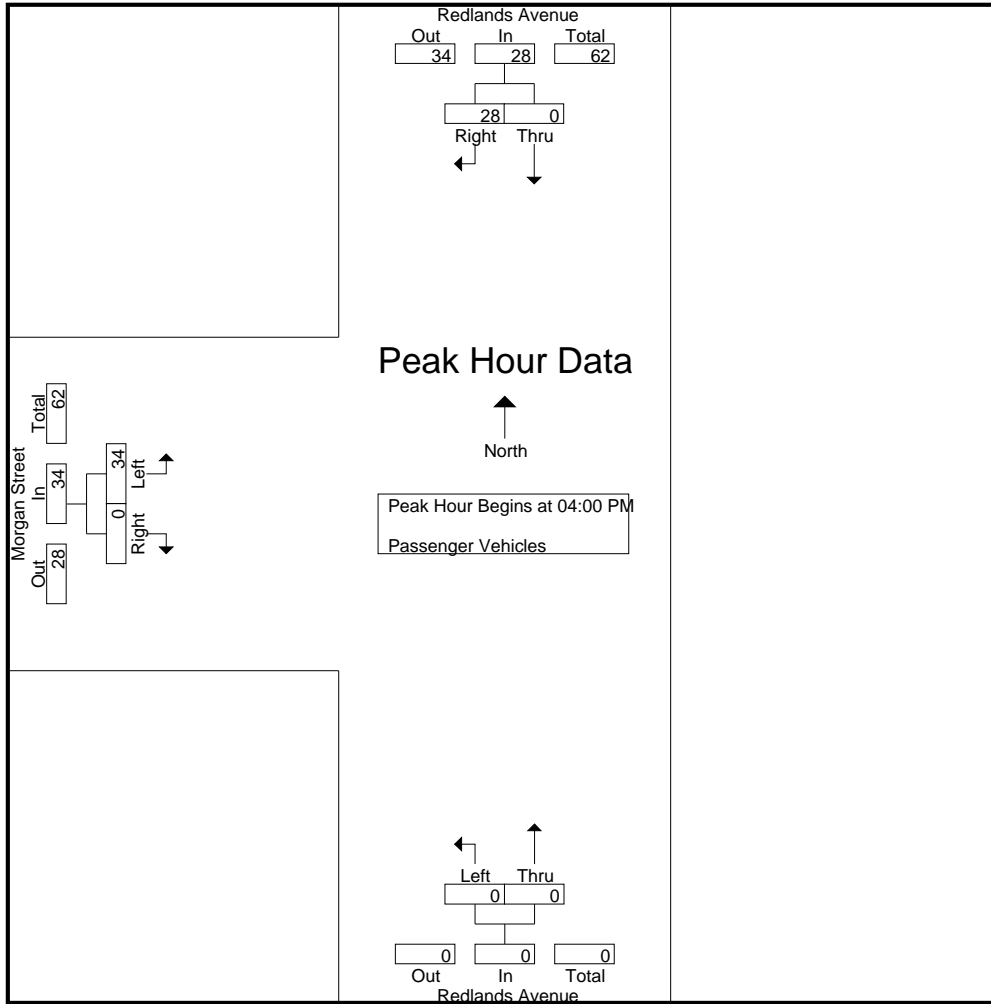
Groups Printed- Passenger Vehicles

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	7	7	0	0	0	7	0	7	14
04:15 PM	0	4	4	0	0	0	6	0	6	10
04:30 PM	0	10	10	0	0	0	13	0	13	23
04:45 PM	0	7	7	0	0	0	8	0	8	15
Total	0	28	28	0	0	0	34	0	34	62
05:00 PM	0	3	3	0	0	0	7	0	7	10
05:15 PM	0	3	3	0	0	0	3	0	3	6
05:30 PM	0	7	7	0	0	0	4	0	4	11
05:45 PM	0	3	3	0	0	0	7	0	7	10
Total	0	16	16	0	0	0	21	0	21	37
Grand Total	0	44	44	0	0	0	55	0	55	99
Apprch %	0	100		0	0		100	0		
Total %	0	44.4	44.4	0	0	0	55.6	0	55.6	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	7	7	0	0	0	7	0	7	14
04:15 PM	0	4	4	0	0	0	6	0	6	10
04:30 PM	0	10	10	0	0	0	13	0	13	23
04:45 PM	0	7	7	0	0	0	8	0	8	15
Total Volume	0	28	28	0	0	0	34	0	34	62
% App. Total	0	100		0	0		100	0		
PHF	.000	.700	.700	.000	.000	.000	.654	.000	.654	.674

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	7	7	0	0	0	7	0	7
+15 mins.	0	4	4	0	0	0	6	0	6
+30 mins.	0	<b>10</b>	<b>10</b>	0	0	0	<b>13</b>	0	<b>13</b>
+45 mins.	0	7	7	0	0	0	8	0	8
Total Volume	0	28	28	0	0	0	34	0	34
% App. Total	0	100		0	0		100	0	
PHF	.000	.700	.700	.000	.000	.000	.654	.000	.654

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

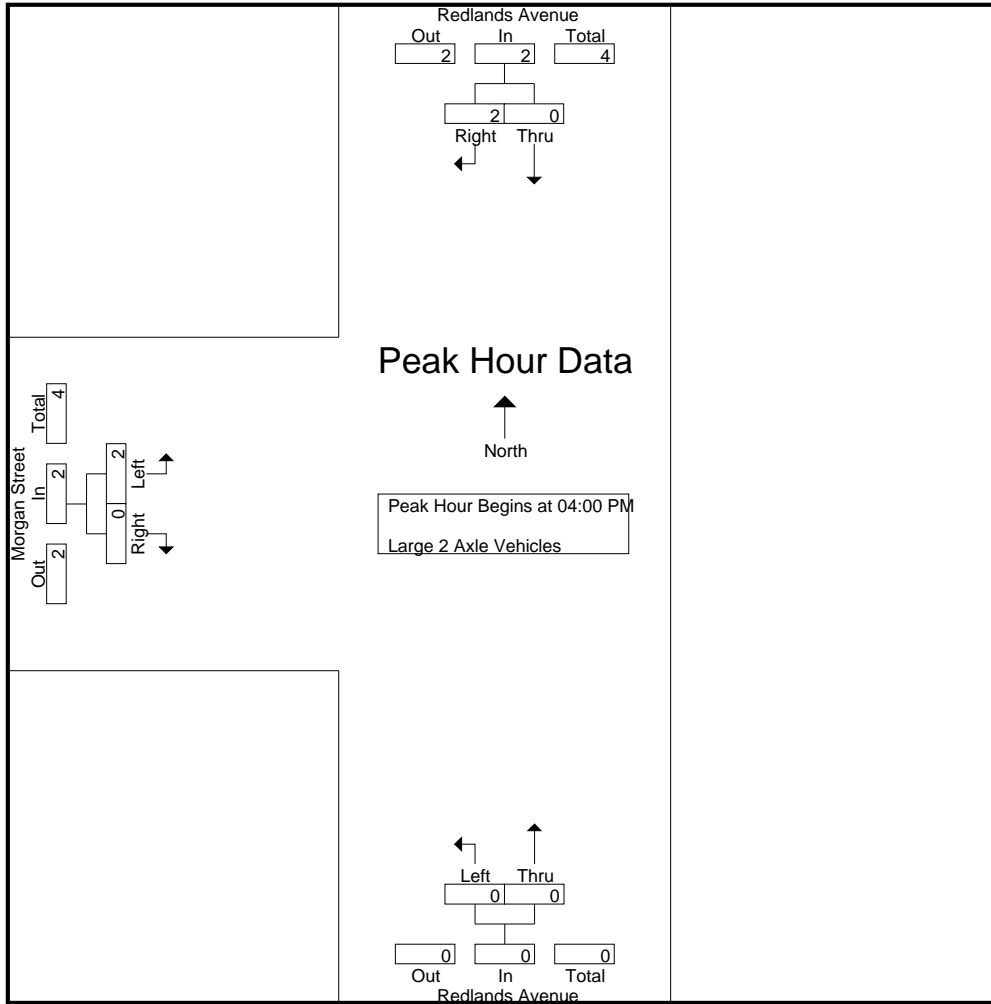
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	2	2	0	0	0	2	0	2	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	2	0	0	0	2	0	2	4
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	2	0	0	0	2	0	2	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.500

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	2	2	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	1	0	1	0	1	1	0	0	0	2
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	0	1	1
Total	1	0	1	0	1	1	2	0	2	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	1	1	2	0	1	1	2	0	2	5
Apprch %	50	50		0	100		100	0		
Total %	20	20	40	0	20	20	40	0	40	

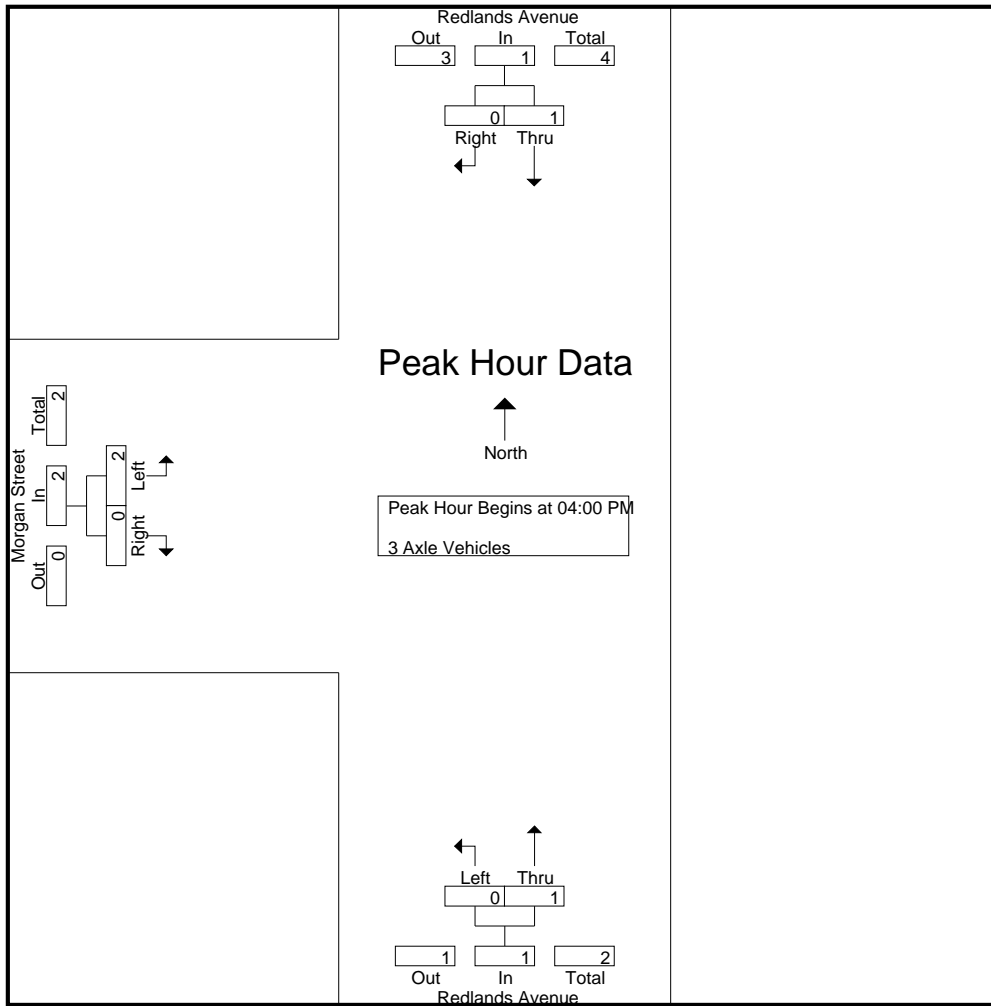
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	1	0	1	0	1	1	0	0	0	2
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	1	0	1	1	2	0	2	4
% App. Total	100	0		0	100		100	0		
PHF	.250	.000	.250	.000	.250	.250	.500	.000	.500	.500

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM



City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	1	0	1	0	1	1	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	1	0	1	0	1	1	2	0	2
% App. Total	100	0	100	0	100	100	100	0	100
PHF	.250	.000	.250	.000	.250	.250	.500	.000	.500

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

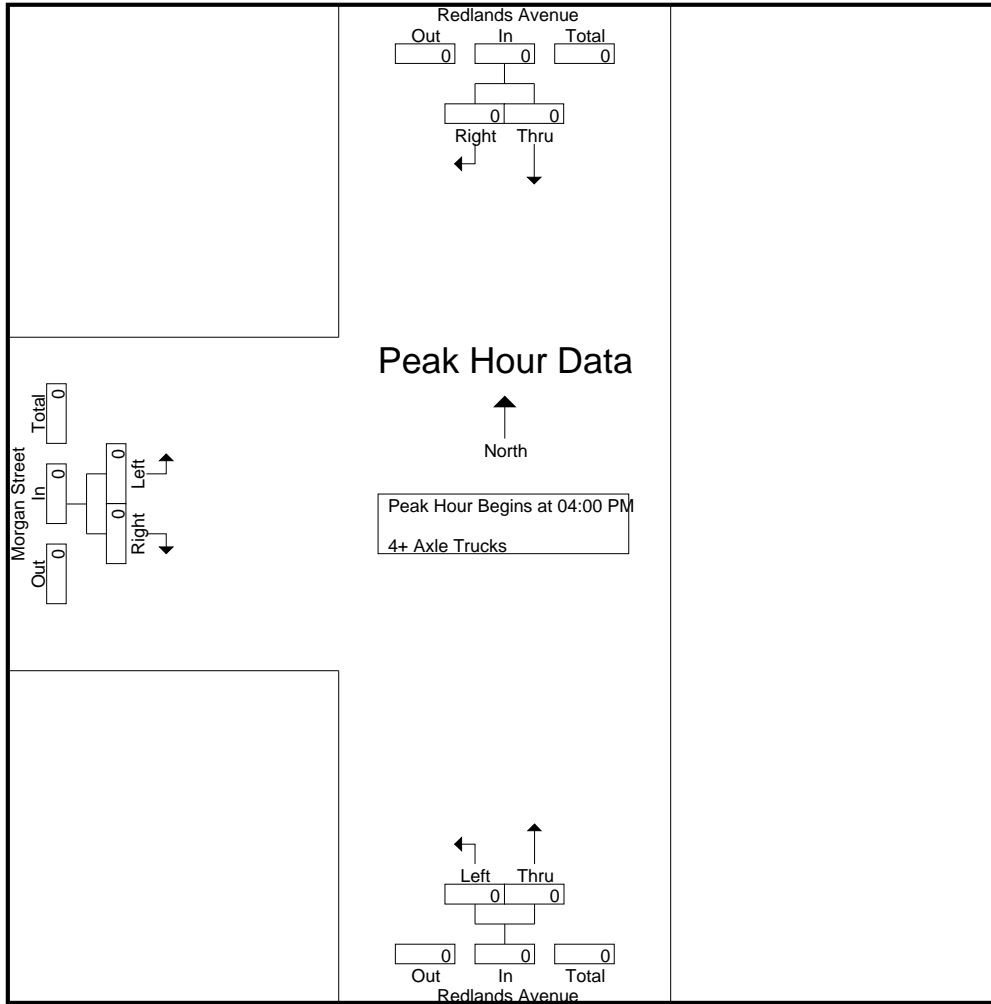
Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	1	1	0	0	0	1	0	1	2
Grand Total	0	1	1	0	0	0	1	0	1	2
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Redlands Avenue Southbound			Redlands Avenue Northbound			Morgan Street Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street  
 Weather: Clear

File Name : 16\_PER\_Redlands\_Morgan PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street



Date: 5/24/2018  
 Day: Thursday

PEDESTRIANS

	North Leg Redlands Avenue	East Leg Morgan Street	South Leg Redlands Avenue	West Leg Morgan Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Redlands Avenue	East Leg Morgan Street	South Leg Redlands Avenue	West Leg Morgan Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	1

Location: City of Perris  
 N/S: Redlands Avenue  
 E/W: Morgan Street



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound Morgan Street			Northbound Redlands Avenue			Eastbound Morgan Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1	0	0	0	0	0	0	0	2

	Southbound Redlands Avenue			Westbound Morgan Street			Northbound Redlands Avenue			Eastbound Morgan Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	0	0	0	0	0	0	0	0	0	1

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

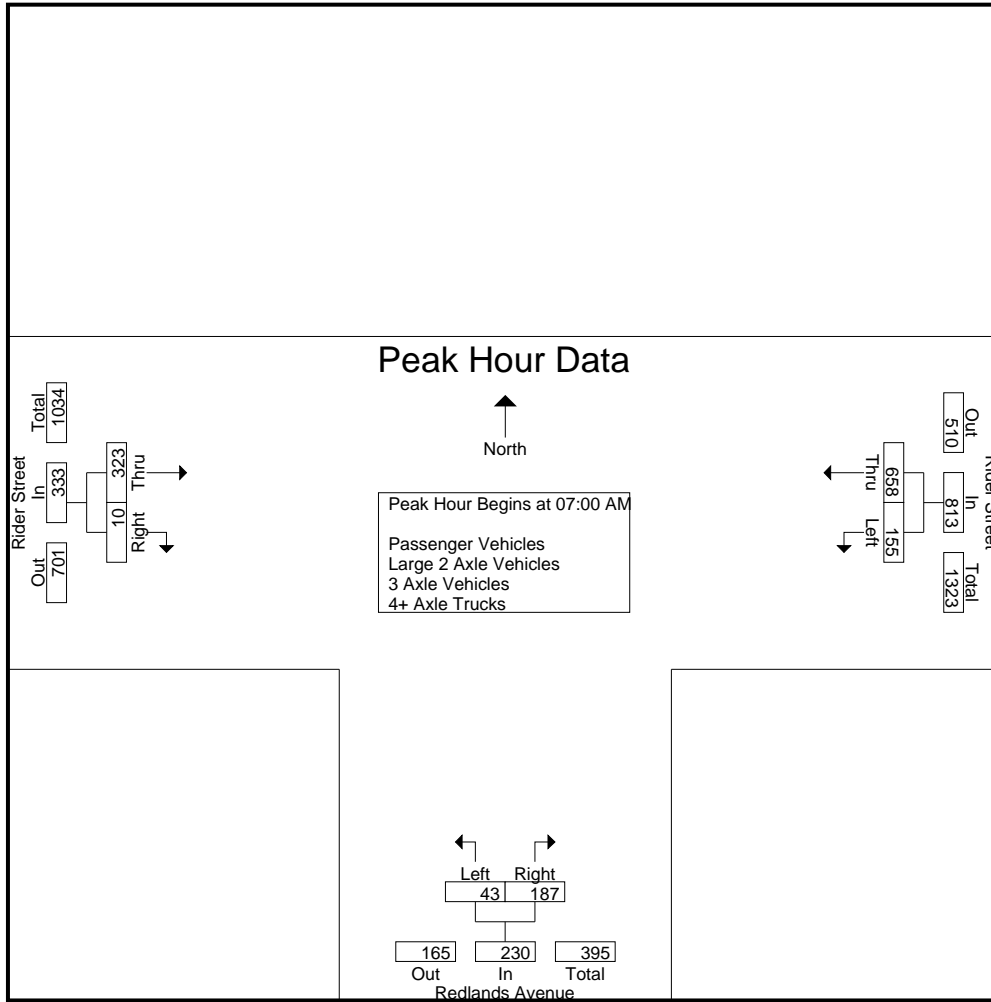
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	19	154	173	10	42	52	72	1	73	298
07:15 AM	41	158	199	10	51	61	75	2	77	337
07:30 AM	45	181	226	10	52	62	86	6	92	380
07:45 AM	50	165	215	13	42	55	90	1	91	361
Total	155	658	813	43	187	230	323	10	333	1376
08:00 AM	43	109	152	14	15	29	44	2	46	227
08:15 AM	26	77	103	3	28	31	39	1	40	174
08:30 AM	24	56	80	8	16	24	28	3	31	135
08:45 AM	16	56	72	5	11	16	29	3	32	120
Total	109	298	407	30	70	100	140	9	149	656
Grand Total	264	956	1220	73	257	330	463	19	482	2032
Apprch %	21.6	78.4		22.1	77.9		96.1	3.9		
Total %	13	47	60	3.6	12.6	16.2	22.8	0.9	23.7	
Passenger Vehicles	261	946	1207	70	253	323	450	16	466	1996
% Passenger Vehicles	98.9	99	98.9	95.9	98.4	97.9	97.2	84.2	96.7	98.2
Large 2 Axle Vehicles	3	10	13	1	3	4	10	1	11	28
% Large 2 Axle Vehicles										
3 Axle Vehicles	0	0	0	2	1	3	1	2	3	6
% 3 Axle Vehicles	0	0	0	2.7	0.4	0.9	0.2	10.5	0.6	0.3
4+ Axle Trucks	0	0	0	0	0	0	2	0	2	2
% 4+ Axle Trucks	0	0	0	0	0	0	0.4	0	0.4	0.1

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	19	154	173	10	42	52	72	1	73	298
07:15 AM	41	158	199	10	51	61	75	2	77	337
07:30 AM	45	<b>181</b>	<b>226</b>	10	<b>52</b>	<b>62</b>	86	<b>6</b>	<b>92</b>	<b>380</b>
07:45 AM	<b>50</b>	165	215	<b>13</b>	42	55	<b>90</b>	1	91	361
Total Volume	155	658	813	43	187	230	323	10	333	1376
% App. Total	19.1	80.9		18.7	81.3		97	3		
PHF	.775	.909	.899	.827	.899	.927	.897	.417	.905	.905

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	19	154	173	10	42	52	72	1	73
+15 mins.	41	158	199	10	51	61	75	2	77
+30 mins.	45	<b>181</b>	<b>226</b>	10	<b>52</b>	<b>62</b>	86	<b>6</b>	<b>92</b>
+45 mins.	<b>50</b>	165	215	<b>13</b>	42	55	<b>90</b>	1	91
Total Volume	155	658	813	43	187	230	323	10	333
% App. Total	19.1	80.9		18.7	81.3		97	3	
PHF	.775	.909	.899	.827	.899	.927	.897	.417	.905

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles

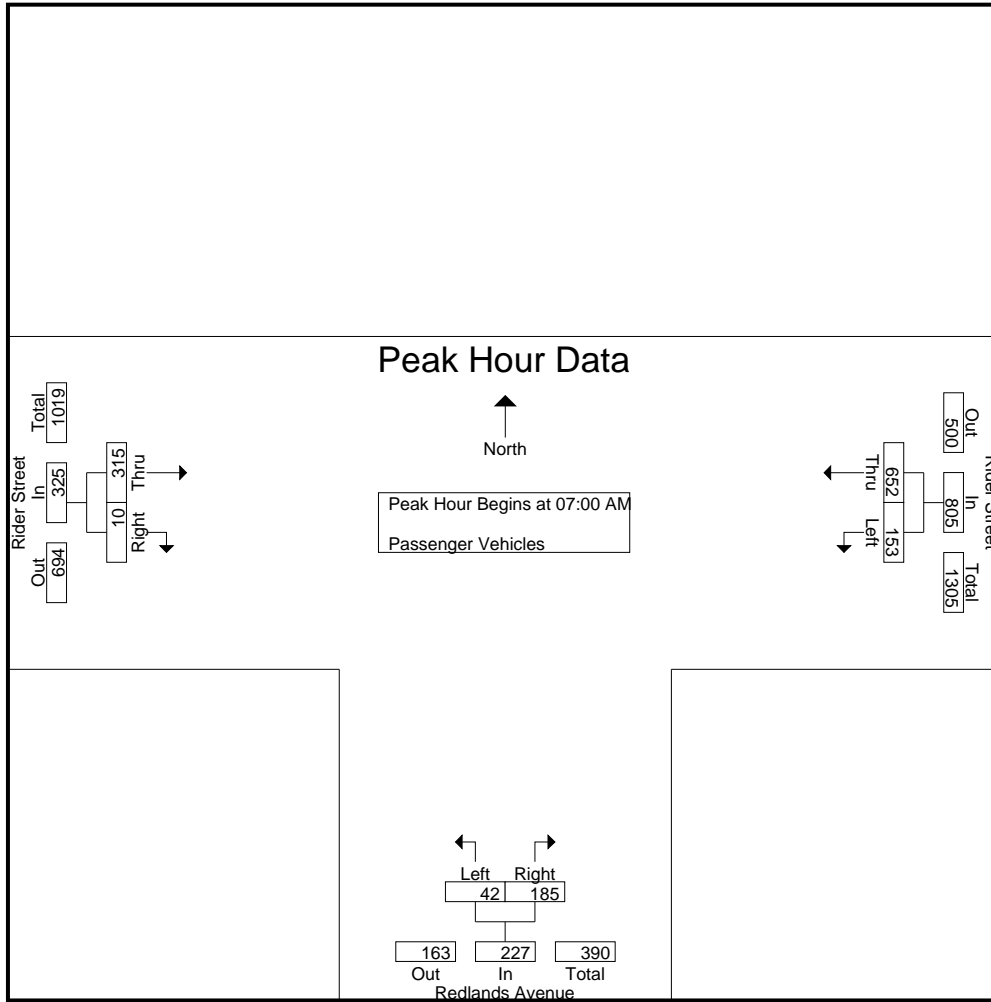
Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	19	154	173	9	42	51	70	1	71	295
07:15 AM	40	156	196	10	49	59	72	2	74	329
07:30 AM	44	179	223	10	52	62	83	6	89	374
07:45 AM	50	163	213	13	42	55	90	1	91	359
Total	153	652	805	42	185	227	315	10	325	1357
08:00 AM	43	107	150	13	15	28	42	1	43	221
08:15 AM	25	76	101	3	26	29	38	1	39	169
08:30 AM	24	56	80	8	16	24	27	2	29	133
08:45 AM	16	55	71	4	11	15	28	2	30	116
Total	108	294	402	28	68	96	135	6	141	639
Grand Total	261	946	1207	70	253	323	450	16	466	1996
Apprch %	21.6	78.4		21.7	78.3		96.6	3.4		
Total %	13.1	47.4	60.5	3.5	12.7	16.2	22.5	0.8	23.3	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	19	154	173	9	42	51	70	1	71	295
07:15 AM	40	156	196	10	49	59	72	2	74	329
07:30 AM	44	<b>179</b>	<b>223</b>	10	<b>52</b>	<b>62</b>	83	<b>6</b>	89	<b>374</b>
07:45 AM	<b>50</b>	163	213	<b>13</b>	42	55	<b>90</b>	1	<b>91</b>	359
Total Volume	153	652	805	42	185	227	315	10	325	1357
% App. Total	19	81		18.5	81.5		96.9	3.1		
PHF	.765	.911	.902	.808	.889	.915	.875	.417	.893	.907



City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	19	154	173	9	42	51	70	1	71
+15 mins.	40	156	196	10	49	59	72	2	74
+30 mins.	44	<b>179</b>	<b>223</b>	10	<b>52</b>	<b>62</b>	83	<b>6</b>	89
+45 mins.	<b>50</b>	163	213	<b>13</b>	42	55	<b>90</b>	1	<b>91</b>
Total Volume	153	652	805	42	185	227	315	10	325
% App. Total	19	81		18.5	81.5		96.9	3.1	
PHF	.765	.911	.902	.808	.889	.915	.875	.417	.893

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

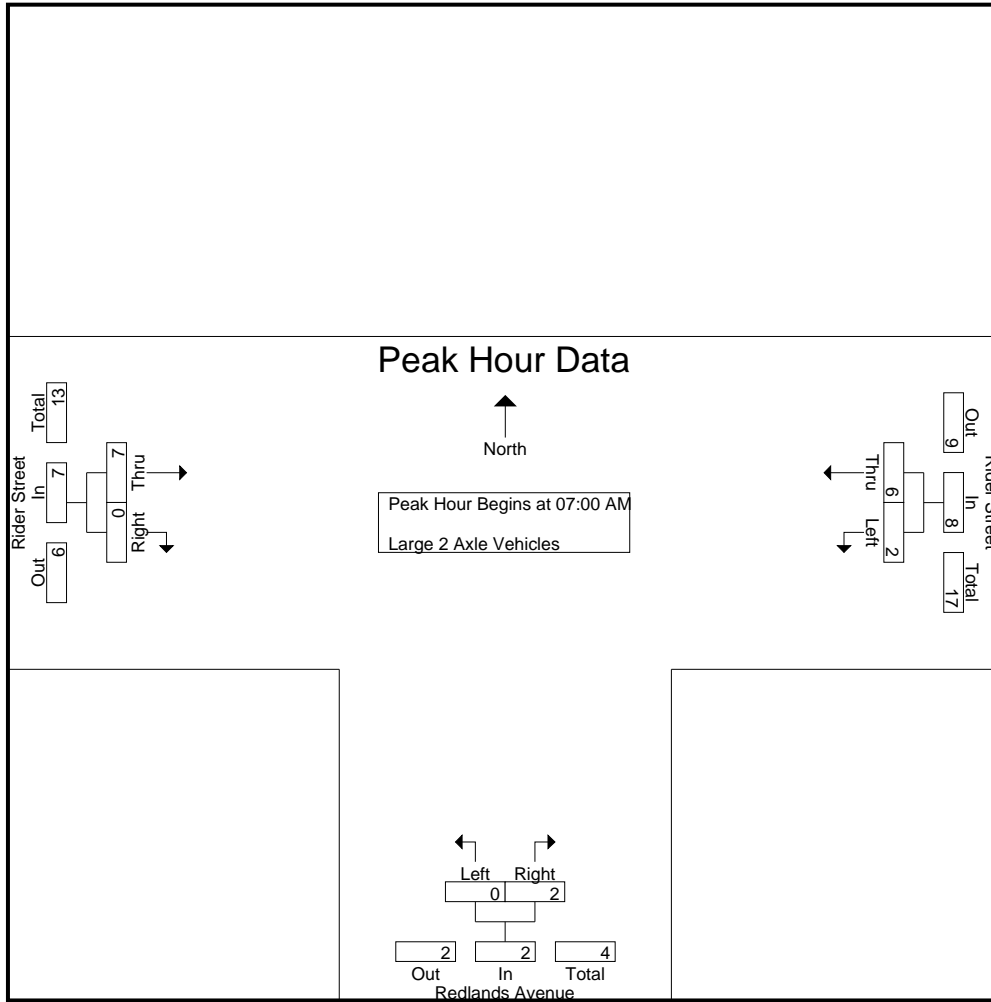
Groups Printed- Large 2 Axle Vehicles

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	2	0	2	2
07:15 AM	1	2	3	0	2	2	3	0	3	8
07:30 AM	1	2	3	0	0	0	2	0	2	5
07:45 AM	0	2	2	0	0	0	0	0	0	2
Total	2	6	8	0	2	2	7	0	7	17
08:00 AM	0	2	2	1	0	1	1	0	1	4
08:15 AM	1	1	2	0	1	1	1	0	1	4
08:30 AM	0	0	0	0	0	0	1	1	2	2
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total	1	4	5	1	1	2	3	1	4	11
Grand Total	3	10	13	1	3	4	10	1	11	28
Apprch %	23.1	76.9		25	75		90.9	9.1		
Total %	10.7	35.7	46.4	3.6	10.7	14.3	35.7	3.6	39.3	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	2	0	2	2
07:15 AM	1	2	3	0	2	2	3	0	3	8
07:30 AM	1	2	3	0	0	0	2	0	2	5
07:45 AM	0	2	2	0	0	0	0	0	0	2
Total Volume	2	6	8	0	2	2	7	0	7	17
% App. Total	25	75		0	100		100	0		
PHF	.500	.750	.667	.000	.250	.250	.583	.000	.583	.531

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	1	2	3	0	2	2	3	0	3
+30 mins.	1	2	3	0	0	0	2	0	2
+45 mins.	0	2	2	0	0	0	0	0	0
Total Volume	2	6	8	0	2	2	7	0	7
% App. Total	25	75		0	100		100	0	
PHF	.500	.750	.667	.000	.250	.250	.583	.000	.583

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

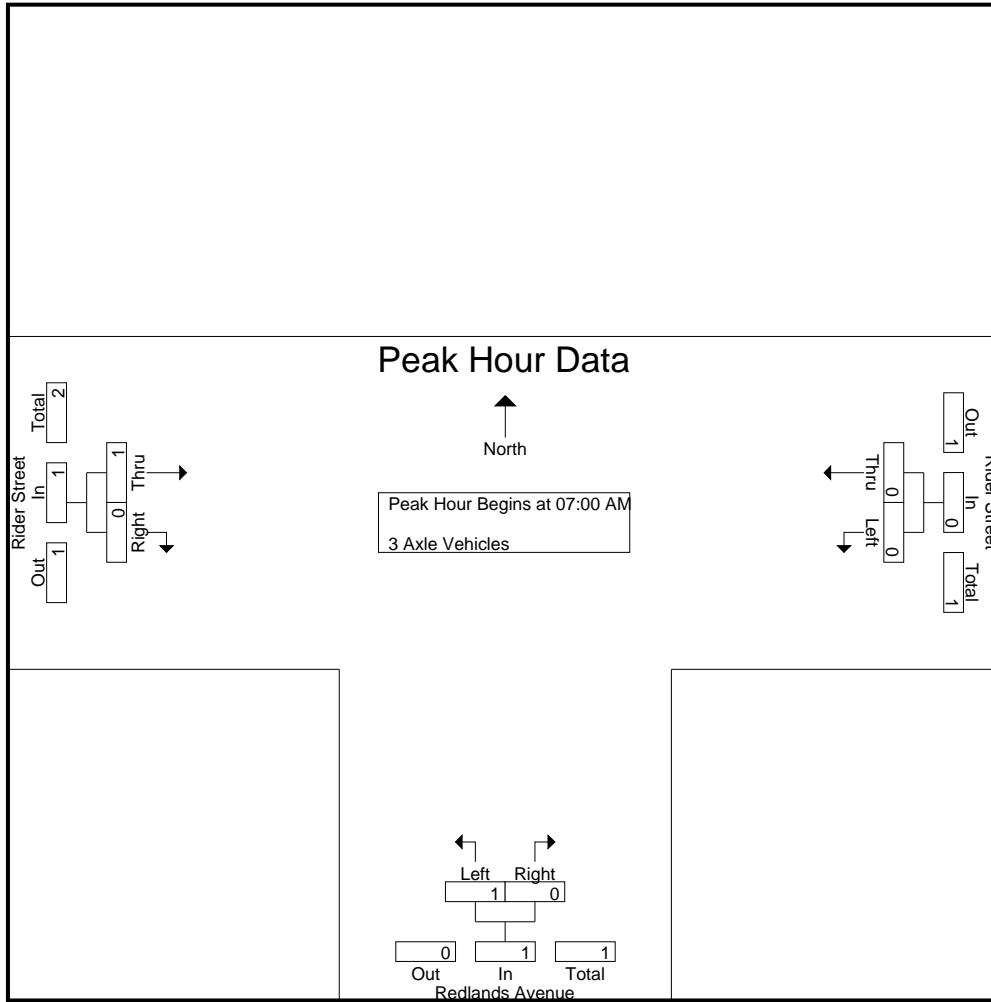
Groups Printed- 3 Axle Vehicles

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	1	1	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	1	0	1	1	2
Total	0	0	0	1	1	2	0	2	2	4
Grand Total	0	0	0	2	1	3	1	2	3	6
Apprch %	0	0		66.7	33.3		33.3	66.7		
Total %	0	0		33.3	16.7	50	16.7	33.3	50	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	1	0	1	2
% App. Total	0	0		100	0		100	0		
PHF	.000	.000	.000	.250	.000	.250	.250	.000	.250	.500

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	1	0	1
% App. Total	0	0	0	100	0	100	100	0	100
PHF	.000	.000	.000	.250	.000	.250	.250	.000	.250

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

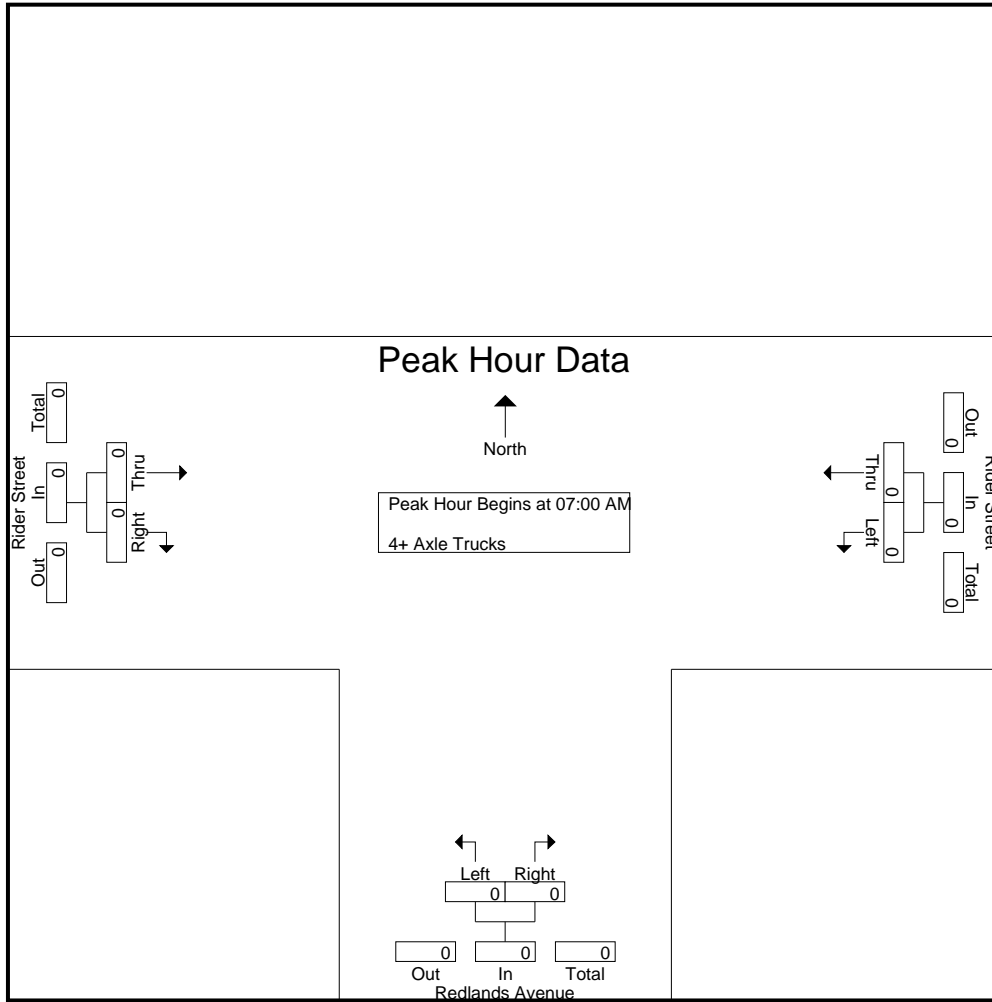
Groups Printed- 4+ Axle Trucks

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	2	0	2	2
Grand Total	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0		0	0		100	0		
Total %	0	0		0	0		100	0	100	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider AM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	15	62	77	11	23	34	100	10	110	221
04:15 PM	20	63	83	6	21	27	108	8	116	226
04:30 PM	24	76	100	9	24	33	121	10	131	264
04:45 PM	25	81	106	6	20	26	115	10	125	257
Total	84	282	366	32	88	120	444	38	482	968
05:00 PM	18	70	88	5	27	32	100	11	111	231
05:15 PM	14	66	80	9	32	41	92	5	97	218
05:30 PM	21	89	110	6	28	34	134	8	142	286
05:45 PM	13	81	94	10	16	26	105	6	111	231
Total	66	306	372	30	103	133	431	30	461	966
Grand Total	150	588	738	62	191	253	875	68	943	1934
Apprch %	20.3	79.7		24.5	75.5		92.8	7.2		
Total %	7.8	30.4	38.2	3.2	9.9	13.1	45.2	3.5	48.8	
Passenger Vehicles	146	577	723	62	189	251	861	66	927	1901
% Passenger Vehicles	97.3	98.1	98	100	99	99.2	98.4	97.1	98.3	98.3
Large 2 Axle Vehicles	3	10	13	0	2	2	10	2	12	27
% Large 2 Axle Vehicles										
3 Axle Vehicles	1	1	2	0	0	0	2	0	2	4
% 3 Axle Vehicles	0.7	0.2	0.3	0	0	0	0.2	0	0.2	0.2
4+ Axle Trucks	0	0	0	0	0	0	2	0	2	2
% 4+ Axle Trucks	0	0	0	0	0	0	0.2	0	0.2	0.1

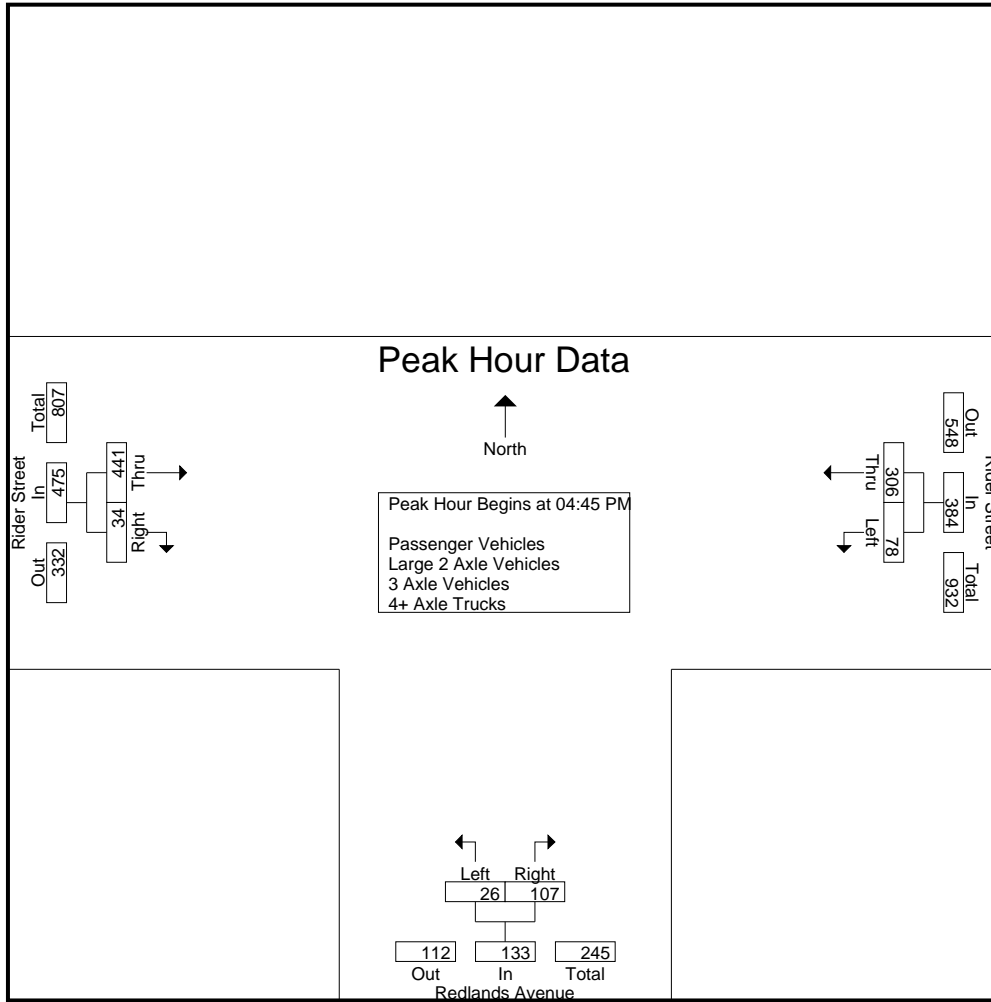
Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:45 PM	<b>25</b>	81	106	6	20	26	115	10	125	257
05:00 PM	18	70	88	5	27	32	100	<b>11</b>	111	231
05:15 PM	14	66	80	<b>9</b>	<b>32</b>	<b>41</b>	92	5	97	218
05:30 PM	21	<b>89</b>	<b>110</b>	6	28	34	<b>134</b>	8	<b>142</b>	<b>286</b>
Total Volume	78	306	384	26	107	133	441	34	475	992
% App. Total	20.3	79.7		19.5	80.5		92.8	7.2		
PHF	.780	.860	.873	.722	.836	.811	.823	.773	.836	.867

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 04:45 PM



City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:15 PM		
+0 mins.	<b>25</b>	81	106	6	20	26	108	8	116
+15 mins.	18	70	88	5	27	32	<b>121</b>	10	<b>131</b>
+30 mins.	14	66	80	<b>9</b>	<b>32</b>	<b>41</b>	115	10	125
+45 mins.	21	<b>89</b>	<b>110</b>	6	28	34	100	<b>11</b>	111
Total Volume	78	306	384	26	107	133	444	39	483
% App. Total	20.3	79.7		19.5	80.5		91.9	8.1	
PHF	.780	.860	.873	.722	.836	.811	.917	.886	.922

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

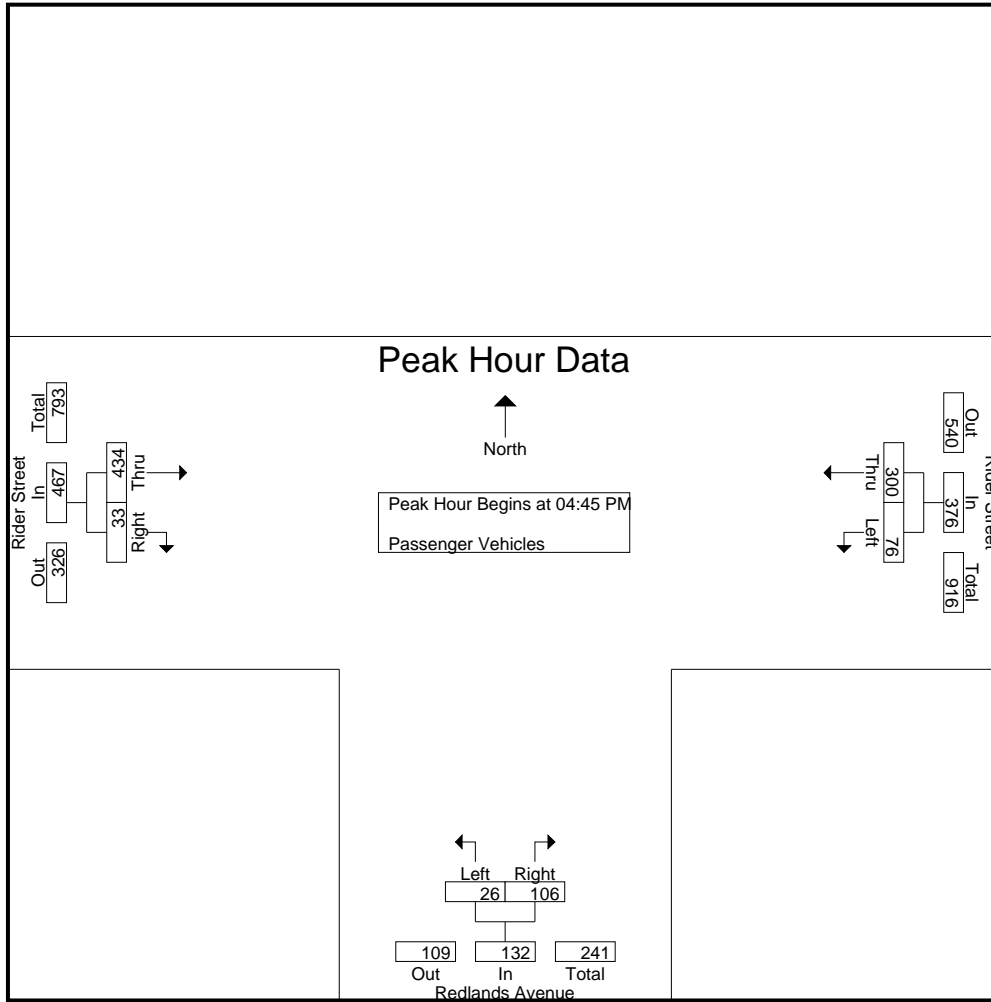
Groups Printed- Passenger Vehicles

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	15	61	76	11	23	34	100	10	110	220
04:15 PM	19	62	81	6	20	26	108	8	116	223
04:30 PM	23	74	97	9	24	33	116	10	126	256
04:45 PM	25	78	103	6	20	26	110	9	119	248
Total	82	275	357	32	87	119	434	37	471	947
05:00 PM	18	70	88	5	26	31	99	11	110	229
05:15 PM	12	66	78	9	32	41	92	5	97	216
05:30 PM	21	86	107	6	28	34	133	8	141	282
05:45 PM	13	80	93	10	16	26	103	5	108	227
Total	64	302	366	30	102	132	427	29	456	954
Grand Total	146	577	723	62	189	251	861	66	927	1901
Apprch %	20.2	79.8		24.7	75.3		92.9	7.1		
Total %	7.7	30.4	38	3.3	9.9	13.2	45.3	3.5	48.8	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	<b>25</b>	78	103	6	20	26	110	9	119	248
05:00 PM	18	70	88	5	26	31	99	<b>11</b>	110	229
05:15 PM	12	66	78	<b>9</b>	<b>32</b>	<b>41</b>	92	5	97	216
05:30 PM	21	<b>86</b>	<b>107</b>	6	28	34	<b>133</b>	8	<b>141</b>	<b>282</b>
Total Volume	76	300	376	26	106	132	434	33	467	975
% App. Total	20.2	79.8		19.7	80.3		92.9	7.1		
PHF	.760	.872	.879	.722	.828	.805	.816	.750	.828	.864

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	<b>25</b>	78	103	6	20	26	110	9	119
+15 mins.	18	70	88	5	26	31	99	<b>11</b>	110
+30 mins.	12	66	78	<b>9</b>	<b>32</b>	<b>41</b>	92	5	97
+45 mins.	21	<b>86</b>	<b>107</b>	6	28	34	<b>133</b>	8	<b>141</b>
Total Volume	76	300	376	26	106	132	434	33	467
% App. Total	20.2	79.8		19.7	80.3		92.9	7.1	
PHF	.760	.872	.879	.722	.828	.805	.816	.750	.828

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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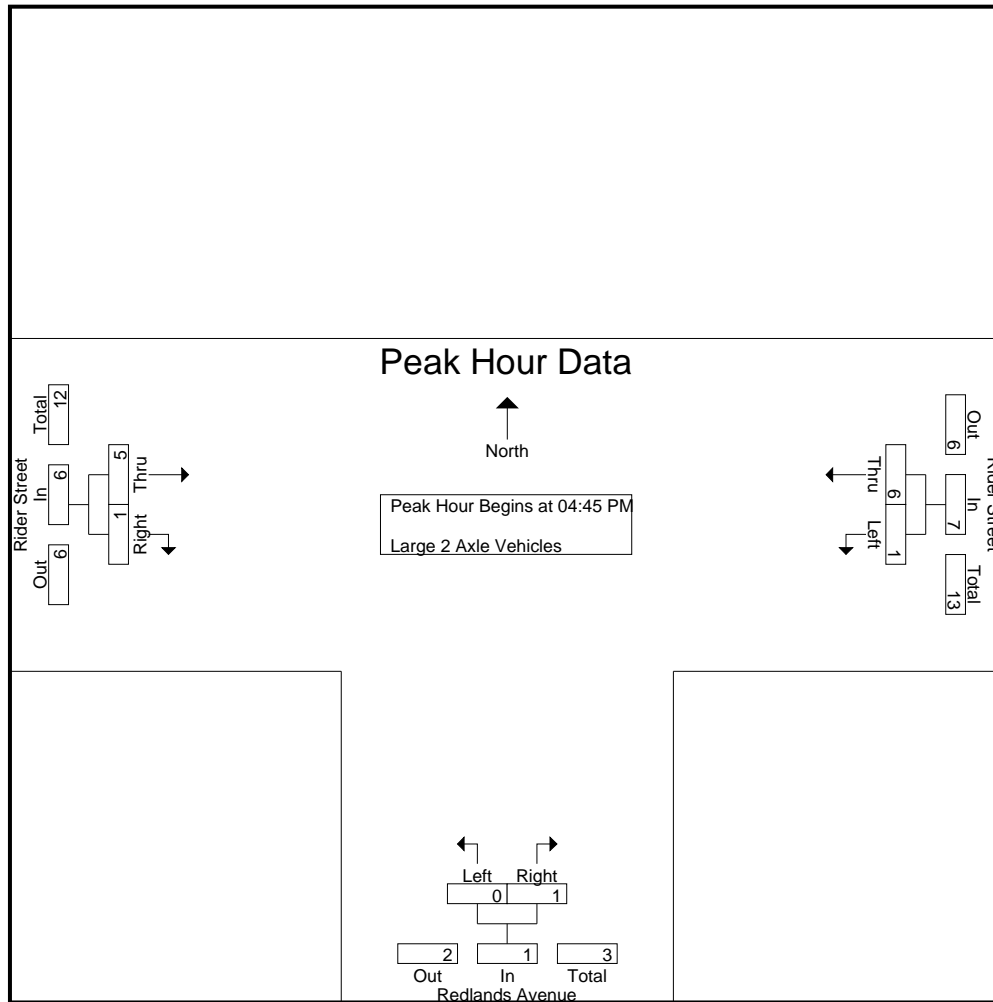
Groups Printed- Large 2 Axle Vehicles

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	1	1	0	0	0	0	0	0	1
04:15 PM	1	1	2	0	1	1	0	0	0	3
04:30 PM	1	1	2	0	0	0	3	0	3	5
04:45 PM	0	3	3	0	0	0	4	1	5	8
Total	2	6	8	0	1	1	7	1	8	17
05:00 PM	0	0	0	0	1	1	0	0	0	1
05:15 PM	1	0	1	0	0	0	0	0	0	1
05:30 PM	0	3	3	0	0	0	1	0	1	4
05:45 PM	0	1	1	0	0	0	2	1	3	4
Total	1	4	5	0	1	1	3	1	4	10
Grand Total	3	10	13	0	2	2	10	2	12	27
Apprch %	23.1	76.9		0	100		83.3	16.7		
Total %	11.1	37	48.1	0	7.4	7.4	37	7.4	44.4	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	3	3	0	0	0	4	1	5	8
05:00 PM	0	0	0	0	1	1	0	0	0	1
05:15 PM	1	0	1	0	0	0	0	0	0	1
05:30 PM	0	3	3	0	0	0	1	0	1	4
Total Volume	1	6	7	0	1	1	5	1	6	14
% App. Total	14.3	85.7		0	100		83.3	16.7		
PHF	.250	.500	.583	.000	.250	.250	.313	.250	.300	.438

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	<b>3</b>	<b>3</b>	0	0	0	<b>4</b>	<b>1</b>	<b>5</b>
+15 mins.	0	0	0	0	<b>1</b>	<b>1</b>	0	0	0
+30 mins.	<b>1</b>	0	1	0	0	0	0	0	0
+45 mins.	0	3	3	0	0	0	1	0	1
Total Volume	1	6	7	0	1	1	5	1	6
% App. Total	14.3	85.7		0	100		83.3	16.7	
PHF	.250	.500	.583	.000	.250	.250	.313	.250	.300

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
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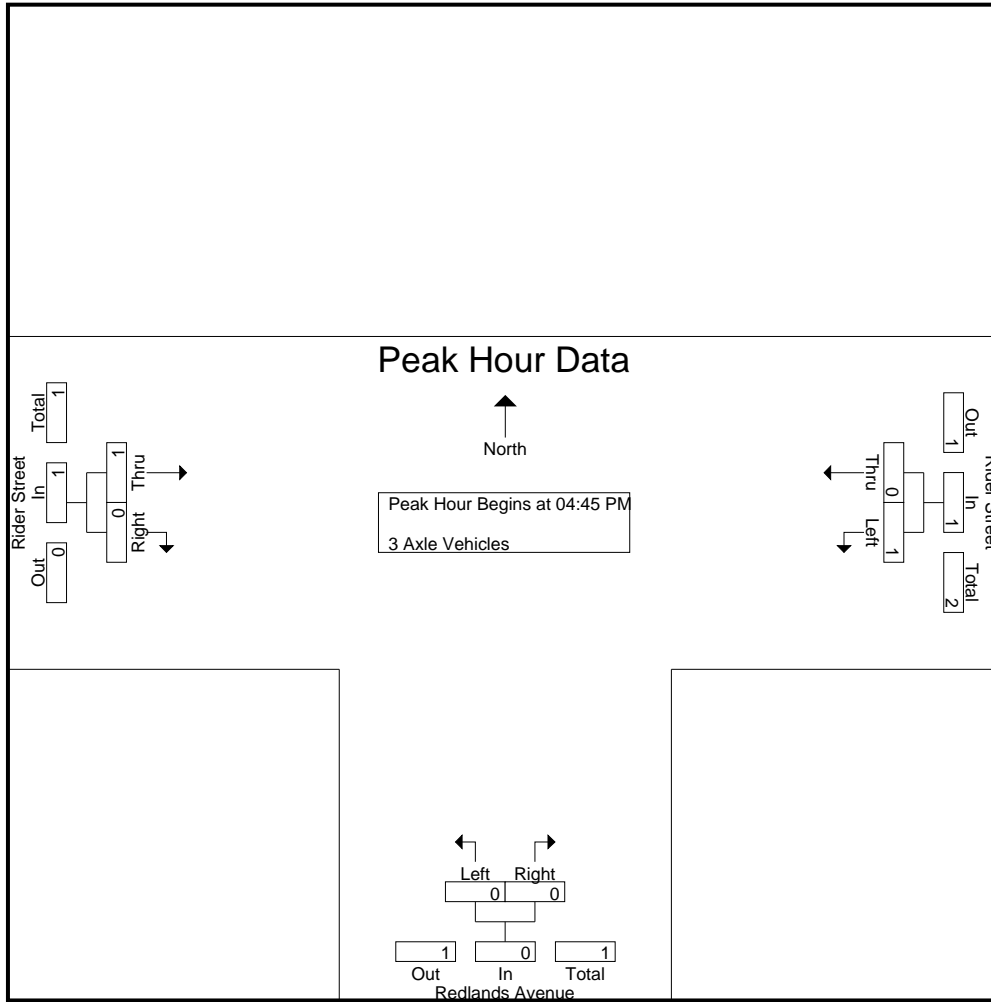
Groups Printed- 3 Axle Vehicles

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	1	0	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	1	0	1	2
Grand Total	1	1	2	0	0	0	2	0	2	4
Apprch %	50	50		0	0		100	0		
Total %	25	25	50	0	0	0	50	0	50	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	1	0	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	1	0	1	2
% App. Total	100	0		0	0		100	0		
PHF	.250	.000	.250	.000	.000	.000	.250	.000	.250	.500

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	1	0	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	1	0	1	0	0	0	1	0	1
% App. Total	100	0	100	0	0	0	100	0	100
PHF	.250	.000	.250	.000	.000	.000	.250	.000	.250

City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 1

Groups Printed- 4+ Axle Trucks

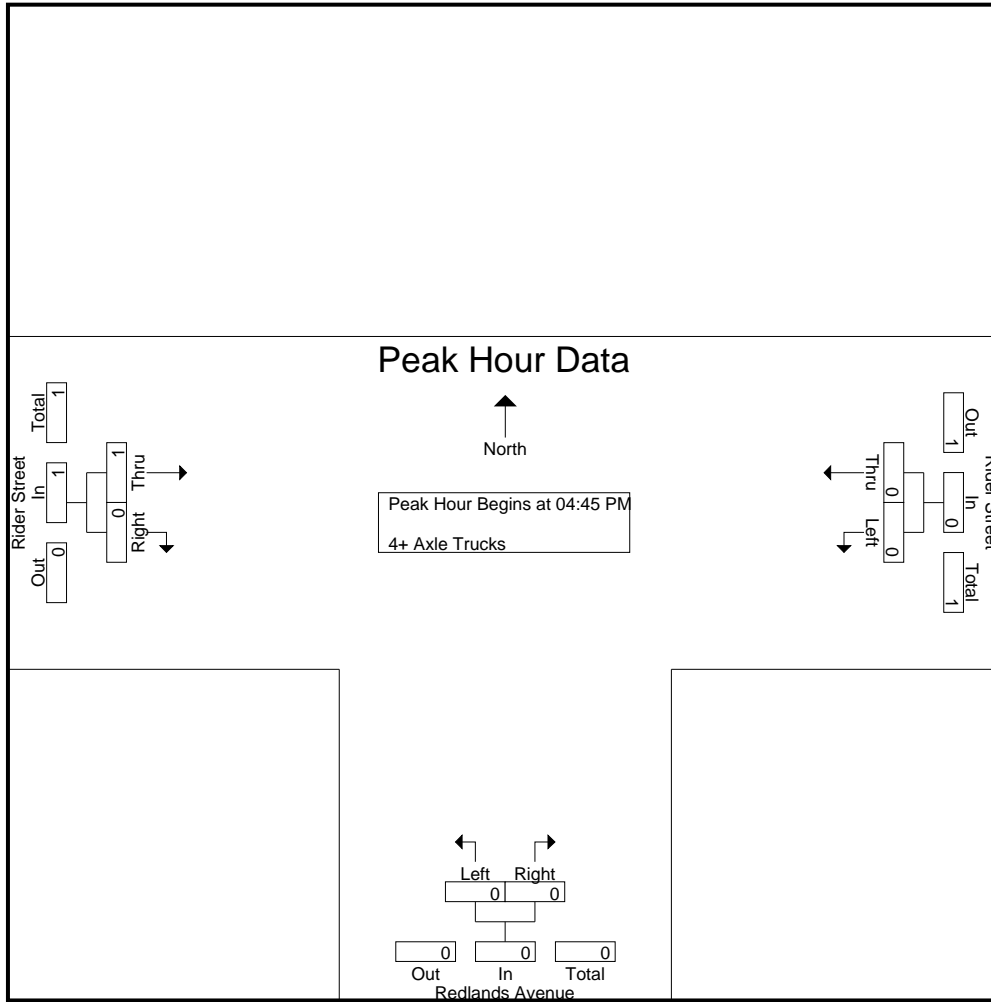
Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	2	0	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0		0	0		100	0		
Total %	0	0		0	0		100	0	100	

Start Time	Rider Street Westbound			Redlands Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250



City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : 18\_PER\_Redlands\_Rider PM  
 Site Code : 05118431  
 Start Date : 5/24/2018  
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	100	0	100
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

Location: City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street



Date: 5/24/2018  
 Day: Thursday

**PEDESTRIANS**

	North Leg Redlands Avenue	East Leg Rider Street	South Leg Redlands Avenue	West Leg Rider Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	2	0	2
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	2	0	2

	North Leg Redlands Avenue	East Leg Rider Street	South Leg Redlands Avenue	West Leg Rider Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	0	0	0

Location: City of Perris  
 N/S: Redlands Avenue  
 E/W: Rider Street



Date: 5/24/2018  
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound Rider Street			Northbound Redlands Avenue			Eastbound Rider Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Redlands Avenue			Westbound Rider Street			Northbound Redlands Avenue			Eastbound Rider Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

# Counts Unlimited, Inc.

PO Box 1178  
Corona, CA 92878  
Phone: (951) 268-6268  
Site Code: 051-18431

City of Perris  
Harley Knox Boulevard  
W/ Perris Boulevard  
24 Hour Directional Classification Count

email: counts@countsunlimited.com

**Eastbound**

Start Time	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	31	5	0	2	2	0	0	4	0	0	0	1	46
01:00	39	4	1	0	2	0	0	3	0	0	0	0	49
02:00	47	11	0	1	3	0	0	2	0	0	0	0	67
03:00	71	15	0	2	4	0	0	2	0	0	0	0	96
04:00	123	24	2	4	9	0	0	1	0	0	0	0	169
05:00	110	26	0	11	6	0	0	5	0	0	0	0	163
06:00	92	34	0	13	6	0	3	6	0	0	0	0	159
07:00	<b>177</b>	<b>51</b>	1	10	3	<b>1</b>	<b>10</b>	3	<b>2</b>	0	0	0	<b>261</b>
08:00	118	40	3	16	5	0	5	4	0	<b>1</b>	0	1	197
09:00	82	29	<b>5</b>	9	4	0	5	7	0	0	0	0	144
10:00	98	27	4	<b>17</b>	14	0	7	<b>20</b>	0	1	0	0	199
11:00	121	37	3	11	<b>18</b>	0	5	15	0	0	0	0	224
12 PM	182	55	<b>5</b>	11	<b>18</b>	<b>1</b>	6	<b>13</b>	0	0	0	0	298
13:00	220	58	2	18	9	1	5	6	0	0	0	0	322
14:00	204	79	2	26	11	0	6	8	0	0	0	0	346
15:00	9	<b>83</b>	2	31	8	1	<b>7</b>	5	0	0	0	<b>1</b>	<b>487</b>
16:00	4	76	1	<b>32</b>	5	0	3	6	0	0	0	0	381
17:00	2	72	0	28	4	0	4	0	0	<b>1</b>	0	0	374
18:00	7	57	0	13	7	0	2	3	0	0	0	0	303
19:00	9	47	1	11	5	0	4	3	<b>1</b>	0	0	0	261
20:00	8	37	2	7	5	0	1	8	0	0	0	0	202
21:00	4	98	0	3	9	0	1	8	0	0	0	0	145
22:00	2	105	0	4	3	0	1	4	0	0	0	0	138
23:00	5	9	0	1	11	0	0	5	0	0	0	0	86
<b>Total</b>	127	917	34	281	171	4	75	141	3	3	0	3	5117
<b>Percent</b>	2.5%	17.9%	0.7%	5.5%	3.3%	0.1%	1.5%	2.8%	0.1%	0.1%	0.0%	0.1%	
<b>AM Peak</b>	11:00	07:00	09:00	10:00	11:00	07:00	07:00	10:00	07:00	08:00	00:00	00:00	07:00
<b>Vol.</b>	14	177	5	17	18	1	10	20	2	1	1	1	261
<b>PM Peak</b>	14:00	15:00	12:00	16:00	12:00	12:00	15:00	12:00	19:00	17:00	15:00	15:00	15:00
<b>Vol.</b>	10	340	5	32	18	1	7	13	1	1	1	1	487
<b>Grand Total</b>	127	3358	34	281	171	4	75	141	3	3	0	3	5117
<b>Percent</b>	2.5%	65.6%	0.7%	5.5%	3.3%	0.1%	1.5%	2.8%	0.1%	0.1%	0.0%	0.1%	

# Counts Unlimited, Inc.

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PER001  
 Site Code: 051-18431

City of Perris  
 Harley Knox Boulevard  
 W/ Perris Boulevard  
 24 Hour Directional Classification Count  
 Westbound

Start Time	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	14	3	1	0	3	0	1	6	0	0	0	0	31
01:00	3	1	0	0	3	0	2	3	0	0	1	0	28
02:00	7	6	2	0	10	0	1	4	0	0	0	0	46
03:00	3	15	3	5	4	0	2	3	0	0	0	0	72
04:00	8	31	0	10	9	0	0	6	0	0	0	0	210
05:00	3	53	2	22	6	0	0	1	0	0	0	0	250
06:00	9	100	3	41	17	0	3	7	0	0	0	0	568
07:00	11	106	0	18	6	0	8	4	0	0	0	0	625
08:00	10	177	2	22	11	1	2	9	0	0	0	0	286
09:00	5	91	5	12	5	0	4	6	0	0	0	0	160
10:00	8	98	5	14	14	0	3	13	0	0	0	0	192
11:00	10	84	3	14	12	2	8	21	0	0	0	0	185
12 PM	8	106	1	10	13	1	3	13	0	0	0	0	192
13:00	7	149	6	21	15	1	4	15	0	0	0	0	256
14:00	13	188	2	17	16	0	3	10	0	0	0	0	328
15:00	6	212	1	17	7	0	7	3	0	0	0	0	312
16:00	9	214	0	13	10	0	4	3	0	0	0	0	301
17:00	18	180	0	15	14	0	3	6	1	0	0	0	282
18:00	4	128	0	12	8	1	4	4	0	0	1	0	194
19:00	9	84	1	11	8	0	1	4	0	0	0	0	138
20:00	4	56	0	6	4	0	1	1	0	0	0	0	89
21:00	5	45	0	5	3	0	2	9	0	0	0	0	75
22:00	9	70	0	2	10	0	1	5	0	0	0	0	112
23:00	6	40	0	1	10	0	0	8	0	0	0	0	74
Total	178	3173	37	288	218	6	67	164	1	0	2	0	5006
Percent	3.6%	63.4%	0.7%	5.8%	4.4%	0.1%	1.3%	3.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	09:00	06:00	06:00	11:00	07:00	11:00	0.0%	0.0%	01:00		07:00
Vol.	11	472	5	41	17	2	8	21			1		625
PM Peak	17:00	16:00	13:00	13:00	14:00	12:00	15:00	13:00	17:00	18:00	18:00		14:00
Vol.	18	214	6	21	16	1	7	15	1	1	1		328
Grand Total	178	3173	37	288	218	6	67	164	1	0	2	0	5006
Percent	3.6%	63.4%	0.7%	5.8%	4.4%	0.1%	1.3%	3.3%	0.0%	0.0%	0.0%	0.0%	

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City of Perris  
Harley Knox Boulevard  
W/ Perris Boulevard  
24 Hour Directional Classification Count

PER001  
Site Code: 051-18431

**Eastbound, Westbound**

Start Time	Cars & Trailers		2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
	Bikes	Trailers												
05/24/18	4	45	8	1	2	5	0	1	10	0	0	0	1	77
01:00	3	54	5	1	0	5	0	2	6	0	0	1	0	77
02:00	10	63	17	2	1	13	0	1	6	0	0	0	0	113
03:00	5	108	30	3	7	8	0	2	5	0	0	0	0	168
04:00	14	269	55	2	14	18	0	0	7	0	0	0	0	379
05:00	8	273	79	2	33	12	0	0	6	0	0	0	0	413
06:00	14	480	134	3	54	23	0	6	13	0	0	0	0	727
07:00	14	649	157	1	28	9	1	18	7	2	0	0	0	886
08:00	14	295	92	5	38	16	1	7	13	0	1	0	1	483
09:00	8	173	61	10	21	9	0	9	13	0	0	0	0	304
10:00	19	196	64	9	31	28	0	10	33	0	1	0	0	391
11:00	24	205	68	6	25	30	2	13	36	0	0	0	0	409
12 PM	15	288	92	6	21	31	2	9	26	0	0	0	0	490
13:00	10	369	96	8	39	24	2	9	21	0	0	0	0	578
14:00	23	392	158	4	43	27	0	9	18	0	0	0	0	674
15:00	15	552	142	3	48	15	1	14	8	0	0	0	1	799
16:00	13	468	124	1	45	15	0	7	9	0	0	0	0	682
17:00	20	443	117	0	43	18	0	7	6	1	1	0	0	656
18:00	11	342	89	0	25	15	1	6	7	0	0	1	0	497
19:00	18	264	67	2	22	13	0	5	7	1	0	0	0	399
20:00	12	190	54	2	13	9	0	2	9	0	0	0	0	291
21:00	9	143	28	0	8	12	0	3	17	0	0	0	0	220
22:00	11	175	34	0	6	13	0	2	9	0	0	0	0	250
23:00	11	95	18	0	2	21	0	0	13	0	0	0	0	160
<b>Total</b>	305	6531	1789	71	569	389	10	142	305	4	3	2	3	10123
<b>Percent</b>	3.0%	64.5%	17.7%	0.7%	5.6%	3.8%	0.1%	1.4%	3.0%	0.0%	0.0%	0.0%	0.0%	
<b>AM Peak</b>	11:00	07:00	07:00	09:00	06:00	11:00	11:00	07:00	11:00	07:00	08:00	01:00	00:00	07:00
<b>Vol.</b>	24	649	157	10	54	30	2	18	36	2	1	1	1	886
<b>PM Peak</b>	14:00	15:00	14:00	13:00	15:00	12:00	12:00	15:00	12:00	17:00	17:00	18:00	15:00	15:00
<b>Vol.</b>	23	552	158	8	48	31	2	14	26	1	1	1	1	799
<b>Grand Total</b>	305	6531	1789	71	569	389	10	142	305	4	3	2	3	10123
<b>Percent</b>	3.0%	64.5%	17.7%	0.7%	5.6%	3.8%	0.1%	1.4%	3.0%	0.0%	0.0%	0.0%	0.0%	

# Counts Unlimited, Inc.

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Site Code: 051-18431

email: counts@countsunlimited.com

City of Perris  
Perris Boulevard  
N/ Rider Street  
24 Hour Directional Classification Count  
Northbound

Start Time	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	0	14	0	5	0	0	0	0	0	0	0	0	71
01:00	0	13	1	4	0	0	7	0	0	0	0	0	59
02:00	3	13	1	6	4	0	8	1	0	0	0	0	87
03:00	2	84	3	15	1	0	<b>15</b>	2	0	0	0	0	286
04:00	0	142	5	43	0	0	12	1	0	0	0	0	595
05:00	5	171	9	62	4	1	10	2	0	0	0	0	659
06:00	2	223	9	<b>75</b>	2	1	8	2	0	0	0	0	837
07:00	10	<b>259</b>	5	71	5	0	12	2	0	0	0	0	<b>1021</b>
08:00	3	399	<b>12</b>	43	5	0	5	2	0	0	0	0	640
09:00	9	333	6	47	<b>10</b>	0	4	2	0	0	0	0	581
10:00	7	397	10	54	9	<b>3</b>	2	1	0	<b>1</b>	<b>1</b>	<b>1</b>	656
11:00	<b>12</b>	329	8	42	3	1	7	<b>7</b>	0	0	0	0	544
12 PM	6	352	7	41	5	<b>1</b>	4	3	0	0	0	0	590
13:00	<b>7</b>	<b>493</b>	<b>8</b>	42	<b>8</b>	0	<b>9</b>	2	<b>1</b>	<b>1</b>	0	0	<b>764</b>
14:00	4	454	5	44	4	1	8	<b>5</b>	0	1	0	0	693
15:00	5	463	6	<b>50</b>	2	0	8	2	1	0	0	0	718
16:00	1	442	3	35	1	1	2	0	0	0	0	<b>1</b>	670
17:00	3	<b>492</b>	4	32	0	0	5	0	0	0	0	0	743
18:00	4	343	2	20	2	0	6	0	0	0	0	0	524
19:00	4	317	1	28	3	0	2	0	0	0	0	0	484
20:00	5	288	2	18	2	0	3	0	0	0	0	0	435
21:00	3	274	1	17	3	0	1	1	0	0	0	0	392
22:00	1	182	0	7	0	0	0	0	0	0	0	0	248
23:00	0	86	1	12	0	0	0	1	0	0	0	0	132
<b>Total</b>	96	7904	109	813	73	9	138	36	2	3	1	2	12429
<b>Percent</b>	0.8%	63.6%	0.9%	6.5%	0.6%	0.1%	1.1%	0.3%	0.0%	0.0%	0.0%	0.0%	
<b>AM Peak</b>	11:00	07:00	08:00	06:00	09:00	10:00	03:00	11:00	10:00	10:00	10:00	10:00	07:00
<b>Vol.</b>	12	657	12	75	10	3	15	7	7	1	1	1	1021
<b>PM Peak</b>	13:00	13:00	13:00	15:00	13:00	12:00	13:00	14:00	13:00	13:00	16:00	16:00	13:00
<b>Vol.</b>	7	493	8	50	8	1	9	5	1	1	1	1	764
<b>Grand Total</b>	96	7904	109	813	73	9	138	36	2	3	1	2	12429
<b>Percent</b>	0.8%	63.6%	0.9%	6.5%	0.6%	0.1%	1.1%	0.3%	0.0%	0.0%	0.0%	0.0%	

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City of Perris  
Perris Boulevard  
N/ Rider Street  
24 Hour Directional Classification Count  
Southbound

PER002  
Site Code: 051-18431

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	0	103	20	0	7	0	0	1	1	0	0	0	0	132
01:00	0	49	10	2	4	10	0	0	0	0	0	0	0	75
02:00	1	42	11	3	3	8	0	0	2	0	0	0	0	70
03:00	0	59	18	1	4	14	0	2	0	0	0	0	0	98
04:00	0	164	50	2	8	<b>19</b>	0	0	1	0	0	0	0	244
05:00	3	185	49	2	13	9	0	4	1	0	<b>1</b>	0	0	267
06:00	1	189	64	6	14	7	0	5	<b>5</b>	0	0	0	0	291
07:00	0	289	91	5	21	6	0	<b>6</b>	2	0	0	0	<b>1</b>	421
08:00	<b>4</b>	273	80	<b>10</b>	24	2	0	4	0	0	0	0	0	397
09:00	4	319	88	7	25	3	0	3	4	0	0	0	0	453
10:00	4	339	<b>101</b>	7	26	4	0	4	5	0	0	0	0	490
11:00	3	<b>347</b>	101	9	<b>30</b>	6	0	4	3	0	0	0	0	<b>503</b>
12 PM	5	427	141	<b>8</b>	45	1	<b>1</b>	6	<b>4</b>	0	0	0	0	638
13:00	7	542	151	3	36	2	1	<b>7</b>	0	0	0	<b>1</b>	0	750
14:00	5	607	187	5	51	<b>5</b>	0	1	0	<b>1</b>	0	0	0	862
15:00	6	570	187	4	48	5	0	5	1	0	0	0	0	826
16:00	<b>10</b>	<b>658</b>	<b>192</b>	2	<b>55</b>	3	0	0	0	0	<b>1</b>	0	0	<b>921</b>
17:00	10	619	186	3	50	1	0	2	1	0	0	0	0	872
18:00	2	576	159	2	43	1	0	2	1	0	0	0	0	786
19:00	3	446	123	5	27	2	0	0	1	0	0	0	0	607
20:00	5	357	95	3	18	2	0	1	1	0	0	0	0	482
21:00	1	305	75	6	15	0	0	1	1	0	0	0	0	404
22:00	3	285	67	0	9	0	0	0	0	0	0	0	0	364
23:00	0	173	31	1	6	0	0	2	0	0	0	0	0	213
<b>Total</b>	77	7923	2277	96	582	110	2	60	34	1	2	1	1	11166
<b>Percent</b>	0.7%	71.0%	20.4%	0.9%	5.2%	1.0%	0.0%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	
<b>AM Peak</b>	08:00	11:00	10:00	08:00	11:00	04:00		07:00	06:00		05:00		07:00	11:00
<b>Vol.</b>	4	347	101	10	30	19		6	5		1		1	503
<b>PM Peak</b>	16:00	16:00	16:00	12:00	16:00	14:00	12:00	13:00	12:00	14:00	16:00	13:00	1	16:00
<b>Vol.</b>	10	658	192	8	55	5	1	7	4	1	1	1	1	921
<b>Grand Total</b>	77	7923	2277	96	582	110	2	60	34	1	2	1	1	11166
<b>Percent</b>	0.7%	71.0%	20.4%	0.9%	5.2%	1.0%	0.0%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	



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City of Perris  
Perris Boulevard  
N/ Rider Street  
24 Hour Directional Classification Count  
Northbound, Southbound

PER002  
Site Code: 051-18431

Start Time	Cars & Trailers		Buses	2 Axle		3 Axle		4 Axle		<5 Axl		5 Axle		>6 Axl		6 Axle		>6 Axl		Total
	Bikes	Trailers		Long	6 Tire	Single	Single	Double	Single	Double	Multi	Double	Double	Multi	Multi	Multi	Multi	Multi		
05/24/18	0	155	34	12	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	203
01:00	0	83	23	8	10	0	7	0	0	0	0	0	0	0	0	0	0	0	0	134
02:00	4	93	24	9	12	0	8	0	0	0	0	3	0	0	0	0	0	0	0	157
03:00	2	223	102	19	15	0	17	0	0	0	0	2	0	0	0	0	0	0	0	384
04:00	0	556	192	51	19	0	12	0	0	0	0	2	0	0	0	0	0	0	0	839
05:00	8	580	220	75	13	1	14	1	0	1	0	3	0	0	0	0	0	0	0	926
06:00	3	704	287	89	9	1	13	1	0	0	0	7	0	0	0	0	0	0	0	1128
07:00	10	946	350	92	11	0	18	0	0	0	0	4	0	0	0	0	0	1	0	1442
08:00	7	672	251	67	7	0	9	0	0	0	0	2	0	0	0	0	0	0	0	1037
09:00	13	652	258	72	13	0	7	0	0	0	0	6	0	0	0	0	0	0	0	1034
10:00	11	736	271	80	13	3	6	0	0	1	0	6	0	0	1	0	0	0	0	1146
11:00	15	676	236	72	9	1	11	0	0	0	0	10	0	0	0	0	0	0	0	1047
12 PM	11	779	312	86	6	2	10	0	0	0	0	7	0	0	0	0	0	0	0	1228
13:00	14	1035	344	78	10	1	16	0	0	0	0	2	0	0	0	0	0	0	0	1514
14:00	9	1061	354	95	9	1	9	0	0	0	0	5	0	0	0	0	0	0	0	1555
15:00	11	1033	368	98	7	0	13	0	0	0	0	3	0	0	0	0	0	0	0	1544
16:00	11	1100	376	90	4	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1591
17:00	13	1111	393	82	1	0	7	0	0	0	0	1	0	0	0	0	0	0	0	1615
18:00	6	919	306	63	3	0	8	0	0	0	0	1	0	0	0	0	0	0	0	1310
19:00	7	763	252	55	6	0	2	0	0	0	0	1	0	0	0	0	0	0	0	1091
20:00	10	645	212	36	4	0	4	0	0	0	0	1	0	0	0	0	0	0	0	917
21:00	4	579	167	32	3	0	2	0	0	0	0	2	0	0	0	0	0	0	0	796
22:00	4	467	125	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	612
23:00	0	259	63	18	2	0	2	0	0	0	0	1	0	0	0	0	0	0	0	345
<b>Total</b>	173	15827	5520	1395	205	11	198	70	3	5	2	3	23595	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Percent</b>	0.7%	67.1%	23.4%	5.9%	0.9%	0.0%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>AM Peak</b>	11:00	07:00	07:00	07:00	08:00	10:00	07:00	11:00	05:00	07:00	10:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00
<b>Vol.</b>	15	946	350	92	22	3	18	10	1	1	1	1	1	1	1	1	1	1	1	1442
<b>PM Peak</b>	13:00	17:00	17:00	15:00	12:00	12:00	13:00	12:00	13:00	13:00	13:00	13:00	13:00	13:00	13:00	13:00	13:00	13:00	13:00	17:00
<b>Vol.</b>	14	1111	393	98	15	2	16	7	1	1	1	1	1	1	1	1	1	1	1	1615
<b>Grand Total</b>	173	15827	5520	1395	205	11	198	70	3	5	2	3	23595	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Percent</b>	0.7%	67.1%	23.4%	5.9%	0.9%	0.0%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

# Counts Unlimited, Inc.

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City of Perris  
 Rider Street  
 W/ Redlands Avenue  
 24 Hour Directional Classification Count

PER003  
 Site Code: 051-18431

## Eastbound

Start Time	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	33	10	0	2	0	0	0	0	0	0	0	0	45
01:00	0	4	0	1	0	0	0	0	0	0	0	0	31
02:00	0	7	0	2	0	0	0	0	0	0	0	0	25
03:00	1	4	0	2	1	0	0	0	0	0	0	0	19
04:00	1	10	0	5	1	0	0	0	0	0	0	0	70
05:00	1	16	1	7	0	0	1	0	0	0	0	0	87
06:00	0	27	2	21	0	0	2	0	0	0	0	0	127
07:00	0	<b>90</b>	3	21	0	<b>1</b>	<b>4</b>	0	0	0	0	0	<b>318</b>
08:00	0	33	1	15	0	0	4	0	0	0	0	0	149
09:00	0	42	2	17	1	1	1	<b>2</b>	0	0	0	0	151
10:00	<b>4</b>	36	<b>4</b>	<b>22</b>	1	0	2	2	0	0	0	0	174
11:00	1	43	0	16	1	0	2	0	0	0	0	0	204
12 PM	1	71	2	20	0	<b>1</b>	3	1	0	0	0	0	249
13:00	0	93	1	29	1	0	2	<b>2</b>	0	0	0	0	358
14:00	4	<b>137</b>	1	30	1	1	3	1	0	0	0	0	<b>527</b>
15:00	4	100	0	31	<b>2</b>	0	<b>9</b>	2	0	0	0	0	471
16:00	<b>5</b>	119	<b>3</b>	<b>42</b>	1	0	3	1	0	0	0	0	472
17:00	0	106	0	33	1	0	2	0	0	0	0	0	461
18:00	0	78	2	26	0	0	2	0	0	0	0	0	399
19:00	0	76	1	27	2	0	3	0	0	0	0	0	353
20:00	1	71	0	13	1	0	2	0	0	0	0	0	307
21:00	3	48	1	12	1	0	0	0	0	0	0	0	217
22:00	2	33	0	9	1	0	0	0	0	0	0	0	186
23:00	1	26	0	9	0	0	0	0	0	0	0	0	134
Total	29	1280	24	412	16	4	45	11	0	1	0	0	5534
Percent	0.5%	23.1%	0.4%	7.4%	0.3%	0.1%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.	10:00	07:00	10:00	10:00	03:00	07:00	07:00	09:00	09:00	07:00	09:00	07:00	07:00
PM Peak Vol.	16:00	14:00	16:00	16:00	15:00	12:00	15:00	13:00	13:00	16:00	13:00	16:00	14:00
Grand Total	29	3712	24	412	16	4	45	11	0	1	0	0	5534
Percent	0.5%	67.1%	0.4%	7.4%	0.3%	0.1%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	

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PER003

City of Perris  
Rider Street  
W/ Redlands Avenue  
24 Hour Directional Classification Count

email: counts@countsunlimited.com

**Westbound**

Start Time	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	17	2	0	0	0	0	0	0	0	0	0	0	19
01:00	0	3	0	0	0	0	0	0	0	0	0	0	19
02:00	1	4	0	2	1	0	0	0	0	0	0	0	30
03:00	2	24	0	3	1	0	0	2	0	0	0	0	133
04:00	1	57	0	15	0	0	1	0	0	0	0	0	312
05:00	2	85	2	14	0	0	3	2	1	0	0	0	361
06:00	1	289	1	15	0	0	5	2	0	0	0	0	406
07:00	<b>7</b>	<b>515</b>	<b>1</b>	<b>17</b>	0	0	<b>6</b>	0	1	0	0	0	<b>675</b>
08:00	0	248	2	8	1	0	2	1	0	0	0	0	319
09:00	1	214	2	13	<b>2</b>	0	2	<b>4</b>	0	0	0	0	308
10:00	0	181	<b>3</b>	10	1	0	2	0	0	0	0	0	259
11:00	0	184	1	8	0	0	0	1	0	0	0	0	240
12 PM	1	206	1	14	<b>2</b>	0	1	<b>1</b>	0	0	0	0	275
13:00	1	292	<b>2</b>	10	0	0	<b>5</b>	0	0	0	0	0	379
14:00	<b>2</b>	<b>338</b>	<b>1</b>	14	2	0	4	1	0	0	0	<b>1</b>	<b>441</b>
15:00	<b>4</b>	302	2	<b>17</b>	0	0	3	0	0	0	0	0	406
16:00	3	224	1	12	1	0	2	0	0	0	0	0	304
17:00	3	275	1	8	1	0	0	0	0	0	0	0	342
18:00	2	221	0	9	0	0	0	0	0	0	0	0	288
19:00	0	214	0	6	1	0	1	1	0	0	0	0	268
20:00	3	150	0	4	0	0	0	1	0	0	0	0	191
21:00	2	112	0	0	1	0	2	0	0	0	0	0	145
22:00	1	83	0	1	0	0	0	0	0	0	0	0	102
23:00	0	52	0	0	0	0	0	0	0	0	0	0	60
<b>Total</b>	<b>37</b>	<b>4746</b>	<b>20</b>	<b>200</b>	<b>14</b>	<b>0</b>	<b>39</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>6282</b>
<b>Percent</b>	<b>0.6%</b>	<b>75.5%</b>	<b>0.3%</b>	<b>3.2%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.6%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	
<b>AM Peak</b>	<b>07:00</b>	<b>07:00</b>	<b>10:00</b>	<b>07:00</b>	<b>09:00</b>	<b>09:00</b>	<b>07:00</b>	<b>09:00</b>	<b>05:00</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>07:00</b>
<b>Vol.</b>	<b>7</b>	<b>515</b>	<b>3</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>1</b>				<b>675</b>
<b>PM Peak</b>	<b>15:00</b>	<b>14:00</b>	<b>13:00</b>	<b>15:00</b>	<b>12:00</b>	<b>12:00</b>	<b>13:00</b>	<b>12:00</b>	<b>14:00</b>	<b>14:00</b>	<b>14:00</b>	<b>14:00</b>	<b>14:00</b>
<b>Vol.</b>	<b>4</b>	<b>338</b>	<b>2</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>441</b>
<b>Grand Total</b>	<b>37</b>	<b>4746</b>	<b>20</b>	<b>200</b>	<b>14</b>	<b>0</b>	<b>39</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>6282</b>
<b>Percent</b>	<b>0.6%</b>	<b>75.5%</b>	<b>0.3%</b>	<b>3.2%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.6%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	

# Counts Unlimited, Inc.

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Site Code: 051-18431

City of Perris  
Rider Street  
W/ Redlands Avenue  
24 Hour Directional Classification Count  
email: counts@countsunlimited.com

PER003

## Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/24/18	0	50	12	0	2	0	0	0	0	0	0	0	0	64
01:00	0	42	7	0	1	0	0	0	0	0	0	0	0	50
02:00	1	38	11	0	4	0	0	0	0	0	0	0	0	55
03:00	3	112	28	0	5	0	0	0	2	0	0	0	0	152
04:00	2	291	67	0	20	1	0	1	0	0	0	0	0	382
05:00	3	313	101	3	21	0	0	4	2	1	0	0	0	448
06:00	1	364	120	3	36	0	0	7	2	0	0	0	0	533
07:00	<b>7</b>	<b>714</b>	<b>218</b>	<b>4</b>	<b>38</b>	<b>0</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>993</b>
08:00	0	344	90	3	23	1	0	6	1	0	0	0	0	468
09:00	1	299	112	4	30	<b>3</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>459</b>
10:00	4	284	98	<b>7</b>	32	2	0	4	2	0	0	0	0	433
11:00	1	325	89	1	24	1	0	2	1	0	0	0	0	444
12 PM	2	356	120	3	34	2	<b>1</b>	4	<b>2</b>	0	0	0	0	524
13:00	1	522	162	3	39	1	0	7	2	0	0	0	0	737
14:00	<b>6</b>	<b>687</b>	<b>215</b>	<b>2</b>	<b>44</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>968</b>
15:00	<b>8</b>	625	177	2	48	2	0	<b>12</b>	2	0	0	0	0	877
16:00	8	521	180	<b>4</b>	<b>54</b>	2	0	5	1	0	<b>1</b>	0	0	776
17:00	3	594	160	1	41	2	0	2	0	0	0	0	0	803
18:00	2	512	134	2	35	0	0	2	0	0	0	0	0	687
19:00	0	458	121	1	33	3	0	4	1	0	0	0	0	621
20:00	4	369	104	0	17	1	0	2	1	0	0	0	0	498
21:00	5	264	76	1	12	2	0	2	0	0	0	0	0	362
22:00	3	224	50	0	10	1	0	0	0	0	0	0	0	288
23:00	1	150	34	0	9	0	0	0	0	0	0	0	0	194
<b>Total</b>	66	8458	2486	44	612	30	4	84	27	2	1	0	2	11816
<b>Percent</b>	0.6%	71.6%	21.0%	0.4%	5.2%	0.3%	0.0%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	
<b>AM Peak</b>	07:00	07:00	07:00	10:00	07:00	09:00	07:00	07:00	09:00	05:00	07:00	09:00	05:00	07:00
<b>Vol.</b>	7	714	218	7	38	3	1	10	6	1	16:00	12:00	14:00	993
<b>PM Peak</b>	15:00	14:00	14:00	16:00	16:00	14:00	12:00	15:00	12:00	12:00	16:00	14:00	14:00	14:00
<b>Vol.</b>	8	687	215	4	54	3	1	12	2	2	1	1	1	968
<b>Grand Total</b>	66	8458	2486	44	612	30	4	84	27	2	1	0	2	11816
<b>Percent</b>	0.6%	71.6%	21.0%	0.4%	5.2%	0.3%	0.0%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_AM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 1

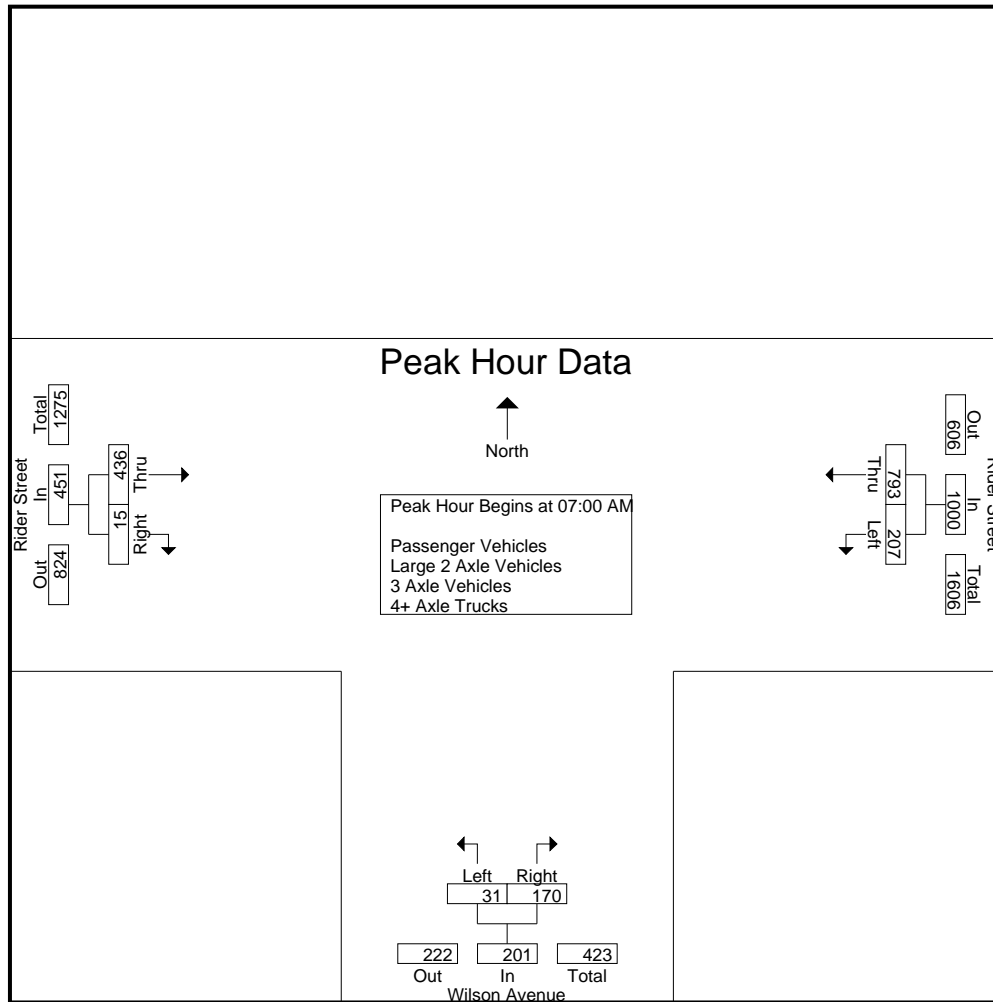
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	30	153	183	12	41	53	104	4	108	344
07:15 AM	51	177	228	6	31	37	122	3	125	390
07:30 AM	71	222	293	7	60	67	120	6	126	486
07:45 AM	55	241	296	6	38	44	90	2	92	432
Total	207	793	1000	31	170	201	436	15	451	1652
08:00 AM	48	112	160	6	19	25	60	6	66	251
08:15 AM	22	91	113	6	18	24	82	6	88	225
08:30 AM	12	71	83	5	18	23	55	1	56	162
08:45 AM	15	64	79	3	23	26	54	0	54	159
Total	97	338	435	20	78	98	251	13	264	797
Grand Total	304	1131	1435	51	248	299	687	28	715	2449
Apprch %	21.2	78.8		17.1	82.9		96.1	3.9		
Total %	12.4	46.2	58.6	2.1	10.1	12.2	28.1	1.1	29.2	
Passenger Vehicles	304	1120	1424	49	246	295	675	26	701	2420
% Passenger Vehicles	100	99	99.2	96.1	99.2	98.7	98.3	92.9	98	98.8
Large 2 Axle Vehicles	0	8	8	2	2	4	9	2	11	23
% Large 2 Axle Vehicles										
3 Axle Vehicles	0	1	1	0	0	0	1	0	1	2
% 3 Axle Vehicles	0	0.1	0.1	0	0	0	0.1	0	0.1	0.1
4+ Axle Trucks	0	2	2	0	0	0	2	0	2	4
% 4+ Axle Trucks	0	0.2	0.1	0	0	0	0.3	0	0.3	0.2

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	30	153	183	12	41	53	104	4	108	344
07:15 AM	51	177	228	6	31	37	122	3	125	390
07:30 AM	71	222	293	7	60	67	120	6	126	486
07:45 AM	55	241	296	6	38	44	90	2	92	432
Total Volume	207	793	1000	31	170	201	436	15	451	1652
% App. Total	20.7	79.3		15.4	84.6		96.7	3.3		
PHF	.729	.823	.845	.646	.708	.750	.893	.625	.895	.850

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_AM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	30	153	183	12	41	53	104	4	108
+15 mins.	51	177	228	6	31	37	122	3	125
+30 mins.	71	222	293	7	60	67	120	6	126
+45 mins.	55	241	296	6	38	44	90	2	92
Total Volume	207	793	1000	31	170	201	436	15	451
% App. Total	20.7	79.3		15.4	84.6		96.7	3.3	
PHF	.729	.823	.845	.646	.708	.750	.893	.625	.895

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_AM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 1

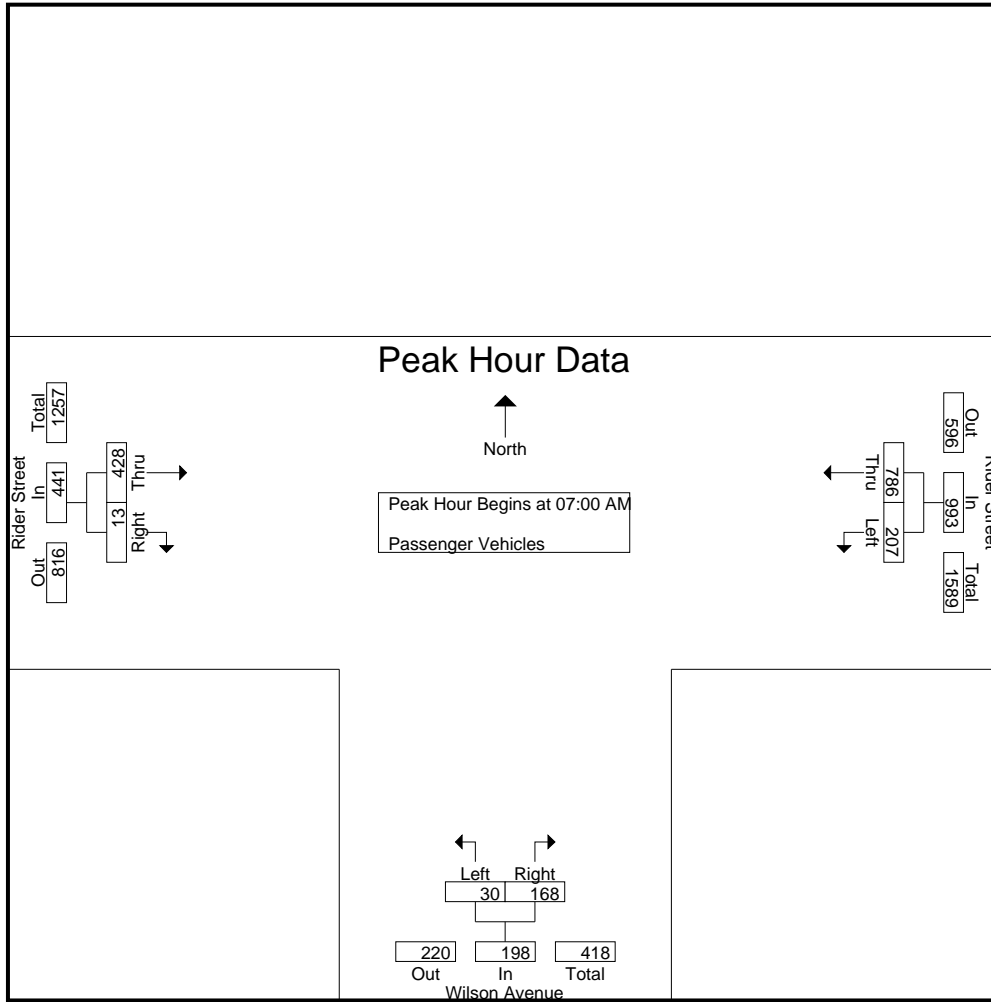
Groups Printed- Passenger Vehicles

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	30	152	182	12	40	52	99	3	102	336
07:15 AM	51	175	226	6	30	36	120	3	123	385
07:30 AM	71	220	291	6	60	66	119	5	124	481
07:45 AM	55	239	294	6	38	44	90	2	92	430
Total	207	786	993	30	168	198	428	13	441	1632
08:00 AM	48	112	160	5	19	24	60	6	66	250
08:15 AM	22	91	113	6	18	24	81	6	87	224
08:30 AM	12	68	80	5	18	23	53	1	54	157
08:45 AM	15	63	78	3	23	26	53	0	53	157
Total	97	334	431	19	78	97	247	13	260	788
Grand Total	304	1120	1424	49	246	295	675	26	701	2420
Apprch %	21.3	78.7		16.6	83.4		96.3	3.7		
Total %	12.6	46.3	58.8	2	10.2	12.2	27.9	1.1	29	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	30	152	182	12	40	52	99	3	102	336
07:15 AM	51	175	226	6	30	36	120	3	123	385
07:30 AM	71	220	291	6	60	66	119	5	124	481
07:45 AM	55	239	294	6	38	44	90	2	92	430
Total Volume	207	786	993	30	168	198	428	13	441	1632
% App. Total	20.8	79.2		15.2	84.8		97.1	2.9		
PHF	.729	.822	.844	.625	.700	.750	.892	.650	.889	.848

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	30	152	182	12	40	52	99	3	102
+15 mins.	51	175	226	6	30	36	120	3	123
+30 mins.	71	220	291	6	60	66	119	5	124
+45 mins.	55	239	294	6	38	44	90	2	92
Total Volume	207	786	993	30	168	198	428	13	441
% App. Total	20.8	79.2		15.2	84.8		97.1	2.9	
PHF	.729	.822	.844	.625	.700	.750	.892	.650	.889



City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_AM  
 Site Code : 05119594  
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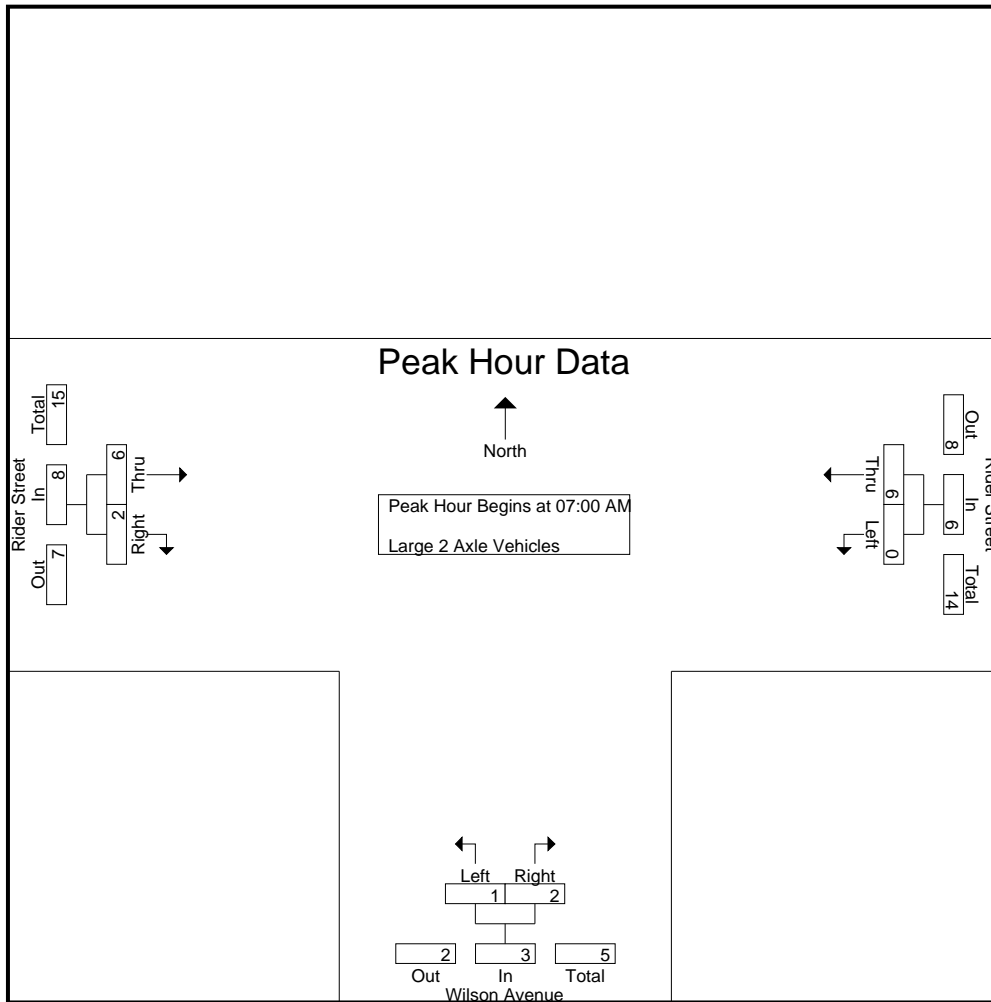
Groups Printed- Large 2 Axle Vehicles

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	1	1	0	1	1	4	1	5	7
07:15 AM	0	2	2	0	1	1	1	0	1	4
07:30 AM	0	2	2	1	0	1	1	1	2	5
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	6	6	1	2	3	6	2	8	17
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	2	2	0	0	0	2	0	2	4
08:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	2	2	1	0	1	3	0	3	6
Grand Total	0	8	8	2	2	4	9	2	11	23
Apprch %	0	100		50	50		81.8	18.2		
Total %	0	34.8	34.8	8.7	8.7	17.4	39.1	8.7	47.8	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	0	1	1	4	1	5	7
07:15 AM	0	2	2	0	1	1	1	0	1	4
07:30 AM	0	2	2	1	0	1	1	1	2	5
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	6	6	1	2	3	6	2	8	17
% App. Total	0	100		33.3	66.7		75	25		
PHF	.000	.750	.750	.250	.500	.750	.375	.500	.400	.607

City of Perris  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	1	1	0	1	1	4	1	5
+15 mins.	0	2	2	0	1	1	1	0	1
+30 mins.	0	2	2	1	0	1	1	1	2
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	6	6	1	2	3	6	2	8
% App. Total	0	100		33.3	66.7		75	25	
PHF	.000	.750	.750	.250	.500	.750	.375	.500	.400

City of Perris  
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 E/W: Rider Street  
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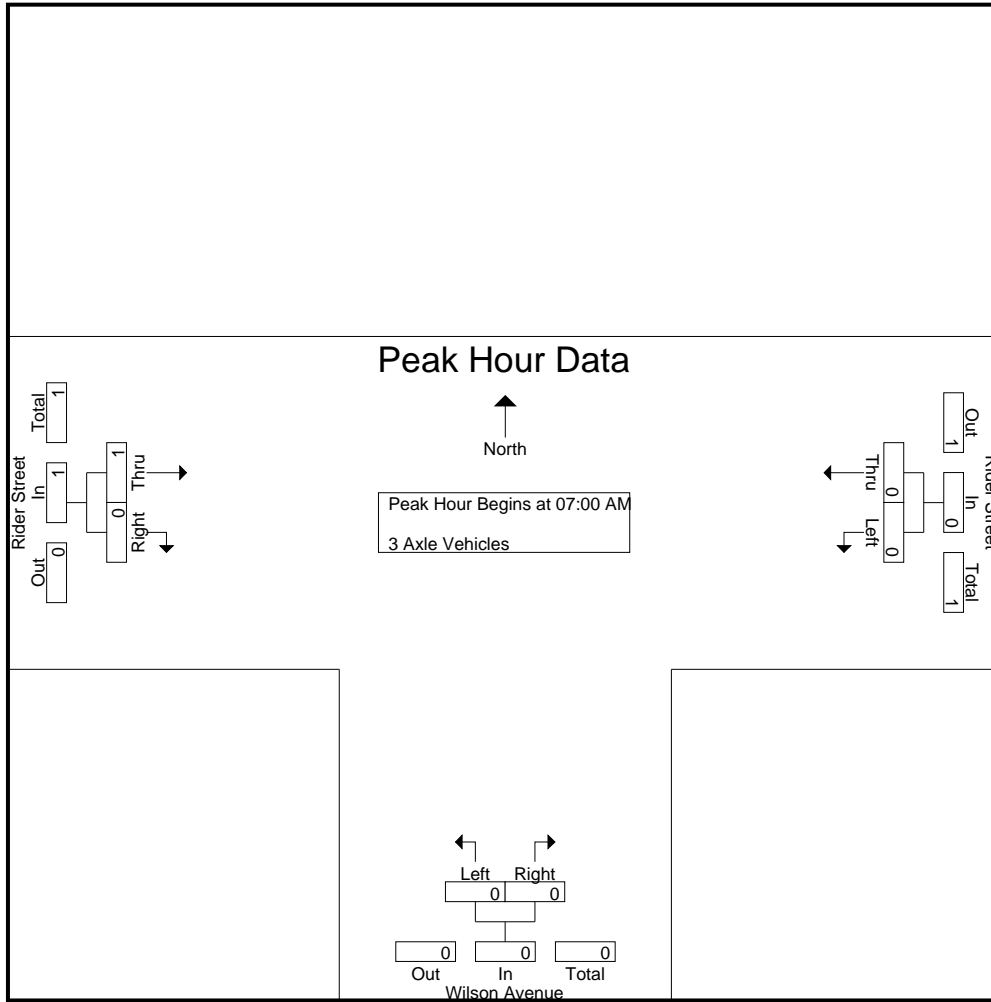
Groups Printed- 3 Axle Vehicles

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	1	1	0	0	0	1	0	1	2
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

City of Perris  
 N/S: Wilson Avenue  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

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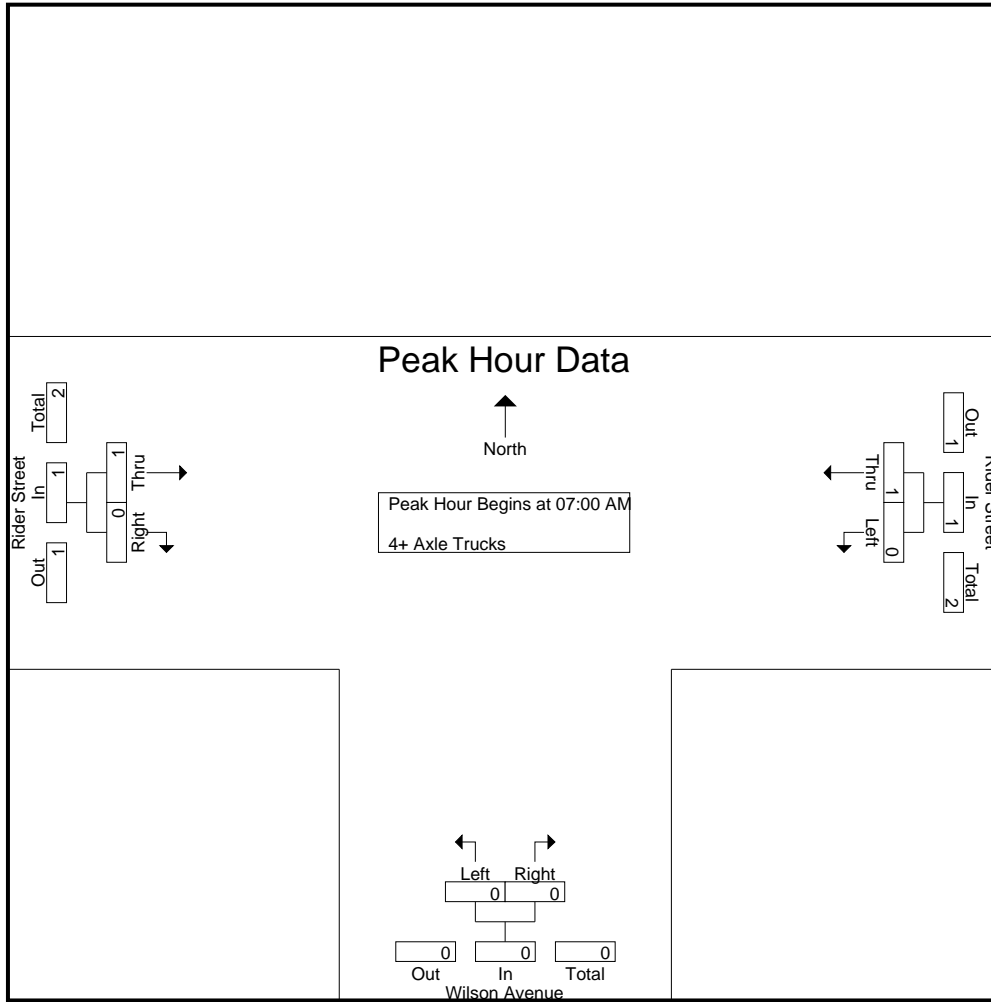
Groups Printed- 4+ Axle Trucks

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	1	1	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	1	1	0	0	0	1	0	1	2
Grand Total	0	2	2	0	0	0	2	0	2	4
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_PM  
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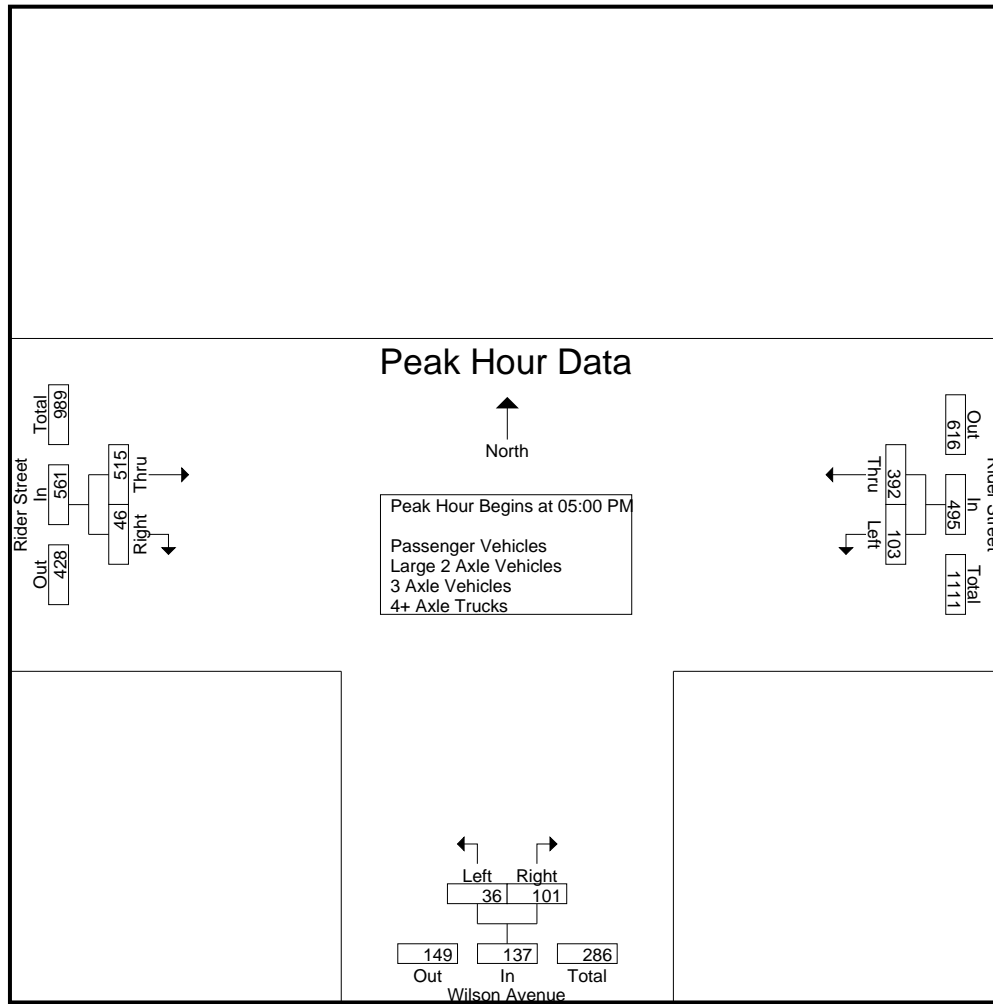
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	25	82	107	6	23	29	114	10	124	260
04:15 PM	34	95	129	5	24	29	108	5	113	271
04:30 PM	24	93	117	6	22	28	161	11	172	317
04:45 PM	24	86	110	5	22	27	136	12	148	285
Total	107	356	463	22	91	113	519	38	557	1133
05:00 PM	28	79	107	11	16	27	132	14	146	280
05:15 PM	28	108	136	9	25	34	119	6	125	295
05:30 PM	24	111	135	6	43	49	126	13	139	323
05:45 PM	23	94	117	10	17	27	138	13	151	295
Total	103	392	495	36	101	137	515	46	561	1193
Grand Total	210	748	958	58	192	250	1034	84	1118	2326
Apprch %	21.9	78.1		23.2	76.8		92.5	7.5		
Total %	9	32.2	41.2	2.5	8.3	10.7	44.5	3.6	48.1	
Passenger Vehicles	208	735	943	58	192	250	1025	83	1108	2301
% Passenger Vehicles	99	98.3	98.4	100	100	100	99.1	98.8	99.1	98.9
Large 2 Axle Vehicles	2	8	10	0	0	0	7	0	7	17
% Large 2 Axle Vehicles										
3 Axle Vehicles	0	2	2	0	0	0	1	0	1	3
% 3 Axle Vehicles	0	0.3	0.2	0	0	0	0.1	0	0.1	0.1
4+ Axle Trucks	0	3	3	0	0	0	1	1	2	5
% 4+ Axle Trucks	0	0.4	0.3	0	0	0	0.1	1.2	0.2	0.2

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	28	79	107	11	16	27	132	14	146	280
05:15 PM	28	108	136	9	25	34	119	6	125	295
05:30 PM	24	111	135	6	43	49	126	13	139	323
05:45 PM	23	94	117	10	17	27	138	13	151	295
Total Volume	103	392	495	36	101	137	515	46	561	1193
% App. Total	20.8	79.2		26.3	73.7		91.8	8.2		
PHF	.920	.883	.910	.818	.587	.699	.933	.821	.929	.923

City of Perris  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			04:45 PM			04:30 PM		
+0 mins.	28	79	107	5	22	27	161	11	172
+15 mins.	28	108	136	11	16	27	136	12	148
+30 mins.	24	111	135	9	25	34	132	14	146
+45 mins.	23	94	117	6	43	49	119	6	125
Total Volume	103	392	495	31	106	137	548	43	591
% App. Total	20.8	79.2		22.6	77.4		92.7	7.3	
PHF	.920	.883	.910	.705	.616	.699	.851	.768	.859



City of Perris  
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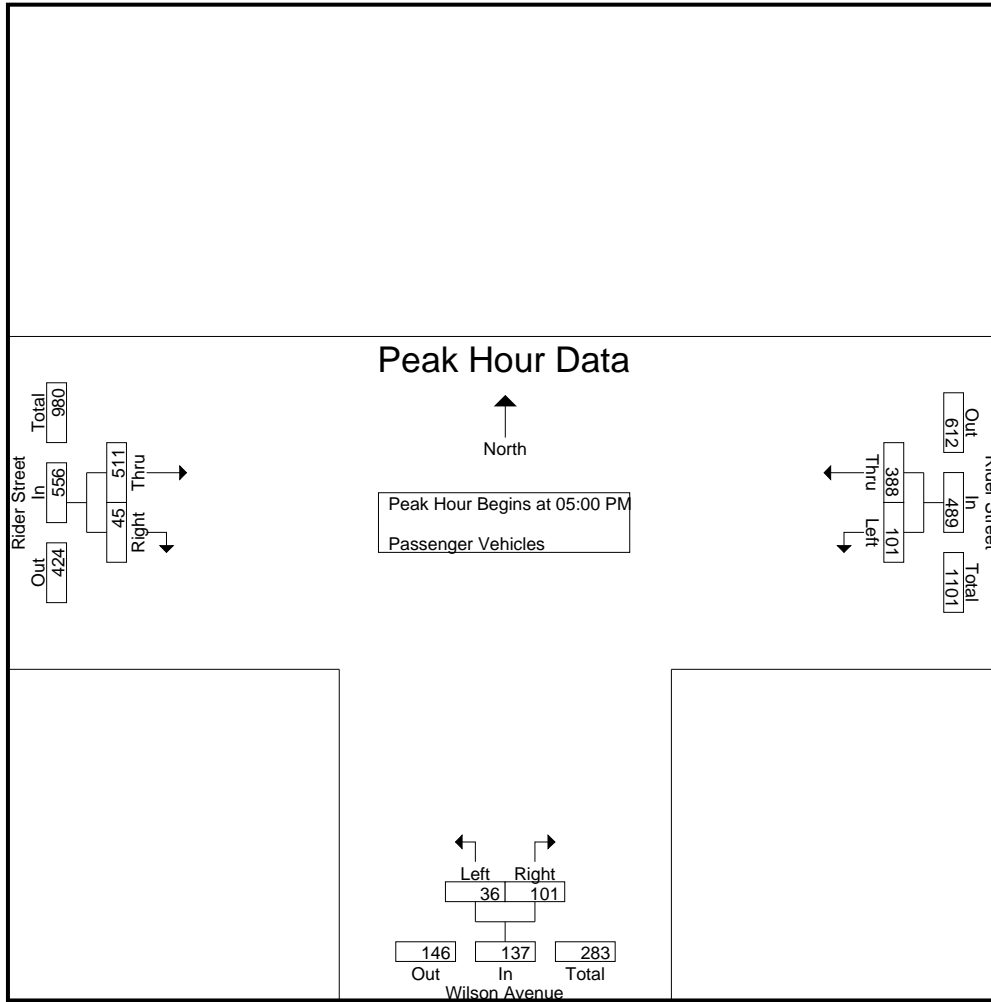
Groups Printed- Passenger Vehicles

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	25	80	105	6	23	29	113	10	123	257
04:15 PM	34	92	126	5	24	29	107	5	112	267
04:30 PM	24	91	115	6	22	28	159	11	170	313
04:45 PM	24	84	108	5	22	27	135	12	147	282
Total	107	347	454	22	91	113	514	38	552	1119
05:00 PM	28	79	107	11	16	27	132	14	146	280
05:15 PM	26	107	133	9	25	34	118	6	124	291
05:30 PM	24	110	134	6	43	49	126	13	139	322
05:45 PM	23	92	115	10	17	27	135	12	147	289
Total	101	388	489	36	101	137	511	45	556	1182
Grand Total	208	735	943	58	192	250	1025	83	1108	2301
Apprch %	22.1	77.9		23.2	76.8		92.5	7.5		
Total %	9	31.9	41	2.5	8.3	10.9	44.5	3.6	48.2	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	28	79	107	11	16	27	132	14	146	280
05:15 PM	26	107	133	9	25	34	118	6	124	291
05:30 PM	24	110	134	6	43	49	126	13	139	322
05:45 PM	23	92	115	10	17	27	135	12	147	289
Total Volume	101	388	489	36	101	137	511	45	556	1182
% App. Total	20.7	79.3		26.3	73.7		91.9	8.1		
PHF	.902	.882	.912	.818	.587	.699	.946	.804	.946	.918

City of Perris  
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 Weather: Clear

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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	28	79	107	11	16	27	132	14	146
+15 mins.	26	107	133	9	25	34	118	6	124
+30 mins.	24	110	134	6	43	49	126	13	139
+45 mins.	23	92	115	10	17	27	135	12	147
Total Volume	101	388	489	36	101	137	511	45	556
% App. Total	20.7	79.3		26.3	73.7		91.9	8.1	
PHF	.902	.882	.912	.818	.587	.699	.946	.804	.946

City of Perris  
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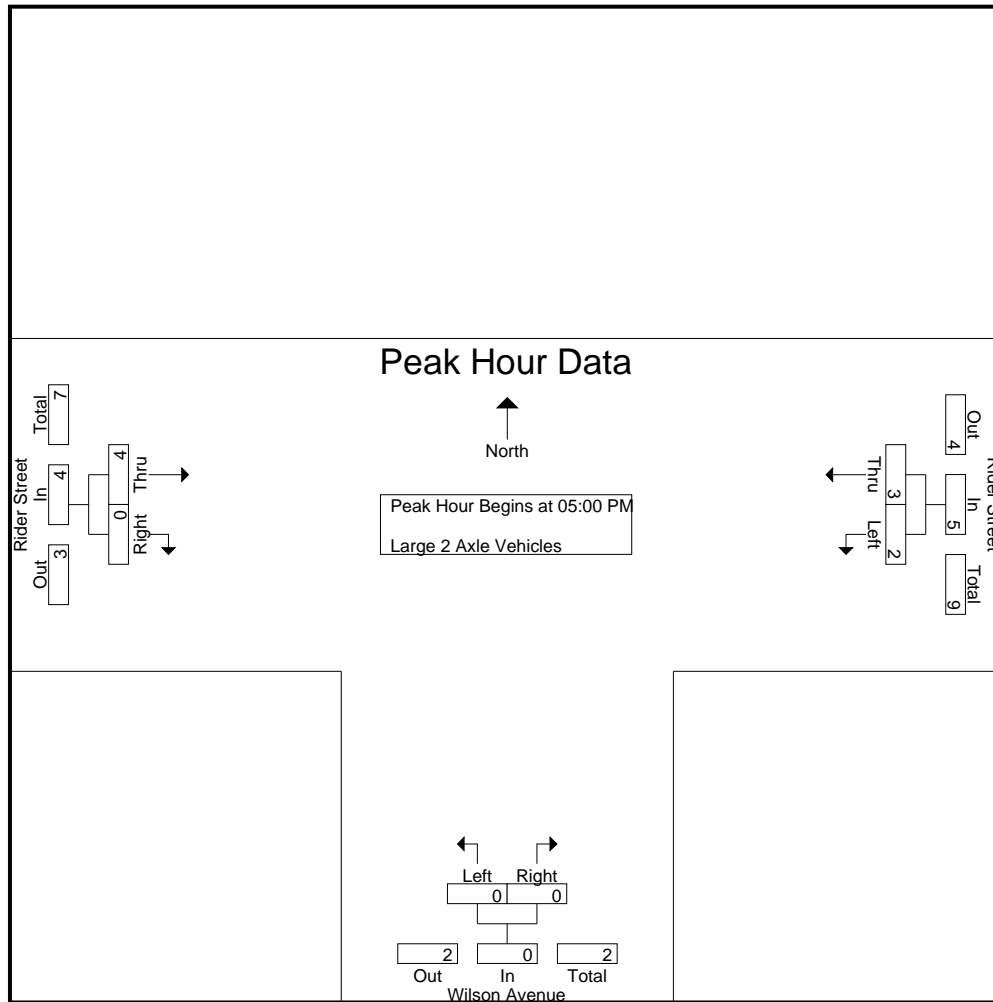
Groups Printed- Large 2 Axle Vehicles

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	0	0	1	0	1	3
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	1	1	0	0	0	1	0	1	2
04:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	5	5	0	0	0	3	0	3	8
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	2	1	3	0	0	0	1	0	1	4
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	2	2	0	0	0	3	0	3	5
Total	2	3	5	0	0	0	4	0	4	9
Grand Total	2	8	10	0	0	0	7	0	7	17
Apprch %	20	80		0	0		100	0		
Total %	11.8	47.1	58.8	0	0	0	41.2	0	41.2	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	2	1	3	0	0	0	1	0	1	4
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	2	2	0	0	0	3	0	3	5
Total Volume	2	3	5	0	0	0	4	0	4	9
% App. Total	40	60		0	0		100	0		
PHF	.250	.375	.417	.000	.000	.000	.333	.000	.333	.450

City of Perris  
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	2	1	3	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	2	0	0	0	3	0	3
Total Volume	2	3	5	0	0	0	4	0	4
% App. Total	40	60		0	0		100	0	
PHF	.250	.375	.417	.000	.000	.000	.333	.000	.333

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_PM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 1

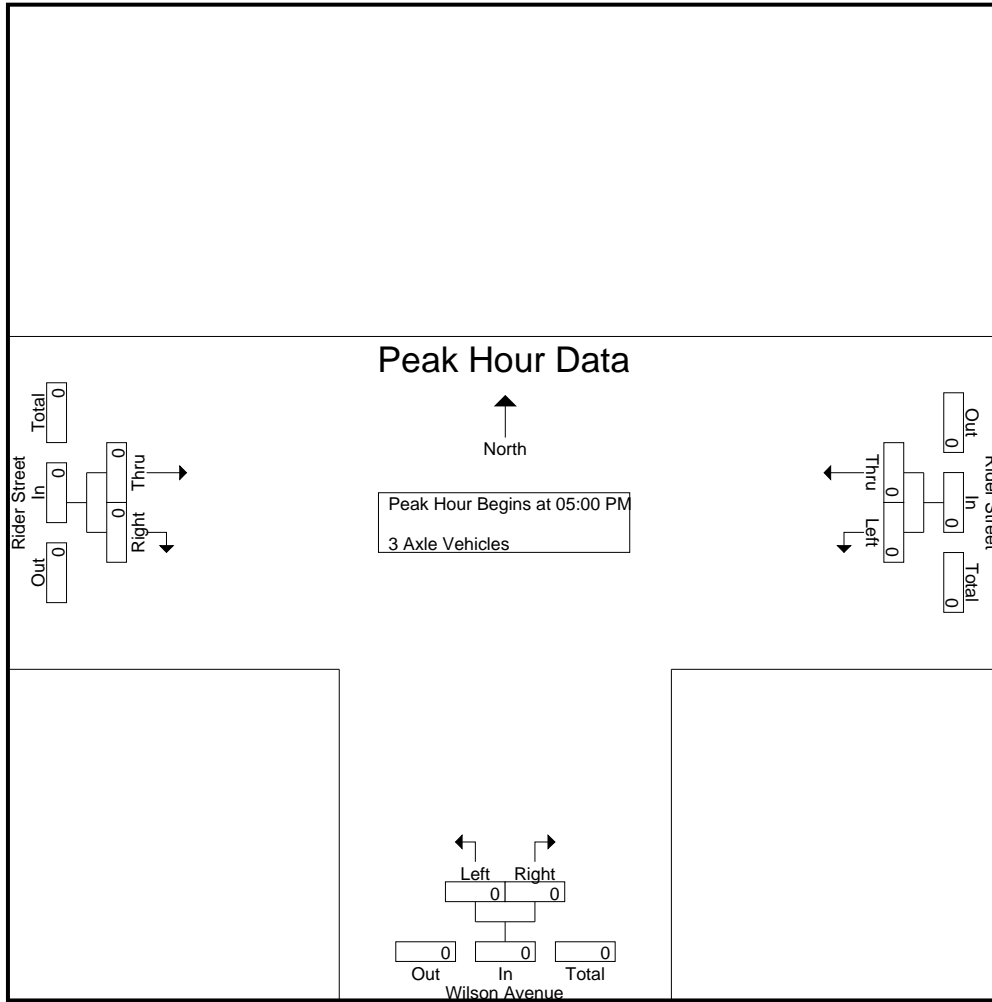
Groups Printed- 3 Axle Vehicles

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	1	0	0	0	1	0	1	2
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	2	0	0	0	1	0	1	3
Apprch %	0	100		0	0		100	0		
Total %	0	66.7	66.7	0	0	0	33.3	0	33.3	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_PM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_PM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 1

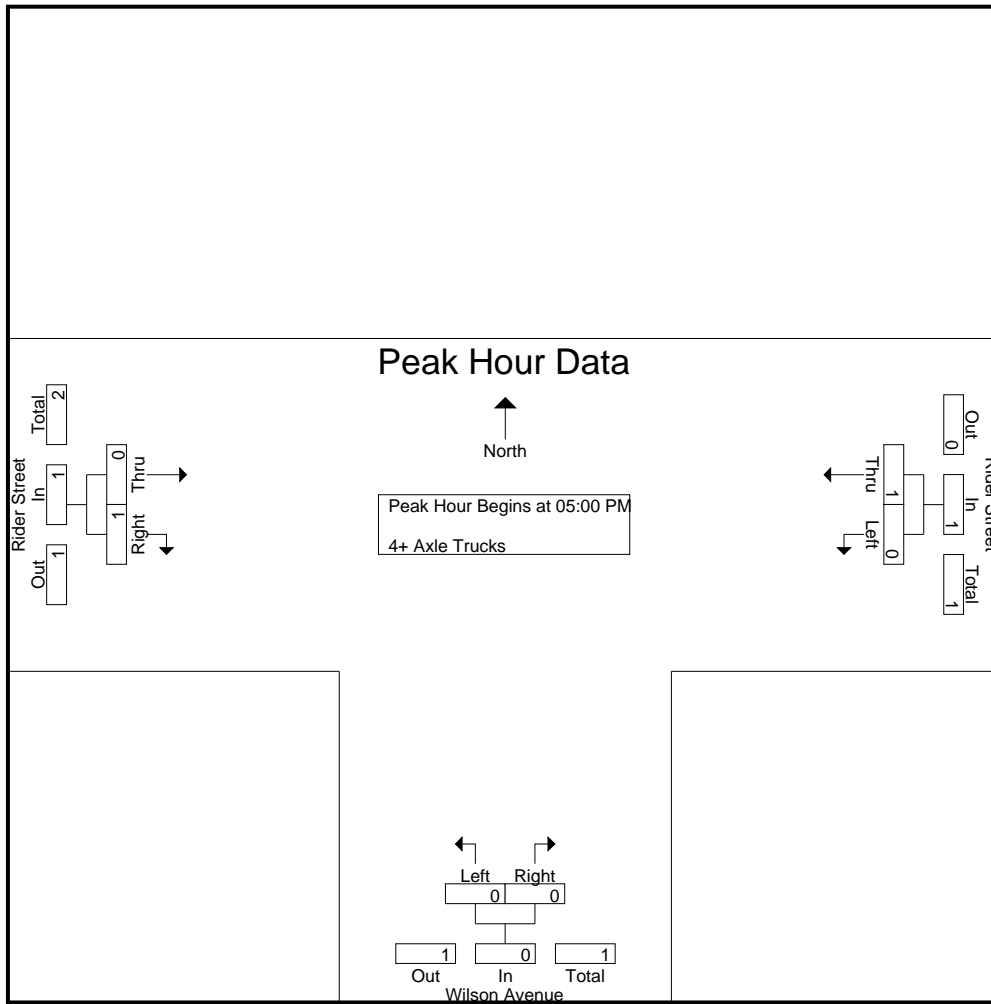
Groups Printed- 4+ Axle Trucks

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	1	1	1
Total	0	1	1	0	0	0	0	1	1	2
Grand Total	0	3	3	0	0	0	1	1	2	5
Apprch %	0	100		0	0		50	50		
Total %	0	60	60	0	0	0	20	20	40	

Start Time	Rider Street Westbound			Wilson Avenue Northbound			Rider Street Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	1	1	1
Total Volume	0	1	1	0	0	0	0	1	1	2
% App. Total	0	100		0	0		0	100		
PHF	.000	.250	.250	.000	.000	.000	.000	.250	.250	.500

City of Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street  
 Weather: Clear

File Name : PER\_Wilson\_Rider\_PM  
 Site Code : 05119594  
 Start Date : 9/5/2019  
 Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			05:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	1	1
Total Volume	0	1	1	0	0	0	0	1	1
% App. Total	0	100		0	0		0	100	
PHF	.000	.250	.250	.000	.000	.000	.000	.250	.250



Location: Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street



Date: 9/6/2019  
 Day: Thursday

**PEDESTRIANS**

	North Leg Wilson Avenue	East Leg Rider Street	South Leg Wilson Avenue	West Leg Rider Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	1	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	1	0	1

	North Leg Wilson Avenue	East Leg Rider Street	South Leg Wilson Avenue	West Leg Rider Street	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	1	0	1
4:30 PM	0	0	1	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
<b>TOTAL VOLUMES:</b>	0	0	2	0	2

Location: Perris  
 N/S: Wilson Avenue  
 E/W: Rider Street



Date: 9/6/2019  
 Day: Thursday

BICYCLES

	Southbound Wilson Avenue			Westbound Rider Street			Northbound Wilson Avenue			Eastbound Rider Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Wilson Avenue			Westbound Rider Street			Northbound Wilson Avenue			Eastbound Rider Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

**APPENDIX 3.2:**

**EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

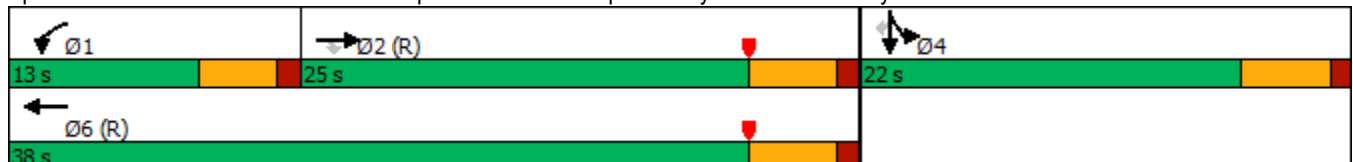


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	438	7	144	173	2	157
Future Volume (vph)	438	7	144	173	2	157
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	22.7	22.7	7.9	33.0	17.0	17.0
Actuated g/C Ratio	0.38	0.38	0.13	0.55	0.28	0.28
v/c Ratio	0.35	0.01	0.67	0.09	0.99	0.29
Control Delay	15.4	0.0	29.4	12.3	63.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	0.0	29.4	12.3	63.9	4.9
LOS	B	A	C	B	E	A
Approach Delay	15.2			20.1	49.1	
Approach LOS	B			C	D	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 31.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

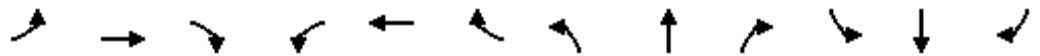


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

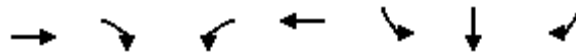
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	438	7	144	173	0	0	0	0	467	2	157
Future Volume (veh/h)	0	438	7	144	173	0	0	0	0	467	2	157
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	476	7	157	188	0				508	2	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1319	588	199	1986	0				511	2	456
Arrive On Green	0.00	0.37	0.37	0.11	0.55	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1609	1810	3705	0				1803	7	1610
Grp Volume(v), veh/h	0	476	7	157	188	0				510	0	114
Grp Sat Flow(s),veh/h/ln	0	1805	1609	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	5.8	0.2	5.1	1.5	0.0				16.9	0.0	3.3
Cycle Q Clear(g_c), s	0.0	5.8	0.2	5.1	1.5	0.0				16.9	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1319	588	199	1986	0				513	0	456
V/C Ratio(X)	0.00	0.36	0.01	0.79	0.09	0.00				0.99	0.00	0.25
Avail Cap(c_a), veh/h	0	1319	588	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.9	12.1	26.0	6.4	0.0				21.5	0.0	16.6
Incr Delay (d2), s/veh	0.0	0.8	0.0	8.9	0.1	0.0				38.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.1	2.4	0.4	0.0				11.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.7	12.2	34.9	6.5	0.0				59.7	0.0	16.9
LnGrp LOS	A	B	B	C	A	A				E	A	B
Approach Vol, veh/h		483			345						624	
Approach Delay, s/veh		14.7			19.4						51.9	
Approach LOS		B			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	11.1	26.9		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	7.1	7.8		18.9		3.5						
Green Ext Time (p_c), s	0.0	1.5		0.0		0.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.8								
HCM 6th LOS				C								

Timings  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑	↓
Traffic Volume (vph)	701	327	282	950	589	1	189
Future Volume (vph)	701	327	282	950	589	1	189
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	37.0	37.0	34.0	71.0	39.0	39.0	39.0
Total Split (%)	33.6%	33.6%	30.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	37.5	37.5	23.0	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.34	0.34	0.21	0.59	0.30	0.30	0.30
v/c Ratio	0.60	0.44	0.79	0.47	0.59	0.59	0.35
Control Delay	33.6	5.2	27.8	5.7	38.1	38.1	14.3
Queue Delay	0.0	0.0	0.0	0.4	59.4	59.4	0.0
Total Delay	33.6	5.2	27.8	6.1	97.5	97.5	14.3
LOS	C	A	C	A	F	F	B
Approach Delay	24.6			11.1		77.3	
Approach LOS	C			B		E	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 32.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.1%  
 ICU Level of Service D  
 Analysis Period (min) 15













Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

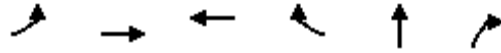
Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	701	327	282	950	0	0	0	0	589	1	189
Future Volume (veh/h)	0	701	327	282	950	0	0	0	0	589	1	189
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	738	283	297	1000	0				621	0	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1317	587	335	2133	0				1102	0	490
Arrive On Green	0.00	0.36	0.36	0.11	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	738	283	297	1000	0				621	0	116
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	18.0	14.9	17.8	23.6	0.0				15.8	0.0	5.9
Cycle Q Clear(g_c), s	0.0	18.0	14.9	17.8	23.6	0.0				15.8	0.0	5.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1317	587	335	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.56	0.48	0.89	0.47	0.00				0.56	0.00	0.24
Avail Cap(c_a), veh/h	0	1317	587	485	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.81	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.9	26.9	47.7	22.1	0.0				32.1	0.0	28.7
Incr Delay (d2), s/veh	0.0	1.7	2.8	10.9	0.6	0.0				2.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	5.8	9.2	10.6	0.0				6.9	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	29.6	29.7	58.6	22.7	0.0				34.2	0.0	29.8
LnGrp LOS	A	C	C	E	C	A				C	A	C
Approach Vol, veh/h		1021			1297						737	
Approach Delay, s/veh		29.7			31.0						33.5	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	24.9	46.1		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	29.5	31.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	19.8	20.0		17.8		25.6						
Green Ext Time (p_c), s	0.6	2.7		2.4		4.4						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.1								
HCM 6th LOS				C								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												



Timings

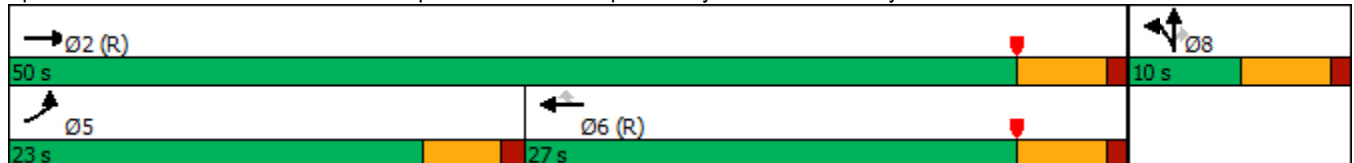


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	269	636	306	706	0	82
Future Volume (vph)	269	636	306	706	0	82
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.7	45.0	26.8	26.8	5.0	5.0
Actuated g/C Ratio	0.23	0.75	0.45	0.45	0.08	0.08
v/c Ratio	0.70	0.25	0.20	0.77	0.08	0.36
Control Delay	15.0	0.3	11.5	12.7	26.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	0.3	11.5	12.7	26.7	8.4
LOS	B	A	B	B	C	A
Approach Delay		4.7	12.4		10.6	
Approach LOS		A	B		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 8.8  
 Intersection LOS: A  
 Intersection Capacity Utilization 74.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	269	636	0	0	306	706	11	0	82	0	0	0
Future Volume (veh/h)	269	636	0	0	306	706	11	0	82	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	289	684	0	0	329	759	12	0	23			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	350	2708	0	0	1738	775	151	0	134			
Arrive On Green	0.06	0.25	0.00	0.00	0.48	0.48	0.08	0.00	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	289	684	0	0	329	759	12	0	23			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	9.5	9.1	0.0	0.0	3.1	27.7	0.4	0.0	0.8			
Cycle Q Clear(g_c), s	9.5	9.1	0.0	0.0	3.1	27.7	0.4	0.0	0.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	350	2708	0	0	1738	775	151	0	134			
V/C Ratio(X)	0.82	0.25	0.00	0.00	0.19	0.98	0.08	0.00	0.17			
Avail Cap(c_a), veh/h	558	2708	0	0	1738	775	151	0	134			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.1	9.1	0.0	0.0	8.9	15.3	25.4	0.0	25.6			
Incr Delay (d2), s/veh	2.5	0.2	0.0	0.0	0.2	27.7	1.0	0.0	2.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	1.5	0.0	0.0	1.0	13.3	0.2	0.0	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	9.3	0.0	0.0	9.1	42.9	26.4	0.0	28.3			
LnGrp LOS	C	A	A	A	A	D	C	A	C			
Approach Vol, veh/h		973			1088			35				
Approach Delay, s/veh		15.3			32.7			27.7				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			16.1	33.9		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+1), s		11.1			11.5	29.7		2.8				
Green Ext Time (p_c), s		2.9			0.2	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					24.5							
HCM 6th LOS					C							

Timings  
4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	172	1117	918	701	313	5	423
Future Volume (vph)	172	1117	918	701	313	5	423
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	14.7	67.8	48.6	48.6	30.7	30.7	30.7
Actuated g/C Ratio	0.13	0.62	0.44	0.44	0.28	0.28	0.28
v/c Ratio	0.75	0.52	0.60	0.65	0.35	0.34	0.88
Control Delay	48.1	22.9	26.8	4.9	32.6	32.5	49.8
Queue Delay	0.0	6.3	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	29.2	26.8	4.9	32.6	32.5	49.8
LOS	D	C	C	A	C	C	D
Approach Delay		31.7	17.3			42.4	
Approach LOS		C	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 27.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.1%  
 ICU Level of Service D  
 Analysis Period (min) 15























Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Traffic Volume (veh/h)	172	1117	0	0	918	701	313	5	423	0	0	0
Future Volume (veh/h)	172	1117	0	0	918	701	313	5	423	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	179	1164	0	0	956	573	330	0	258			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	207	2549	0	0	1988	887	686	0	305			
Arrive On Green	0.23	1.00	0.00	0.00	0.55	0.55	0.19	0.00	0.19			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	179	1164	0	0	956	573	330	0	258			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	10.5	0.0	0.0	0.0	17.8	27.3	8.9	0.0	17.0			
Cycle Q Clear(g_c), s	10.5	0.0	0.0	0.0	17.8	27.3	8.9	0.0	17.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	207	2549	0	0	1988	887	686	0	305			
V/C Ratio(X)	0.87	0.46	0.00	0.00	0.48	0.65	0.48	0.00	0.85			
Avail Cap(c_a), veh/h	271	2549	0	0	1988	887	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.6	0.0	0.0	0.0	15.1	17.2	39.8	0.0	43.0			
Incr Delay (d2), s/veh	15.9	0.5	0.0	0.0	0.8	3.6	0.5	0.0	6.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.9	0.2	0.0	0.0	6.7	9.8	3.9	0.0	7.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.5	0.0	0.0	15.9	20.9	40.3	0.0	49.4			
LnGrp LOS	E	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1343			1529			588				
Approach Delay, s/veh		8.1			17.8			44.3				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.7			17.1	66.6		26.3				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			12.5	29.3		19.0				
Green Ext Time (p_c), s		5.6			0.2	4.3		1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					18.5							
HCM 6th LOS					B							
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑	↑	
Traffic Vol, veh/h	73	652	985	36	8	45
Future Vol, veh/h	73	652	985	36	8	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	78	701	1059	39	9	48

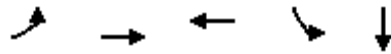
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1098	0	-	0	1566 530
Stage 1	-	-	-	-	1059 -
Stage 2	-	-	-	-	507 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	643	-	-	-	*142 499
Stage 1	-	-	-	-	*299 -
Stage 2	-	-	-	-	*824 -
Platoon blocked, %		-	-	-	1
Mov Cap-1 Maneuver	643	-	-	-	*114 499
Mov Cap-2 Maneuver	-	-	-	-	*114 -
Stage 1	-	-	-	-	*239 -
Stage 2	-	-	-	-	*824 -

Approach	EB	WB	SB
HCM Control Delay, s	2	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	643	-	-	-	331
HCM Lane V/C Ratio	0.122	-	-	-	0.172
HCM Control Delay (s)	11.4	0.9	-	-	18.1
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.6

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
5: Harley Knox Blvd. & Western Way



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↘		
Traffic Volume (vph)	73	652	985	8	0		
Future Volume (vph)	73	652	985	8	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	13.4	38.0	34.2	36.6	36.6	35.8	9.6
Total Split (%)	11.2%	31.7%	28.5%	30.5%	30.5%	30%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	33.5	23.4	12.6	12.6		
Actuated g/C Ratio	0.19	0.78	0.54	0.29	0.29		
v/c Ratio	0.23	0.17	0.39	0.02	0.05		
Control Delay	22.6	3.3	10.4	19.4	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	22.6	3.3	10.4	19.4	0.1		
LOS	C	A	B	B	A		
Approach Delay		5.3	10.4		3.2		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 43.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
 5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑	↖	↗	↑↑↑		↗	↖		↗	↖	
Traffic Volume (veh/h)	73	652	0	0	985	36	0	0	0	8	0	45
Future Volume (veh/h)	73	652	0	0	985	36	0	0	0	8	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	701	0	0	1059	39	0	0	0	9	0	48
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	135	3093	960	5	2034	75	5	5	0	217	0	193
Arrive On Green	0.07	0.60	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5135	189	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	78	701	0	0	713	385	0	0	0	9	0	48
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1866	1810	1900	0	1810	0	1610
Q Serve(g_s), s	1.5	2.3	0.0	0.0	5.8	5.8	0.0	0.0	0.0	0.2	0.0	1.0
Cycle Q Clear(g_c), s	1.5	2.3	0.0	0.0	5.8	5.8	0.0	0.0	0.0	0.2	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	3093	960	5	1370	739	5	5	0	217	0	193
V/C Ratio(X)	0.58	0.23	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.04	0.00	0.25
Avail Cap(c_a), veh/h	434	4555	1414	247	2678	1445	1540	1617	0	1579	0	1405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	3.5	0.0	0.0	8.4	8.4	0.0	0.0	0.0	14.3	0.0	14.6
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	0.0	1.2	1.4	0.0	0.0	0.0	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	3.5	0.0	0.0	8.7	9.0	0.0	0.0	0.0	14.3	0.0	15.3
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		779			1098			0				57
Approach Delay, s/veh		4.9			8.8			0.0				15.1
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	27.7		9.0	7.3	20.3				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		31.2	5.0	32.2		32.0	8.8	28.4				
Max Q Clear Time (g_c+I1), s		0.0	0.0	4.3		3.0	3.5	7.8				
Green Ext Time (p_c), s		0.0	0.0	4.7		0.3	0.0	6.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.4									
HCM 6th LOS			A									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

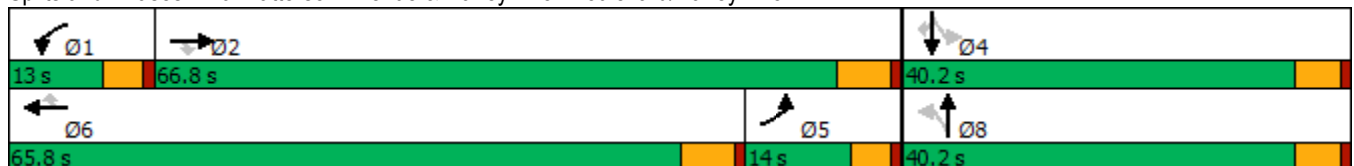


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗	↖		↕		↖	↖
Traffic Volume (vph)	26	591	12	18	866	28	59	9	26	4	22
Future Volume (vph)	26	591	12	18	866	28	59	9	26	4	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	14.0	66.8	66.8	13.0	65.8	65.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	11.7%	55.7%	55.7%	10.8%	54.8%	54.8%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	32.1	32.1	7.5	30.1	30.1		16.8		16.8	16.8
Actuated g/C Ratio	0.15	0.61	0.61	0.14	0.58	0.58		0.32		0.32	0.32
v/c Ratio	0.11	0.29	0.01	0.08	0.45	0.03		0.19		0.07	0.04
Control Delay	33.3	9.6	0.0	34.0	12.7	0.1		19.7		20.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	33.3	9.6	0.0	34.0	12.7	0.1		19.7		20.7	0.1
LOS	C	A	A	C	B	A		B		C	A
Approach Delay		10.4			12.7			19.7		11.9	
Approach LOS		B			B			B		B	

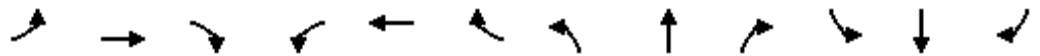
Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 52.3	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 53.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.







Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	26	591	12	18	866	28	59	9	15	26	4	22
Future Volume (veh/h)	26	591	12	18	866	28	59	9	15	26	4	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	642	12	20	941	30	64	10	14	28	4	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	58	2553	792	44	1661	741	294	50	41	361	43	277
Arrive On Green	0.03	0.49	0.49	0.02	0.46	0.46	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	5187	1609	1810	3610	1610	983	289	241	1310	251	1610
Grp Volume(v), veh/h	28	642	12	20	941	30	88	0	0	32	0	21
Grp Sat Flow(s),veh/h/ln	1810	1729	1609	1810	1805	1610	1513	0	0	1561	0	1610
Q Serve(g_s), s	0.8	3.6	0.2	0.5	9.5	0.5	1.7	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	0.8	3.6	0.2	0.5	9.5	0.5	2.4	0.0	0.0	0.7	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.73		0.16	0.87		1.00
Lane Grp Cap(c), veh/h	58	2553	792	44	1661	741	386	0	0	405	0	277
V/C Ratio(X)	0.48	0.25	0.02	0.46	0.57	0.04	0.23	0.00	0.00	0.08	0.00	0.08
Avail Cap(c_a), veh/h	342	6355	1971	305	4351	1941	1175	0	0	1180	0	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	7.3	6.5	24.0	9.8	7.4	18.0	0.0	0.0	17.4	0.0	17.3
Incr Delay (d2), s/veh	2.3	0.1	0.0	2.7	0.4	0.0	0.3	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	0.0	0.2	2.6	0.1	0.8	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	7.4	6.5	26.7	10.3	7.4	18.3	0.0	0.0	17.4	0.0	17.4
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	B
Approach Vol, veh/h		682			991			88				53
Approach Delay, s/veh		8.1			10.5			18.3				17.4
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	30.3		13.7	7.4	28.7		13.7				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	9.4	* 60		35.1				
Max Q Clear Time (g_c+I1), s	2.5	5.6		2.7	2.8	11.5		4.4				
Green Ext Time (p_c), s	0.0	6.8		0.2	0.0	11.4		0.4				

Intersection Summary

HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	26	591	12	18	866	28	59	9	15	26	4	22
Future Volume (veh/h)	26	591	12	18	866	28	59	9	15	26	4	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	642	12	20	941	30	64	10	14	28	4	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	58	1777	792	44	1661	741	294	50	41	361	43	277
Arrive On Green	0.03	0.49	0.49	0.02	0.46	0.46	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	3610	1609	1810	3610	1610	983	289	241	1310	251	1610
Grp Volume(v), veh/h	28	642	12	20	941	30	88	0	0	32	0	21
Grp Sat Flow(s),veh/h/ln	1810	1805	1609	1810	1805	1610	1513	0	0	1561	0	1610
Q Serve(g_s), s	0.8	5.5	0.2	0.5	9.5	0.5	1.7	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	0.8	5.5	0.2	0.5	9.5	0.5	2.4	0.0	0.0	0.7	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.73		0.16	0.87		1.00
Lane Grp Cap(c), veh/h	58	1777	792	44	1661	741	386	0	0	405	0	277
V/C Ratio(X)	0.48	0.36	0.02	0.46	0.57	0.04	0.23	0.00	0.00	0.08	0.00	0.08
Avail Cap(c_a), veh/h	342	4423	1971	305	4351	1941	1175	0	0	1180	0	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	7.8	6.5	24.0	9.8	7.4	18.0	0.0	0.0	17.4	0.0	17.3
Incr Delay (d2), s/veh	2.3	0.2	0.0	2.7	0.4	0.0	0.3	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.4	0.0	0.2	2.6	0.1	0.8	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	8.0	6.5	26.7	10.3	7.4	18.3	0.0	0.0	17.4	0.0	17.4
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	B
Approach Vol, veh/h		682			991			88				53
Approach Delay, s/veh		8.7			10.5			18.3				17.4
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	30.3		13.7	7.4	28.7		13.7				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	9.4	* 60		35.1				
Max Q Clear Time (g_c+I1), s	2.5	7.5		2.7	2.8	11.5		4.4				
Green Ext Time (p_c), s	0.0	6.8		0.2	0.0	11.4		0.4				

Intersection Summary

HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

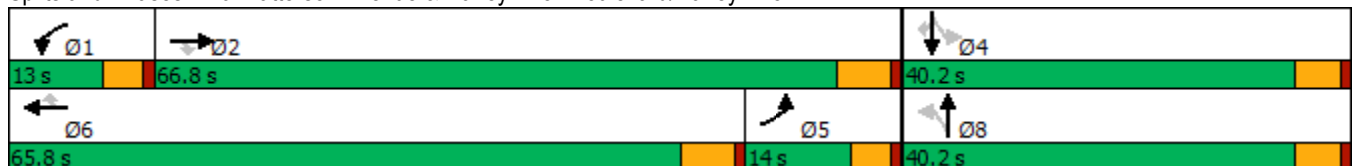


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	26	591	12	18	866	28	59	9	26	4	22
Future Volume (vph)	26	591	12	18	866	28	59	9	26	4	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	14.0	66.8	66.8	13.0	65.8	65.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	11.7%	55.7%	55.7%	10.8%	54.8%	54.8%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	32.1	32.1	7.5	30.1	30.1		16.8		16.8	16.8
Actuated g/C Ratio	0.15	0.61	0.61	0.14	0.58	0.58		0.32		0.32	0.32
v/c Ratio	0.11	0.20	0.01	0.08	0.45	0.03		0.19		0.07	0.04
Control Delay	33.3	8.7	0.0	34.0	12.7	0.1		19.7		20.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	33.3	8.7	0.0	34.0	12.7	0.1		19.7		20.7	0.1
LOS	C	A	A	C	B	A		B		C	A
Approach Delay		9.6			12.7			19.7		11.9	
Approach LOS		A			B			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 52.3  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay: 11.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.



Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		↗
Traffic Vol, veh/h	1303	237	17	1610	0	64
Future Vol, veh/h	1303	237	17	1610	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1372	249	18	1695	0	67

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1621	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	-	407	-	0
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	407	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	18.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	327	-	-	407	-
HCM Lane V/C Ratio	0.206	-	-	0.044	-
HCM Control Delay (s)	18.8	-	-	14.3	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection			
Intersection Delay, s/veh	11.4		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	975	23
Demand Flow Rate, veh/h	0	975	23
Vehicles Circulating, veh/h	10	10	660
Vehicles Exiting, veh/h	975	673	30
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	11.6	4.8
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.435	0.565
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	975	10	13
Cap Entry Lane, veh/h	1407	779	779
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	975	10	13
Cap Entry, veh/h	1407	779	779
V/C Ratio	0.693	0.013	0.017
Control Delay, s/veh	11.6	4.7	4.8
LOS	B	A	A
95th %tile Queue, veh	6	0	0

Timings  
9: Webster Av. & Ramona Exwy.

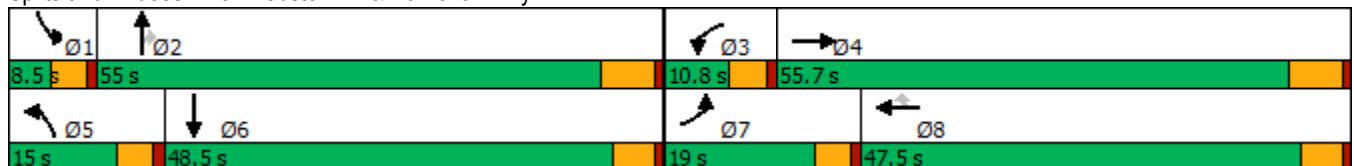


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	164	1147	28	1408	22	108	36	30	12	
Future Volume (vph)	164	1147	28	1408	22	108	36	30	12	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	19.0	55.7	10.8	47.5	47.5	15.0	55.0	55.0	48.5	8.5
Total Split (%)	14.6%	42.8%	8.3%	36.5%	36.5%	11.5%	42.3%	42.3%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	52.3	5.8	41.3	41.3	9.9	56.9	56.9	0.0	
Actuated g/C Ratio	0.11	0.41	0.05	0.32	0.32	0.08	0.44	0.44	0.00	
v/c Ratio	0.89	0.60	0.36	0.88	0.04	0.81	0.05	0.04	2.93	
Control Delay	97.6	31.6	72.4	48.6	0.1	97.6	21.1	0.1	927.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	97.6	31.6	72.4	48.6	0.1	97.6	21.1	0.1	927.0	
LOS	F	C	E	D	A	F	C	A	F	
Approach Delay		39.6		48.3			64.8		927.0	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 128  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.93  
 Intersection Signal Delay: 91.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 68.9%  
 ICU Level of Service C  
 Analysis Period (min) 15
























Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1147	56	28	1408	22	108	36	30	41	12	111
Future Volume (veh/h)	164	1147	56	28	1408	22	108	36	30	41	12	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	1207	52	29	1482	20	114	38	16	43	13	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	212	2476	107	54	2065	641	146	506	428	0	28	180
Arrive On Green	0.12	0.49	0.49	0.03	0.40	0.40	0.08	0.27	0.27	0.00	0.13	0.13
Sat Flow, veh/h	1810	5099	220	1810	5187	1610	1810	1900	1608	0	220	1423
Grp Volume(v), veh/h	173	818	441	29	1482	20	114	38	16	0	0	97
Grp Sat Flow(s),veh/h/ln	1810	1729	1860	1810	1729	1610	1810	1900	1608	0	0	1644
Q Serve(g_s), s	7.3	12.4	12.4	1.2	18.7	0.6	4.8	1.2	0.6	0.0	0.0	4.3
Cycle Q Clear(g_c), s	7.3	12.4	12.4	1.2	18.7	0.6	4.8	1.2	0.6	0.0	0.0	4.3
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	0.00		0.87
Lane Grp Cap(c), veh/h	212	1679	903	54	2065	641	146	506	428	0	0	208
V/C Ratio(X)	0.81	0.49	0.49	0.54	0.72	0.03	0.78	0.08	0.04	0.00	0.00	0.47
Avail Cap(c_a), veh/h	335	2198	1183	144	2825	877	242	1191	1008	0	0	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	13.5	13.5	37.2	19.7	14.3	35.1	21.4	21.2	0.0	0.0	31.6
Incr Delay (d2), s/veh	4.0	0.2	0.4	3.0	0.6	0.0	3.4	0.1	0.0	0.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.0	4.3	0.6	6.5	0.2	2.2	0.5	0.2	0.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	13.7	13.9	40.3	20.3	14.3	38.6	21.5	21.2	0.0	0.0	33.2
LnGrp LOS	D	B	B	D	C	B	D	C	C	A	A	C
Approach Vol, veh/h		1432			1531			168				97
Approach Delay, s/veh		16.6			20.6			33.0				33.2
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	26.9	6.9	44.0	10.9	16.0	13.7	37.2				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	48.8	6.2	49.5	10.4	* 43	14.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	3.2	3.2	14.4	6.8	6.3	9.3	20.7				
Green Ext Time (p_c), s	0.0	0.2	0.0	9.1	0.0	0.6	0.1	10.3				

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

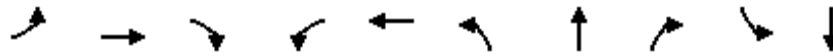
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

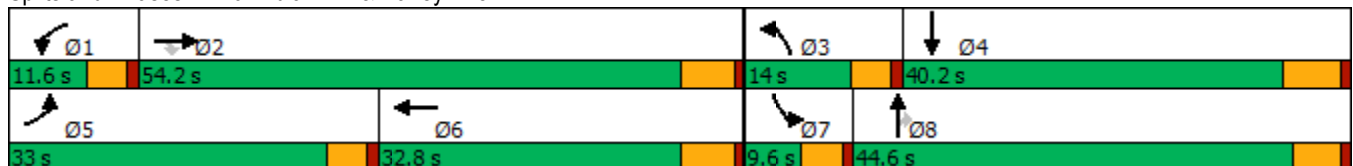


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	261	285	48	14	650	111	260	20	11	69
Future Volume (vph)	261	285	48	14	650	111	260	20	11	69
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.6	39.9	39.9	5.7	19.0	7.5	25.7	25.7	5.3	13.8
Actuated g/C Ratio	0.22	0.50	0.50	0.07	0.24	0.09	0.32	0.32	0.07	0.17
v/c Ratio	0.72	0.12	0.06	0.12	0.62	0.38	0.25	0.04	0.10	0.35
Control Delay	42.5	12.8	0.1	46.0	31.2	42.6	22.8	0.1	47.2	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	12.8	0.1	46.0	31.2	42.6	22.8	0.1	47.2	12.5
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		24.8			31.5		27.3			14.1
Approach LOS		C			C		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.3  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 26.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.




























HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	261	285	48	14	650	42	111	260	20	11	69	151
Future Volume (veh/h)	261	285	48	14	650	42	111	260	20	11	69	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	287	313	39	15	714	31	122	286	14	12	76	136
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	2060	639	33	1152	50	252	798	356	27	297	265
Arrive On Green	0.19	0.40	0.40	0.02	0.23	0.23	0.07	0.22	0.22	0.02	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	5098	221	3510	3610	1610	1810	1805	1610
Grp Volume(v), veh/h	287	313	39	15	484	261	122	286	14	12	76	136
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1860	1755	1805	1610	1810	1805	1610
Q Serve(g_s), s	9.3	2.4	0.9	0.5	7.7	7.7	2.0	4.1	0.4	0.4	2.2	4.7
Cycle Q Clear(g_c), s	9.3	2.4	0.9	0.5	7.7	7.7	2.0	4.1	0.4	0.4	2.2	4.7
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	2060	639	33	781	420	252	798	356	27	297	265
V/C Ratio(X)	0.84	0.15	0.06	0.45	0.62	0.62	0.48	0.36	0.04	0.44	0.26	0.51
Avail Cap(c_a), veh/h	845	4126	1281	208	1534	825	542	2326	1037	149	1009	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	11.8	11.3	29.6	21.2	21.2	27.2	20.1	18.6	29.7	22.2	23.2
Incr Delay (d2), s/veh	2.1	0.0	0.0	3.5	0.8	1.5	0.5	0.3	0.0	4.1	0.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.7	0.3	0.2	2.8	3.1	0.8	1.5	0.1	0.2	0.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	11.8	11.4	33.1	22.0	22.7	27.7	20.3	18.7	33.8	22.6	24.8
LnGrp LOS	C	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		639			760			422			224	
Approach Delay, s/veh		18.1			22.5			22.4			24.5	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	30.0	9.0	16.2	16.1	19.5	5.5	19.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.5	4.4	4.0	6.7	11.3	9.7	2.4	6.1				
Green Ext Time (p_c), s	0.0	2.1	0.1	1.1	0.3	4.0	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/06/2019

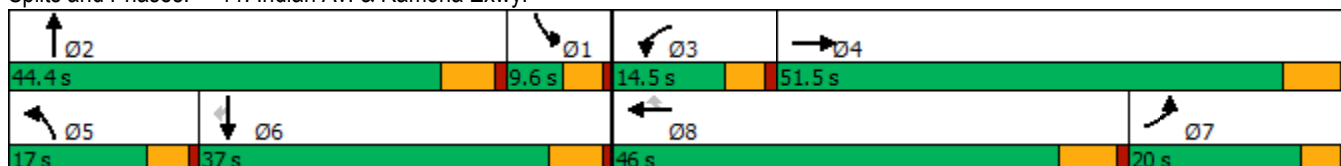


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	144	986	64	1409	99	86	136	19	50	38
Future Volume (vph)	144	986	64	1409	99	86	136	19	50	38
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	51.5	14.5	46.0	46.0	17.0	44.4	9.6	37.0	37.0
Total Split (%)	16.7%	42.9%	12.1%	38.3%	38.3%	14.2%	37.0%	8.0%	30.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.9	42.2	7.8	35.1	35.1	8.9	20.3	6.2	13.7	13.7
Actuated g/C Ratio	0.13	0.47	0.09	0.39	0.39	0.10	0.23	0.07	0.15	0.15
v/c Ratio	0.63	0.46	0.43	0.73	0.14	0.50	0.23	0.16	0.10	0.10
Control Delay	53.6	19.0	53.6	27.4	0.5	53.6	24.8	50.3	36.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	19.0	53.6	27.4	0.5	53.6	24.8	50.3	36.2	0.5
LOS	D	B	D	C	A	D	C	D	D	A
Approach Delay		23.2		26.8			34.0		26.1	
Approach LOS		C		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 89  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 26.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	986	61	64	1409	99	86	136	45	19	50	38
Future Volume (veh/h)	144	986	61	64	1409	99	86	136	45	19	50	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	153	1049	53	68	1499	75	91	145	25	20	53	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	191	2410	122	90	2075	644	118	404	68	89	471	210
Arrive On Green	0.11	0.48	0.48	0.05	0.40	0.40	0.07	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	5057	255	1810	5187	1610	1810	3089	522	1810	3610	1610
Grp Volume(v), veh/h	153	717	385	68	1499	75	91	84	86	20	53	31
Grp Sat Flow(s),veh/h/ln	1810	1729	1854	1810	1729	1610	1810	1805	1806	1810	1805	1610
Q Serve(g_s), s	6.3	10.5	10.5	2.8	18.6	2.2	3.8	3.2	3.3	0.8	1.0	0.9
Cycle Q Clear(g_c), s	6.3	10.5	10.5	2.8	18.6	2.2	3.8	3.2	3.3	0.8	1.0	0.9
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	191	1648	884	90	2075	644	118	236	236	89	471	210
V/C Ratio(X)	0.80	0.43	0.44	0.75	0.72	0.12	0.77	0.35	0.37	0.22	0.11	0.15
Avail Cap(c_a), veh/h	365	2051	1100	235	2703	839	294	912	913	118	1475	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	13.2	13.2	35.8	19.3	14.4	35.1	30.2	30.3	34.9	29.3	14.3
Incr Delay (d2), s/veh	2.9	0.2	0.3	4.6	0.7	0.1	4.0	0.9	0.9	0.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	3.3	3.6	1.3	6.4	0.7	1.7	1.4	1.4	0.4	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	13.4	13.5	40.4	20.0	14.5	39.1	31.1	31.2	35.4	29.4	14.6
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1255			1642			261			104	
Approach Delay, s/veh		16.2			20.6			34.0			26.2	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	15.8	8.4	42.6	9.6	15.8	14.3	36.7				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	5.0	* 39	9.9	45.3	12.4	31.2	15.4	* 40				
Max Q Clear Time (g_c+I1), s	2.8	5.3	4.8	12.5	5.8	3.0	8.3	20.6				
Green Ext Time (p_c), s	0.0	0.9	0.0	7.5	0.0	0.3	0.1	9.9				

Intersection Summary

HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

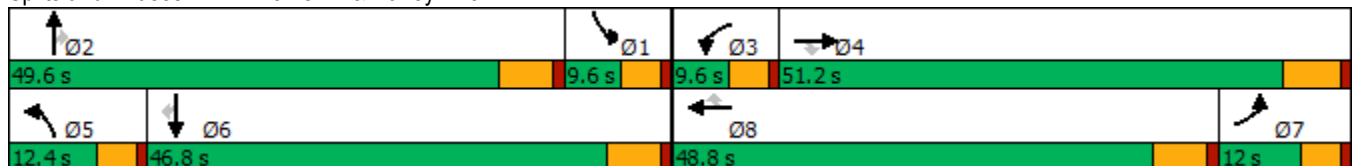


Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations	↘	↑↑	↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	
Traffic Volume (vph)	240	40	30	200	140	153	1137	5	27	611	337	
Future Volume (vph)	240	40	30	200	140	153	1137	5	27	611	337	
Turn Type	Prot	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		8		5	2		1	6		3
Permitted Phases			4		8			2			6	
Detector Phase	7	4	4	8	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	47.2	47.2	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8	9.6
Total Split (s)	12.0	51.2	51.2	48.8	48.8	12.4	49.6	49.6	9.6	46.8	46.8	9.6
Total Split (%)	10.0%	42.7%	42.7%	40.7%	40.7%	10.3%	41.3%	41.3%	8.0%	39.0%	39.0%	8%
Yellow Time (s)	3.6	5.2	5.2	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	27.4	27.4	14.8	14.8	7.6	28.8	28.8	5.4	19.4	19.4	
Actuated g/C Ratio	0.11	0.38	0.38	0.20	0.20	0.10	0.40	0.40	0.07	0.27	0.27	
v/c Ratio	1.24	0.03	0.04	0.19	0.31	0.43	0.57	0.01	0.11	0.45	0.51	
Control Delay	175.8	16.0	0.1	24.4	4.2	39.4	19.8	0.0	41.1	23.1	5.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	175.8	16.0	0.1	24.4	4.2	39.4	19.8	0.0	41.1	23.1	5.6	
LOS	F	B	A	C	A	D	B	A	D	C	A	
Approach Delay		138.2		16.1			22.1			17.6		
Approach LOS		F		B			C			B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 72.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 32.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑	↘	↖↗	↑↑↑	↘	↖↗	↑↑↑	↘	↖↗	↑↑↑	↘
Traffic Volume (veh/h)	240	40	30	0	200	140	153	1137	5	27	611	337
Future Volume (veh/h)	240	40	30	0	200	140	153	1137	5	27	611	337
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	247	41	18	0	206	54	158	1172	4	28	630	242
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	202	1259	562	5	779	242	250	1830	568	107	1712	532
Arrive On Green	0.11	0.35	0.35	0.00	0.15	0.15	0.07	0.35	0.35	0.03	0.33	0.33
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	247	41	18	0	206	54	158	1172	4	28	630	242
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.4	0.5	0.5	0.0	2.3	2.0	2.9	12.5	0.1	0.5	6.2	4.4
Cycle Q Clear(g_c), s	7.4	0.5	0.5	0.0	2.3	2.0	2.9	12.5	0.1	0.5	6.2	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	1259	562	5	779	242	250	1830	568	107	1712	532
V/C Ratio(X)	1.23	0.03	0.03	0.00	0.26	0.22	0.63	0.64	0.01	0.26	0.37	0.46
Avail Cap(c_a), veh/h	202	2445	1091	264	3358	1042	412	3420	1062	264	3201	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	14.2	14.2	0.0	25.0	24.8	30.0	18.0	10.4	31.5	17.0	5.6
Incr Delay (d2), s/veh	137.3	0.0	0.0	0.0	0.2	0.5	1.0	0.4	0.0	0.5	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.2	0.2	0.0	0.9	0.7	1.2	4.3	0.0	0.2	2.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	166.8	14.3	14.3	0.0	25.2	25.3	31.0	18.3	10.4	32.0	17.1	6.2
LnGrp LOS	F	B	B	A	C	C	C	B	B	C	B	A
Approach Vol, veh/h		306			260			1334			900	
Approach Delay, s/veh		137.4			25.2			19.8			14.6	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	29.2	0.0	29.4	9.3	27.7	13.6	15.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	* 44	5.0	45.0	7.8	41.0	7.4	* 43				
Max Q Clear Time (g_c+I1), s	2.5	14.5	0.0	2.5	4.9	8.2	9.4	4.3				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.2	0.1	5.2	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

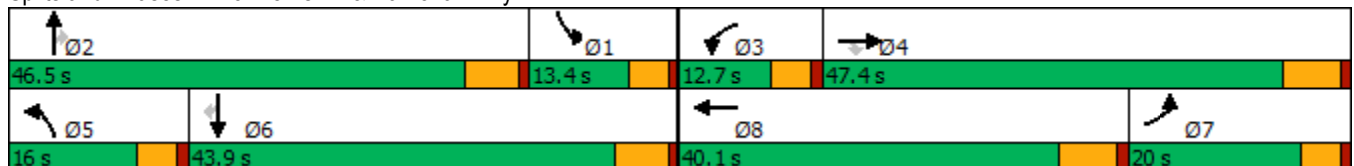
09/06/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	381	584	86	104	1160	273	735	59	123	355	139	
Future Volume (vph)	381	584	86	104	1160	273	735	59	123	355	139	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	47.4	47.4	12.7	40.1	16.0	46.5	46.5	13.4	43.9	43.9	
Total Split (%)	16.7%	39.5%	39.5%	10.6%	33.4%	13.3%	38.8%	38.8%	11.2%	36.6%	36.6%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	14.8	41.4	41.4	7.2	33.8	11.1	29.4	29.4	7.7	26.1	26.1	
Actuated g/C Ratio	0.14	0.39	0.39	0.07	0.32	0.10	0.27	0.27	0.07	0.24	0.24	
v/c Ratio	0.82	0.30	0.12	0.46	0.87	0.78	0.77	0.11	0.51	0.42	0.28	
Control Delay	60.7	24.5	0.3	56.7	42.2	64.1	41.6	0.4	56.9	35.3	4.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	60.7	24.5	0.3	56.7	42.2	64.1	41.6	0.4	56.9	35.3	4.4	
LOS	E	C	A	E	D	E	D	A	E	D	A	
Approach Delay		35.6			43.2		45.1			32.6		
Approach LOS		D			D		D			C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107.1	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 40.2	Intersection LOS: D
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

























Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	381	584	86	104	1160	196	273	735	59	123	355	139
Future Volume (veh/h)	381	584	86	104	1160	196	273	735	59	123	355	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	397	608	64	108	1208	177	284	766	31	128	370	115
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	464	2125	660	168	1414	207	350	964	429	191	844	376
Arrive On Green	0.13	0.41	0.41	0.05	0.31	0.31	0.10	0.27	0.27	0.05	0.23	0.23
Sat Flow, veh/h	3510	5187	1610	3510	4568	669	3510	3610	1605	3510	3610	1608
Grp Volume(v), veh/h	397	608	64	108	915	470	284	766	31	128	370	115
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1729	1779	1755	1805	1605	1755	1805	1608
Q Serve(g_s), s	11.2	8.0	2.5	3.1	25.2	25.2	8.0	20.0	1.2	3.6	8.9	4.0
Cycle Q Clear(g_c), s	11.2	8.0	2.5	3.1	25.2	25.2	8.0	20.0	1.2	3.6	8.9	4.0
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	2125	660	168	1070	550	350	964	429	191	844	376
V/C Ratio(X)	0.85	0.29	0.10	0.64	0.85	0.85	0.81	0.79	0.07	0.67	0.44	0.31
Avail Cap(c_a), veh/h	533	2125	660	280	1156	595	395	1449	644	305	1356	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	20.0	18.4	47.4	32.9	32.9	44.7	34.6	17.5	47.0	33.2	14.5
Incr Delay (d2), s/veh	10.4	0.1	0.1	1.5	6.1	11.1	9.6	1.8	0.1	1.5	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.0	0.9	1.3	10.6	11.7	3.8	8.5	0.5	1.6	3.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	20.1	18.5	49.0	39.0	43.9	54.3	36.4	17.6	48.6	33.5	15.0
LnGrp LOS	D	C	B	D	D	D	D	D	B	D	C	B
Approach Vol, veh/h		1069			1493			1081			613	
Approach Delay, s/veh		32.4			41.3			40.6			33.2	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	32.9	9.5	47.7	14.7	29.5	19.6	37.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	8.8	* 41	8.1	41.2	11.4	38.1	15.4	* 34				
Max Q Clear Time (g_c+I1), s	5.6	22.0	5.1	10.0	10.0	10.9	13.2	27.2				
Green Ext Time (p_c), s	0.1	4.7	0.0	4.1	0.1	2.6	0.2	4.2				

Intersection Summary

HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
09/06/2019

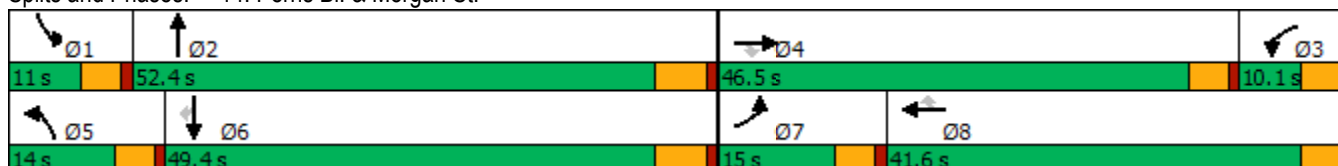


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	36	15	19	16	26	3	34	973	5	471	99
Future Volume (vph)	36	15	19	16	26	3	34	973	5	471	99
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	15.0	46.5	46.5	10.1	41.6	41.6	14.0	52.4	11.0	49.4	49.4
Total Split (%)	12.5%	38.8%	38.8%	8.4%	34.7%	34.7%	11.7%	43.7%	9.2%	41.2%	41.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.2	20.0	20.0	9.2	18.8	18.8	9.1	35.0	8.3	32.9	32.9
Actuated g/C Ratio	0.20	0.44	0.44	0.20	0.41	0.41	0.20	0.76	0.18	0.72	0.72
v/c Ratio	0.11	0.01	0.03	0.05	0.04	0.00	0.11	0.29	0.02	0.21	0.10
Control Delay	31.0	18.9	0.1	30.2	19.4	0.0	31.1	10.8	36.0	13.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	18.9	0.1	30.2	19.4	0.0	31.1	10.8	36.0	13.7	3.3
LOS	C	B	A	C	B	A	C	B	D	B	A
Approach Delay		19.9			22.1			11.5		12.1	
Approach LOS		B			C			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 45.9  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.29  
 Intersection Signal Delay: 12.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 44.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.





























HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	15	19	16	26	3	34	973	18	5	471	99
Future Volume (veh/h)	36	15	19	16	26	3	34	973	18	5	471	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	17	6	18	30	1	39	1106	18	6	535	101
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	554	247	40	250	211	77	2033	33	15	1271	555
Arrive On Green	0.04	0.15	0.15	0.02	0.13	0.13	0.04	0.39	0.39	0.01	0.35	0.35
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5257	86	1810	3610	1576
Grp Volume(v), veh/h	41	17	6	18	30	1	39	727	397	6	535	101
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1576
Q Serve(g_s), s	1.0	0.2	0.1	0.4	0.6	0.0	1.0	7.5	7.5	0.2	5.1	2.0
Cycle Q Clear(g_c), s	1.0	0.2	0.1	0.4	0.6	0.0	1.0	7.5	7.5	0.2	5.1	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	80	554	247	40	250	211	77	1337	729	15	1271	555
V/C Ratio(X)	0.51	0.03	0.02	0.45	0.12	0.00	0.50	0.54	0.54	0.41	0.42	0.18
Avail Cap(c_a), veh/h	412	3314	1478	218	1540	1305	373	3531	1924	254	3449	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	16.4	8.3	22.0	17.5	17.2	21.4	10.9	10.9	22.5	11.2	10.2
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.8	0.2	0.0	1.9	0.3	0.6	6.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.1	0.2	0.3	0.0	0.4	2.0	2.2	0.1	1.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	16.5	8.3	24.9	17.7	17.2	23.3	11.2	11.5	29.4	11.5	10.4
LnGrp LOS	C	B	A	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		64			49			1163			642	
Approach Delay, s/veh		20.0			20.3			11.7			11.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	23.5	5.6	11.6	6.6	21.9	6.6	10.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	46.6	5.5	41.9	9.4	43.6	10.4	37.0				
Max Q Clear Time (g_c+I1), s	2.2	9.5	2.4	2.2	3.0	7.1	3.0	2.6				
Green Ext Time (p_c), s	0.0	8.2	0.0	0.1	0.0	3.9	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

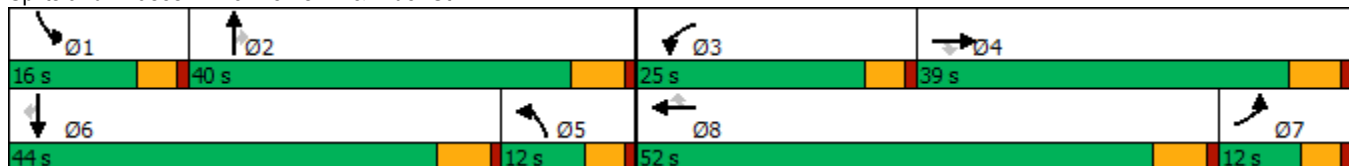
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	146	16	153	295	254	42	792	73	74	378	40
Future Volume (vph)	37	146	16	153	295	254	42	792	73	74	378	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	12.0	39.0	39.0	25.0	52.0	52.0	12.0	40.0	40.0	16.0	44.0	44.0
Total Split (%)	10.0%	32.5%	32.5%	20.8%	43.3%	43.3%	10.0%	33.3%	33.3%	13.3%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.3	13.9	13.9	11.5	22.5	22.5	9.2	19.2	19.2	7.9	22.5	22.5
Actuated g/C Ratio	0.11	0.19	0.19	0.16	0.31	0.31	0.13	0.27	0.27	0.11	0.31	0.31
v/c Ratio	0.18	0.21	0.04	0.54	0.27	0.38	0.18	0.58	0.14	0.38	0.24	0.06
Control Delay	37.1	28.6	0.1	40.1	24.0	5.6	36.1	26.7	0.5	42.3	22.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	28.6	0.1	40.1	24.0	5.6	36.1	26.7	0.5	42.3	22.8	0.2
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		27.9			20.8			25.0			23.9	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 72.3  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 23.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 53.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

























Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	146	16	153	295	254	42	792	73	74	378	40
Future Volume (veh/h)	37	146	16	153	295	254	42	792	73	74	378	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	147	4	155	298	122	42	800	42	75	382	25
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	653	291	201	653	291	229	1402	429	112	952	296
Arrive On Green	0.09	0.18	0.18	0.11	0.18	0.18	0.13	0.27	0.27	0.06	0.18	0.18
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	5187	1588	1810	5187	1610
Grp Volume(v), veh/h	37	147	4	155	298	122	42	800	42	75	382	25
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1729	1588	1810	1729	1610
Q Serve(g_s), s	1.1	1.9	0.1	4.6	4.1	2.6	1.1	7.4	1.1	2.2	3.6	0.7
Cycle Q Clear(g_c), s	1.1	1.9	0.1	4.6	4.1	2.6	1.1	7.4	1.1	2.2	3.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	653	291	201	653	291	229	1402	429	112	952	296
V/C Ratio(X)	0.23	0.23	0.01	0.77	0.46	0.42	0.18	0.57	0.10	0.67	0.40	0.08
Avail Cap(c_a), veh/h	242	2168	967	668	3017	1345	242	3208	982	373	3584	1112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	19.3	6.5	23.9	20.2	9.7	21.6	17.4	15.1	25.4	19.9	18.7
Incr Delay (d2), s/veh	0.3	0.2	0.0	2.4	0.5	1.0	0.1	0.4	0.1	2.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	0.0	1.8	1.5	1.2	0.4	2.5	0.3	0.9	1.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	19.5	6.5	26.3	20.7	10.6	21.7	17.8	15.2	28.0	20.2	18.8
LnGrp LOS	C	B	A	C	C	B	C	B	B	C	C	B
Approach Vol, veh/h		188			575			884			482	
Approach Delay, s/veh		20.1			20.1			17.8			21.3	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	20.7	10.7	15.8	12.8	15.9	10.7	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	11.4	34.2	20.4	33.2	7.4	* 38	7.4	* 46				
Max Q Clear Time (g_c+I1), s	4.2	9.4	6.6	3.9	3.1	5.6	3.1	6.1				
Green Ext Time (p_c), s	0.0	5.5	0.1	0.8	0.0	2.5	0.0	2.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.4								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	10	62	334	4	1		
Future Volume (vph)	10	62	334	4	1		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	9.6	31.8	36.0	78.6	42.6	9.6	31.8
Total Split (%)	8.0%	26.5%	30.0%	65.5%	35.5%	8%	27%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.8	17.4	19.3	21.2	17.6		
Actuated g/C Ratio	0.18	0.39	0.43	0.48	0.40		
v/c Ratio	0.04	0.06	0.49	0.00	0.00		
Control Delay	32.6	0.1	19.6	7.8	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.6	0.1	19.6	7.8	0.0		
LOS	C	A	B	A	A		
Approach Delay				19.4			
Approach LOS				B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 44.4	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 42.8%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	62	0	0	0	334	4	0	0	1	6
Future Volume (veh/h)	10	0	62	0	0	0	334	4	0	0	1	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	12	0	55	0	0	0	388	5	0	0	1	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	29	274	232	6	7	0	494	1687	0	0	62	55
Arrive On Green	0.02	0.00	0.14	0.00	0.00	0.00	0.27	0.47	0.00	0.00	0.03	0.03
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	12	0	55	0	0	0	388	5	0	0	1	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.2	0.0	0.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	29	274	232	6	7	0	494	1687	0	0	62	55
V/C Ratio(X)	0.42	0.00	0.24	0.00	0.00	0.00	0.78	0.00	0.00	0.00	0.02	0.13
Avail Cap(c_a), veh/h	314	1715	1453	314	1794	0	1972	9172	0	0	2331	2079
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	10.9	0.0	0.0	0.0	9.7	4.1	0.0	0.0	13.4	13.5
Incr Delay (d2), s/veh	3.5	0.0	0.5	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.6	0.0	11.4	0.0	0.0	0.0	10.7	4.1	0.0	0.0	13.5	14.5
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		67			0			393			8	
Approach Delay, s/veh		12.5			0.0			10.7			14.4	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		18.9	0.0	10.0	12.5	6.4	5.1	4.9				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		73.2	5.0	26.0	31.4	37.2	5.0	* 27				
Max Q Clear Time (g_c+I1), s		2.0	0.0	2.9	7.7	2.1	2.2	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.1	0.5	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	26	49	341	54	6
Future Vol, veh/h	4	26	49	341	54	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	30	56	392	62	7
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	7.9	7.8	8.2
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	75%
Vol Right, %	0%	0%	0%	0%	100%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	171	171	4	26	36	24
LT Vol	49	0	0	4	0	0	0
Through Vol	0	171	171	0	0	36	18
RT Vol	0	0	0	0	26	0	6
Lane Flow Rate	56	196	196	5	30	41	28
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.081	0.254	0.161	0.008	0.041	0.061	0.039
Departure Headway (Hd)	5.161	4.661	2.959	6.095	4.895	5.288	5.112
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	685	760	1182	590	735	681	704
Service Time	2.957	2.456	0.754	3.801	2.6	2.994	2.819
HCM Lane V/C Ratio	0.082	0.258	0.166	0.008	0.041	0.06	0.04
HCM Control Delay	8.4	9.1	6.3	8.9	7.8	8.3	8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	1	0.6	0	0.1	0.2	0.1

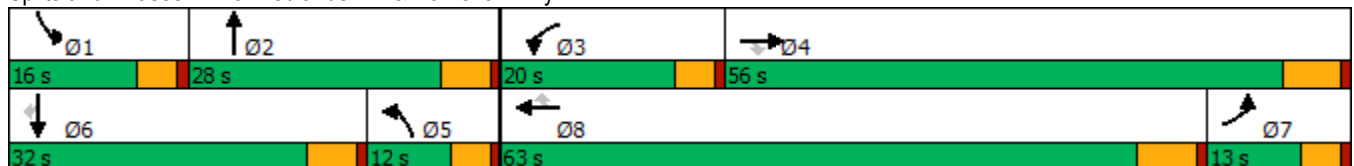
Timings  
18: Redlands Av. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	29	766	21	79	1514	347	31	6	48	1	9	
Future Volume (vph)	29	766	21	79	1514	347	31	6	48	1	9	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4	
Total Split (s)	13.0	56.0	56.0	20.0	63.0	63.0	12.0	28.0	16.0	32.0	32.0	
Total Split (%)	10.8%	46.7%	46.7%	16.7%	52.5%	52.5%	10.0%	23.3%	13.3%	26.7%	26.7%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	7.4	40.6	40.6	9.5	45.5	45.5	7.9	13.9	8.3	16.0	16.0	
Actuated g/C Ratio	0.10	0.55	0.55	0.13	0.61	0.61	0.11	0.19	0.11	0.22	0.22	
v/c Ratio	0.17	0.28	0.02	0.35	0.50	0.32	0.17	0.27	0.25	0.00	0.02	
Control Delay	46.0	14.8	0.0	44.1	14.4	2.5	44.5	12.5	44.9	38.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.0	14.8	0.0	44.1	14.4	2.5	44.5	12.5	44.9	38.0	0.1	
LOS	D	B	A	D	B	A	D	B	D	D	A	
Approach Delay		15.6			13.5			20.2		38.1		
Approach LOS		B			B			C		D		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 74.3  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 14.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 56.2%  
 ICU Level of Service B  
 Analysis Period (min) 15






























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	29	766	21	79	1514	347	31	6	92	48	1	9
Future Volume (veh/h)	29	766	21	79	1514	347	31	6	92	48	1	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	798	19	82	1577	295	32	6	32	50	1	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	2485	772	107	2509	779	60	31	167	80	229	194
Arrive On Green	0.03	0.48	0.48	0.06	0.48	0.48	0.03	0.12	0.12	0.04	0.12	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	261	1389	1810	1900	1610
Grp Volume(v), veh/h	30	798	19	82	1577	295	32	0	38	50	1	6
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	0	1650	1810	1900	1610
Q Serve(g_s), s	1.1	6.6	0.3	3.1	15.8	5.0	1.2	0.0	1.5	1.9	0.0	0.2
Cycle Q Clear(g_c), s	1.1	6.6	0.3	3.1	15.8	5.0	1.2	0.0	1.5	1.9	0.0	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	57	2485	772	107	2509	779	60	0	199	80	229	194
V/C Ratio(X)	0.53	0.32	0.02	0.77	0.63	0.38	0.53	0.00	0.19	0.62	0.00	0.03
Avail Cap(c_a), veh/h	217	3689	1145	398	4208	1306	191	0	533	295	722	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	11.2	3.7	32.5	13.4	4.3	33.3	0.0	27.7	32.9	27.1	27.2
Incr Delay (d2), s/veh	2.8	0.1	0.0	4.3	0.3	0.3	2.7	0.0	0.5	2.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.0	0.1	1.4	4.8	2.1	0.5	0.0	0.6	0.8	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	11.3	3.7	36.8	13.7	4.6	36.1	0.0	28.2	35.8	27.1	27.3
LnGrp LOS	D	B	A	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		847			1954			70				57
Approach Delay, s/veh		12.0			13.3			31.8				34.7
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	13.8	8.7	39.7	7.7	13.8	8.4	40.1				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	5.4	* 5.4	6.2	* 6.2				
Max Green Setting (Gmax), s	11.4	22.6	15.4	49.8	7.4	* 27	8.4	* 57				
Max Q Clear Time (g_c+I1), s	3.9	3.5	5.1	8.6	3.2	2.2	3.1	17.8				
Green Ext Time (p_c), s	0.0	0.1	0.1	5.6	0.0	0.0	0.0	16.1				

Intersection Summary

HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕			↖	↗
Traffic Vol, veh/h	32	0	0	0	0	0	0	0	0	0	0	46
Future Vol, veh/h	32	0	0	0	0	0	0	0	0	0	0	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	35	0	0	0	0	0	0	0	0	0	0	50
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.1	0	0	6.8
HCM LOS	A	-	-	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	0%	0%	0%
Vol Thru, %	100%	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	32	0	0	0	46
LT Vol	0	32	0	0	0	0
Through Vol	0	0	0	0	0	0
RT Vol	0	0	0	0	0	46
Lane Flow Rate	0	35	0	0	0	50
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0	0.049	0	0	0	0.054
Departure Headway (Hd)	4.599	5.087	4.587	4.614	4.561	3.861
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	705	0	0	0	925
Service Time	2.644	2.807	2.307	2.649	2.297	1.596
HCM Lane V/C Ratio	0	0.05	0	0	0	0.054
HCM Control Delay	7.6	8.1	7.3	7.6	7.3	6.8
HCM Lane LOS	N	A	N	N	N	A
HCM 95th-tile Q	0	0.2	0	0	0	0.2

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1027	1090	1635	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1027	1090	1635	-	-	-
Mov Cap-2 Maneuver	1027	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↗		↖		↗		↔	
Traffic Vol, veh/h	0	336	10	161	685	0	45	0	192	0	0	0
Future Vol, veh/h	0	336	10	161	685	0	45	0	192	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	120	-	-	150	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	365	11	175	745	0	49	0	209	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	376	0	0	1088	-	365	1570	1471	373
Stage 1	-	-	-	-	-	-	365	-	-	1095	1095	-
Stage 2	-	-	-	-	-	-	723	-	-	475	376	-
Critical Hdwy	-	-	-	4.1	-	-	7.3	-	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	-	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	-	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	-	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1194	-	-	184	0	685	83	128	630
Stage 1	0	-	-	-	-	-	658	0	-	231	292	-
Stage 2	0	-	-	-	-	-	388	0	-	574	620	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1194	-	-	163	-	685	51	109	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	163	-	-	51	109	-
Stage 1	-	-	-	-	-	-	658	-	-	231	249	-
Stage 2	-	-	-	-	-	-	331	-	-	399	620	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.6			17			0		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	163	685	-	-	1194	-	-	-
HCM Lane V/C Ratio	0.3	0.305	-	-	0.147	-	-	-
HCM Control Delay (s)	36.3	12.5	-	-	8.5	-	-	0
HCM Lane LOS	E	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	1.2	1.3	-	-	0.5	-	-	-

Intersection						
Int Delay, s/veh	4.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑	↘	
Traffic Vol, veh/h	500	18	207	799	32	171
Future Vol, veh/h	500	18	207	799	32	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	185	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	588	21	244	940	38	201

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	609	0	1546 588
Stage 1	-	-	-	-	588 -
Stage 2	-	-	-	-	958 -
Critical Hdwy	-	-	4.1	-	6.6 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	979	-	117 513
Stage 1	-	-	-	-	559 -
Stage 2	-	-	-	-	338 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	979	-	88 513
Mov Cap-2 Maneuver	-	-	-	-	192 -
Stage 1	-	-	-	-	559 -
Stage 2	-	-	-	-	254 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2	25.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	406	-	-	979	-
HCM Lane V/C Ratio	0.588	-	-	0.249	-
HCM Control Delay (s)	25.8	-	-	9.9	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	3.6	-	-	1	-

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

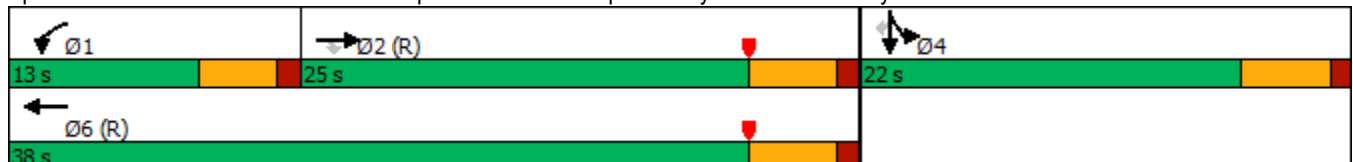


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	344	14	253	171	7	162
Future Volume (vph)	344	14	253	171	7	162
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	9.2	33.7	16.3	16.3
Actuated g/C Ratio	0.33	0.33	0.15	0.56	0.27	0.27
v/c Ratio	0.32	0.03	1.02	0.09	0.86	0.32
Control Delay	15.8	0.1	82.7	11.4	39.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	0.1	82.7	11.4	39.9	4.9
LOS	B	A	F	B	D	A
Approach Delay	15.2			54.0	29.4	
Approach LOS	B			D	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 33.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

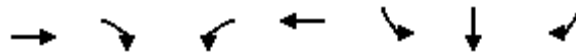
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	344	14	253	171	0	0	0	0	372	7	162
Future Volume (veh/h)	0	344	14	253	171	0	0	0	0	372	7	162
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	382	13	281	190	0				413	8	102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1273	568	256	2055	0				469	9	425
Arrive On Green	0.00	0.35	0.35	0.14	0.57	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1777	34	1610
Grp Volume(v), veh/h	0	382	13	281	190	0				421	0	102
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1811	0	1610
Q Serve(g_s), s	0.0	4.6	0.3	8.5	1.4	0.0				13.4	0.0	3.0
Cycle Q Clear(g_c), s	0.0	4.6	0.3	8.5	1.4	0.0				13.4	0.0	3.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1273	568	256	2055	0				478	0	425
V/C Ratio(X)	0.00	0.30	0.02	1.10	0.09	0.00				0.88	0.00	0.24
Avail Cap(c_a), veh/h	0	1273	568	256	2055	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.1	12.7	25.8	5.9	0.0				21.2	0.0	17.3
Incr Delay (d2), s/veh	0.0	0.6	0.1	83.5	0.1	0.0				15.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	0.1	9.2	0.4	0.0				6.8	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.7	12.8	109.3	6.0	0.0				36.6	0.0	17.6
LnGrp LOS	A	B	B	F	A	A				D	A	B
Approach Vol, veh/h		395			471					523		
Approach Delay, s/veh		14.6			67.6					32.9		
Approach LOS		B			E					C		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	26.2		20.8		39.2						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	10.5	6.6		15.4		3.4						
Green Ext Time (p_c), s	0.0	1.2		0.5		0.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			39.5									
HCM 6th LOS			D									

Timings  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗	↗
Traffic Volume (vph)	793	317	345	846	754	3	171
Future Volume (vph)	793	317	345	846	754	3	171
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	37.0	37.0	34.0	71.0	39.0	39.0	39.0
Total Split (%)	33.6%	33.6%	30.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	35.0	35.0	25.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.32	0.32	0.23	0.59	0.30	0.30	0.30
v/c Ratio	0.70	0.44	0.84	0.40	0.74	0.74	0.29
Control Delay	37.8	5.5	31.6	5.1	44.0	44.4	7.0
Queue Delay	0.0	0.0	0.0	0.3	57.6	57.5	0.0
Total Delay	37.8	5.5	31.6	5.4	101.7	101.9	7.0
LOS	D	A	C	A	F	F	A
Approach Delay	28.6			13.0		84.4	
Approach LOS	C			B		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 38.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 120.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

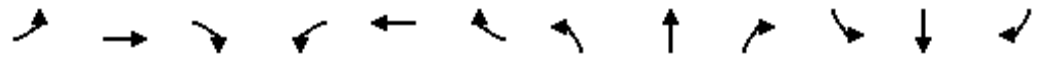
Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	793	317	345	846	0	0	0	0	754	3	171
Future Volume (veh/h)	0	793	317	345	846	0	0	0	0	754	3	171
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	809	258	352	863	0				771	0	95
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1209	539	389	2133	0				1102	0	490
Arrive On Green	0.00	0.33	0.33	0.13	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	809	258	352	863	0				771	0	95
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	21.1	14.0	21.1	19.8	0.0				20.7	0.0	4.8
Cycle Q Clear(g_c), s	0.0	21.1	14.0	21.1	19.8	0.0				20.7	0.0	4.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1209	539	389	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.67	0.48	0.90	0.40	0.00				0.70	0.00	0.19
Avail Cap(c_a), veh/h	0	1209	539	485	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.84	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	31.4	29.0	46.8	20.9	0.0				33.8	0.0	28.3
Incr Delay (d2), s/veh	0.0	3.0	3.0	15.4	0.5	0.0				3.7	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.1	5.5	11.4	8.9	0.0				9.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.3	32.0	62.1	21.4	0.0				37.5	0.0	29.1
LnGrp LOS	A	C	C	E	C	A				D	A	C
Approach Vol, veh/h		1067			1215						866	
Approach Delay, s/veh		33.8			33.2						36.6	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	28.2	42.8		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	29.5	31.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	23.1	23.1		22.7		21.8						
Green Ext Time (p_c), s	0.6	2.5		2.5		3.7						

Intersection Summary

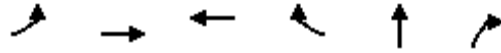
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Timings

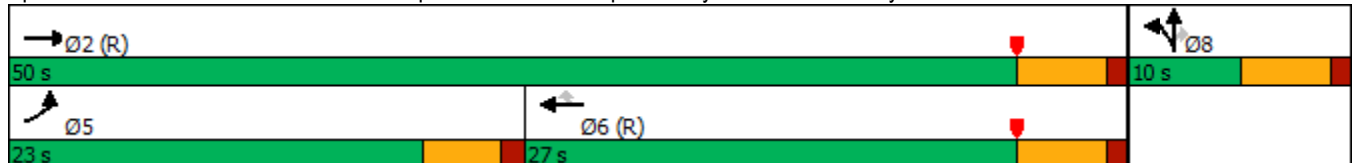


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	223	493	404	542	4	238
Future Volume (vph)	223	493	404	542	4	238
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.0	45.0	27.5	27.5	5.0	5.0
Actuated g/C Ratio	0.22	0.75	0.46	0.46	0.08	0.08
v/c Ratio	0.67	0.21	0.29	0.63	0.19	0.72
Control Delay	15.9	0.2	11.6	6.7	28.8	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	0.2	11.6	6.7	28.8	16.5
LOS	B	A	B	A	C	B
Approach Delay		5.1	8.8		17.7	
Approach LOS		A	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 8.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 62.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

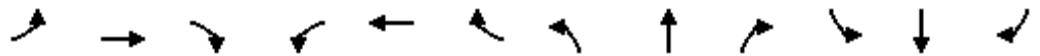


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	223	493	0	0	404	542	20	4	238	0	0	0
Future Volume (veh/h)	223	493	0	0	404	542	20	4	238	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	262	580	0	0	475	587	24	5	86			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	322	2708	0	0	1794	800	126	26	134			
Arrive On Green	0.06	0.25	0.00	0.00	0.50	0.50	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1510	315	1610			
Grp Volume(v), veh/h	262	580	0	0	475	587	29	0	86			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1825	0	1610			
Q Serve(g_s), s	8.6	7.7	0.0	0.0	4.6	17.3	0.9	0.0	3.1			
Cycle Q Clear(g_c), s	8.6	7.7	0.0	0.0	4.6	17.3	0.9	0.0	3.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.83		1.00			
Lane Grp Cap(c), veh/h	322	2708	0	0	1794	800	152	0	134			
V/C Ratio(X)	0.81	0.21	0.00	0.00	0.26	0.73	0.19	0.00	0.64			
Avail Cap(c_a), veh/h	558	2708	0	0	1794	800	152	0	134			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.96	0.96	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.3	8.5	0.0	0.0	8.7	11.9	25.6	0.0	26.6			
Incr Delay (d2), s/veh	1.8	0.2	0.0	0.0	0.4	5.9	2.8	0.0	21.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.8	1.1	0.0	0.0	1.4	5.8	0.5	0.0	1.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	8.7	0.0	0.0	9.1	17.8	28.4	0.0	47.8			
LnGrp LOS	C	A	A	A	A	B	C	A	D			
Approach Vol, veh/h		842			1062			115				
Approach Delay, s/veh		15.0			13.9			42.9				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			15.2	34.8		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		9.7			10.6	19.3		5.1				
Green Ext Time (p_c), s		2.4			0.2	1.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					16.0							
HCM 6th LOS					B							

Timings  
4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↷	↷	↶	↷	↷
Traffic Volume (vph)	202	1344	867	718	324	7	391
Future Volume (vph)	202	1344	867	718	324	7	391
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	16.1	70.1	49.4	49.4	28.4	28.4	28.4
Actuated g/C Ratio	0.15	0.64	0.45	0.45	0.26	0.26	0.26
v/c Ratio	0.78	0.60	0.55	0.66	0.38	0.38	0.85
Control Delay	44.0	20.9	25.3	5.0	34.7	34.6	47.4
Queue Delay	0.0	31.9	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	52.8	25.3	5.0	34.7	34.6	47.4
LOS	D	D	C	A	C	C	D
Approach Delay		51.6	16.1			41.6	
Approach LOS		D	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 35.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 120.4%  
 ICU Level of Service H  
 Analysis Period (min) 15




















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1344	0	0	867	718	324	7	391	0	0	0
Future Volume (veh/h)	202	1344	0	0	867	718	324	7	391	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	206	1371	0	0	885	509	336	0	296			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	233	2465	0	0	1853	825	770	0	343			
Arrive On Green	0.26	1.00	0.00	0.00	0.51	0.51	0.21	0.00	0.21			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	206	1371	0	0	885	509	336	0	296			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	12.0	0.0	0.0	0.0	17.4	24.8	8.9	0.0	19.5			
Cycle Q Clear(g_c), s	12.0	0.0	0.0	0.0	17.4	24.8	8.9	0.0	19.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	233	2465	0	0	1853	825	770	0	343			
V/C Ratio(X)	0.89	0.56	0.00	0.00	0.48	0.62	0.44	0.00	0.86			
Avail Cap(c_a), veh/h	271	2465	0	0	1853	825	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.63	0.63	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.1	0.0	0.0	0.0	17.3	19.1	37.6	0.0	41.8			
Incr Delay (d2), s/veh	17.5	0.6	0.0	0.0	0.9	3.4	0.4	0.0	9.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.6	0.2	0.0	0.0	6.7	9.1	3.8	0.0	8.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.6	0.0	0.0	18.2	22.5	38.0	0.0	51.2			
LnGrp LOS	E	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1577			1394			632				
Approach Delay, s/veh		8.0			19.7			44.2				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.1			18.6	62.5		28.9				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			14.0	26.8		21.5				
Green Ext Time (p_c), s		7.2			0.1	4.1		1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					18.9							
HCM 6th LOS					B							
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↑	↑	
Traffic Vol, veh/h	27	717	874	8	10	84
Future Vol, veh/h	27	717	874	8	10	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	33	864	1053	10	12	101

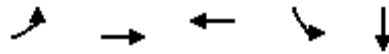
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1063	0	-	0	1551 527
Stage 1	-	-	-	-	1053 -
Stage 2	-	-	-	-	498 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	663	-	-	-	*163 501
Stage 1	-	-	-	-	*301 -
Stage 2	-	-	-	-	*775 -
Platoon blocked, %		-	-	-	1
Mov Cap-1 Maneuver	663	-	-	-	*147 501
Mov Cap-2 Maneuver	-	-	-	-	*147 -
Stage 1	-	-	-	-	*272 -
Stage 2	-	-	-	-	*775 -

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	663	-	-	-	399
HCM Lane V/C Ratio	0.049	-	-	-	0.284
HCM Control Delay (s)	10.7	0.5	-	-	17.6
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Timings  
5: Harley Knox Blvd. & Western Way

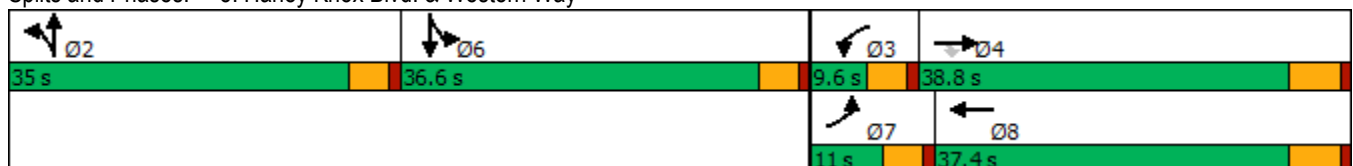


Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	27	717	874	10	0		
Future Volume (vph)	27	717	874	10	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	11.0	38.8	37.4	36.6	36.6	35.0	9.6
Total Split (%)	9.2%	32.3%	31.2%	30.5%	30.5%	29%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	6.3	23.6	20.4	11.7	11.7		
Actuated g/C Ratio	0.16	0.61	0.53	0.30	0.30		
v/c Ratio	0.11	0.27	0.39	0.02	0.11		
Control Delay	20.4	5.3	9.4	16.5	0.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	20.4	5.3	9.4	16.5	0.3		
LOS	C	A	A	B	A		
Approach Delay		5.9	9.4		2.0		
Approach LOS		A	A		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 38.5	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	

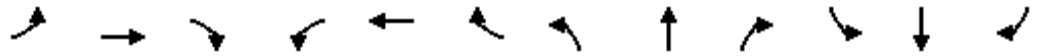
Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑↑	↗	↵	↑↑↑		↵	↗		↵	↗	
Traffic Volume (veh/h)	27	717	0	0	874	8	0	0	0	10	0	84
Future Volume (veh/h)	27	717	0	0	874	8	0	0	0	10	0	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	864	0	0	1053	10	0	0	0	12	0	101
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	2820	875	5	2036	19	5	5	0	331	0	295
Arrive On Green	0.04	0.54	0.00	0.00	0.38	0.38	0.00	0.00	0.00	0.18	0.00	0.18
Sat Flow, veh/h	1810	5187	1610	1810	5299	50	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	33	864	0	0	687	376	0	0	0	12	0	101
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1891	1810	1900	0	1810	0	1610
Q Serve(g_s), s	0.7	3.5	0.0	0.0	5.8	5.8	0.0	0.0	0.0	0.2	0.0	2.1
Cycle Q Clear(g_c), s	0.7	3.5	0.0	0.0	5.8	5.8	0.0	0.0	0.0	0.2	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	2820	875	5	1329	727	5	5	0	331	0	295
V/C Ratio(X)	0.47	0.31	0.00	0.00	0.52	0.52	0.00	0.00	0.00	0.04	0.00	0.34
Avail Cap(c_a), veh/h	304	4495	1395	238	2870	1569	1445	1517	0	1521	0	1353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	4.8	0.0	0.0	9.0	9.0	0.0	0.0	0.0	12.8	0.0	13.6
Incr Delay (d2), s/veh	1.8	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.0	0.0	1.3	1.5	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	4.8	0.0	0.0	9.3	9.6	0.0	0.0	0.0	12.8	0.0	14.2
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		897			1063			0				113
Approach Delay, s/veh		5.4			9.4			0.0				14.1
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	26.5		11.6	6.1	20.4				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		30.4	5.0	33.0		32.0	6.4	31.6				
Max Q Clear Time (g_c+I1), s		0.0	0.0	5.5		4.1	2.7	7.8				
Green Ext Time (p_c), s		0.0	0.0	6.0		0.6	0.0	6.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

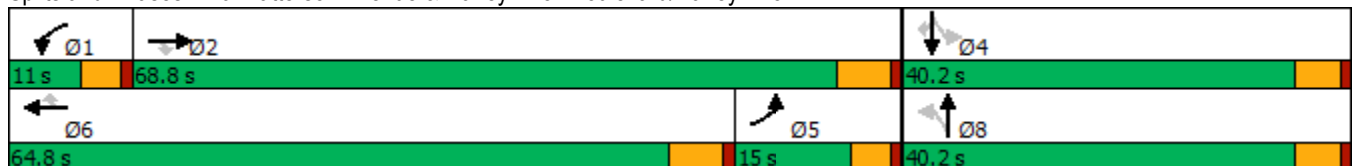


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕		↕	↘
Traffic Volume (vph)	37	642	19	2	753	12	38	2	20	4	31
Future Volume (vph)	37	642	19	2	753	12	38	2	20	4	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.6	38.1	38.1	7.5	33.6	33.6		17.4		17.4	17.4
Actuated g/C Ratio	0.17	0.74	0.74	0.15	0.65	0.65		0.34		0.34	0.34
v/c Ratio	0.15	0.29	0.02	0.01	0.39	0.01		0.11		0.06	0.06
Control Delay	32.3	8.0	0.1	36.5	12.7	0.0		19.9		21.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	32.3	8.0	0.1	36.5	12.7	0.0		19.9		21.5	0.2
LOS	C	A	A	D	B	A		B		C	A
Approach Delay		9.1			12.6			19.9		9.4	
Approach LOS		A			B			B		A	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 51.3	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 50.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.







Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	37	642	19	2	753	12	38	2	5	20	4	31
Future Volume (veh/h)	37	642	19	2	753	12	38	2	5	20	4	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	783	22	2	918	15	46	2	5	24	5	37
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	1870	834	5	1623	709	322	19	21	334	58	263
Arrive On Green	0.05	0.52	0.52	0.00	0.45	0.45	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	3610	1610	1810	3610	1577	1133	113	130	1221	353	1610
Grp Volume(v), veh/h	45	783	22	2	918	15	53	0	0	29	0	37
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1577	1376	0	0	1574	0	1610
Q Serve(g_s), s	1.2	6.6	0.3	0.1	9.2	0.3	1.2	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	1.2	6.6	0.3	0.1	9.2	0.3	1.8	0.0	0.0	0.6	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.87		0.09	0.83		1.00
Lane Grp Cap(c), veh/h	85	1870	834	5	1623	709	362	0	0	391	0	263
V/C Ratio(X)	0.53	0.42	0.03	0.40	0.57	0.02	0.15	0.00	0.00	0.07	0.00	0.14
Avail Cap(c_a), veh/h	383	4632	2066	236	4338	1895	1145	0	0	1216	0	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	7.3	5.8	24.4	10.0	7.5	18.0	0.0	0.0	17.4	0.0	17.6
Incr Delay (d2), s/veh	1.9	0.2	0.0	18.4	0.4	0.0	0.2	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.6	0.1	0.0	2.5	0.1	0.5	0.0	0.0	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	7.5	5.8	42.9	10.4	7.5	18.2	0.0	0.0	17.5	0.0	17.8
LnGrp LOS	C	A	A	D	B	A	B	A	A	B	A	B
Approach Vol, veh/h		850			935			53				66
Approach Delay, s/veh		8.4			10.4			18.2				17.7
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	31.2		13.1	8.1	27.9		13.1				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	2.1	8.6		3.0	3.2	11.2		3.8				
Green Ext Time (p_c), s	0.0	8.9		0.2	0.0	10.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

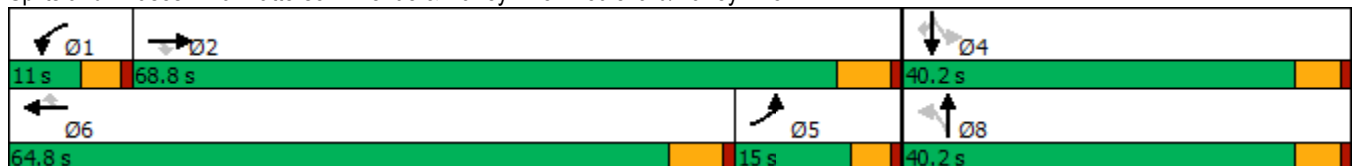


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	37	642	19	2	753	12	38	2	20	4	31
Future Volume (vph)	37	642	19	2	753	12	38	2	20	4	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.6	38.1	38.1	7.5	33.6	33.6		17.4		17.4	17.4
Actuated g/C Ratio	0.17	0.74	0.74	0.15	0.65	0.65		0.34		0.34	0.34
v/c Ratio	0.15	0.20	0.02	0.01	0.39	0.01		0.11		0.06	0.06
Control Delay	32.3	7.1	0.1	36.5	12.7	0.0		19.9		21.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	32.3	7.1	0.1	36.5	12.7	0.0		19.9		21.5	0.2
LOS	C	A	A	D	B	A		B		C	A
Approach Delay		8.3			12.6			19.9		9.4	
Approach LOS		A			B			B		A	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 51.3  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.39  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.8%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	37	642	19	2	753	12	38	2	5	20	4	31
Future Volume (veh/h)	37	642	19	2	753	12	38	2	5	20	4	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	783	22	2	918	15	46	2	5	24	5	37
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	2687	834	5	1623	709	322	19	21	334	58	263
Arrive On Green	0.05	0.52	0.52	0.00	0.45	0.45	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	3610	1577	1133	113	130	1221	353	1610
Grp Volume(v), veh/h	45	783	22	2	918	15	53	0	0	29	0	37
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1805	1577	1376	0	0	1574	0	1610
Q Serve(g_s), s	1.2	4.2	0.3	0.1	9.2	0.3	1.2	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	1.2	4.2	0.3	0.1	9.2	0.3	1.8	0.0	0.0	0.6	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.87		0.09	0.83		1.00
Lane Grp Cap(c), veh/h	85	2687	834	5	1623	709	362	0	0	391	0	263
V/C Ratio(X)	0.53	0.29	0.03	0.40	0.57	0.02	0.15	0.00	0.00	0.07	0.00	0.14
Avail Cap(c_a), veh/h	383	6656	2066	236	4338	1895	1145	0	0	1216	0	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	6.7	5.8	24.4	10.0	7.5	18.0	0.0	0.0	17.4	0.0	17.6
Incr Delay (d2), s/veh	1.9	0.1	0.0	18.4	0.4	0.0	0.2	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.1	0.0	2.5	0.1	0.5	0.0	0.0	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	6.8	5.8	42.9	10.4	7.5	18.2	0.0	0.0	17.5	0.0	17.8
LnGrp LOS	C	A	A	D	B	A	B	A	A	B	A	B
Approach Vol, veh/h		850			935			53				66
Approach Delay, s/veh		7.7			10.4			18.2				17.7
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	31.2		13.1	8.1	27.9		13.1				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	2.1	6.2		3.0	3.2	11.2		3.8				
Green Ext Time (p_c), s	0.0	8.8		0.2	0.0	10.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1461	275	14	1583	0	36
Future Vol, veh/h	1461	275	14	1583	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1491	281	14	1615	0	37

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1772	0	886
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	356	-	292
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	356	-	292
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	292	-	-	356	-
HCM Lane V/C Ratio	0.126	-	-	0.04	-
HCM Control Delay (s)	19.1	-	-	15.5	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection			
Intersection Delay, s/veh	10.3		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	887	50
Demand Flow Rate, veh/h	0	887	50
Vehicles Circulating, veh/h	9	40	810
Vehicles Exiting, veh/h	918	820	46
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	10.6	5.8
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.800	0.200
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	887	40	10
Cap Entry Lane, veh/h	1369	679	679
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	887	40	10
Cap Entry, veh/h	1369	679	679
V/C Ratio	0.648	0.059	0.015
Control Delay, s/veh	10.6	5.9	5.5
LOS	B	A	A
95th %tile Queue, veh	5	0	0

Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

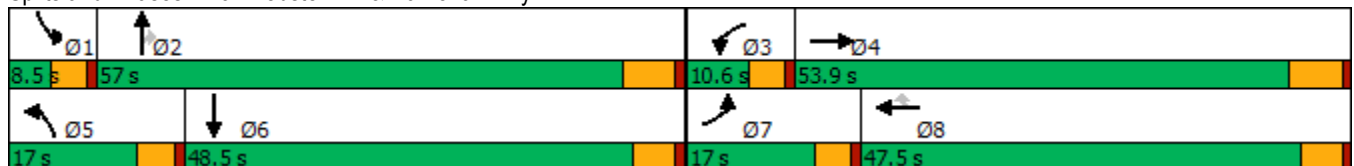


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	139	1332	24	1331	23	138	28	21	24	
Future Volume (vph)	139	1332	24	1331	23	138	28	21	24	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	17.0	53.9	10.6	47.5	47.5	17.0	57.0	57.0	48.5	8.5
Total Split (%)	13.1%	41.5%	8.2%	36.5%	36.5%	13.1%	43.8%	43.8%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.8	49.0	5.6	39.9	39.9	11.8	58.8	58.8	0.0	
Actuated g/C Ratio	0.09	0.39	0.04	0.32	0.32	0.09	0.46	0.46	0.00	
v/c Ratio	0.85	0.70	0.31	0.84	0.04	0.85	0.03	0.03	6.58	
Control Delay	95.8	35.4	70.4	45.9	0.1	94.9	19.7	0.0	2577.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	95.8	35.4	70.4	45.9	0.1	94.9	19.7	0.0	2577.9	
LOS	F	D	E	D	A	F	B	A	F	
Approach Delay		41.0		45.5			72.8		2577.9	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 126.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 6.58  
 Intersection Signal Delay: 221.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 65.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

























Splits and Phases: 9: Webster Av. & Ramona Exwy.



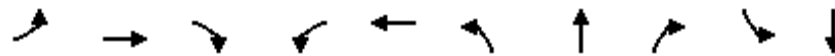
HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	139	1332	26	24	1331	23	138	28	21	78	24	128
Future Volume (veh/h)	139	1332	26	24	1331	23	138	28	21	78	24	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	143	1373	23	25	1372	19	142	29	14	80	25	99
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	180	2377	40	49	1972	612	179	557	466	0	44	176
Arrive On Green	0.10	0.45	0.45	0.03	0.38	0.38	0.10	0.29	0.29	0.00	0.13	0.13
Sat Flow, veh/h	1810	5253	88	1810	5187	1610	1810	1900	1590	0	335	1326
Grp Volume(v), veh/h	143	904	492	25	1372	19	142	29	14	0	0	124
Grp Sat Flow(s),veh/h/ln	1810	1729	1883	1810	1729	1610	1810	1900	1590	0	0	1661
Q Serve(g_s), s	5.8	14.5	14.5	1.0	16.7	0.6	5.7	0.8	0.5	0.0	0.0	5.2
Cycle Q Clear(g_c), s	5.8	14.5	14.5	1.0	16.7	0.6	5.7	0.8	0.5	0.0	0.0	5.2
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.00		0.80
Lane Grp Cap(c), veh/h	180	1565	852	49	1972	612	179	557	466	0	0	221
V/C Ratio(X)	0.79	0.58	0.58	0.51	0.70	0.03	0.79	0.05	0.03	0.00	0.00	0.56
Avail Cap(c_a), veh/h	300	2204	1200	145	2939	912	300	1290	1079	0	0	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	15.2	15.2	35.9	19.5	14.5	33.0	19.0	18.9	0.0	0.0	30.4
Incr Delay (d2), s/veh	3.0	0.3	0.6	3.0	0.4	0.0	3.0	0.0	0.0	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.7	5.2	0.5	5.7	0.2	2.6	0.3	0.2	0.0	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	15.5	15.8	38.9	20.0	14.6	36.0	19.0	18.9	0.0	0.0	32.6
LnGrp LOS	D	B	B	D	B	B	D	B	B	A	A	C
Approach Vol, veh/h		1539			1416			185			124	
Approach Delay, s/veh		17.5			20.3			32.0			32.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	28.1	6.6	40.1	12.0	16.1	12.0	34.7				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	50.8	6.0	47.7	12.4	* 43	12.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	2.8	3.0	16.5	7.7	7.2	7.8	18.7				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.2	0.1	0.7	0.1	9.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.1								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
10: Indian Av. & Harley Knox Bl.

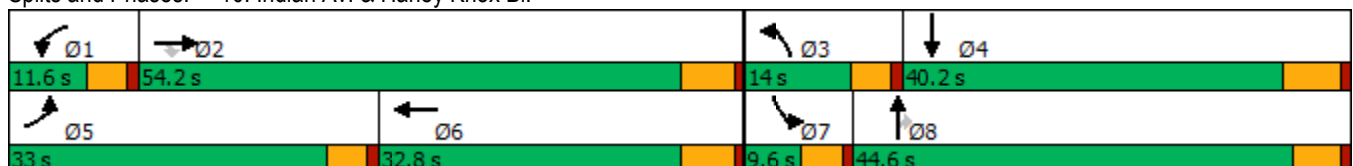


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘	↑↑	↗	↘	↑↑
Traffic Volume (vph)	240	363	46	14	332	57	215	24	44	239
Future Volume (vph)	240	363	46	14	332	57	215	24	44	239
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	17.7	33.7	33.7	6.0	14.4	6.7	20.6	20.6	5.5	18.5
Actuated g/C Ratio	0.23	0.44	0.44	0.08	0.19	0.09	0.27	0.27	0.07	0.24
v/c Ratio	0.73	0.20	0.08	0.13	0.45	0.24	0.28	0.06	0.43	0.68
Control Delay	41.7	16.5	0.2	45.9	31.9	42.5	24.9	0.2	54.3	20.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	16.5	0.2	45.9	31.9	42.5	24.9	0.2	54.3	20.9
LOS	D	B	A	D	C	D	C	A	D	C
Approach Delay		24.7			32.5		26.3			23.4
Approach LOS		C			C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 26.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	240	363	46	14	332	13	57	215	24	44	239	294
Future Volume (veh/h)	240	363	46	14	332	13	57	215	24	44	239	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	300	454	47	18	415	14	71	269	14	55	299	247
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	356	1762	547	39	847	28	202	869	383	90	441	353
Arrive On Green	0.20	0.34	0.34	0.02	0.16	0.16	0.06	0.24	0.24	0.05	0.23	0.23
Sat Flow, veh/h	1810	5187	1610	1810	5154	173	3510	3610	1589	1810	1890	1516
Grp Volume(v), veh/h	300	454	47	18	278	151	71	269	14	55	285	261
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1869	1755	1805	1589	1810	1805	1600
Q Serve(g_s), s	9.7	3.9	1.2	0.6	4.4	4.5	1.2	3.7	0.4	1.8	8.8	9.1
Cycle Q Clear(g_c), s	9.7	3.9	1.2	0.6	4.4	4.5	1.2	3.7	0.4	1.8	8.8	9.1
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	356	1762	547	39	568	307	202	869	383	90	421	373
V/C Ratio(X)	0.84	0.26	0.09	0.46	0.49	0.49	0.35	0.31	0.04	0.61	0.68	0.70
Avail Cap(c_a), veh/h	844	4123	1280	208	1534	829	542	2324	1023	149	1008	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	14.5	13.7	29.4	23.1	23.1	27.6	19.0	17.7	28.4	21.3	21.4
Incr Delay (d2), s/veh	2.1	0.1	0.1	3.1	0.7	1.2	0.4	0.2	0.0	2.5	1.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.2	0.4	0.3	1.6	1.8	0.5	1.4	0.1	0.8	3.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	14.6	13.7	32.6	23.8	24.4	28.0	19.2	17.7	30.8	23.2	23.8
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		801			447			354			601	
Approach Delay, s/veh		18.7			24.3			20.9			24.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	26.5	8.1	20.4	16.6	15.8	7.6	20.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.6	5.9	3.2	11.1	11.7	6.5	3.8	5.7				
Green Ext Time (p_c), s	0.0	3.1	0.0	3.1	0.4	2.3	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/06/2019

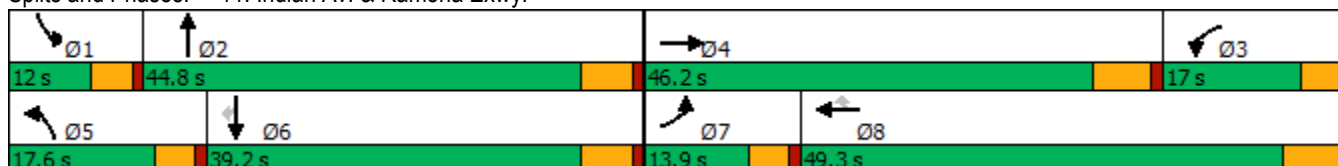


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗	↘	↗↗↗	↗	↘	↗↗	↘	↗↗	↗
Traffic Volume (vph)	57	1314	120	1159	30	97	63	62	172	60
Future Volume (vph)	57	1314	120	1159	30	97	63	62	172	60
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	13.9	46.2	17.0	49.3	49.3	17.6	44.8	12.0	39.2	39.2
Total Split (%)	11.6%	38.5%	14.2%	41.1%	41.1%	14.7%	37.3%	10.0%	32.7%	32.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	34.1	10.4	40.1	40.1	9.4	16.3	6.9	14.1	14.1
Actuated g/C Ratio	0.08	0.39	0.12	0.46	0.46	0.11	0.19	0.08	0.16	0.16
v/c Ratio	0.39	0.72	0.58	0.50	0.04	0.52	0.15	0.45	0.30	0.14
Control Delay	51.9	26.7	53.1	20.5	0.1	52.3	23.0	55.6	36.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.9	26.7	53.1	20.5	0.1	52.3	23.0	55.6	36.0	0.7
LOS	D	C	D	C	A	D	C	E	D	A
Approach Delay		27.7		23.0			37.9		32.9	
Approach LOS		C		C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 87.3  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 26.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1314	96	120	1159	30	97	63	31	62	172	60
Future Volume (veh/h)	57	1314	96	120	1159	30	97	63	31	62	172	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	59	1355	81	124	1195	25	100	65	17	64	177	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	87	1930	115	159	2322	711	130	457	115	91	500	223
Arrive On Green	0.05	0.39	0.39	0.09	0.45	0.45	0.07	0.16	0.16	0.05	0.14	0.14
Sat Flow, veh/h	1810	5001	299	1810	5187	1588	1810	2856	720	1810	3610	1610
Grp Volume(v), veh/h	59	937	499	124	1195	25	100	40	42	64	177	28
Grp Sat Flow(s),veh/h/ln	1810	1729	1842	1810	1729	1588	1810	1805	1770	1810	1805	1610
Q Serve(g_s), s	2.3	16.5	16.5	4.8	11.9	0.6	3.9	1.4	1.5	2.5	3.2	1.1
Cycle Q Clear(g_c), s	2.3	16.5	16.5	4.8	11.9	0.6	3.9	1.4	1.5	2.5	3.2	1.1
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	87	1334	711	159	2322	711	130	289	283	91	500	223
V/C Ratio(X)	0.68	0.70	0.70	0.78	0.51	0.04	0.77	0.14	0.15	0.71	0.35	0.13
Avail Cap(c_a), veh/h	233	1918	1022	311	3101	949	326	976	958	186	1672	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	18.7	18.7	32.2	14.3	11.2	32.9	26.0	26.0	33.7	28.1	27.2
Incr Delay (d2), s/veh	3.4	0.7	1.3	3.2	0.2	0.0	3.6	0.2	0.2	3.7	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.6	6.1	2.1	3.8	0.2	1.7	0.6	0.6	1.1	1.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	19.3	19.9	35.4	14.5	11.2	36.5	26.2	26.3	37.4	28.6	27.5
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1495			1344			182			269	
Approach Delay, s/veh		20.2			16.3			31.9			30.6	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	17.3	12.5	34.0	9.8	15.8	8.1	38.5				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.4	39.0	12.4	* 40	13.0	33.4	9.3	43.1				
Max Q Clear Time (g_c+I1), s	4.5	3.5	6.8	18.5	5.9	5.2	4.3	13.9				
Green Ext Time (p_c), s	0.0	0.4	0.1	9.2	0.1	1.1	0.0	8.9				

Intersection Summary

HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

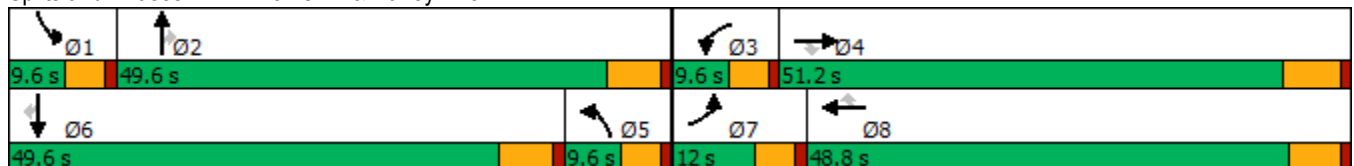
Rider 2 and 4 TIA (JN 11557)  
09/06/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	115	72	6	47	71	18	819	5	111	1114	286
Future Volume (vph)	220	115	72	6	47	71	18	819	5	111	1114	286
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.7	23.2	23.2	5.6	15.1	15.1	5.6	22.8	22.8	5.6	30.6	30.6
Actuated g/C Ratio	0.14	0.33	0.33	0.08	0.21	0.21	0.08	0.32	0.32	0.08	0.43	0.43
v/c Ratio	0.98	0.11	0.12	0.03	0.05	0.17	0.07	0.54	0.01	0.44	0.54	0.36
Control Delay	92.6	19.1	0.4	43.5	24.9	0.8	42.5	21.5	0.0	44.7	18.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.6	19.1	0.4	43.5	24.9	0.8	42.5	21.5	0.0	44.7	18.8	4.0
LOS	F	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		55.5			12.1			21.9			17.9	
Approach LOS		E			B			C			B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	220	115	72	6	47	71	18	819	5	111	1114	286
Future Volume (veh/h)	220	115	72	6	47	71	18	819	5	111	1114	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	239	125	28	7	51	32	20	890	5	121	1211	235
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	920	410	32	793	243	81	1822	566	235	1956	607
Arrive On Green	0.11	0.25	0.25	0.01	0.15	0.15	0.02	0.35	0.35	0.07	0.38	0.38
Sat Flow, veh/h	1810	3610	1608	3510	5187	1589	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	239	125	28	7	51	32	20	890	5	121	1211	235
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1755	1729	1589	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	7.4	1.8	0.6	0.1	0.6	1.2	0.4	9.0	0.1	2.2	12.7	4.1
Cycle Q Clear(g_c), s	7.4	1.8	0.6	0.1	0.6	1.2	0.4	9.0	0.1	2.2	12.7	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	920	410	32	793	243	81	1822	566	235	1956	607
V/C Ratio(X)	1.19	0.14	0.07	0.22	0.06	0.13	0.25	0.49	0.01	0.51	0.62	0.39
Avail Cap(c_a), veh/h	201	2436	1085	263	3344	1024	263	3406	1057	263	3406	1057
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	19.2	10.0	32.8	24.2	24.4	32.0	16.9	14.1	30.1	16.9	5.0
Incr Delay (d2), s/veh	124.3	0.1	0.1	1.3	0.0	0.2	0.6	0.2	0.0	0.6	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.7	0.3	0.1	0.2	0.4	0.2	3.1	0.0	0.9	4.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	154.0	19.3	10.0	34.1	24.2	24.7	32.6	17.1	14.1	30.7	17.2	5.4
LnGrp LOS	F	B	B	C	C	C	C	B	B	C	B	A
Approach Vol, veh/h		392			90			915			1567	
Approach Delay, s/veh		100.7			25.1			17.5			16.5	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	29.2	5.2	23.2	7.3	30.9	12.0	16.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.2	11.0	2.1	3.8	2.4	14.7	9.4	3.2				
Green Ext Time (p_c), s	0.0	6.4	0.0	0.8	0.0	10.4	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

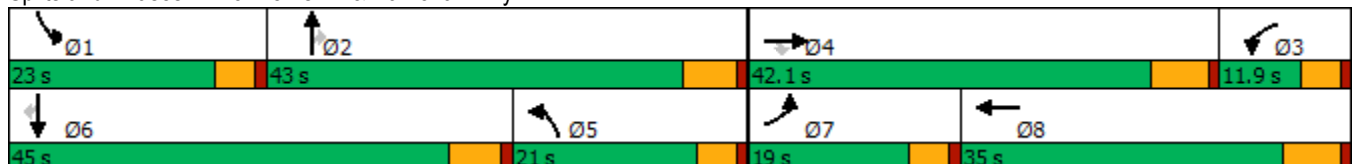
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	241	1027	139	96	776	269	425	96	326	601	264	
Future Volume (vph)	241	1027	139	96	776	269	425	96	326	601	264	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	19.0	42.1	42.1	11.9	35.0	21.0	43.0	43.0	23.0	45.0	45.0	
Total Split (%)	15.8%	35.1%	35.1%	9.9%	29.2%	17.5%	35.8%	35.8%	19.2%	37.5%	37.5%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	11.0	29.5	29.5	7.0	22.8	11.9	22.4	22.4	13.4	23.9	23.9	
Actuated g/C Ratio	0.12	0.32	0.32	0.08	0.25	0.13	0.24	0.24	0.15	0.26	0.26	
v/c Ratio	0.58	0.63	0.22	0.37	0.70	0.60	0.49	0.19	0.65	0.65	0.44	
Control Delay	46.9	30.3	3.1	49.3	35.1	46.1	32.8	0.8	45.4	34.5	6.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.9	30.3	3.1	49.3	35.1	46.1	32.8	0.8	45.4	34.5	6.8	
LOS	D	C	A	D	D	D	C	A	D	C	A	
Approach Delay		30.4			36.5		33.4			31.4		
Approach LOS		C			D		C			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 32.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.3%  
 ICU Level of Service C  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	241	1027	139	96	776	98	269	425	96	326	601	264
Future Volume (veh/h)	241	1027	139	96	776	98	269	425	96	326	601	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	246	1048	101	98	792	87	274	434	57	333	613	213
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	336	1509	468	194	1281	140	366	899	394	428	909	403
Arrive On Green	0.10	0.29	0.29	0.06	0.27	0.27	0.10	0.25	0.25	0.12	0.25	0.25
Sat Flow, veh/h	3510	5187	1609	3510	4739	517	3510	3610	1584	3510	3610	1601
Grp Volume(v), veh/h	246	1048	101	98	577	302	274	434	57	333	613	213
Grp Sat Flow(s),veh/h/ln	1755	1729	1609	1755	1729	1798	1755	1805	1584	1755	1805	1601
Q Serve(g_s), s	5.5	14.5	3.8	2.2	11.8	11.9	6.1	8.3	1.6	7.4	12.3	6.5
Cycle Q Clear(g_c), s	5.5	14.5	3.8	2.2	11.8	11.9	6.1	8.3	1.6	7.4	12.3	6.5
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	1509	468	194	935	486	366	899	394	428	909	403
V/C Ratio(X)	0.73	0.69	0.22	0.51	0.62	0.62	0.75	0.48	0.14	0.78	0.67	0.53
Avail Cap(c_a), veh/h	627	2311	717	318	1236	643	714	1666	731	802	1756	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	25.4	21.6	37.0	25.7	25.8	35.1	25.8	12.5	34.3	27.2	12.7
Incr Delay (d2), s/veh	1.2	0.6	0.2	0.8	0.7	1.3	1.2	0.4	0.2	1.2	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.4	1.3	0.9	4.4	4.7	2.5	3.3	0.8	3.0	5.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	26.0	21.8	37.8	26.4	27.1	36.2	26.2	12.7	35.5	28.1	13.8
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1395			977			765			1159	
Approach Delay, s/veh		27.5			27.8			28.8			27.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	25.9	10.6	29.6	14.2	26.1	12.3	28.0				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	18.4	37.2	7.3	* 36	16.4	* 39	14.4	28.8				
Max Q Clear Time (g_c+I1), s	9.4	10.3	4.2	16.5	8.1	14.3	7.5	13.9				
Green Ext Time (p_c), s	0.4	2.8	0.0	6.8	0.3	4.6	0.2	4.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				27.8								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
09/06/2019

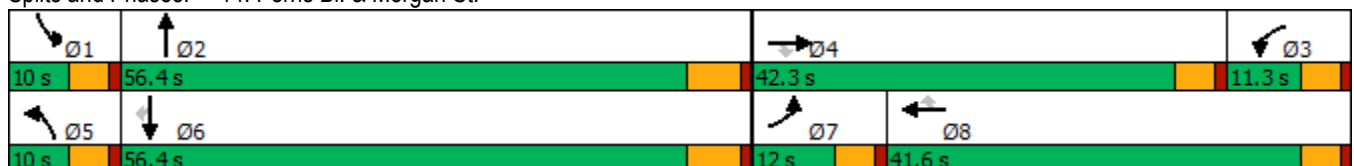


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	36	23	29	33	6	17	13	729	7	908	15
Future Volume (vph)	36	23	29	33	6	17	13	729	7	908	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.3	42.3	11.3	41.6	41.6	10.0	56.4	10.0	56.4	56.4
Total Split (%)	10.0%	35.3%	35.3%	9.4%	34.7%	34.7%	8.3%	47.0%	8.3%	47.0%	47.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	18.2	18.2	9.4	18.7	18.7	8.3	34.8	8.3	34.8	34.8
Actuated g/C Ratio	0.18	0.36	0.36	0.18	0.37	0.37	0.16	0.68	0.16	0.68	0.68
v/c Ratio	0.13	0.02	0.05	0.11	0.01	0.03	0.05	0.23	0.03	0.41	0.01
Control Delay	35.2	24.6	0.1	33.0	23.3	0.1	38.4	10.5	38.9	12.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	24.6	0.1	33.0	23.3	0.1	38.4	10.5	38.9	12.7	0.0
LOS	D	C	A	C	C	A	D	B	D	B	A
Approach Delay		20.9			21.8			11.0		12.7	
Approach LOS		C			C			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 51.2  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 12.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.
































HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	36	23	29	33	6	17	13	729	11	7	908	15
Future Volume (veh/h)	36	23	29	33	6	17	13	729	11	7	908	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	25	16	36	7	16	14	801	12	8	998	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	76	541	241	72	280	237	32	2217	33	19	1495	667
Arrive On Green	0.04	0.15	0.15	0.04	0.15	0.15	0.02	0.42	0.42	0.01	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5264	79	1810	3610	1610
Grp Volume(v), veh/h	40	25	16	36	7	16	14	526	287	8	998	15
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1610
Q Serve(g_s), s	1.1	0.3	0.3	1.0	0.2	0.4	0.4	5.4	5.4	0.2	11.6	0.3
Cycle Q Clear(g_c), s	1.1	0.3	0.3	1.0	0.2	0.4	0.4	5.4	5.4	0.2	11.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	76	541	241	72	280	237	32	1456	794	19	1495	667
V/C Ratio(X)	0.52	0.05	0.07	0.50	0.03	0.07	0.44	0.36	0.36	0.42	0.67	0.02
Avail Cap(c_a), veh/h	259	2630	1173	234	1359	1151	189	3381	1843	189	3530	1575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	18.8	11.2	24.3	18.9	19.0	25.2	10.2	10.2	25.4	12.3	9.0
Incr Delay (d2), s/veh	2.1	0.0	0.1	2.0	0.0	0.1	3.5	0.2	0.3	5.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.2	0.4	0.1	0.2	0.2	1.5	1.7	0.1	3.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	18.9	11.3	26.3	18.9	19.1	28.7	10.4	10.5	30.9	12.8	9.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	A
Approach Vol, veh/h		81			59			827			1021	
Approach Delay, s/veh		21.1			23.5			10.7			12.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.1	27.6	6.7	12.4	5.5	27.2	6.8	12.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.7	37.7	5.4	50.6	7.4	37.0				
Max Q Clear Time (g_c+I1), s	2.2	7.4	3.0	2.3	2.4	13.6	3.1	2.4				
Green Ext Time (p_c), s	0.0	5.4	0.0	0.2	0.0	7.8	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				12.6								
HCM 6th LOS				B								

Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

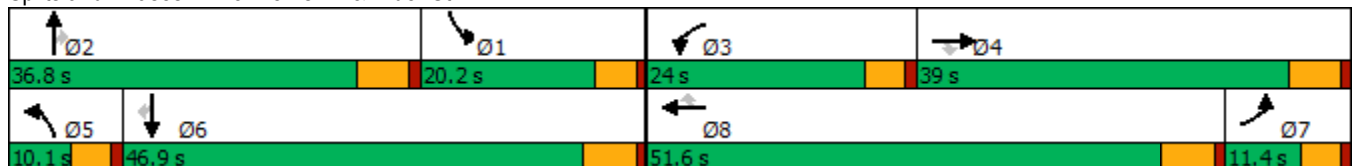
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	182	49	154	63	125	18	584	184	118	848	15
Future Volume (vph)	38	182	49	154	63	125	18	584	184	118	848	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.4	39.0	39.0	24.0	51.6	51.6	10.1	36.8	36.8	20.2	46.9	46.9
Total Split (%)	9.5%	32.5%	32.5%	20.0%	43.0%	43.0%	8.4%	30.7%	30.7%	16.8%	39.1%	39.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.7	14.0	14.0	11.6	24.6	24.6	5.7	17.3	17.3	9.9	25.7	25.7
Actuated g/C Ratio	0.12	0.19	0.19	0.16	0.34	0.34	0.08	0.24	0.24	0.14	0.35	0.35
v/c Ratio	0.18	0.27	0.12	0.55	0.05	0.19	0.13	0.49	0.36	0.49	0.48	0.02
Control Delay	36.5	28.7	0.6	40.4	23.4	2.4	44.1	27.4	7.2	41.9	20.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	28.7	0.6	40.4	23.4	2.4	44.1	27.4	7.2	41.9	20.7	0.1
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		24.7			23.4			23.0			22.9	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 72.4  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 23.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 55.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	182	49	154	63	125	18	584	184	118	848	15
Future Volume (veh/h)	38	182	49	154	63	125	18	584	184	118	848	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	188	17	159	65	45	19	602	130	122	874	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	164	659	294	205	664	296	41	1139	348	159	1588	493
Arrive On Green	0.09	0.18	0.18	0.11	0.18	0.18	0.02	0.22	0.22	0.09	0.31	0.31
Sat Flow, veh/h	1810	3610	1608	1810	3610	1610	1810	5187	1584	1810	5187	1609
Grp Volume(v), veh/h	39	188	17	159	65	45	19	602	130	122	874	6
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1610	1810	1729	1584	1810	1729	1609
Q Serve(g_s), s	1.1	2.5	0.5	4.7	0.8	1.3	0.6	5.7	2.4	3.7	7.8	0.1
Cycle Q Clear(g_c), s	1.1	2.5	0.5	4.7	0.8	1.3	0.6	5.7	2.4	3.7	7.8	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	659	294	205	664	296	41	1139	348	159	1588	493
V/C Ratio(X)	0.24	0.29	0.06	0.77	0.10	0.15	0.46	0.53	0.37	0.77	0.55	0.01
Avail Cap(c_a), veh/h	222	2160	962	633	2979	1329	179	2897	885	509	3841	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	19.6	18.7	23.9	18.8	19.0	26.8	19.1	7.0	24.8	16.1	4.3
Incr Delay (d2), s/veh	0.3	0.2	0.1	2.4	0.1	0.2	2.9	0.4	0.7	2.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.9	0.2	1.9	0.3	0.4	0.3	2.0	1.2	1.5	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	19.8	18.8	26.3	18.9	19.2	29.7	19.5	7.6	27.7	16.4	4.3
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	A
Approach Vol, veh/h		244			269			751			1002	
Approach Delay, s/veh		20.4			23.3			17.7			17.7	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	18.0	10.9	15.9	5.9	22.8	10.8	16.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	15.6	* 31	19.4	33.2	5.5	41.1	6.8	* 46				
Max Q Clear Time (g_c+I1), s	5.7	7.7	6.7	4.5	2.6	9.8	3.1	3.3				
Green Ext Time (p_c), s	0.1	4.2	0.1	1.1	0.0	6.3	0.0	0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			18.6									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.

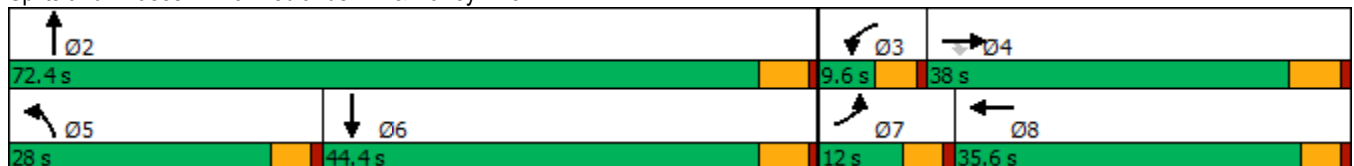


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	7	224	115	2	3		
Future Volume (vph)	7	224	115	2	3		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	12.0	38.0	28.0	72.4	44.4	9.6	35.6
Total Split (%)	10.0%	31.7%	23.3%	60.3%	37.0%	8%	30%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	16.0	11.4	17.8	16.1		
Actuated g/C Ratio	0.17	0.38	0.27	0.42	0.38		
v/c Ratio	0.03	0.19	0.26	0.00	0.01		
Control Delay	28.9	0.3	20.9	9.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	28.9	0.3	20.9	9.0	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.7			
Approach LOS				C			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 42.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 31.5%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/06/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	224	0	0	0	115	2	0	0	3	9
Future Volume (veh/h)	7	0	224	0	0	0	115	2	0	0	3	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	8	0	241	0	0	0	126	2	0	0	3	9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	19	572	485	6	246	0	200	1112	0	0	66	59
Arrive On Green	0.01	0.00	0.30	0.00	0.00	0.00	0.11	0.31	0.00	0.00	0.04	0.04
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	8	0	241	0	0	0	126	2	0	0	3	9
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.1	0.0	3.5	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.1	0.0	3.5	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	19	572	485	6	246	0	200	1112	0	0	66	59
V/C Ratio(X)	0.41	0.00	0.50	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.05	0.15
Avail Cap(c_a), veh/h	468	2136	1810	316	2057	0	1478	8445	0	0	2458	2193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	8.2	0.0	0.0	0.0	12.2	6.9	0.0	0.0	13.3	13.4
Incr Delay (d2), s/veh	5.1	0.0	0.8	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	9.0	0.0	0.0	0.0	13.4	6.9	0.0	0.0	13.6	14.5
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		249			0			128			12	
Approach Delay, s/veh		9.3			0.0			13.3			14.3	
Approach LOS		A						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		14.2	0.0	14.4	7.8	6.5	4.9	9.5				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		67.0	5.0	32.2	23.4	39.0	7.4	* 31				
Max Q Clear Time (g_c+I1), s		2.0	0.0	5.5	3.9	2.2	2.1	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.8	0.1	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.8									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	34	5	103	232	3
Future Vol, veh/h	8	34	5	103	232	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	38	6	114	258	3
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	2	2	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	7.9	7.4	8.7
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	96%
Vol Right, %	0%	0%	0%	0%	100%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	52	52	8	34	155	80
LT Vol	5	0	0	8	0	0	0
Through Vol	0	52	52	0	0	155	77
RT Vol	0	0	0	0	34	0	3
Lane Flow Rate	6	57	57	9	38	172	89
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.009	0.082	0.055	0.015	0.05	0.232	0.12
Departure Headway (Hd)	5.638	5.136	3.431	5.923	4.722	4.856	4.83
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	636	699	1044	605	758	744	747
Service Time	3.357	2.856	1.15	3.654	2.453	2.556	2.53
HCM Lane V/C Ratio	0.009	0.082	0.055	0.015	0.05	0.231	0.119
HCM Control Delay	8.4	8.3	6.4	8.7	7.7	9	8.2
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.2	0	0.2	0.9	0.4

Timings  
18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/06/2019

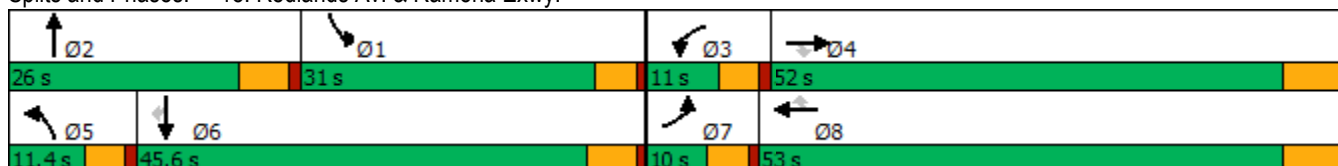


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	15	1424	53	23	1020	85	35	8	219	24	10
Future Volume (vph)	15	1424	53	23	1020	85	35	8	219	24	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	10.0	52.0	52.0	11.0	53.0	53.0	11.4	26.0	31.0	45.6	45.6
Total Split (%)	8.3%	43.3%	43.3%	9.2%	44.2%	44.2%	9.5%	21.7%	25.8%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.1	35.4	35.4	6.4	35.7	35.7	6.8	12.8	17.7	19.8	19.8
Actuated g/C Ratio	0.08	0.46	0.46	0.08	0.46	0.46	0.09	0.17	0.23	0.26	0.26
v/c Ratio	0.11	0.63	0.07	0.16	0.45	0.11	0.24	0.17	0.56	0.05	0.02
Control Delay	49.7	20.3	0.2	49.1	17.4	0.3	49.0	17.3	38.5	27.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	20.3	0.2	49.1	17.4	0.3	49.0	17.3	38.5	27.6	0.1
LOS	D	C	A	D	B	A	D	B	D	C	A
Approach Delay		19.9			16.8			30.2		35.9	
Approach LOS		B			B			C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.5  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 20.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 56.0%  
 ICU Level of Service B  
 Analysis Period (min) 15

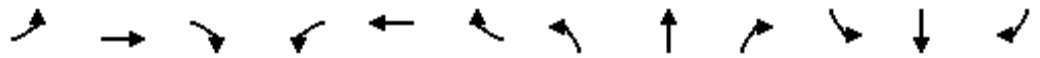
Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↑		↘	↑	↗
Traffic Volume (veh/h)	15	1424	53	23	1020	85	35	8	44	219	24	10
Future Volume (veh/h)	15	1424	53	23	1020	85	35	8	44	219	24	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	1499	48	24	1074	61	37	8	27	231	25	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	2155	651	47	2193	671	65	46	154	276	470	398
Arrive On Green	0.02	0.42	0.42	0.03	0.42	0.42	0.04	0.12	0.12	0.15	0.25	0.25
Sat Flow, veh/h	1810	5187	1566	1810	5187	1587	1810	380	1282	1810	1900	1610
Grp Volume(v), veh/h	16	1499	48	24	1074	61	37	0	35	231	25	7
Grp Sat Flow(s),veh/h/ln	1810	1729	1566	1810	1729	1587	1810	0	1662	1810	1900	1610
Q Serve(g_s), s	0.7	18.0	1.4	1.0	11.4	0.8	1.5	0.0	1.4	9.4	0.8	0.2
Cycle Q Clear(g_c), s	0.7	18.0	1.4	1.0	11.4	0.8	1.5	0.0	1.4	9.4	0.8	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	34	2155	651	47	2193	671	65	0	199	276	470	398
V/C Ratio(X)	0.47	0.70	0.07	0.51	0.49	0.09	0.57	0.00	0.18	0.84	0.05	0.02
Avail Cap(c_a), veh/h	129	3142	948	153	3210	982	163	0	453	632	1010	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	18.2	13.3	36.3	15.9	2.9	35.9	0.0	29.9	31.1	21.7	21.5
Incr Delay (d2), s/veh	3.7	0.4	0.0	3.1	0.2	0.1	2.9	0.0	0.4	2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.0	0.4	0.4	3.8	0.5	0.7	0.0	0.6	4.0	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	18.6	13.4	39.4	16.1	2.9	38.8	0.0	30.3	33.7	21.7	21.5
LnGrp LOS	D	B	B	D	B	A	D	A	C	C	C	C
Approach Vol, veh/h		1563			1159			72			263	
Approach Delay, s/veh		18.6			15.8			34.7			32.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.9	14.5	6.6	37.6	7.3	24.1	6.0	38.2				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	26.4	* 21	6.4	45.8	6.8	40.2	5.4	46.8				
Max Q Clear Time (g_c+I1), s	11.4	3.4	3.0	20.0	3.5	2.8	2.7	13.4				
Green Ext Time (p_c), s	0.3	0.1	0.0	11.5	0.0	0.1	0.0	8.2				

Intersection Summary

HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕			↖	↗
Traffic Vol, veh/h	42	0	0	0	0	0	0	2	0	0	2	32
Future Vol, veh/h	42	0	0	0	0	0	0	2	0	0	2	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	46	0	0	0	0	0	0	2	0	0	2	35
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.1	0	7.7	6.8
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	0%	0%	0%
Vol Thru, %	100%	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	42	0	0	2	32
LT Vol	0	42	0	0	0	0
Through Vol	2	0	0	0	2	0
RT Vol	0	0	0	0	0	32
Lane Flow Rate	2	46	0	0	2	35
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.003	0.064	0	0	0.003	0.038
Departure Headway (Hd)	4.61	5.068	4.568	4.603	4.582	3.882
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	772	709	0	0	778	917
Service Time	2.663	2.785	2.285	2.64	2.329	1.628
HCM Lane V/C Ratio	0.003	0.065	0	0	0.003	0.038
HCM Control Delay	7.7	8.1	7.3	7.6	7.3	6.8
HCM Lane LOS	A	A	N	N	A	A
HCM 95th-tile Q	0	0.2	0	0	0	0.1

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	0	0	0	0	2
Future Vol, veh/h	2	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	0	0	0	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1	1	2	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1027	1090	1634	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1027	1090	1634	-	-	-
Mov Cap-2 Maneuver	1027	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1634	-	1027	-	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	0	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↗		↖		↗		↔	
Traffic Vol, veh/h	0	466	35	84	359	0	27	0	113	0	0	0
Future Vol, veh/h	0	466	35	84	359	0	27	0	113	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	120	-	-	150	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	507	38	91	390	0	29	0	123	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	545	0	0	884	-	507	1160	1117	195
Stage 1	-	-	-	-	-	-	507	-	-	572	572	-
Stage 2	-	-	-	-	-	-	377	-	-	588	545	-
Critical Hdwy	-	-	-	4.1	-	-	7.3	-	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	-	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	-	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	-	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1034	-	-	255	0	570	163	209	820
Stage 1	0	-	-	-	-	-	552	0	-	477	508	-
Stage 2	0	-	-	-	-	-	622	0	-	499	522	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1034	-	-	238	-	570	119	191	820
Mov Cap-2 Maneuver	-	-	-	-	-	-	238	-	-	119	191	-
Stage 1	-	-	-	-	-	-	552	-	-	477	463	-
Stage 2	-	-	-	-	-	-	567	-	-	391	522	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.7			14.8			0		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	238	570	-	-	1034	-	-	-
HCM Lane V/C Ratio	0.123	0.215	-	-	0.088	-	-	-
HCM Control Delay (s)	22.2	13	-	-	8.8	-	-	0
HCM Lane LOS	C	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.4	0.8	-	-	0.3	-	-	-

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑	↘	
Traffic Vol, veh/h	519	48	104	399	36	101
Future Vol, veh/h	519	48	104	399	36	101
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	185	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	564	52	113	434	39	110

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	617	0	1008
Stage 1	-	-	-	-	565
Stage 2	-	-	-	-	443
Critical Hdwy	-	-	4.1	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	973	-	254
Stage 1	-	-	-	-	573
Stage 2	-	-	-	-	620
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	972	-	224
Mov Cap-2 Maneuver	-	-	-	-	358
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	548

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	469	-	-	972	-
HCM Lane V/C Ratio	0.318	-	-	0.116	-
HCM Control Delay (s)	16.2	-	-	9.2	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	0.4	-

**APPENDIX 3.3:**

**EXISTING (2019) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday PM Peak Hour**

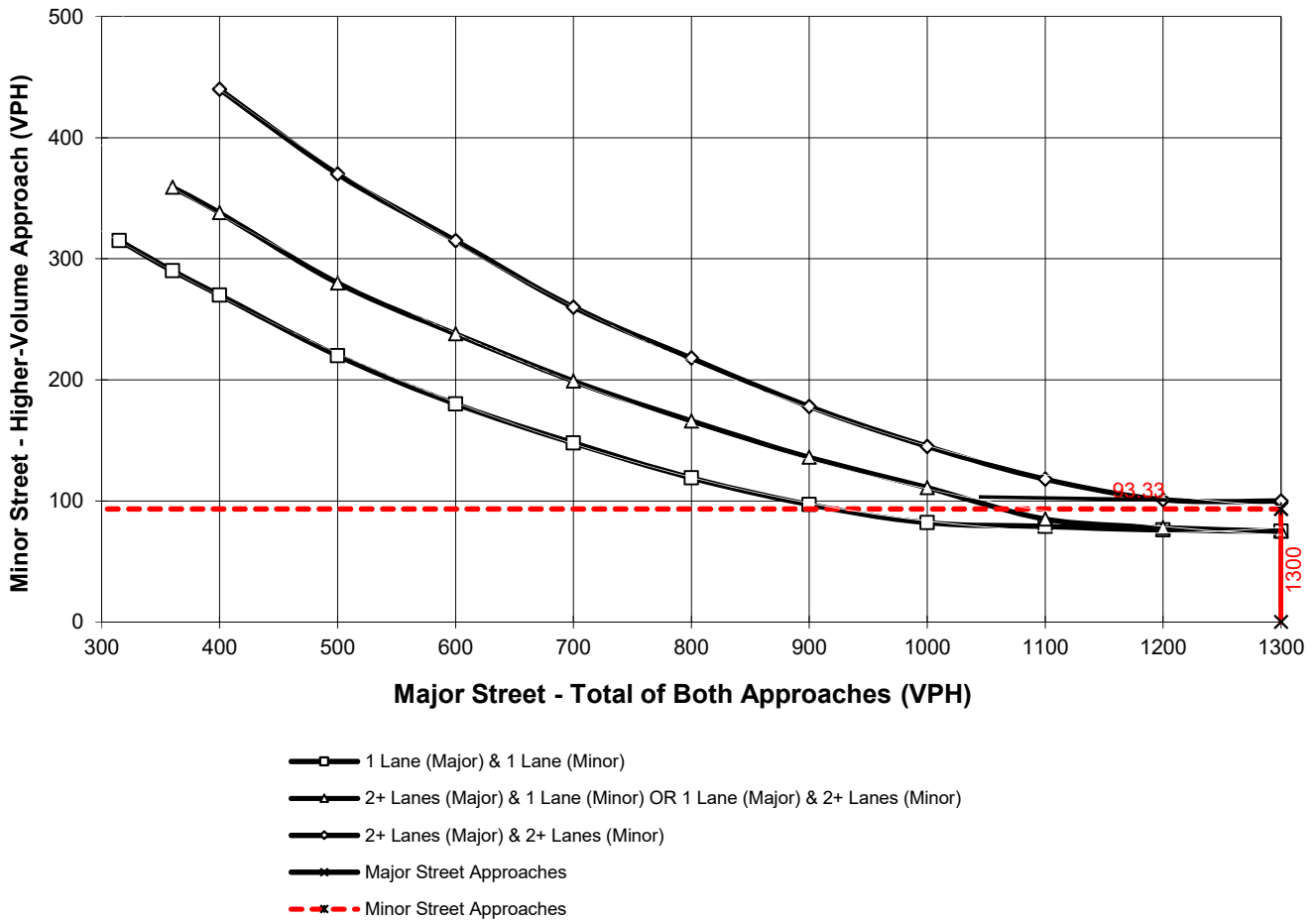
Major Street Name = **Harley Knox Bl.**

Total of Both Approaches (VPH) = **1625**  
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **Western Wy.**

High Volume Approach (VPH) = **93**  
 Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane



### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing (2019) Conditions - Weekday PM Peak Hour**

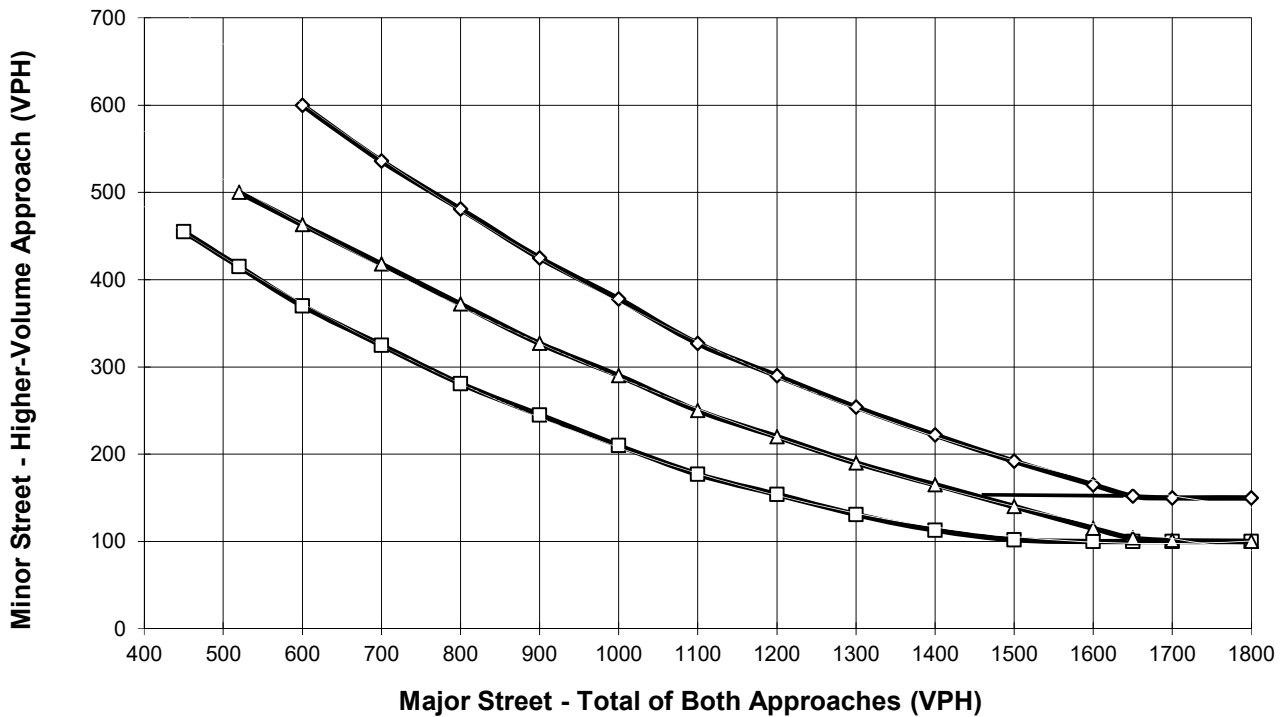
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **343**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Markham St.**

High Volume Approach (VPH) = **41**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane



### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = Existing (2019) Conditions - Weekday AM Peak Hour

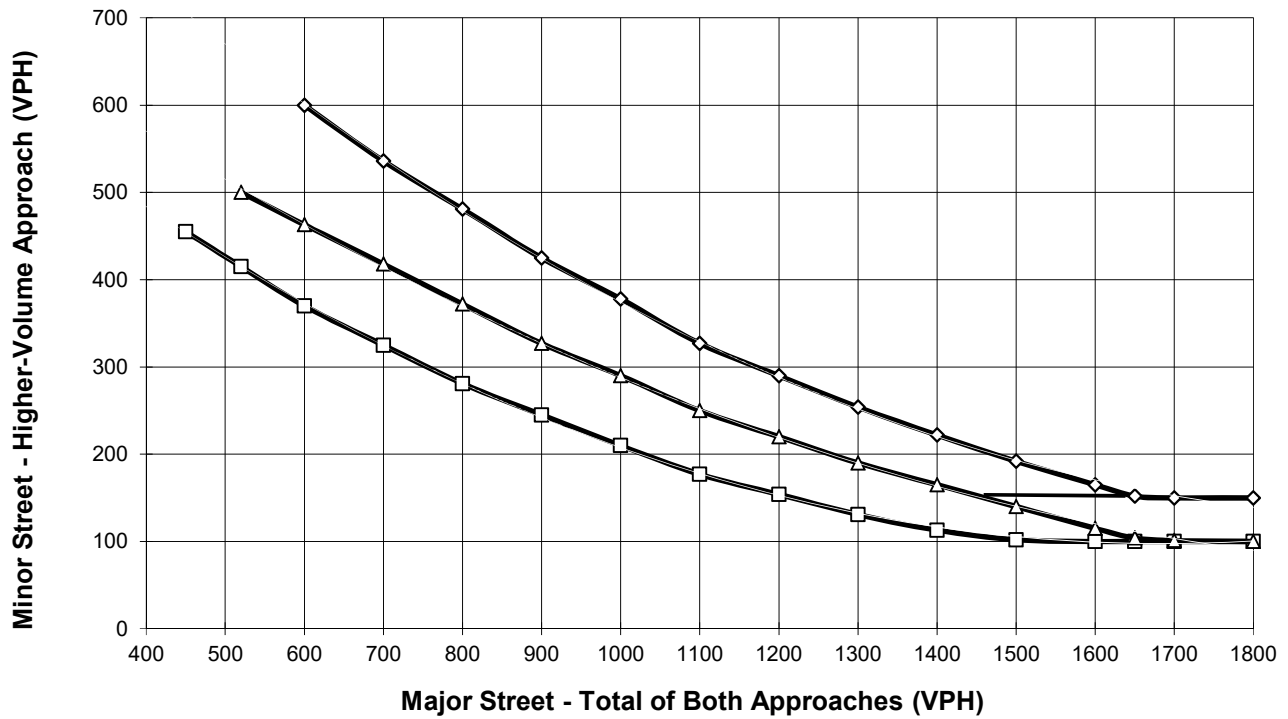
Major Street Name = Morgan St.

Total of Both Approaches (VPH) = 42  
 Number of Approach Lanes on Major Street = 1

Minor Street Name = Redlands Ave.

High Volume Approach (VPH) = 34  
 Number of Approach Lanes On Minor Street = 1

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = Existing (2019) Conditions - Weekday PM Peak Hour

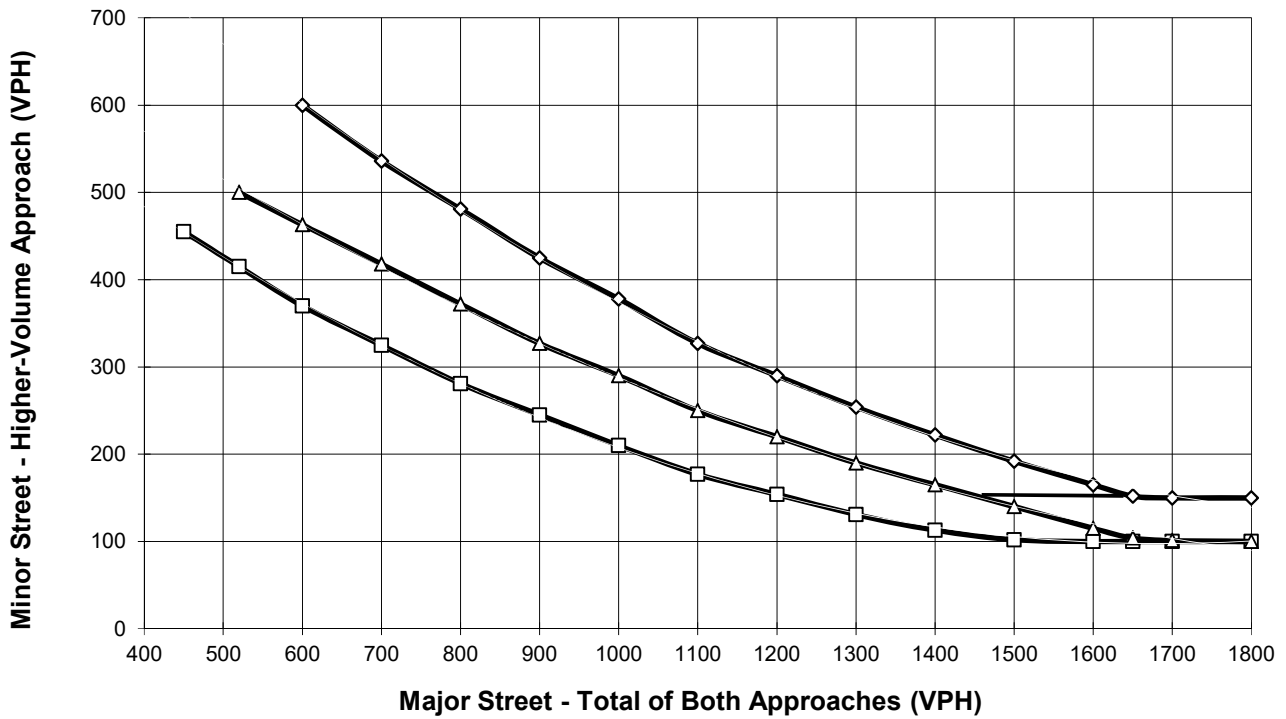
Major Street Name = Redlands Av.

Total of Both Approaches (VPH) = 2  
 Number of Approach Lanes on Major Street = 1

Minor Street Name = Sinclair St.

High Volume Approach (VPH) = 2  
 Number of Approach Lanes On Minor Street = 1

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = Existing (2019) Conditions - Weekday AM Peak Hour

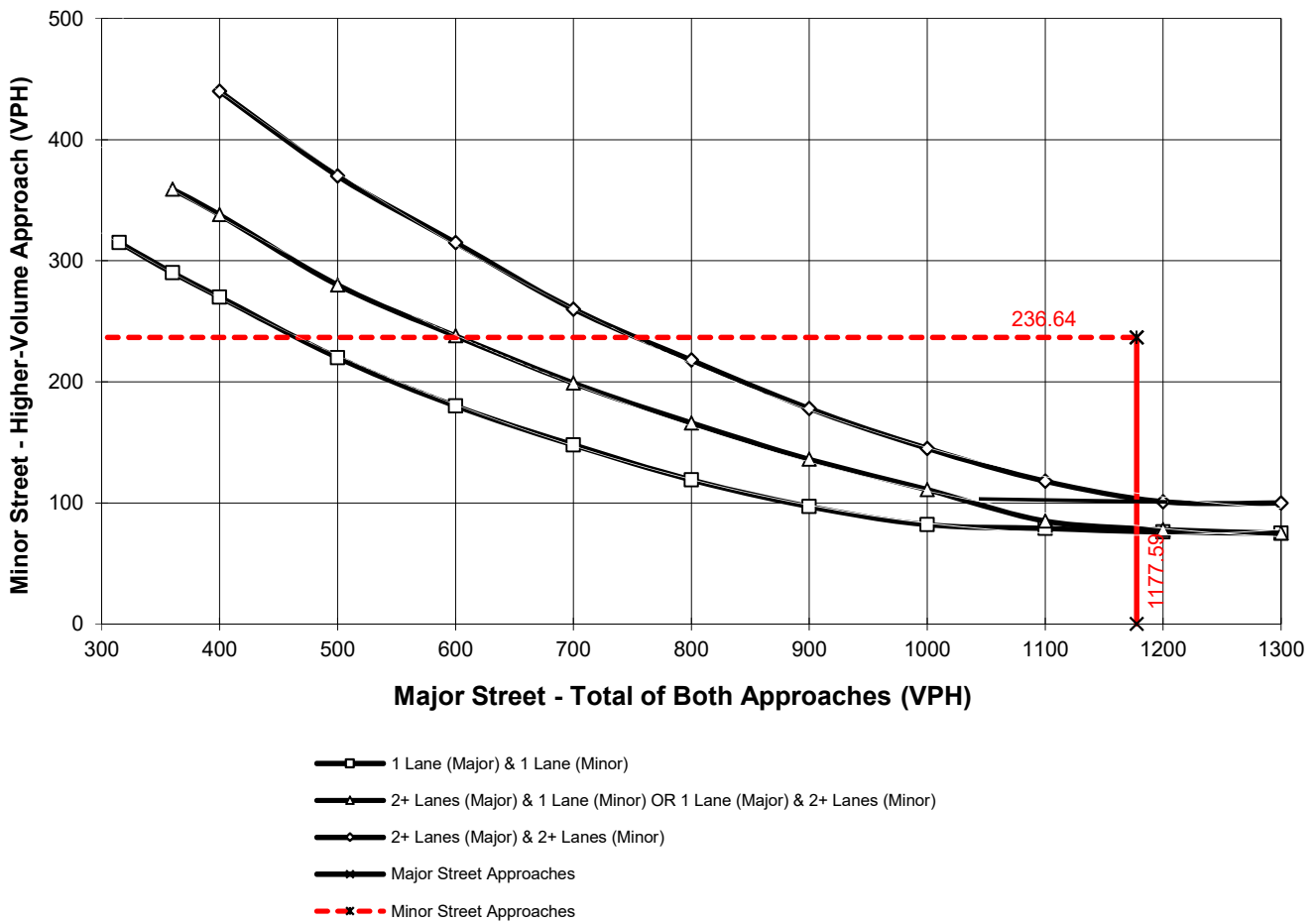
Major Street Name = Rider St.

Total of Both Approaches (VPH) = 1,178  
 Number of Approach Lanes Major Street = 2

Minor Street Name = Redlands Av.

High Volume Approach (VPH) = 237  
 Number of Approach Lanes Minor Street = 1

WARRANTED FOR A SIGNAL



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday AM Peak Hour**

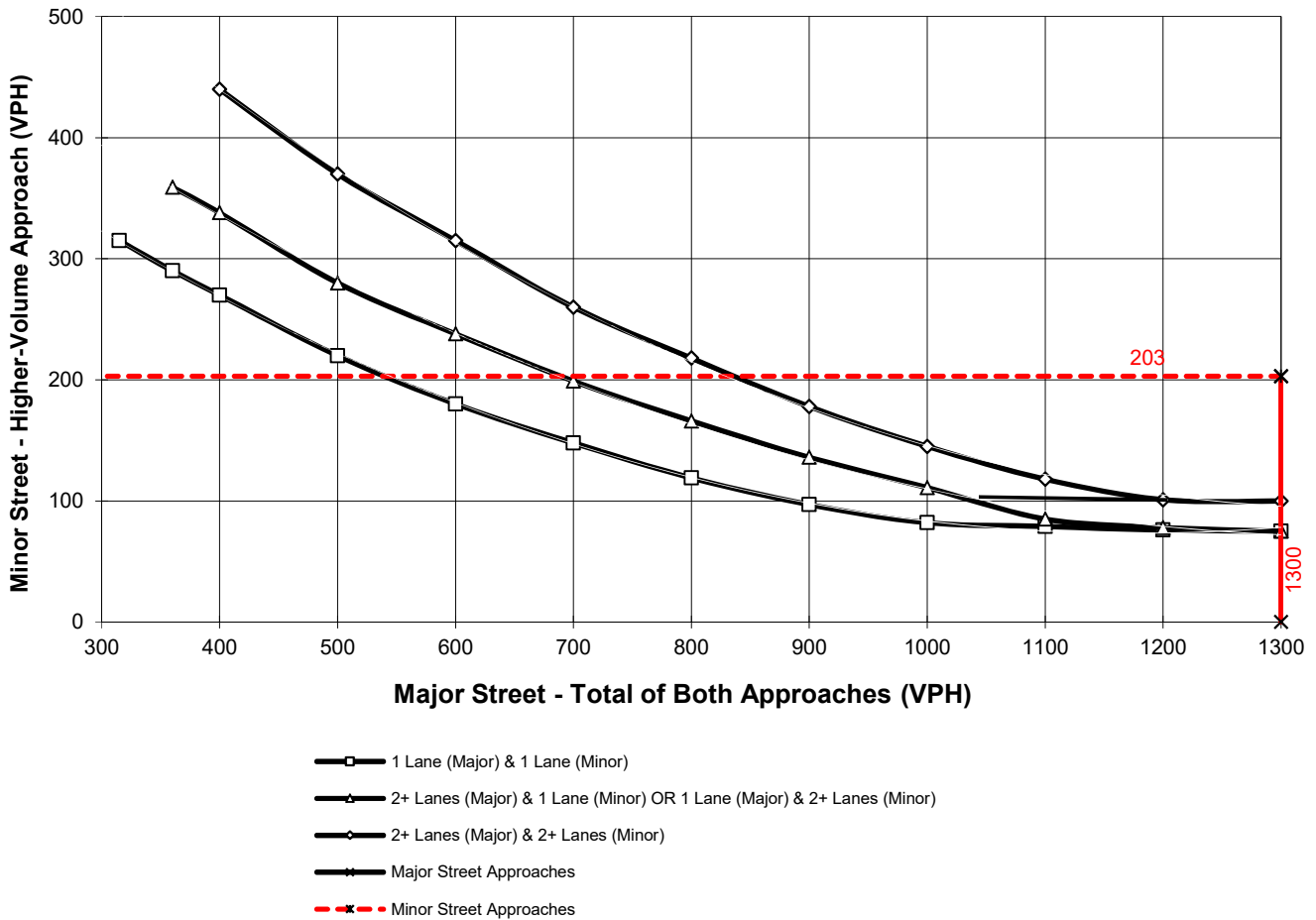
Major Street Name = **Rider St.**

Total of Both Approaches (VPH) = **1,463**  
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **Wilson Av.**

High Volume Approach (VPH) = **203**  
 Number of Approach Lanes Minor Street = **1**

**WARRANTED FOR A SIGNAL**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

**APPENDIX 3.4:**

**EXISTING (2019) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues



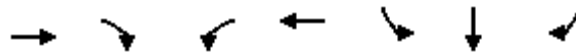
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	476	8	157	188	510	171
v/c Ratio	0.35	0.01	0.67	0.09	0.99	0.29
Control Delay	15.4	0.0	29.4	12.3	63.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	0.0	29.4	12.3	63.9	4.9
Queue Length 50th (ft)	67	0	54	31	183	0
Queue Length 95th (ft)	103	0	#115	56	#359	37
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1364	676	255	1985	513	580
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.01	0.62	0.09	0.99	0.29

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues

2: I-215 SB Ramps & Ramona Exwy.

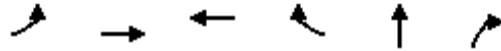


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	738	344	297	1000	310	311	199
v/c Ratio	0.60	0.44	0.79	0.47	0.59	0.59	0.35
Control Delay	33.6	5.2	27.8	5.7	38.1	38.1	14.3
Queue Delay	0.0	0.0	0.0	0.4	59.4	59.4	0.0
Total Delay	33.6	5.2	27.8	6.1	97.5	97.5	14.3
Queue Length 50th (ft)	226	0	102	88	194	195	42
Queue Length 95th (ft)	317	68	39	26	293	294	103
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1230	777	484	2133	522	523	573
Starvation Cap Reductn	0	0	0	597	0	0	0
Spillback Cap Reductn	0	0	0	0	246	247	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.44	0.61	0.65	1.12	1.13	0.35

Intersection Summary



Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	289	684	329	759	12	88
v/c Ratio	0.70	0.25	0.20	0.77	0.08	0.36
Control Delay	15.0	0.3	11.5	12.7	26.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	0.3	11.5	12.7	26.7	8.4
Queue Length 50th (ft)	15	0	36	62	4	0
Queue Length 95th (ft)	19	m0	68	#301	18	25
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1611	990	150	242
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.25	0.20	0.77	0.08	0.36

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	179	1164	956	730	166	165	441
v/c Ratio	0.75	0.52	0.60	0.65	0.35	0.34	0.88
Control Delay	48.1	22.9	26.8	4.9	32.6	32.5	49.8
Queue Delay	0.0	6.3	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	29.2	26.8	4.9	32.6	32.5	49.8
Queue Length 50th (ft)	135	454	282	0	95	94	245
Queue Length 95th (ft)	206	539	368	82	152	151	#370
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	270	2225	1595	1120	553	555	571
Starvation Cap Reductn	0	1001	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.95	0.60	0.65	0.30	0.30	0.77

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues



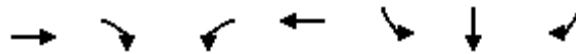
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	382	16	281	190	421	180
v/c Ratio	0.32	0.03	1.02	0.09	0.86	0.32
Control Delay	15.8	0.1	82.7	11.4	39.9	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	0.1	82.7	11.4	39.9	4.9
Queue Length 50th (ft)	53	0	~123	30	141	0
Queue Length 95th (ft)	83	0	#257	54	#278	38
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	617	276	2027	513	586
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.03	1.02	0.09	0.82	0.31

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

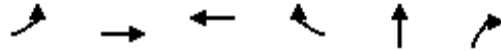
Queues

2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	809	323	352	863	384	388	174
v/c Ratio	0.70	0.44	0.84	0.40	0.74	0.74	0.29
Control Delay	37.8	5.5	31.6	5.1	44.0	44.4	7.0
Queue Delay	0.0	0.0	0.0	0.3	57.6	57.5	0.0
Total Delay	37.8	5.5	31.6	5.4	101.7	101.9	7.0
Queue Length 50th (ft)	267	0	235	84	254	257	7
Queue Length 95th (ft)	353	66	86	23	375	380	57
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1149	734	484	2133	522	523	603
Starvation Cap Reductn	0	0	0	572	0	0	0
Spillback Cap Reductn	0	0	0	0	236	236	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.44	0.73	0.55	1.34	1.35	0.29
<b>Intersection Summary</b>							

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	262	580	475	638	29	280
v/c Ratio	0.67	0.21	0.29	0.63	0.19	0.72
Control Delay	15.9	0.2	11.6	6.7	28.8	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	0.2	11.6	6.7	28.8	16.5
Queue Length 50th (ft)	20	1	53	28	10	0
Queue Length 95th (ft)	16	m1	90	98	30	#68
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1655	1011	152	391
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.21	0.29	0.63	0.19	0.72

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	206	1371	885	733	169	169	399
v/c Ratio	0.78	0.60	0.55	0.66	0.38	0.38	0.85
Control Delay	44.0	20.9	25.3	5.0	34.7	34.6	47.4
Queue Delay	0.0	31.9	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	52.8	25.3	5.0	34.7	34.6	47.4
Queue Length 50th (ft)	158	540	246	0	102	102	220
Queue Length 95th (ft)	m#239	622	335	84	154	154	316
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	281	2300	1622	1117	553	555	571
Starvation Cap Reductn	0	1004	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.06	0.55	0.66	0.31	0.30	0.70

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 3.5:**

**EXISTING (2019) CONDITIONS BASIC FREEWAY SEGMENT ANALYSIS WORKSHEETS**

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# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3880	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1477
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.1
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	21.4
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3515	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1312
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.55
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	18.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	RV	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2018)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3403	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1258
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.52
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	70.0
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	18.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5250	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2017
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.84
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	62.3
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	32.4
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4509	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1665
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	24.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4430	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1636
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	24.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5350	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1996
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	62.7
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	31.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5192	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1882
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	64.6
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	29.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5013	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1799
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	27.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4600	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1716
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	66.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	25.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4185	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1517
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	22.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4038	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1493
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.0
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	21.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

**APPENDIX 3.6:**

**EXISTING (2019) CONDITIONS FREEWAY MERGE/DIVERGE ANALYSIS WORKSHEETS**

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# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3880	491
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.826
Flow Rate (vi),pc/h	4430	646
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.62	0.31

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.356
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1438
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	60.0
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.620	Outer Lanes Freeway Speed (SO), mi/h	75.1
Flow in Lanes 1 and 2 (v12), pc/h	2992	Ramp Junction Speed (S), mi/h	64.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.0
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	RV	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2018)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Oleander Business Park TIA (JN 11006)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3389	125
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	16.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.862
Flow Rate (vi),pc/h	3794	158
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.55	0.08

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	912.6	Density in Ramp Influence Area (DR), pc/mi/ln	22.4
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.340
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1575
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	66.1
Flow in Lanes 1 and 2 (v12), pc/h	2219	Ramp Junction Speed (S), mi/h	62.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	2377	Average Density (D), pc/mi/ln	21.0
Level of Service (LOS)	C		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3515	674
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.885
Flow Rate (vi),pc/h	3935	828
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.55	0.39

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	24.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.373
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1168
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.6
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.624	Outer Lanes Freeway Speed (SO), mi/h	76.1
Flow in Lanes 1 and 2 (v12), pc/h	2767	Ramp Junction Speed (S), mi/h	63.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	20.6
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	2841	562
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.926
Flow Rate (vi),pc/h	3119	647
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.52	0.31

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	20.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.301
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1251
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	61.6
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	67.3
Flow in Lanes 1 and 2 (v12), pc/h	1868	Ramp Junction Speed (S), mi/h	63.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2515	Average Density (D), pc/mi/ln	19.8
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4425	825
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.885
Flow Rate (vi),pc/h	5000	1013
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.84	0.48

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1371.4	Density in Ramp Influence Area (DR), pc/mi/ln	34.0
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.495
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2070
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.1
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.586	Outer Lanes Freeway Speed (SO), mi/h	64.3
Flow in Lanes 1 and 2 (v12), pc/h	2930	Ramp Junction Speed (S), mi/h	58.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	3943	Average Density (D), pc/mi/ln	34.1
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4509	85
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.909
Flow Rate (vi),pc/h	5095	102
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.05

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.6
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.307
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1857
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	61.4
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.628	Outer Lanes Freeway Speed (SO), mi/h	73.4
Flow in Lanes 1 and 2 (v12), pc/h	3238	Ramp Junction Speed (S), mi/h	65.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	26.0
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3753	757
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	12.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.893
Flow Rate (vi),pc/h	4201	903
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.43

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.381
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1701
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.3
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.7
Flow in Lanes 1 and 2 (v12), pc/h	2500	Ramp Junction Speed (S), mi/h	61.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	3403	Average Density (D), pc/mi/ln	27.8
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4430	677
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.909
Flow Rate (vi),pc/h	5005	794
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.70	0.38

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.369
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1693
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.7
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.598	Outer Lanes Freeway Speed (SO), mi/h	74.1
Flow in Lanes 1 and 2 (v12), pc/h	3312	Ramp Junction Speed (S), mi/h	63.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	26.1
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5350	420
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	20.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.833
Flow Rate (vi),pc/h	5989	548
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.83	0.26

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	34.6
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.347
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2258
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	60.3
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.585	Outer Lanes Freeway Speed (SO), mi/h	71.9
Flow in Lanes 1 and 2 (v12), pc/h	3731	Ramp Junction Speed (S), mi/h	64.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	31.1
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4930	262
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	4.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.962
Flow Rate (vi),pc/h	5468	296
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.80	0.14

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1300.3	Density in Ramp Influence Area (DR), pc/mi/ln	31.0
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.426
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2269
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.1
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	63.6
Flow in Lanes 1 and 2 (v12), pc/h	3199	Ramp Junction Speed (S), mi/h	60.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	3495	Average Density (D), pc/mi/ln	32.0
Level of Service (LOS)	D		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5192	817
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.909
Flow Rate (vi),pc/h	5759	958
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.80	0.46

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	32.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.384
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2055
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.2
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.572	Outer Lanes Freeway Speed (SO), mi/h	72.7
Flow in Lanes 1 and 2 (v12), pc/h	3704	Ramp Junction Speed (S), mi/h	63.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.3
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	RV	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2018)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4375	639
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.952
Flow Rate (vi),pc/h	4803	730
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.77	0.35

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.6
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.396
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1926
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.9
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	64.9
Flow in Lanes 1 and 2 (v12), pc/h	2877	Ramp Junction Speed (S), mi/h	60.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	3607	Average Density (D), pc/mi/ln	30.3
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3967	633
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	14.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.877
Flow Rate (vi),pc/h	4356	785
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.37

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1184.8	Density in Ramp Influence Area (DR), pc/mi/ln	29.3
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.404
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1803
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.7
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.586	Outer Lanes Freeway Speed (SO), mi/h	65.3
Flow in Lanes 1 and 2 (v12), pc/h	2553	Ramp Junction Speed (S), mi/h	60.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	3338	Average Density (D), pc/mi/ln	28.1
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4185	218
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.826
Flow Rate (vi),pc/h	4642	287
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.64	0.14

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.324
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1607
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.631	Outer Lanes Freeway Speed (SO), mi/h	74.4
Flow in Lanes 1 and 2 (v12), pc/h	3035	Ramp Junction Speed (S), mi/h	65.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.8
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3364	821
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	9.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.917
Flow Rate (vi),pc/h	3693	954
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.65	0.45

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	25.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.355
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1496
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.1
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	66.4
Flow in Lanes 1 and 2 (v12), pc/h	2197	Ramp Junction Speed (S), mi/h	62.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	3151	Average Density (D), pc/mi/ln	25.0
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4038	674
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.926
Flow Rate (vi),pc/h	4479	776
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.62	0.37

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	25.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.368
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1437
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.7
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.612	Outer Lanes Freeway Speed (SO), mi/h	75.1
Flow in Lanes 1 and 2 (v12), pc/h	3042	Ramp Junction Speed (S), mi/h	63.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.4
Level of Service (LOS)	C		

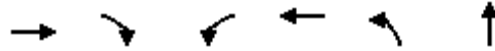
**APPENDIX 3.7:**

**EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS  
WITH IMPROVEMENTS**

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Timings  
24: Redlands Av. & Rider St.

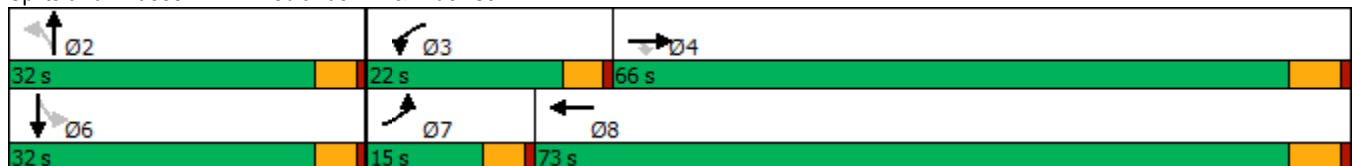


Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø6	Ø7
Lane Configurations	↑	↗	↖	↑↗	↖	↗		
Traffic Volume (vph)	336	10	161	685	45	0		
Future Volume (vph)	336	10	161	685	45	0		
Turn Type	NA	Perm	Prot	NA	Perm	NA		
Protected Phases	4		3	8		2	6	7
Permitted Phases		4			2			
Detector Phase	4	4	3	8	2	2		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	22.8	22.8	9.6	22.8	27.6	27.6	27.6	9.6
Total Split (s)	66.0	66.0	22.0	73.0	32.0	32.0	32.0	15.0
Total Split (%)	55.0%	55.0%	18.3%	60.8%	26.7%	26.7%	27%	13%
Yellow Time (s)	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	4.6	5.8	4.6	4.6		
Lead/Lag	Lag	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	60.3	60.3	13.5	78.5	10.5	10.5		
Actuated g/C Ratio	0.61	0.61	0.14	0.79	0.11	0.11		
v/c Ratio	0.32	0.01	0.71	0.26	0.32	0.32		
Control Delay	11.0	0.0	57.5	3.0	48.4	1.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	11.0	0.0	57.5	3.0	48.4	1.3		
LOS	B	A	E	A	D	A		
Approach Delay	10.7			13.4		10.2		
Approach LOS	B			B		B		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 99.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 24: Redlands Av. & Rider St.



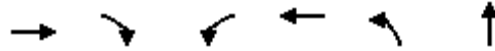
HCM 6th Signalized Intersection Summary  
24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	336	10	161	685	0	45	0	192	0	0	0
Future Volume (veh/h)	0	336	10	161	685	0	45	0	192	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	365	11	175	745	0	49	0	209	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	2	1111	941	207	2685	0	351	0	250	70	295	0
Arrive On Green	0.00	0.58	0.58	0.11	0.74	0.00	0.16	0.00	0.16	0.00	0.00	0.00
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	1810	0	1610	1191	1900	0
Grp Volume(v), veh/h	0	365	11	175	745	0	49	0	209	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1810	0	1610	1191	1900	0
Q Serve(g_s), s	0.0	10.2	0.3	9.8	6.9	0.0	2.4	0.0	13.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.2	0.3	9.8	6.9	0.0	2.4	0.0	13.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	1111	941	207	2685	0	351	0	250	70	295	0
V/C Ratio(X)	0.00	0.33	0.01	0.84	0.28	0.00	0.14	0.00	0.84	0.00	0.00	0.00
Avail Cap(c_a), veh/h	183	1111	941	306	2685	0	551	0	428	202	506	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	11.0	8.9	44.7	4.3	0.0	37.8	0.0	42.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	8.9	0.3	0.0	0.2	0.0	7.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	0.1	4.7	1.9	0.0	1.1	0.0	5.5	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.8	9.0	53.6	4.5	0.0	37.9	0.0	49.5	0.0	0.0	0.0
LnGrp LOS	A	B	A	D	A	A	D	A	D	A	A	A
Approach Vol, veh/h		376			920			258				0
Approach Delay, s/veh		11.7			13.9			47.3				0.0
Approach LOS		B			B			D				
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.6	16.4	66.0		20.6	0.0	82.4				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		27.4	17.4	60.2		27.4	10.4	67.2				
Max Q Clear Time (g_c+I1), s		15.0	11.8	12.2		0.0	0.0	8.9				
Green Ext Time (p_c), s		1.0	0.1	2.2		0.0	0.0	5.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.9								
HCM 6th LOS				B								

Timings  
24: Redlands Av. & Rider St.

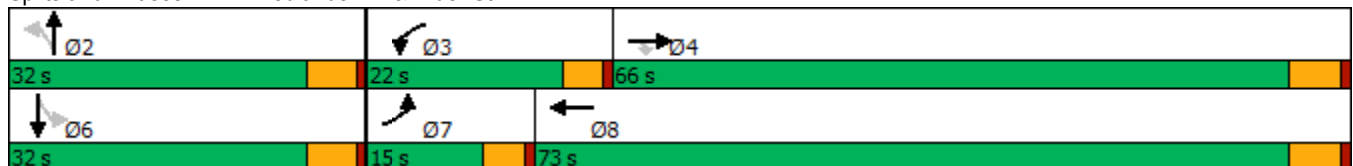


Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	Ø6	Ø7
Lane Configurations	↑	↗	↖	↑↗	↖	↗		
Traffic Volume (vph)	466	35	84	359	27	0		
Future Volume (vph)	466	35	84	359	27	0		
Turn Type	NA	Perm	Prot	NA	Perm	NA		
Protected Phases	4		3	8		2	6	7
Permitted Phases		4			2			
Detector Phase	4	4	3	8	2	2		
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	22.8	22.8	9.6	22.8	28.4	28.4	28.4	9.6
Total Split (s)	66.0	66.0	22.0	73.0	32.0	32.0	32.0	15.0
Total Split (%)	55.0%	55.0%	18.3%	60.8%	26.7%	26.7%	27%	13%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.4	5.4		
Lead/Lag	Lag	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	64.4	64.4	9.2	76.3	10.0	10.0		
Actuated g/C Ratio	0.66	0.66	0.09	0.78	0.10	0.10		
v/c Ratio	0.40	0.03	0.53	0.14	0.20	0.22		
Control Delay	9.8	0.1	52.6	2.7	43.5	0.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	9.8	0.1	52.6	2.7	43.5	0.9		
LOS	A	A	D	A	D	A		
Approach Delay	9.1			12.2		9.1		
Approach LOS	A			B		A		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.5  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.53  
 Intersection Signal Delay: 10.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.7%  
 ICU Level of Service A  
 Analysis Period (min) 15























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	466	35	84	359	0	27	0	113	0	0	0
Future Volume (veh/h)	0	466	35	84	359	0	27	0	113	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	507	38	91	390	0	29	0	123	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	2	1247	1057	117	2784	0	272	0	172	78	203	0
Arrive On Green	0.00	0.66	0.66	0.06	0.77	0.00	0.11	0.00	0.11	0.00	0.00	0.00
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	1810	0	1610	1288	1900	0
Grp Volume(v), veh/h	0	507	38	91	390	0	29	0	123	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1810	0	1610	1288	1900	0
Q Serve(g_s), s	0.0	11.5	0.8	4.5	2.5	0.0	1.3	0.0	6.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.5	0.8	4.5	2.5	0.0	1.3	0.0	6.8	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	1247	1057	117	2784	0	272	0	172	78	203	0
V/C Ratio(X)	0.00	0.41	0.04	0.77	0.14	0.00	0.11	0.00	0.72	0.00	0.00	0.00
Avail Cap(c_a), veh/h	205	1247	1057	343	2784	0	603	0	467	314	551	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	7.4	5.6	42.2	2.7	0.0	37.2	0.0	39.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.1	4.1	0.1	0.0	0.2	0.0	5.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.9	0.2	2.1	0.5	0.0	0.6	0.0	2.8	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.4	5.6	46.3	2.8	0.0	37.4	0.0	45.1	0.0	0.0	0.0
LnGrp LOS	A	A	A	D	A	A	D	A	D	A	A	A
Approach Vol, veh/h		545			481			152				0
Approach Delay, s/veh		8.2			11.0			43.6				0.0
Approach LOS		A			B			D				
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.2	10.6	66.0		15.2	0.0	76.6				
Change Period (Y+Rc), s		5.4	4.6	5.8		5.4	4.6	5.8				
Max Green Setting (Gmax), s		26.6	17.4	60.2		26.6	10.4	67.2				
Max Q Clear Time (g_c+I1), s		8.8	6.5	13.5		0.0	0.0	4.5				
Green Ext Time (p_c), s		0.6	0.1	3.3		0.0	0.0	2.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.9								
HCM 6th LOS				B								

**APPENDIX 6.1:**

**E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

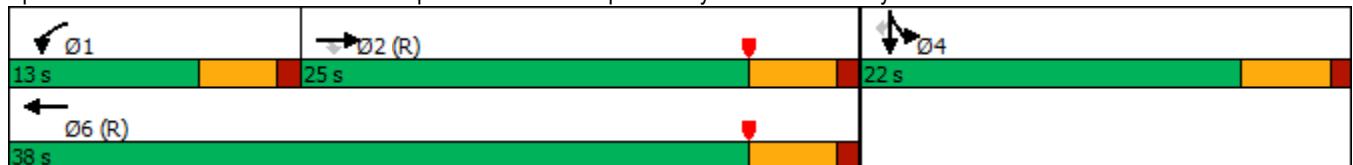


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	438	7	152	173	2	157
Future Volume (vph)	438	7	152	173	2	157
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.5	20.5	8.0	33.0	17.0	17.0
Actuated g/C Ratio	0.34	0.34	0.13	0.55	0.28	0.28
v/c Ratio	0.39	0.01	0.69	0.09	1.08	0.29
Control Delay	16.3	0.0	31.5	12.3	88.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	0.0	31.5	12.3	88.3	4.9
LOS	B	A	C	B	F	A
Approach Delay	16.0			21.3	68.6	
Approach LOS	B			C	E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 41.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 103.9%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

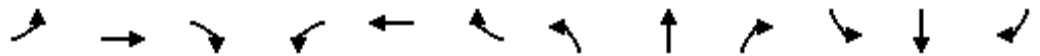


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019

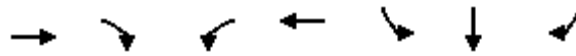


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	438	7	152	173	0	0	0	0	508	2	157
Future Volume (veh/h)	0	438	7	152	173	0	0	0	0	508	2	157
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	476	7	165	188	0				552	2	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1301	580	208	1986	0				511	2	456
Arrive On Green	0.00	0.36	0.36	0.11	0.55	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1609	1810	3705	0				1803	7	1610
Grp Volume(v), veh/h	0	476	7	165	188	0				554	0	114
Grp Sat Flow(s),veh/h/ln	0	1805	1609	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	5.8	0.2	5.3	1.5	0.0				17.0	0.0	3.3
Cycle Q Clear(g_c), s	0.0	5.8	0.2	5.3	1.5	0.0				17.0	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1301	580	208	1986	0				513	0	456
V/C Ratio(X)	0.00	0.37	0.01	0.79	0.09	0.00				1.08	0.00	0.25
Avail Cap(c_a), veh/h	0	1301	580	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.1	12.3	25.9	6.4	0.0				21.5	0.0	16.6
Incr Delay (d2), s/veh	0.0	0.8	0.0	10.3	0.1	0.0				63.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.1	2.6	0.4	0.0				15.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.9	12.4	36.2	6.5	0.0				84.7	0.0	16.9
LnGrp LOS	A	B	B	D	A	A				F	A	B
Approach Vol, veh/h		483			353						668	
Approach Delay, s/veh		14.9			20.4						73.1	
Approach LOS		B			C						E	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	11.4	26.6		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	7.3	7.8		19.0		3.5						
Green Ext Time (p_c), s	0.0	1.5		0.0		0.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			42.0									
HCM 6th LOS			D									



Timings

2: I-215 SB Ramps & Ramona Exwy.

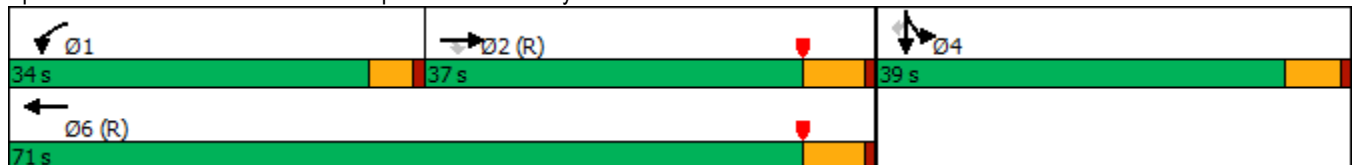


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵	↵
Traffic Volume (vph)	701	327	286	950	607	1	189
Future Volume (vph)	701	327	286	950	607	1	189
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	37.0	37.0	34.0	71.0	39.0	39.0	39.0
Total Split (%)	33.6%	33.6%	30.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	37.3	37.3	23.2	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.34	0.34	0.21	0.59	0.30	0.30	0.30
v/c Ratio	0.60	0.44	0.79	0.47	0.61	0.61	0.35
Control Delay	33.7	5.3	27.5	5.5	38.7	38.7	14.3
Queue Delay	0.0	0.0	0.0	0.4	59.8	59.7	0.0
Total Delay	33.7	5.3	27.5	6.0	98.4	98.5	14.3
LOS	C	A	C	A	F	F	B
Approach Delay	24.7			10.9		78.5	
Approach LOS	C			B		E	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 33.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	701	327	286	950	0	0	0	0	607	1	189
Future Volume (veh/h)	0	701	327	286	950	0	0	0	0	607	1	189
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	738	283	301	1000	0				640	0	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1309	584	339	2133	0				1102	0	490
Arrive On Green	0.00	0.36	0.36	0.11	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	738	283	301	1000	0				640	0	116
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	18.0	15.0	18.0	23.6	0.0				16.4	0.0	5.9
Cycle Q Clear(g_c), s	0.0	18.0	15.0	18.0	23.6	0.0				16.4	0.0	5.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1309	584	339	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.56	0.48	0.89	0.47	0.00				0.58	0.00	0.24
Avail Cap(c_a), veh/h	0	1309	584	485	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.1	27.1	47.7	22.1	0.0				32.3	0.0	28.7
Incr Delay (d2), s/veh	0.0	1.8	2.9	11.1	0.6	0.0				2.2	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	5.9	9.4	10.6	0.0				7.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	29.9	30.0	58.8	22.7	0.0				34.6	0.0	29.8
LnGrp LOS	A	C	C	E	C	A				C	A	C
Approach Vol, veh/h		1021			1301						756	
Approach Delay, s/veh		29.9			31.1						33.8	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	25.1	45.9		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	29.5	31.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	20.0	20.0		18.4		25.6						
Green Ext Time (p_c), s	0.6	2.7		2.4		4.4						

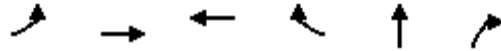
Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

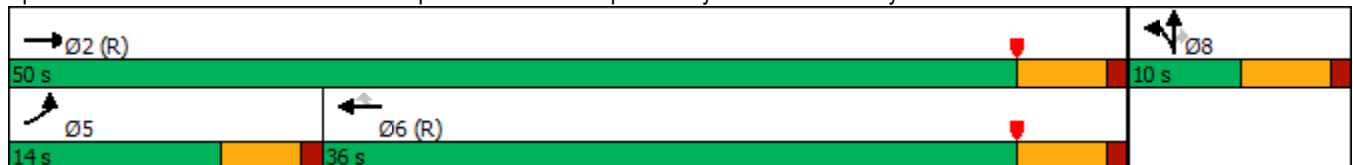


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	269	677	314	717	0	109
Future Volume (vph)	269	677	314	717	0	109
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	14.0	50.0	36.0	36.0	10.0	10.0
Total Split (%)	23.3%	83.3%	60.0%	60.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	9.5	45.0	31.0	31.0	5.0	5.0
Actuated g/C Ratio	0.16	0.75	0.52	0.52	0.08	0.08
v/c Ratio	1.01	0.27	0.18	0.74	0.08	0.48
Control Delay	74.2	0.1	8.1	9.7	26.7	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	0.1	8.1	9.7	26.7	13.6
LOS	E	A	A	A	C	B
Approach Delay		21.2	9.2		14.8	
Approach LOS		C	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 14.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 103.9%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

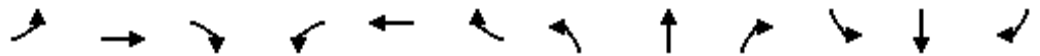


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↙	↗			
Traffic Volume (veh/h)	269	677	0	0	314	717	11	0	109	0	0	0
Future Volume (veh/h)	269	677	0	0	314	717	11	0	109	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	289	728	0	0	338	771	12	0	52			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	287	2708	0	0	1865	832	151	0	134			
Arrive On Green	0.11	0.50	0.00	0.00	0.52	0.52	0.08	0.00	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	289	728	0	0	338	771	12	0	52			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	9.5	7.0	0.0	0.0	3.0	26.6	0.4	0.0	1.8			
Cycle Q Clear(g_c), s	9.5	7.0	0.0	0.0	3.0	26.6	0.4	0.0	1.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	287	2708	0	0	1865	832	151	0	134			
V/C Ratio(X)	1.01	0.27	0.00	0.00	0.18	0.93	0.08	0.00	0.39			
Avail Cap(c_a), veh/h	287	2708	0	0	1865	832	151	0	134			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.93	0.93	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	5.5	0.0	0.0	7.7	13.4	25.4	0.0	26.0			
Incr Delay (d2), s/veh	53.5	0.2	0.0	0.0	0.2	16.7	1.0	0.0	8.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.1	0.8	0.0	0.0	0.9	10.5	0.2	0.0	0.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	5.7	0.0	0.0	7.9	30.2	26.4	0.0	34.3			
LnGrp LOS	F	A	A	A	A	C	C	A	C			
Approach Vol, veh/h		1017			1109			64				
Approach Delay, s/veh		26.9			23.4			32.8				
Approach LOS		C			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			14.0	36.0		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			9.5	31.0		5.0				
Max Q Clear Time (g_c+1), s		9.0			11.5	28.6		3.8				
Green Ext Time (p_c), s		3.1			0.0	0.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					25.3							
HCM 6th LOS					C							

Timings  
4: I-215 NB Ramps & Ramona Exwy.

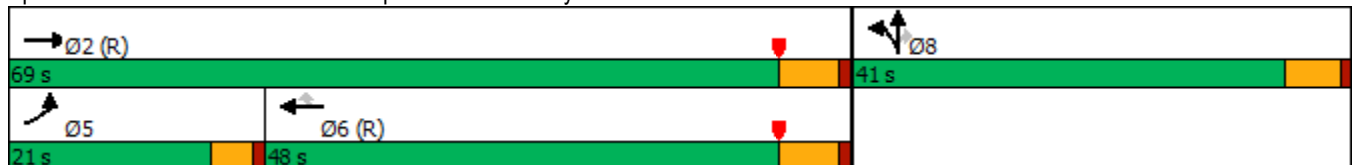


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	172	1135	922	706	313	5	435
Future Volume (vph)	172	1135	922	706	313	5	435
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	14.7	67.2	48.1	48.1	31.3	31.3	31.3
Actuated g/C Ratio	0.13	0.61	0.44	0.44	0.28	0.28	0.28
v/c Ratio	0.75	0.54	0.61	0.66	0.34	0.34	0.88
Control Delay	48.4	23.1	27.3	5.0	32.2	32.1	50.8
Queue Delay	0.0	10.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	33.1	27.3	5.0	32.2	32.1	50.8
LOS	D	C	C	A	C	C	D
Approach Delay		35.1	17.6			42.9	
Approach LOS		D	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 29.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.4%  
 ICU Level of Service D  
 Analysis Period (min) 15






















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



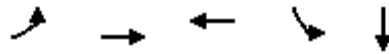
HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	172	1135	0	0	922	706	313	5	435	0	0	0
Future Volume (veh/h)	172	1135	0	0	922	706	313	5	435	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	179	1182	0	0	960	578	330	0	270			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	207	2522	0	0	1962	875	712	0	317			
Arrive On Green	0.23	1.00	0.00	0.00	0.54	0.54	0.20	0.00	0.20			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	179	1182	0	0	960	578	330	0	270			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	10.5	0.0	0.0	0.0	18.2	28.1	8.9	0.0	17.8			
Cycle Q Clear(g_c), s	10.5	0.0	0.0	0.0	18.2	28.1	8.9	0.0	17.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	207	2522	0	0	1962	875	712	0	317			
V/C Ratio(X)	0.87	0.47	0.00	0.00	0.49	0.66	0.46	0.00	0.85			
Avail Cap(c_a), veh/h	271	2522	0	0	1962	875	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.76	0.76	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.6	0.0	0.0	0.0	15.6	17.9	39.0	0.0	42.6			
Incr Delay (d2), s/veh	15.8	0.5	0.0	0.0	0.9	3.9	0.5	0.0	7.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.9	0.2	0.0	0.0	6.9	10.1	3.9	0.0	7.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	0.5	0.0	0.0	16.5	21.8	39.5	0.0	49.9			
LnGrp LOS	E	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1361			1538			600				
Approach Delay, s/veh		8.0			18.5			44.2				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.8			17.1	65.8		27.2				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			12.5	30.1		19.8				
Green Ext Time (p_c), s		5.7			0.2	4.2		1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					18.8							
HCM 6th LOS					B							
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings  
5: Harley Knox Blvd. & Western Way

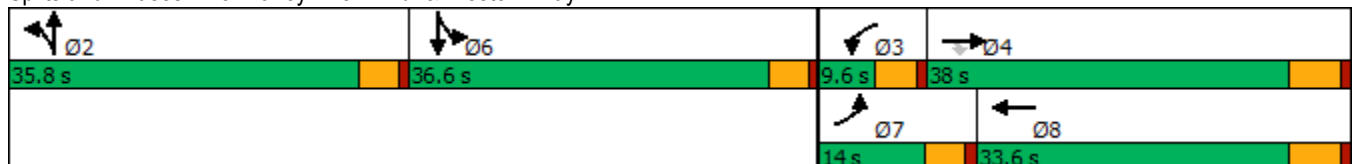


Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	73	720	1004	8	0		
Future Volume (vph)	73	720	1004	8	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	14.0	38.0	33.6	36.6	36.6	35.8	9.6
Total Split (%)	11.7%	31.7%	28.0%	30.5%	30.5%	30%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	34.3	24.3	12.4	12.4		
Actuated g/C Ratio	0.18	0.78	0.55	0.28	0.28		
v/c Ratio	0.24	0.19	0.39	0.02	0.05		
Control Delay	23.2	3.3	10.2	19.8	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.2	3.3	10.2	19.8	0.1		
LOS	C	A	B	B	A		
Approach Delay		5.2	10.2		3.2		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 43.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

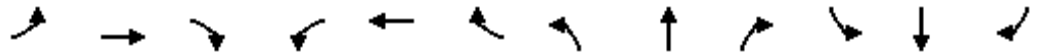
Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
 5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑		↖	↗		↖	↗	
Traffic Volume (veh/h)	73	720	0	0	1004	36	0	0	0	8	0	45
Future Volume (veh/h)	73	720	0	0	1004	36	0	0	0	8	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	78	774	0	0	1080	39	0	0	0	9	0	48
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	135	3103	963	5	2050	74	5	5	0	217	0	193
Arrive On Green	0.07	0.60	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5139	185	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	78	774	0	0	726	393	0	0	0	9	0	48
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1867	1810	1900	0	1810	0	1610
Q Serve(g_s), s	1.5	2.6	0.0	0.0	5.9	5.9	0.0	0.0	0.0	0.2	0.0	1.0
Cycle Q Clear(g_c), s	1.5	2.6	0.0	0.0	5.9	5.9	0.0	0.0	0.0	0.2	0.0	1.0
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	135	3103	963	5	1380	745	5	5	0	217	0	193
V/C Ratio(X)	0.58	0.25	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.04	0.00	0.25
Avail Cap(c_a), veh/h	461	4527	1405	245	2605	1406	1530	1607	0	1569	0	1396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	3.5	0.0	0.0	8.4	8.4	0.0	0.0	0.0	14.4	0.0	14.7
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	0.0	1.3	1.4	0.0	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	3.5	0.0	0.0	8.8	9.0	0.0	0.0	0.0	14.4	0.0	15.4
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		852			1119			0				57
Approach Delay, s/veh		4.9			8.8			0.0				15.2
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	27.9		9.0	7.4	20.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		31.2	5.0	32.2		32.0	9.4	27.8				
Max Q Clear Time (g_c+I1), s		0.0	0.0	4.6		3.0	3.5	7.9				
Green Ext Time (p_c), s		0.0	0.0	5.3		0.3	0.0	6.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.4									
HCM 6th LOS			A									



Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

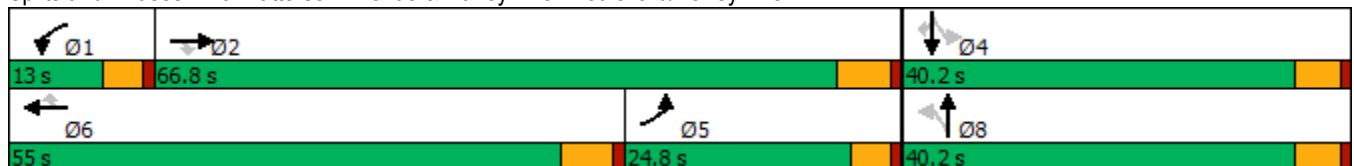


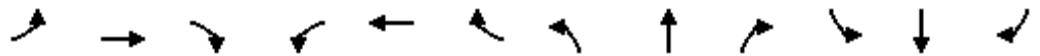
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	26	659	12	18	885	28	59	9	26	4	22
Future Volume (vph)	26	659	12	18	885	28	59	9	26	4	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	24.8	66.8	66.8	13.0	55.0	55.0	40.2	40.2	40.2	40.2	40.2
Total Split (%)	20.7%	55.7%	55.7%	10.8%	45.8%	45.8%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.6	32.6	32.6	7.4	30.6	30.6		16.6		16.6	16.6
Actuated g/C Ratio	0.14	0.62	0.62	0.14	0.58	0.58		0.31		0.31	0.31
v/c Ratio	0.11	0.22	0.01	0.08	0.46	0.03		0.20		0.07	0.04
Control Delay	33.7	8.8	0.0	34.4	12.8	0.1		20.0		21.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	33.7	8.8	0.0	34.4	12.8	0.1		20.0		21.0	0.1
LOS	C	A	A	C	B	A		B		C	A
Approach Delay		9.6			12.8			20.0		12.1	
Approach LOS		A			B			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 53  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 11.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↑↑↑	↷	↶	↑↑	↷		↕			↷	↷
Traffic Volume (veh/h)	26	659	12	18	885	28	59	9	15	26	4	22
Future Volume (veh/h)	26	659	12	18	885	28	59	9	15	26	4	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	716	12	20	962	30	64	10	14	28	4	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	58	2552	791	44	1660	740	294	50	41	361	43	277
Arrive On Green	0.03	0.49	0.49	0.02	0.46	0.46	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	5187	1609	1810	3610	1610	983	289	241	1310	251	1610
Grp Volume(v), veh/h	28	716	12	20	962	30	88	0	0	32	0	21
Grp Sat Flow(s),veh/h/ln	1810	1729	1609	1810	1805	1610	1513	0	0	1561	0	1610
Q Serve(g_s), s	0.8	4.0	0.2	0.5	9.8	0.5	1.7	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	0.8	4.0	0.2	0.5	9.8	0.5	2.4	0.0	0.0	0.7	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.73		0.16	0.87		1.00
Lane Grp Cap(c), veh/h	58	2552	791	44	1660	740	386	0	0	405	0	277
V/C Ratio(X)	0.48	0.28	0.02	0.46	0.58	0.04	0.23	0.00	0.00	0.08	0.00	0.08
Avail Cap(c_a), veh/h	735	6358	1972	305	3569	1592	1175	0	0	1181	0	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	7.5	6.5	24.0	9.9	7.4	18.0	0.0	0.0	17.3	0.0	17.3
Incr Delay (d2), s/veh	2.3	0.1	0.0	2.7	0.5	0.0	0.3	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	0.0	0.2	2.7	0.1	0.8	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	7.5	6.5	26.7	10.4	7.4	18.3	0.0	0.0	17.4	0.0	17.4
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	B
Approach Vol, veh/h		756			1012			88				53
Approach Delay, s/veh		8.2			10.6			18.3				17.4
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	30.3		13.7	7.4	28.7		13.7				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	20.2	* 49		35.1				
Max Q Clear Time (g_c+I1), s	2.5	6.0		2.7	2.8	11.8		4.4				
Green Ext Time (p_c), s	0.0	7.8		0.2	0.0	11.1		0.4				

Intersection Summary

HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1333	237	17	1619	0	64
Future Vol, veh/h	1333	237	17	1619	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1403	249	18	1704	0	67

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1652	0	826
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	396	0	319
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	396	-	319
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	319	-	-	396	-
HCM Lane V/C Ratio	0.211	-	-	0.045	-
HCM Control Delay (s)	19.3	-	-	14.5	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection			
Intersection Delay, s/veh	11.9		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	996	23
Demand Flow Rate, veh/h	0	996	23
Vehicles Circulating, veh/h	10	10	735
Vehicles Exiting, veh/h	996	748	30
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	12.0	5.1
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.435	0.565
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	996	10	13
Cap Entry Lane, veh/h	1407	727	727
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	996	10	13
Cap Entry, veh/h	1407	727	727
V/C Ratio	0.708	0.014	0.018
Control Delay, s/veh	12.0	5.1	5.1
LOS	B	A	A
95th %tile Queue, veh	6	0	0

Timings  
9: Webster Av. & Ramona Exwy.

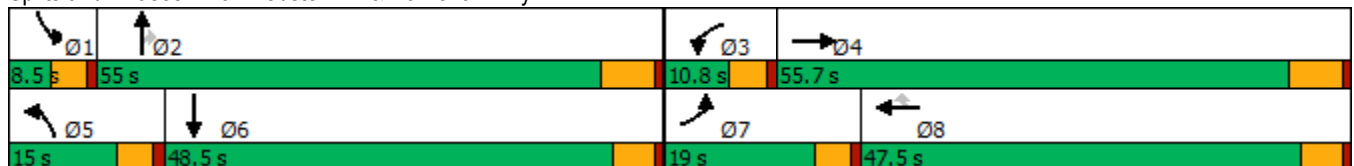


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↗↗↗	↘	↗↗↗	↗	↘	↗	↗	↗↗	
Traffic Volume (vph)	164	1177	28	1417	22	108	36	30	12	
Future Volume (vph)	164	1177	28	1417	22	108	36	30	12	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	19.0	55.7	10.8	47.5	47.5	15.0	55.0	55.0	48.5	8.5
Total Split (%)	14.6%	42.8%	8.3%	36.5%	36.5%	11.5%	42.3%	42.3%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	52.4	5.8	41.4	41.4	9.9	56.9	56.9	0.0	
Actuated g/C Ratio	0.11	0.41	0.05	0.32	0.32	0.08	0.44	0.44	0.00	
v/c Ratio	0.89	0.61	0.36	0.89	0.04	0.81	0.05	0.04	2.93	
Control Delay	97.8	32.0	72.4	49.0	0.1	97.8	21.1	0.1	927.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	97.8	32.0	72.4	49.0	0.1	97.8	21.1	0.1	927.0	
LOS	F	C	E	D	A	F	C	A	F	
Approach Delay		39.7		48.7			65.0		927.0	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130	
Actuated Cycle Length: 128.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.93	
Intersection Signal Delay: 90.7	Intersection LOS: F
Intersection Capacity Utilization 69.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖	↖	↑	↖		↕	
Traffic Volume (veh/h)	164	1177	56	28	1417	22	108	36	30	41	12	111
Future Volume (veh/h)	164	1177	56	28	1417	22	108	36	30	41	12	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	1239	52	29	1492	20	114	38	16	43	13	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	212	2487	104	54	2073	644	146	504	427	0	28	179
Arrive On Green	0.12	0.49	0.49	0.03	0.40	0.40	0.08	0.27	0.27	0.00	0.13	0.13
Sat Flow, veh/h	1810	5105	214	1810	5187	1610	1810	1900	1608	0	220	1423
Grp Volume(v), veh/h	173	839	452	29	1492	20	114	38	16	0	0	97
Grp Sat Flow(s),veh/h/ln	1810	1729	1861	1810	1729	1610	1810	1900	1608	0	0	1644
Q Serve(g_s), s	7.3	12.8	12.8	1.2	18.9	0.6	4.8	1.2	0.6	0.0	0.0	4.3
Cycle Q Clear(g_c), s	7.3	12.8	12.8	1.2	18.9	0.6	4.8	1.2	0.6	0.0	0.0	4.3
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	0.00		0.87
Lane Grp Cap(c), veh/h	212	1684	907	54	2073	644	146	504	427	0	0	207
V/C Ratio(X)	0.82	0.50	0.50	0.54	0.72	0.03	0.78	0.08	0.04	0.00	0.00	0.47
Avail Cap(c_a), veh/h	333	2190	1179	144	2814	874	241	1187	1004	0	0	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	33.7	13.6	13.6	37.4	19.8	14.3	35.3	21.5	21.3	0.0	0.0	31.7
Incr Delay (d2), s/veh	4.1	0.2	0.4	3.0	0.6	0.0	3.4	0.1	0.0	0.0	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.1	4.5	0.6	6.6	0.2	2.2	0.5	0.2	0.0	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	13.8	14.0	40.4	20.3	14.3	38.7	21.6	21.3	0.0	0.0	33.4
LnGrp LOS	D	B	B	D	C	B	D	C	C	A	A	C
Approach Vol, veh/h		1464			1541			168				97
Approach Delay, s/veh		16.7			20.6			33.2				33.4
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	26.9	6.9	44.3	10.9	16.1	13.8	37.4				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	48.8	6.2	49.5	10.4	* 43	14.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	3.2	3.2	14.8	6.8	6.3	9.3	20.9				
Green Ext Time (p_c), s	0.0	0.2	0.0	9.4	0.0	0.6	0.1	10.3				

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

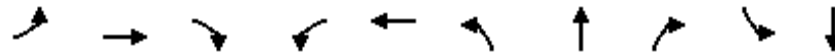
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

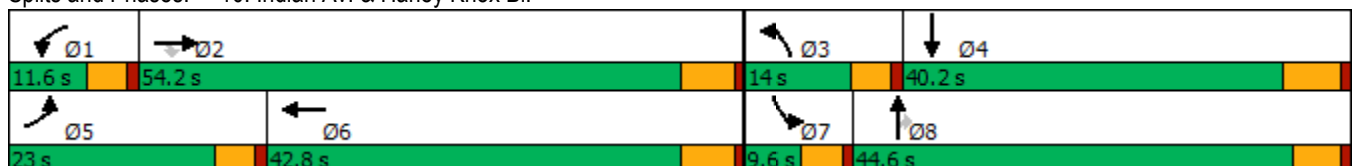


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	261	353	48	14	669	111	260	20	11	69
Future Volume (vph)	261	353	48	14	669	111	260	20	11	69
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	23.0	54.2	54.2	11.6	42.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	19.2%	45.2%	45.2%	9.7%	35.7%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.0	41.0	41.0	5.6	19.0	7.2	25.2	25.2	5.2	13.8
Actuated g/C Ratio	0.24	0.51	0.51	0.07	0.24	0.09	0.31	0.31	0.06	0.17
v/c Ratio	0.68	0.15	0.06	0.12	0.64	0.39	0.25	0.04	0.10	0.35
Control Delay	40.7	13.2	0.1	43.5	30.9	41.5	22.1	0.1	44.7	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	13.2	0.1	43.5	30.9	41.5	22.1	0.1	44.7	11.7
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		23.1			31.1		26.5			13.3
Approach LOS		C			C		C			B

Intersection Summary































Cycle Length: 120  
 Actuated Cycle Length: 80.8  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 25.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	261	353	48	14	669	42	111	260	20	11	69	151
Future Volume (veh/h)	261	353	48	14	669	42	111	260	20	11	69	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	287	388	39	15	735	31	122	286	14	12	76	136
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	340	2112	656	33	1214	51	249	784	350	27	291	260
Arrive On Green	0.19	0.41	0.41	0.02	0.24	0.24	0.07	0.22	0.22	0.02	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	5105	215	3510	3610	1610	1810	1805	1610
Grp Volume(v), veh/h	287	388	39	15	497	269	122	286	14	12	76	136
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1861	1755	1805	1610	1810	1805	1610
Q Serve(g_s), s	9.5	3.0	0.9	0.5	7.9	8.0	2.1	4.2	0.4	0.4	2.3	4.8
Cycle Q Clear(g_c), s	9.5	3.0	0.9	0.5	7.9	8.0	2.1	4.2	0.4	0.4	2.3	4.8
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	2112	656	33	822	443	249	784	350	27	291	260
V/C Ratio(X)	0.84	0.18	0.06	0.45	0.60	0.61	0.49	0.36	0.04	0.44	0.26	0.52
Avail Cap(c_a), veh/h	537	4053	1258	204	2065	1112	533	2284	1019	146	991	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	11.8	11.2	30.1	21.0	21.0	27.7	20.6	19.1	30.2	22.7	23.8
Incr Delay (d2), s/veh	3.9	0.0	0.0	3.5	0.7	1.3	0.6	0.3	0.0	4.1	0.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.9	0.3	0.2	2.9	3.2	0.8	1.6	0.1	0.2	0.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	11.8	11.2	33.6	21.7	22.4	28.3	20.9	19.2	34.4	23.2	25.4
LnGrp LOS	C	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		714			781			422			224	
Approach Delay, s/veh		18.4			22.2			23.0			25.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	31.0	9.0	16.2	16.2	20.5	5.5	19.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	18.4	37.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.5	5.0	4.1	6.8	11.5	10.0	2.4	6.2				
Green Ext Time (p_c), s	0.0	2.6	0.1	1.1	0.2	4.8	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

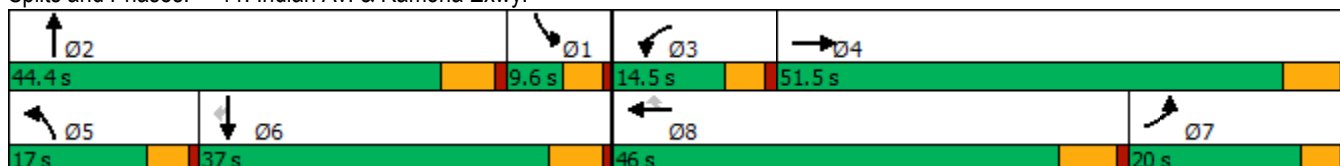


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	144	1016	64	1418	99	86	136	19	50	38
Future Volume (vph)	144	1016	64	1418	99	86	136	19	50	38
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	51.5	14.5	46.0	46.0	17.0	44.4	9.6	37.0	37.0
Total Split (%)	16.7%	42.9%	12.1%	38.3%	38.3%	14.2%	37.0%	8.0%	30.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.9	42.4	7.8	35.2	35.2	8.9	20.3	6.2	13.7	13.7
Actuated g/C Ratio	0.13	0.48	0.09	0.39	0.39	0.10	0.23	0.07	0.15	0.15
v/c Ratio	0.64	0.47	0.43	0.74	0.14	0.51	0.24	0.16	0.10	0.10
Control Delay	53.7	19.2	53.7	27.4	0.5	53.7	24.9	50.4	36.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.7	19.2	53.7	27.4	0.5	53.7	24.9	50.4	36.3	0.5
LOS	D	B	D	C	A	D	C	D	D	A
Approach Delay		23.3		26.8			34.1		26.1	
Approach LOS		C		C			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 89.2  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 26.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	1016	61	64	1418	99	86	136	45	19	50	38
Future Volume (veh/h)	144	1016	61	64	1418	99	86	136	45	19	50	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	153	1081	53	68	1509	75	91	145	25	20	53	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	191	2421	119	90	2082	646	118	403	68	89	470	210
Arrive On Green	0.11	0.48	0.48	0.05	0.40	0.40	0.07	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	5065	248	1810	5187	1610	1810	3089	522	1810	3610	1610
Grp Volume(v), veh/h	153	738	396	68	1509	75	91	84	86	20	53	31
Grp Sat Flow(s),veh/h/ln	1810	1729	1855	1810	1729	1610	1810	1805	1806	1810	1805	1610
Q Serve(g_s), s	6.3	10.8	10.9	2.8	18.8	2.2	3.8	3.2	3.4	0.8	1.0	0.9
Cycle Q Clear(g_c), s	6.3	10.8	10.9	2.8	18.8	2.2	3.8	3.2	3.4	0.8	1.0	0.9
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	191	1653	887	90	2082	646	118	235	236	89	470	210
V/C Ratio(X)	0.80	0.45	0.45	0.75	0.72	0.12	0.77	0.35	0.37	0.22	0.11	0.15
Avail Cap(c_a), veh/h	364	2044	1097	234	2694	836	293	909	910	118	1470	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	13.3	13.3	35.9	19.4	14.4	35.2	30.4	30.4	35.0	29.4	14.4
Incr Delay (d2), s/veh	2.9	0.2	0.4	4.7	0.7	0.1	4.0	0.9	1.0	0.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	3.5	3.8	1.3	6.5	0.7	1.7	1.4	1.4	0.4	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	13.5	13.6	40.6	20.1	14.5	39.2	31.3	31.4	35.5	29.5	14.7
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1287			1652			261			104	
Approach Delay, s/veh		16.2			20.7			34.1			26.3	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	15.8	8.4	42.8	9.6	15.8	14.3	37.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	5.0	* 39	9.9	45.3	12.4	31.2	15.4	* 40				
Max Q Clear Time (g_c+I1), s	2.8	5.4	4.8	12.9	5.8	3.0	8.3	20.8				
Green Ext Time (p_c), s	0.0	0.9	0.0	7.8	0.0	0.3	0.1	9.9				

Intersection Summary

HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

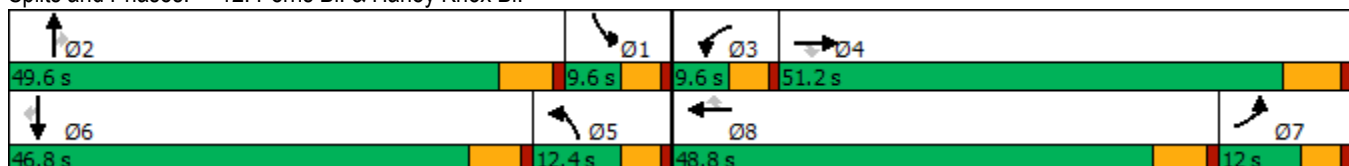


Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations	↘	↑↑	↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	
Traffic Volume (vph)	240	108	30	219	140	153	1140	5	27	620	337	
Future Volume (vph)	240	108	30	219	140	153	1140	5	27	620	337	
Turn Type	Prot	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		8		5	2		1	6		3
Permitted Phases			4		8			2			6	
Detector Phase	7	4	4	8	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	47.2	47.2	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8	9.6
Total Split (s)	12.0	51.2	51.2	48.8	48.8	12.4	49.6	49.6	9.6	46.8	46.8	9.6
Total Split (%)	10.0%	42.7%	42.7%	40.7%	40.7%	10.3%	41.3%	41.3%	8.0%	39.0%	39.0%	8%
Yellow Time (s)	3.6	5.2	5.2	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	27.4	27.4	14.8	14.8	8.6	29.1	29.1	5.4	18.8	18.8	
Actuated g/C Ratio	0.11	0.38	0.38	0.20	0.20	0.12	0.40	0.40	0.07	0.26	0.26	
v/c Ratio	1.25	0.08	0.05	0.21	0.34	0.38	0.57	0.01	0.11	0.48	0.51	
Control Delay	178.3	16.1	0.1	24.6	9.4	37.0	19.8	0.0	41.3	24.3	6.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	178.3	16.1	0.1	24.6	9.4	37.0	19.8	0.0	41.3	24.3	6.0	
LOS	F	B	A	C	A	D	B	A	D	C	A	
Approach Delay		117.9		18.7			21.8			18.5		
Approach LOS		F		B			C			B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 72.7  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 32.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	240	108	30	0	219	140	153	1140	5	27	620	337
Future Volume (veh/h)	240	108	30	0	219	140	153	1140	5	27	620	337
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	247	111	18	0	226	54	158	1175	4	28	639	242
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	206	1289	575	5	798	248	502	1851	575	107	1268	394
Arrive On Green	0.11	0.36	0.36	0.00	0.15	0.15	0.14	0.36	0.36	0.03	0.24	0.24
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	247	111	18	0	226	54	158	1175	4	28	639	242
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.4	1.3	0.2	0.0	2.5	1.9	2.6	12.2	0.1	0.5	6.9	8.7
Cycle Q Clear(g_c), s	7.4	1.3	0.2	0.0	2.5	1.9	2.6	12.2	0.1	0.5	6.9	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	1289	575	5	798	248	502	1851	575	107	1268	394
V/C Ratio(X)	1.20	0.09	0.03	0.00	0.28	0.22	0.31	0.63	0.01	0.26	0.50	0.61
Avail Cap(c_a), veh/h	206	2501	1115	270	3433	1066	502	3497	1086	270	3274	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	13.9	3.7	0.0	24.3	24.1	25.0	17.4	10.0	30.8	21.1	21.8
Incr Delay (d2), s/veh	126.5	0.0	0.0	0.0	0.2	0.4	0.1	0.4	0.0	0.5	0.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.5	0.1	0.0	0.9	0.7	1.0	4.1	0.0	0.2	2.5	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.2	13.9	3.7	0.0	24.5	24.5	25.1	17.7	10.0	31.2	21.5	23.4
LnGrp LOS	F	B	A	A	C	C	C	B	A	C	C	C
Approach Vol, veh/h		376			280			1337			909	
Approach Delay, s/veh		106.3			24.5			18.6			22.3	
Approach LOS		F			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	29.0	0.0	29.4	13.9	21.7	13.6	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	7.8	41.0	7.4	* 43				
Max Q Clear Time (g_c+I1), s	2.5	14.2	0.0	3.3	4.6	10.7	9.4	4.5				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.7	0.1	5.2	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

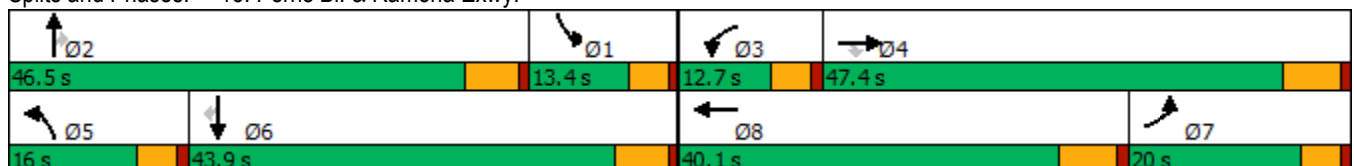
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	381	590	110	104	1162	280	738	59	123	364	139	
Future Volume (vph)	381	590	110	104	1162	280	738	59	123	364	139	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	47.4	47.4	12.7	40.1	16.0	46.5	46.5	13.4	43.9	43.9	
Total Split (%)	16.7%	39.5%	39.5%	10.6%	33.4%	13.3%	38.8%	38.8%	11.2%	36.6%	36.6%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	14.8	41.4	41.4	7.2	33.8	11.2	29.5	29.5	7.7	26.1	26.1	
Actuated g/C Ratio	0.14	0.39	0.39	0.07	0.32	0.10	0.28	0.28	0.07	0.24	0.24	
v/c Ratio	0.82	0.31	0.16	0.46	0.88	0.80	0.77	0.11	0.51	0.43	0.28	
Control Delay	60.9	24.5	1.8	56.8	42.4	65.4	41.6	0.4	57.0	35.5	4.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	60.9	24.5	1.8	56.8	42.4	65.4	41.6	0.4	57.0	35.5	4.4	
LOS	E	C	A	E	D	E	D	A	E	D	A	
Approach Delay		35.0			43.4		45.6			32.8		
Approach LOS		D			D		D			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.2  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 40.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 80.6%  
 ICU Level of Service D  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	381	590	110	104	1162	196	280	738	59	123	364	139
Future Volume (veh/h)	381	590	110	104	1162	196	280	738	59	123	364	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	397	615	89	108	1210	177	292	769	31	128	379	115
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	464	2124	659	168	1413	207	358	967	430	191	838	373
Arrive On Green	0.13	0.41	0.41	0.05	0.31	0.31	0.10	0.27	0.27	0.05	0.23	0.23
Sat Flow, veh/h	3510	5187	1610	3510	4569	668	3510	3610	1605	3510	3610	1608
Grp Volume(v), veh/h	397	615	89	108	916	471	292	769	31	128	379	115
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1729	1779	1755	1805	1605	1755	1805	1608
Q Serve(g_s), s	11.2	8.1	3.5	3.1	25.3	25.3	8.3	20.1	1.2	3.6	9.2	4.1
Cycle Q Clear(g_c), s	11.2	8.1	3.5	3.1	25.3	25.3	8.3	20.1	1.2	3.6	9.2	4.1
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	2124	659	168	1070	550	358	967	430	191	838	373
V/C Ratio(X)	0.86	0.29	0.13	0.64	0.86	0.86	0.82	0.80	0.07	0.67	0.45	0.31
Avail Cap(c_a), veh/h	532	2124	659	280	1153	593	394	1446	643	304	1353	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	20.1	18.8	47.5	33.0	33.0	44.7	34.6	17.6	47.2	33.5	14.7
Incr Delay (d2), s/veh	10.5	0.1	0.1	1.5	6.2	11.2	10.4	1.9	0.1	1.5	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.0	1.2	1.3	10.7	11.8	4.0	8.6	0.5	1.6	3.9	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.7	20.2	18.8	49.1	39.2	44.2	55.2	36.5	17.6	48.7	33.9	15.1
LnGrp LOS	D	C	B	D	D	D	E	D	B	D	C	B
Approach Vol, veh/h		1101			1495			1092			622	
Approach Delay, s/veh		32.1			41.5			41.0			33.4	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	33.0	9.5	47.8	15.0	29.4	19.6	37.6				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	8.8	* 41	8.1	41.2	11.4	38.1	15.4	* 34				
Max Q Clear Time (g_c+I1), s	5.6	22.1	5.1	10.1	10.3	11.2	13.2	27.3				
Green Ext Time (p_c), s	0.1	4.7	0.0	4.3	0.1	2.6	0.2	4.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				37.8								
HCM 6th LOS				D								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

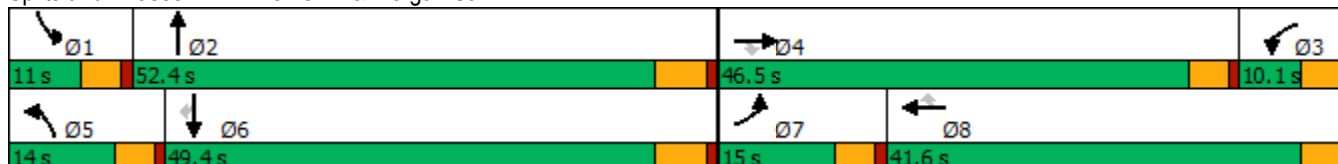


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	36	15	19	16	26	7	34	978	20	489	99
Future Volume (vph)	36	15	19	16	26	7	34	978	20	489	99
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	15.0	46.5	46.5	10.1	41.6	41.6	14.0	52.4	11.0	49.4	49.4
Total Split (%)	12.5%	38.8%	38.8%	8.4%	34.7%	34.7%	11.7%	43.7%	9.2%	41.2%	41.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.3	22.7	22.7	9.6	19.4	19.4	9.3	34.3	8.8	31.9	31.9
Actuated g/C Ratio	0.17	0.42	0.42	0.18	0.36	0.36	0.17	0.63	0.16	0.59	0.59
v/c Ratio	0.13	0.01	0.03	0.06	0.04	0.01	0.13	0.35	0.08	0.26	0.11
Control Delay	35.9	21.6	0.1	34.8	24.0	0.0	36.1	14.8	38.8	17.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	21.6	0.1	34.8	24.0	0.0	36.1	14.8	38.8	17.2	3.2
LOS	D	C	A	C	C	A	D	B	D	B	A
Approach Delay		23.0			24.0			15.5		15.6	
Approach LOS		C			C			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 54.2  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.35  
 Intersection Signal Delay: 16.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 44.6%  
 ICU Level of Service A  
 Analysis Period (min) 15




























Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	36	15	19	16	26	7	34	978	18	20	489	99
Future Volume (veh/h)	36	15	19	16	26	7	34	978	18	20	489	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	17	6	18	30	6	39	1111	18	23	556	101
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	557	248	43	255	216	77	2004	32	50	1323	578
Arrive On Green	0.04	0.15	0.15	0.02	0.13	0.13	0.04	0.38	0.38	0.03	0.37	0.37
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5257	85	1810	3610	1576
Grp Volume(v), veh/h	41	17	6	18	30	6	39	731	398	23	556	101
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1576
Q Serve(g_s), s	1.1	0.2	0.1	0.5	0.7	0.2	1.0	7.9	7.9	0.6	5.5	2.1
Cycle Q Clear(g_c), s	1.1	0.2	0.1	0.5	0.7	0.2	1.0	7.9	7.9	0.6	5.5	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	80	557	248	43	255	216	77	1318	718	50	1323	578
V/C Ratio(X)	0.52	0.03	0.02	0.41	0.12	0.03	0.51	0.55	0.55	0.46	0.42	0.17
Avail Cap(c_a), veh/h	396	3186	1421	210	1481	1255	358	3395	1850	244	3316	1448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	17.1	8.9	22.8	18.1	17.9	22.2	11.5	11.5	22.7	11.3	10.2
Incr Delay (d2), s/veh	1.9	0.0	0.0	2.3	0.2	0.1	1.9	0.4	0.7	2.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	0.2	0.3	0.1	0.4	2.2	2.5	0.2	1.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	17.1	8.9	25.2	18.3	17.9	24.2	11.9	12.2	25.2	11.5	10.3
LnGrp LOS	C	B	A	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		64			54			1168			680	
Approach Delay, s/veh		20.8			20.5			12.4			11.8	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	23.9	5.7	11.9	6.6	23.2	6.7	11.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	46.6	5.5	41.9	9.4	43.6	10.4	37.0				
Max Q Clear Time (g_c+1), s	2.6	9.9	2.5	2.2	3.0	7.5	3.1	2.7				
Green Ext Time (p_c), s	0.0	8.2	0.0	0.1	0.0	4.0	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.7									
HCM 6th LOS			B									



Timings  
15: Perris Bl. & Rider St.

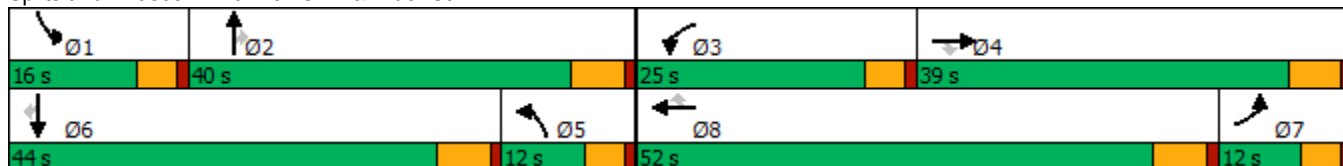
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	146	16	156	295	259	42	792	82	92	378	40
Future Volume (vph)	37	146	16	156	295	259	42	792	82	92	378	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	12.0	39.0	39.0	25.0	52.0	52.0	12.0	40.0	40.0	16.0	44.0	44.0
Total Split (%)	10.0%	32.5%	32.5%	20.8%	43.3%	43.3%	10.0%	33.3%	33.3%	13.3%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.3	13.9	13.9	11.7	22.6	22.6	9.4	19.7	19.7	8.5	23.3	23.3
Actuated g/C Ratio	0.11	0.19	0.19	0.16	0.31	0.31	0.13	0.27	0.27	0.12	0.32	0.32
v/c Ratio	0.18	0.22	0.04	0.55	0.27	0.39	0.18	0.57	0.15	0.44	0.23	0.06
Control Delay	37.5	29.0	0.2	40.5	24.4	5.6	36.2	26.9	0.6	43.7	22.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	29.0	0.2	40.5	24.4	5.6	36.2	26.9	0.6	43.7	22.9	0.2
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		28.3			21.1			25.0			24.9	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 73.4  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.57  
 Intersection Signal Delay: 24.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 55.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
 15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑↑	↗	↘	↑↑↑	↗
Traffic Volume (veh/h)	37	146	16	156	295	259	42	792	82	92	378	40
Future Volume (veh/h)	37	146	16	156	295	259	42	792	82	92	378	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	147	4	158	298	127	42	800	51	93	382	25
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	165	644	287	204	644	287	244	1396	427	124	940	292
Arrive On Green	0.09	0.18	0.18	0.11	0.18	0.18	0.13	0.27	0.27	0.07	0.18	0.18
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	5187	1588	1810	5187	1610
Grp Volume(v), veh/h	37	147	4	158	298	127	42	800	51	93	382	25
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1729	1588	1810	1729	1610
Q Serve(g_s), s	1.1	2.0	0.1	4.8	4.1	2.7	1.2	7.5	1.4	2.8	3.6	0.7
Cycle Q Clear(g_c), s	1.1	2.0	0.1	4.8	4.1	2.7	1.2	7.5	1.4	2.8	3.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	644	287	204	644	287	244	1396	427	124	940	292
V/C Ratio(X)	0.22	0.23	0.01	0.77	0.46	0.44	0.17	0.57	0.12	0.75	0.41	0.09
Avail Cap(c_a), veh/h	239	2140	954	659	2978	1328	244	3167	969	368	3537	1098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	19.7	6.5	24.2	20.6	9.8	21.5	17.7	15.5	25.6	20.3	19.1
Incr Delay (d2), s/veh	0.3	0.2	0.0	2.4	0.5	1.1	0.1	0.4	0.1	3.5	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.7	0.0	1.9	1.5	1.3	0.4	2.5	0.4	1.2	1.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	19.9	6.5	26.5	21.1	10.9	21.6	18.1	15.6	29.1	20.6	19.2
LnGrp LOS	C	B	A	C	C	B	C	B	B	C	C	B
Approach Vol, veh/h		188			583			893			500	
Approach Delay, s/veh		20.4			20.4			18.1			22.1	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	20.9	10.9	15.8	13.3	16.0	10.9	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	11.4	34.2	20.4	33.2	7.4	* 38	7.4	* 46				
Max Q Clear Time (g_c+I1), s	4.8	9.5	6.8	4.0	3.2	5.6	3.1	6.1				
Green Ext Time (p_c), s	0.0	5.5	0.2	0.8	0.0	2.5	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	10	130	353	4	1		
Future Volume (vph)	10	130	353	4	1		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	9.6	31.8	36.0	78.6	42.6	9.6	31.8
Total Split (%)	8.0%	26.5%	30.0%	65.5%	35.5%	8%	27%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.2	16.3	19.3	21.5	16.6		
Actuated g/C Ratio	0.15	0.34	0.40	0.45	0.35		
v/c Ratio	0.04	0.12	0.56	0.00	0.01		
Control Delay	33.0	0.2	21.4	7.8	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	33.0	0.2	21.4	7.8	0.0		
LOS	C	A	C	A	A		
Approach Delay				21.2			
Approach LOS				C			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 47.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 43.9%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	130	0	0	0	353	4	0	0	1	6
Future Volume (veh/h)	10	0	130	0	0	0	353	4	0	0	1	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	12	0	134	0	0	0	410	5	0	0	1	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	29	418	355	5	131	0	507	1624	0	0	61	55
Arrive On Green	0.02	0.00	0.22	0.00	0.00	0.00	0.28	0.45	0.00	0.00	0.03	0.03
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	12	0	134	0	0	0	410	5	0	0	1	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.2	0.0	2.4	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	2.4	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	29	418	355	5	131	0	507	1624	0	0	61	55
V/C Ratio(X)	0.42	0.00	0.38	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.02	0.13
Avail Cap(c_a), veh/h	267	1455	1233	267	1523	0	1674	7786	0	0	1978	1765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	11.3	0.0	0.0	0.0	11.4	5.1	0.0	0.0	15.8	15.9
Incr Delay (d2), s/veh	3.6	0.0	0.7	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.8	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	11.9	0.0	0.0	0.0	12.6	5.1	0.0	0.0	16.0	16.9
LnGrp LOS	C	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		146			0			415			8	
Approach Delay, s/veh		12.6			0.0			12.5			16.8	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		20.7	0.0	13.3	14.1	6.6	5.1	8.1				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		73.2	5.0	26.0	31.4	37.2	5.0	* 27				
Max Q Clear Time (g_c+I1), s		2.0	0.0	4.4	9.2	2.1	2.2	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.4	0.6	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	26	49	360	122	6
Future Vol, veh/h	4	26	49	360	122	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	30	56	414	140	7
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8.2	8.2	8.7
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	87%
Vol Right, %	0%	0%	0%	0%	100%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	180	180	4	26	81	47
LT Vol	49	0	0	4	0	0	0
Through Vol	0	180	180	0	0	81	41
RT Vol	0	0	0	0	26	0	6
Lane Flow Rate	56	207	207	5	30	93	54
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.085	0.282	0.185	0.008	0.043	0.139	0.078
Departure Headway (Hd)	5.416	4.915	3.211	6.355	5.153	5.339	5.248
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	663	732	1117	563	693	671	683
Service Time	3.134	2.633	0.929	4.1	2.898	3.071	2.98
HCM Lane V/C Ratio	0.084	0.283	0.185	0.009	0.043	0.139	0.079
HCM Control Delay	8.6	9.6	6.7	9.2	8.1	8.9	8.4
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	1.2	0.7	0	0.1	0.5	0.3

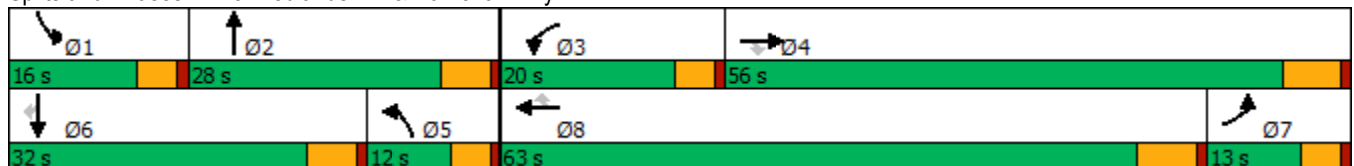
Timings  
18: Redlands Av. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	29	766	27	88	1514	347	33	25	48	69	9	
Future Volume (vph)	29	766	27	88	1514	347	33	25	48	69	9	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4	
Total Split (s)	13.0	56.0	56.0	20.0	63.0	63.0	12.0	28.0	16.0	32.0	32.0	
Total Split (%)	10.8%	46.7%	46.7%	16.7%	52.5%	52.5%	10.0%	23.3%	13.3%	26.7%	26.7%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	7.4	40.2	40.2	10.0	45.5	45.5	8.0	13.9	8.3	14.0	14.0	
Actuated g/C Ratio	0.10	0.54	0.54	0.13	0.61	0.61	0.11	0.19	0.11	0.19	0.19	
v/c Ratio	0.17	0.28	0.03	0.38	0.50	0.32	0.18	0.32	0.25	0.20	0.02	
Control Delay	46.0	15.2	0.1	43.8	14.4	2.5	44.5	16.0	44.9	38.8	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.0	15.2	0.1	43.8	14.4	2.5	44.5	16.0	44.9	38.8	0.1	
LOS	D	B	A	D	B	A	D	B	D	D	A	
Approach Delay		15.8			13.6			22.1		38.5		
Approach LOS		B			B			C		D		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 74.3  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 15.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 56.2%  
 ICU Level of Service B  
 Analysis Period (min) 15





























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	29	766	27	88	1514	347	33	25	95	48	69	9
Future Volume (veh/h)	29	766	27	88	1514	347	33	25	95	48	69	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	798	25	92	1577	295	34	26	35	50	72	6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	2411	748	120	2476	769	62	101	135	79	257	218
Arrive On Green	0.03	0.46	0.46	0.07	0.48	0.48	0.03	0.14	0.14	0.04	0.14	0.14
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	734	988	1810	1900	1610
Grp Volume(v), veh/h	30	798	25	92	1577	295	34	0	61	50	72	6
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	0	1722	1810	1900	1610
Q Serve(g_s), s	1.2	7.0	0.4	3.6	16.5	5.3	1.3	0.0	2.3	2.0	2.5	0.2
Cycle Q Clear(g_c), s	1.2	7.0	0.4	3.6	16.5	5.3	1.3	0.0	2.3	2.0	2.5	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	57	2411	748	120	2476	769	62	0	236	79	257	218
V/C Ratio(X)	0.53	0.33	0.03	0.77	0.64	0.38	0.55	0.00	0.26	0.63	0.28	0.03
Avail Cap(c_a), veh/h	211	3581	1112	386	4084	1268	186	0	539	286	701	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	12.2	4.2	33.1	14.2	4.8	34.3	0.0	27.9	33.9	28.0	27.1
Incr Delay (d2), s/veh	2.8	0.1	0.0	3.9	0.3	0.3	2.8	0.0	0.6	3.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	0.2	1.6	5.1	2.2	0.6	0.0	0.9	0.9	1.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	12.3	4.3	37.0	14.4	5.1	37.1	0.0	28.4	37.0	28.6	27.1
LnGrp LOS	D	B	A	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		853			1964			95			128	
Approach Delay, s/veh		12.9			14.1			31.5			31.8	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	15.3	9.4	39.7	7.9	15.2	8.5	40.6				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	5.4	* 5.4	6.2	* 6.2				
Max Green Setting (Gmax), s	11.4	22.6	15.4	49.8	7.4	* 27	8.4	* 57				
Max Q Clear Time (g_c+I1), s	4.0	4.3	5.6	9.0	3.3	4.5	3.2	18.5				
Green Ext Time (p_c), s	0.0	0.2	0.1	5.6	0.0	0.3	0.0	16.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	32	15	0	1	4	2	0	22	0	20	63	46
Future Vol, veh/h	32	15	0	1	4	2	0	22	0	20	63	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	35	16	0	1	4	2	0	24	0	22	68	50

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	164	161	93	169	186	24	118	0	0	24	0	0
Stage 1	137	137	-	24	24	-	-	-	-	-	-	-
Stage 2	27	24	-	145	162	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	805	735	970	799	712	1058	1483	-	-	1604	-	-
Stage 1	871	787	-	999	879	-	-	-	-	-	-	-
Stage 2	996	879	-	863	768	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	791	725	970	777	702	1058	1483	-	-	1604	-	-
Mov Cap-2 Maneuver	791	725	-	777	702	-	-	-	-	-	-	-
Stage 1	871	776	-	999	879	-	-	-	-	-	-	-
Stage 2	989	879	-	833	757	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9.6	0	1.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1483	-	-	791	725	789	1604	-	-
HCM Lane V/C Ratio	-	-	-	0.044	0.022	0.01	0.014	-	-
HCM Control Delay (s)	0	-	-	9.8	10.1	9.6	7.3	-	-
HCM Lane LOS	A	-	-	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	0	-	-



Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	3	19	0	0	64
Future Vol, veh/h	0	3	19	0	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	21	0	0	70

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	11	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1074	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	1074	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1074	-
HCM Lane V/C Ratio	-	- 0.003	-
HCM Control Delay (s)	-	- 8.4	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	6	0	13	3	16	48	0
Future Vol, veh/h	0	0	0	0	0	6	0	13	3	16	48	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	7	0	14	3	17	52	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	93	103	52	102	102	9	-	0	0	17	0	0
Stage 1	86	86	-	16	16	-	-	-	-	-	-	-
Stage 2	7	17	-	86	86	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.2	7.3	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	891	791	1021	879	792	1077	0	-	-	1613	-	-
Stage 1	927	827	-	1007	886	-	0	-	-	-	-	-
Stage 2	1019	885	-	927	827	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	879	782	1021	872	783	1077	-	-	-	1613	-	-
Mov Cap-2 Maneuver	879	782	-	872	783	-	-	-	-	-	-	-
Stage 1	927	818	-	1007	886	-	-	-	-	-	-	-
Stage 2	1013	885	-	917	818	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.4	0	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	-	1077	1613	-
HCM Lane V/C Ratio	-	-	-	0.006	0.011	-
HCM Control Delay (s)	-	-	0	8.4	7.3	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	0	-

Timings

22: Redlands Av. & Driveway 2



Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	2	4	47	1
Future Volume (vph)	2	4	47	1
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	5.0	10.0
Minimum Split (s)	21.6	22.4	9.6	15.4
Total Split (s)	27.0	30.0	33.0	63.0
Total Split (%)	30.0%	33.3%	36.7%	70.0%
Yellow Time (s)	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-1.4	-0.6	-1.4
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	10.7	59.0	7.2	68.5
Actuated g/C Ratio	0.15	0.82	0.10	0.95
v/c Ratio	0.06	0.00	0.28	0.00
Control Delay	16.0	4.0	32.8	1.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.0	4.0	32.8	1.0
LOS	B	A	C	A
Approach Delay	16.0	4.0		32.2
Approach LOS	B	A		C

Intersection Summary

Cycle Length: 90	
Actuated Cycle Length: 71.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 26.2	Intersection LOS: C
Intersection Capacity Utilization 24.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Redlands Av. & Driveway 2



HCM 6th Signalized Intersection Summary  
 22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)  
 12/10/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑
Traffic Volume (veh/h)	2	12	4	3	47	1
Future Volume (veh/h)	2	12	4	3	47	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	13	4	3	51	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	10	63	1513	1008	97	1595
Arrive On Green	0.05	0.04	0.73	0.71	0.05	0.84
Sat Flow, veh/h	206	1339	2170	1382	1810	1900
Grp Volume(v), veh/h	16	0	3	4	51	1
Grp Sat Flow(s),veh/h/ln	1649	0	1805	1651	1810	1900
Q Serve(g_s), s	0.7	0.0	0.0	0.0	1.9	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.0	1.9	0.0
Prop In Lane	0.12	0.81		0.84	1.00	
Lane Grp Cap(c), veh/h	77	0	1316	1204	97	1595
V/C Ratio(X)	0.21	0.00	0.00	0.00	0.53	0.00
Avail Cap(c_a), veh/h	539	0	1316	1204	747	1595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	2.6	2.7	32.4	0.9
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.0	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.0	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.8	0.0	2.6	2.7	34.1	0.9
LnGrp LOS	C	A	A	A	C	A
Approach Vol, veh/h	16		7			52
Approach Delay, s/veh	33.8		2.7			33.4
Approach LOS	C		A			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.8	55.2			63.0	7.3
Change Period (Y+Rc), s	4.6	5.4			5.4	4.6
Max Green Setting (Gmax), s	28.4	24.6			57.6	22.4
Max Q Clear Time (g_c+I1), s	3.9	2.0			2.0	2.7
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑	↑↑			↑
Traffic Vol, veh/h	0	1	6	3	0	3
Future Vol, veh/h	0	1	6	3	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	7	3	0	3

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	5	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1083	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	1083	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1083	-
HCM Lane V/C Ratio	-	- 0.001	-
HCM Control Delay (s)	-	- 8.3	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Timings

24: Redlands Av. & Rider St.

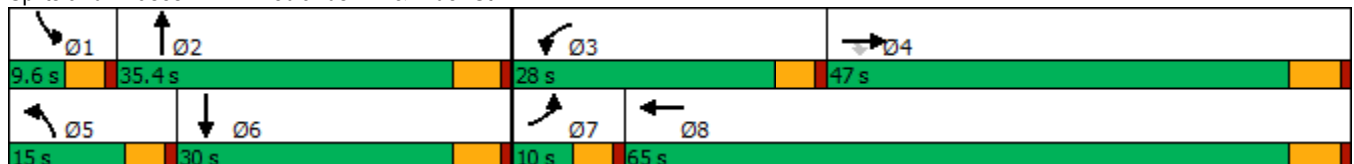


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations	↖	↑	↗	↖	↕	↖	↗	↗	
Traffic Volume (vph)	6	357	10	161	691	45	3	1	
Future Volume (vph)	6	357	10	161	691	45	3	1	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	NA	
Protected Phases	7	4		3	8	5	2	6	1
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	9.6	27.4	27.4	9.6
Total Split (s)	10.0	47.0	47.0	28.0	65.0	15.0	35.4	30.0	9.6
Total Split (%)	8.3%	39.2%	39.2%	23.3%	54.2%	12.5%	29.5%	25.0%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	5.1	44.5	44.5	12.5	60.0	8.5	12.5	10.1	
Actuated g/C Ratio	0.06	0.52	0.52	0.15	0.70	0.10	0.15	0.12	
v/c Ratio	0.06	0.39	0.01	0.67	0.30	0.28	0.51	0.01	
Control Delay	43.5	15.6	0.0	47.7	6.4	41.3	9.8	30.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.5	15.6	0.0	47.7	6.4	41.3	9.8	30.7	
LOS	D	B	A	D	A	D	A	C	
Approach Delay		15.7			14.2		15.7	30.7	
Approach LOS		B			B		B	C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 85.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	357	10	161	691	0	45	3	192	0	1	2
Future Volume (veh/h)	6	357	10	161	691	0	45	3	192	0	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	7	388	11	175	751	0	49	3	209	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	16	992	841	211	2273	0	69	4	308	2	60	120
Arrive On Green	0.01	0.52	0.52	0.12	0.63	0.00	0.04	0.19	0.19	0.00	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	1810	23	1591	1810	565	1131
Grp Volume(v), veh/h	7	388	11	175	751	0	49	0	212	0	0	3
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1810	0	1614	1810	0	1696
Q Serve(g_s), s	0.4	11.5	0.3	8.9	9.1	0.0	2.5	0.0	11.5	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.4	11.5	0.3	8.9	9.1	0.0	2.5	0.0	11.5	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.99	1.00		0.67
Lane Grp Cap(c), veh/h	16	992	841	211	2273	0	69	0	312	2	0	180
V/C Ratio(X)	0.44	0.39	0.01	0.83	0.33	0.00	0.71	0.00	0.68	0.00	0.00	0.02
Avail Cap(c_a), veh/h	104	992	841	450	2273	0	200	0	515	96	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	13.5	10.8	40.6	8.1	0.0	44.7	0.0	35.2	0.0	0.0	37.6
Incr Delay (d2), s/veh	6.7	1.2	0.0	3.2	0.4	0.0	4.8	0.0	2.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.7	0.1	4.0	3.0	0.0	1.2	0.0	4.5	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	14.6	10.8	43.8	8.5	0.0	49.5	0.0	37.8	0.0	0.0	37.7
LnGrp LOS	D	B	B	D	A	A	D	A	D	A	A	D
Approach Vol, veh/h		406			926			261				3
Approach Delay, s/veh		15.2			15.2			40.0				37.7
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	23.6	15.5	54.9	8.2	15.4	5.4	65.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	5.0	30.0	23.4	41.2	10.4	24.6	5.4	59.2				
Max Q Clear Time (g_c+I1), s	0.0	13.5	10.9	13.5	4.5	2.1	2.4	11.1				
Green Ext Time (p_c), s	0.0	1.0	0.2	2.2	0.0	0.0	0.0	5.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.3								
HCM 6th LOS				B								

Timings  
25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)  
12/10/2019

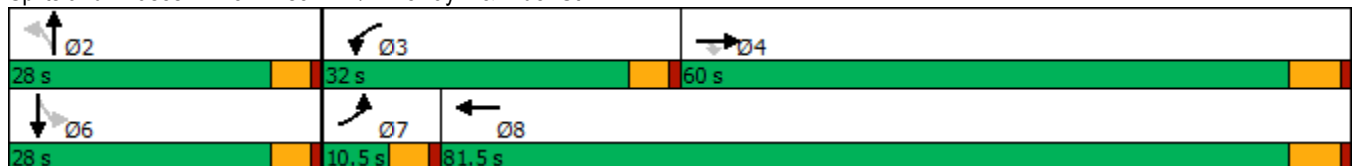


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↑	↗	↖	↕		↕	↕
Traffic Volume (vph)	21	500	18	207	799	32	0	0
Future Volume (vph)	21	500	18	207	799	32	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	26.6	26.6	26.6
Total Split (s)	10.5	60.0	60.0	32.0	81.5	28.0	28.0	28.0
Total Split (%)	8.8%	50.0%	50.0%	26.7%	67.9%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.5	59.3	59.3	18.2	76.1		11.8	11.8
Actuated g/C Ratio	0.05	0.57	0.57	0.17	0.73		0.11	0.11
v/c Ratio	0.26	0.54	0.02	0.78	0.36		0.68	0.02
Control Delay	57.0	18.0	0.1	58.3	6.4		21.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	57.0	18.0	0.1	58.3	6.4		21.0	0.2
LOS	E	B	A	E	A		C	A
Approach Delay		18.9			17.1		21.0	0.2
Approach LOS		B			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.3  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 18.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 69.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av./Driveway 4 & Rider St.





HCM 6th Signalized Intersection Summary  
 25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	500	18	207	799	0	32	0	171	0	0	6
Future Volume (veh/h)	21	500	18	207	799	0	32	0	171	0	0	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	588	21	244	940	0	38	0	201	0	0	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	44	1037	878	275	2431	0	68	12	227	0	0	272
Arrive On Green	0.02	0.55	0.55	0.15	0.67	0.00	0.17	0.00	0.17	0.00	0.00	0.17
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	181	73	1344	0	0	1610
Grp Volume(v), veh/h	25	588	21	244	940	0	239	0	0	0	0	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1599	0	0	0	0	1610
Q Serve(g_s), s	1.5	22.9	0.7	14.9	12.9	0.0	11.1	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.5	22.9	0.7	14.9	12.9	0.0	16.4	0.0	0.0	0.0	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.00	0.16		0.84	0.00		1.00
Lane Grp Cap(c), veh/h	44	1037	878	275	2431	0	307	0	0	0	0	272
V/C Ratio(X)	0.57	0.57	0.02	0.89	0.39	0.00	0.78	0.00	0.00	0.00	0.00	0.03
Avail Cap(c_a), veh/h	95	1037	878	441	2431	0	369	0	0	0	0	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	16.8	11.8	46.7	8.1	0.0	45.5	0.0	0.0	0.0	0.0	39.0
Incr Delay (d2), s/veh	4.3	2.3	0.1	7.9	0.5	0.0	8.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	9.7	0.2	7.1	4.4	0.0	7.3	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	19.1	11.8	54.6	8.6	0.0	54.0	0.0	0.0	0.0	0.0	39.0
LnGrp LOS	E	B	B	D	A	A	D	A	A	A	A	D
Approach Vol, veh/h		634			1184			239				7
Approach Delay, s/veh		20.4			18.1			54.0				39.0
Approach LOS		C			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.6	21.7	67.1		23.6	7.3	81.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	5.9	75.7				
Max Q Clear Time (g_c+I1), s		18.4	16.9	24.9		2.4	3.5	14.9				
Green Ext Time (p_c), s		0.6	0.2	3.8		0.0	0.0	7.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.0								
HCM 6th LOS				C								

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

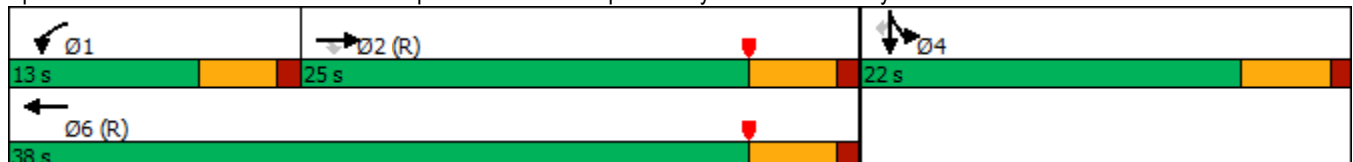


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	344	14	276	171	7	162
Future Volume (vph)	344	14	276	171	7	162
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	9.0	33.5	16.5	16.5
Actuated g/C Ratio	0.33	0.33	0.15	0.56	0.28	0.28
v/c Ratio	0.32	0.03	1.13	0.09	0.88	0.31
Control Delay	15.8	0.1	118.1	11.3	42.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	0.1	118.1	11.3	42.7	4.9
LOS	B	A	F	B	D	A
Approach Delay	15.2			77.3	31.7	
Approach LOS	B			E	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 42.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 64.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

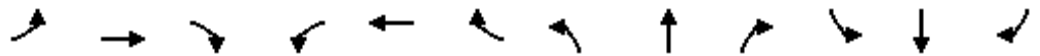


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

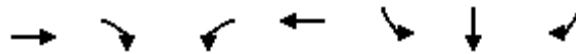
09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	344	14	276	171	0	0	0	0	386	7	162
Future Volume (veh/h)	0	344	14	276	171	0	0	0	0	386	7	162
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	382	13	307	190	0				429	8	102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1248	557	256	2030	0				482	9	436
Arrive On Green	0.00	0.35	0.35	0.14	0.56	0.00				0.27	0.27	0.27
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1778	33	1610
Grp Volume(v), veh/h	0	382	13	307	190	0				437	0	102
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1811	0	1610
Q Serve(g_s), s	0.0	4.6	0.3	8.5	1.5	0.0				13.9	0.0	3.0
Cycle Q Clear(g_c), s	0.0	4.6	0.3	8.5	1.5	0.0				13.9	0.0	3.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1248	557	256	2030	0				491	0	436
V/C Ratio(X)	0.00	0.31	0.02	1.20	0.09	0.00				0.89	0.00	0.23
Avail Cap(c_a), veh/h	0	1248	557	256	2030	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.4	12.9	25.8	6.1	0.0				21.0	0.0	17.0
Incr Delay (d2), s/veh	0.0	0.6	0.1	119.4	0.1	0.0				17.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	0.1	11.7	0.4	0.0				7.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.0	13.0	145.1	6.2	0.0				38.1	0.0	17.3
LnGrp LOS	A	B	B	F	A	A				D	A	B
Approach Vol, veh/h		395			497						539	
Approach Delay, s/veh		14.9			92.0						34.1	
Approach LOS		B			F						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.7		21.3		38.7						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	10.5	6.6		15.9		3.5						
Green Ext Time (p_c), s	0.0	1.2		0.3		0.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				48.9								
HCM 6th LOS				D								

Timings

2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑	↵
Traffic Volume (vph)	793	317	360	846	763	3	171
Future Volume (vph)	793	317	360	846	763	3	171
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	37.0	37.0	34.0	71.0	39.0	39.0	39.0
Total Split (%)	33.6%	33.6%	30.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	34.4	34.4	26.1	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.31	0.31	0.24	0.59	0.30	0.30	0.30
v/c Ratio	0.72	0.44	0.86	0.40	0.75	0.75	0.29
Control Delay	38.6	5.5	32.4	5.0	44.6	44.9	7.0
Queue Delay	0.0	0.0	0.0	0.3	57.7	57.6	0.0
Total Delay	38.6	5.5	32.4	5.3	102.3	102.5	7.0
LOS	D	A	C	A	F	F	A
Approach Delay	29.1			13.4		85.0	
Approach LOS	C			B		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 39.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 122.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑					↘	↗	↗
Traffic Volume (veh/h)	0	793	317	360	846	0	0	0	0	763	3	171
Future Volume (veh/h)	0	793	317	360	846	0	0	0	0	763	3	171
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	809	258	367	863	0				781	0	95
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1180	526	404	2133	0				1102	0	490
Arrive On Green	0.00	0.33	0.33	0.13	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	809	258	367	863	0				781	0	95
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	21.4	14.1	22.0	19.8	0.0				21.1	0.0	4.8
Cycle Q Clear(g_c), s	0.0	21.4	14.1	22.0	19.8	0.0				21.1	0.0	4.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1180	526	404	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.69	0.49	0.91	0.40	0.00				0.71	0.00	0.19
Avail Cap(c_a), veh/h	0	1180	526	485	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.1	29.7	46.5	20.9	0.0				33.9	0.0	28.3
Incr Delay (d2), s/veh	0.0	3.3	3.2	16.3	0.5	0.0				3.9	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.3	5.6	11.9	8.9	0.0				9.4	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	35.4	32.9	62.8	21.4	0.0				37.8	0.0	29.1
LnGrp LOS	A	D	C	E	C	A				D	A	C
Approach Vol, veh/h		1067			1230						876	
Approach Delay, s/veh		34.8			33.8						36.8	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	29.0	42.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	29.5	31.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	24.0	23.4		23.1		21.8						
Green Ext Time (p_c), s	0.5	2.4		2.5		3.7						

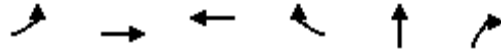
Intersection Summary

HCM 6th Ctrl Delay	35.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

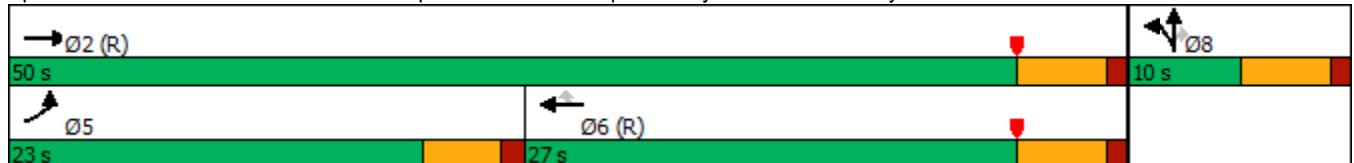


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	223	507	427	577	4	247
Future Volume (vph)	223	507	427	577	4	247
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.0	45.0	27.5	27.5	5.0	5.0
Actuated g/C Ratio	0.22	0.75	0.46	0.46	0.08	0.08
v/c Ratio	0.67	0.22	0.30	0.67	0.19	0.73
Control Delay	15.9	0.2	11.8	8.1	28.8	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	0.2	11.8	8.1	28.8	16.7
LOS	B	A	B	A	C	B
Approach Delay		5.0	9.6		17.8	
Approach LOS		A	A		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 9.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 64.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	223	507	0	0	427	577	20	4	247	0	0	0
Future Volume (veh/h)	223	507	0	0	427	577	20	4	247	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	262	596	0	0	502	628	24	5	97			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	322	2708	0	0	1794	800	126	26	134			
Arrive On Green	0.06	0.25	0.00	0.00	0.50	0.50	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1510	315	1610			
Grp Volume(v), veh/h	262	596	0	0	502	628	29	0	97			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1825	0	1610			
Q Serve(g_s), s	8.6	7.9	0.0	0.0	4.9	19.3	0.9	0.0	3.5			
Cycle Q Clear(g_c), s	8.6	7.9	0.0	0.0	4.9	19.3	0.9	0.0	3.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.83		1.00			
Lane Grp Cap(c), veh/h	322	2708	0	0	1794	800	152	0	134			
V/C Ratio(X)	0.81	0.22	0.00	0.00	0.28	0.78	0.19	0.00	0.72			
Avail Cap(c_a), veh/h	558	2708	0	0	1794	800	152	0	134			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.96	0.96	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.3	8.6	0.0	0.0	8.8	12.4	25.6	0.0	26.8			
Incr Delay (d2), s/veh	1.8	0.2	0.0	0.0	0.4	7.0	2.8	0.0	28.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.8	1.1	0.0	0.0	1.5	6.5	0.5	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	8.8	0.0	0.0	9.2	19.5	28.4	0.0	55.3			
LnGrp LOS	C	A	A	A	A	B	C	A	E			
Approach Vol, veh/h		858			1130			126				
Approach Delay, s/veh		15.0			14.9			49.1				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			15.2	34.8		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		9.9			10.6	21.3		5.5				
Green Ext Time (p_c), s		2.4			0.2	0.3		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					17.0							
HCM 6th LOS					B							

Timings

4: I-215 NB Ramps & Ramona Exwy.

09/10/2019

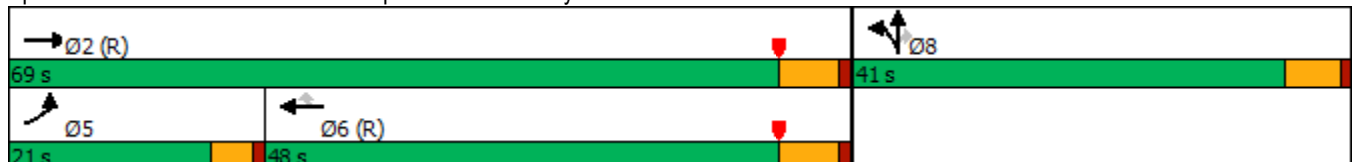


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	202	1353	882	741	324	7	397
Future Volume (vph)	202	1353	882	741	324	7	397
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	16.1	69.8	49.2	49.2	28.7	28.7	28.7
Actuated g/C Ratio	0.15	0.63	0.45	0.45	0.26	0.26	0.26
v/c Ratio	0.78	0.60	0.56	0.67	0.38	0.38	0.85
Control Delay	44.0	21.1	25.6	5.2	34.4	34.4	47.8
Queue Delay	0.0	38.2	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	59.3	25.6	5.2	34.4	34.4	47.8
LOS	D	E	C	A	C	C	D
Approach Delay		57.3	16.3			41.7	
Approach LOS		E	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 37.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 122.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.
























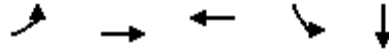
HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1353	0	0	882	741	324	7	397	0	0	0
Future Volume (veh/h)	202	1353	0	0	882	741	324	7	397	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	206	1381	0	0	900	532	336	0	302			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	233	2452	0	0	1840	819	783	0	348			
Arrive On Green	0.26	1.00	0.00	0.00	0.51	0.51	0.22	0.00	0.22			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	206	1381	0	0	900	532	336	0	302			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	12.0	0.0	0.0	0.0	17.9	26.7	8.8	0.0	19.9			
Cycle Q Clear(g_c), s	12.0	0.0	0.0	0.0	17.9	26.7	8.8	0.0	19.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	233	2452	0	0	1840	819	783	0	348			
V/C Ratio(X)	0.89	0.56	0.00	0.00	0.49	0.65	0.43	0.00	0.87			
Avail Cap(c_a), veh/h	271	2452	0	0	1840	819	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.61	0.61	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.1	0.0	0.0	0.0	17.6	19.8	37.2	0.0	41.6			
Incr Delay (d2), s/veh	17.0	0.6	0.0	0.0	0.9	4.0	0.4	0.0	9.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.5	0.2	0.0	0.0	7.0	9.8	3.8	0.0	8.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	0.6	0.0	0.0	18.6	23.7	37.6	0.0	51.5			
LnGrp LOS	E	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1587			1432			638				
Approach Delay, s/veh		7.9			20.5			44.2				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		80.7			18.6	62.1		29.3				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			14.0	28.7		21.9				
Green Ext Time (p_c), s		7.3			0.1	4.1		1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					19.2							
HCM 6th LOS					B							
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings  
5: Harley Knox Blvd. & Western Way



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↘		
Traffic Volume (vph)	27	740	932	10	0		
Future Volume (vph)	27	740	932	10	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	11.0	38.8	37.4	36.6	36.6	35.0	9.6
Total Split (%)	9.2%	32.3%	31.2%	30.5%	30.5%	29%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	6.3	24.9	21.7	11.7	11.7		
Actuated g/C Ratio	0.16	0.63	0.55	0.29	0.29		
v/c Ratio	0.11	0.27	0.40	0.02	0.11		
Control Delay	21.3	5.2	9.2	17.4	0.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	21.3	5.2	9.2	17.4	0.3		
LOS	C	A	A	B	A		
Approach Delay		5.8	9.2		2.1		
Approach LOS		A	A		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 39.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	27	740	0	0	932	8	0	0	0	10	0	84
Future Volume (veh/h)	27	740	0	0	932	8	0	0	0	10	0	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	892	0	0	1123	10	0	0	0	12	0	101
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	2877	893	5	2115	19	5	5	0	327	0	291
Arrive On Green	0.04	0.55	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.18	0.00	0.18
Sat Flow, veh/h	1810	5187	1610	1810	5302	47	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	33	892	0	0	732	401	0	0	0	12	0	101
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1892	1810	1900	0	1810	0	1610
Q Serve(g_s), s	0.7	3.6	0.0	0.0	6.3	6.3	0.0	0.0	0.0	0.2	0.0	2.2
Cycle Q Clear(g_c), s	0.7	3.6	0.0	0.0	6.3	6.3	0.0	0.0	0.0	0.2	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	2877	893	5	1379	754	5	5	0	327	0	291
V/C Ratio(X)	0.47	0.31	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.04	0.00	0.35
Avail Cap(c_a), veh/h	295	4361	1354	231	2784	1523	1402	1472	0	1475	0	1313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.5	4.7	0.0	0.0	9.0	9.0	0.0	0.0	0.0	13.3	0.0	14.1
Incr Delay (d2), s/veh	1.9	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.0	0.0	1.4	1.6	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	4.8	0.0	0.0	9.3	9.6	0.0	0.0	0.0	13.3	0.0	14.8
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		925			1133			0				113
Approach Delay, s/veh		5.3			9.4			0.0				14.6
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	27.6		11.7	6.1	21.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		30.4	5.0	33.0		32.0	6.4	31.6				
Max Q Clear Time (g_c+I1), s		0.0	0.0	5.6		4.2	2.7	8.3				
Green Ext Time (p_c), s		0.0	0.0	6.2		0.6	0.0	7.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

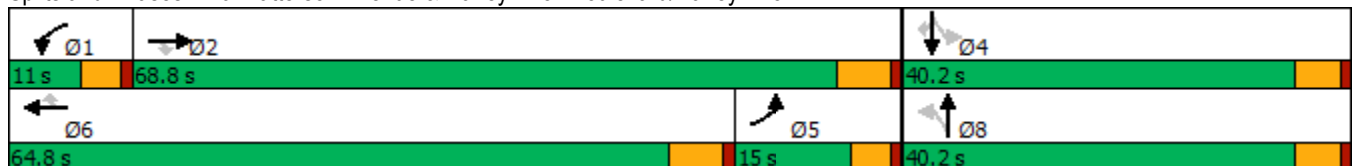


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↙	↗
Traffic Volume (vph)	37	665	19	2	811	12	38	2	20	4	31
Future Volume (vph)	37	665	19	2	811	12	38	2	20	4	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	40.5	40.5	7.3	35.9	35.9		17.2		17.2	17.2
Actuated g/C Ratio	0.16	0.75	0.75	0.14	0.67	0.67		0.32		0.32	0.32
v/c Ratio	0.16	0.21	0.02	0.01	0.41	0.01		0.12		0.07	0.06
Control Delay	33.9	6.9	0.1	38.5	12.6	0.0		21.4		23.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	33.9	6.9	0.1	38.5	12.6	0.0		21.4		23.0	0.2
LOS	C	A	A	D	B	A		C		C	A
Approach Delay		8.1			12.4			21.4		10.1	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 53.8  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	665	19	2	811	12	38	2	5	20	4	31
Future Volume (veh/h)	37	665	19	2	811	12	38	2	5	20	4	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	811	22	2	989	15	46	2	5	24	5	37
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	2791	866	5	1702	743	309	18	21	322	56	255
Arrive On Green	0.05	0.54	0.54	0.00	0.47	0.47	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	3610	1577	1129	112	129	1226	352	1610
Grp Volume(v), veh/h	45	811	22	2	989	15	53	0	0	29	0	37
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1805	1577	1370	0	0	1578	0	1610
Q Serve(g_s), s	1.3	4.4	0.3	0.1	10.3	0.3	1.3	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	1.3	4.4	0.3	0.1	10.3	0.3	2.0	0.0	0.0	0.7	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	0.87		0.09	0.83		1.00
Lane Grp Cap(c), veh/h	83	2791	866	5	1702	743	348	0	0	378	0	255
V/C Ratio(X)	0.54	0.29	0.03	0.40	0.58	0.02	0.15	0.00	0.00	0.08	0.00	0.14
Avail Cap(c_a), veh/h	365	6335	1967	225	4129	1803	1089	0	0	1158	0	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	6.5	5.6	25.7	9.9	7.3	19.1	0.0	0.0	18.5	0.0	18.7
Incr Delay (d2), s/veh	2.0	0.1	0.0	18.5	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.1	0.0	2.8	0.1	0.5	0.0	0.0	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	6.6	5.6	44.1	10.4	7.3	19.3	0.0	0.0	18.6	0.0	18.9
LnGrp LOS	C	A	A	D	B	A	B	A	A	B	A	B
Approach Vol, veh/h		878			1006			53				66
Approach Delay, s/veh		7.6			10.4			19.3				18.8
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	33.6		13.3	8.2	30.1		13.3				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	2.1	6.4		3.0	3.3	12.3		4.0				
Green Ext Time (p_c), s	0.0	9.2		0.2	0.0	12.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1477	275	14	1622	0	36
Future Vol, veh/h	1477	275	14	1622	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1507	281	14	1655	0	37

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1788	0	894
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	351	-	288
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	351	-	288
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	288	-	-	351	-
HCM Lane V/C Ratio	0.128	-	-	0.041	-
HCM Control Delay (s)	19.3	-	-	15.7	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection			
Intersection Delay, s/veh	11.8		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	962	50
Demand Flow Rate, veh/h	0	962	50
Vehicles Circulating, veh/h	9	40	840
Vehicles Exiting, veh/h	993	850	46
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	12.1	6.0
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.800	0.200
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	962	40	10
Cap Entry Lane, veh/h	1369	661	661
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	962	40	10
Cap Entry, veh/h	1369	661	661
V/C Ratio	0.703	0.061	0.015
Control Delay, s/veh	12.1	6.1	5.6
LOS	B	A	A
95th %tile Queue, veh	6	0	0

Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

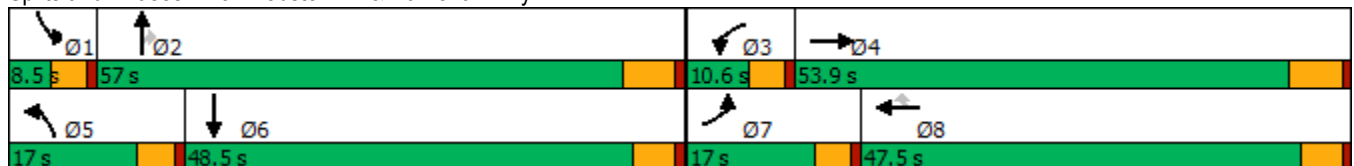


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	139	1348	24	1370	23	138	28	21	24	
Future Volume (vph)	139	1348	24	1370	23	138	28	21	24	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	17.0	53.9	10.6	47.5	47.5	17.0	57.0	57.0	48.5	8.5
Total Split (%)	13.1%	41.5%	8.2%	36.5%	36.5%	13.1%	43.8%	43.8%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.9	49.5	5.6	40.3	40.3	11.8	58.8	58.8	0.0	
Actuated g/C Ratio	0.09	0.39	0.04	0.32	0.32	0.09	0.46	0.46	0.00	
v/c Ratio	0.85	0.70	0.31	0.86	0.04	0.85	0.03	0.03	6.58	
Control Delay	95.9	35.5	70.5	46.8	0.1	95.4	19.7	0.0	2577.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	95.9	35.5	70.5	46.8	0.1	95.4	19.7	0.0	2577.9	
LOS	F	D	E	D	A	F	B	A	F	
Approach Delay		41.0		46.5			73.2		2577.9	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130	
Actuated Cycle Length: 126.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 6.58	
Intersection Signal Delay: 219.4	Intersection LOS: F
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Webster Av. & Ramona Exwy.



























HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

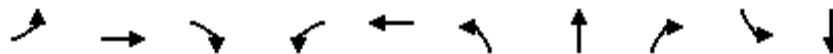
Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	1348	26	24	1370	23	138	28	21	78	24	128
Future Volume (veh/h)	139	1348	26	24	1370	23	138	28	21	78	24	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	143	1390	23	25	1412	19	142	29	14	80	25	99
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	180	2413	40	49	2006	623	179	551	461	0	44	174
Arrive On Green	0.10	0.46	0.46	0.03	0.39	0.39	0.10	0.29	0.29	0.00	0.13	0.13
Sat Flow, veh/h	1810	5254	87	1810	5187	1610	1810	1900	1590	0	335	1326
Grp Volume(v), veh/h	143	915	498	25	1412	19	142	29	14	0	0	124
Grp Sat Flow(s),veh/h/ln	1810	1729	1883	1810	1729	1610	1810	1900	1590	0	0	1661
Q Serve(g_s), s	5.9	14.8	14.8	1.0	17.4	0.6	5.8	0.8	0.5	0.0	0.0	5.3
Cycle Q Clear(g_c), s	5.9	14.8	14.8	1.0	17.4	0.6	5.8	0.8	0.5	0.0	0.0	5.3
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.00		0.80
Lane Grp Cap(c), veh/h	180	1588	865	49	2006	623	179	551	461	0	0	217
V/C Ratio(X)	0.80	0.58	0.58	0.51	0.70	0.03	0.79	0.05	0.03	0.00	0.00	0.57
Avail Cap(c_a), veh/h	295	2170	1182	143	2894	898	295	1270	1063	0	0	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	15.1	15.1	36.5	19.6	14.5	33.5	19.4	19.3	0.0	0.0	31.0
Incr Delay (d2), s/veh	3.0	0.3	0.6	3.1	0.5	0.0	3.0	0.0	0.0	0.0	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.8	5.3	0.5	6.0	0.2	2.6	0.4	0.2	0.0	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	15.4	15.7	39.5	20.1	14.5	36.5	19.5	19.3	0.0	0.0	33.4
LnGrp LOS	D	B	B	D	C	B	D	B	B	A	A	C
Approach Vol, veh/h		1556			1456			185				124
Approach Delay, s/veh		17.5			20.4			32.5				33.4
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	28.3	6.7	41.1	12.1	16.1	12.1	35.6				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	50.8	6.0	47.7	12.4	* 43	12.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	2.8	3.0	16.8	7.8	7.3	7.9	19.4				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.3	0.1	0.7	0.1	10.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

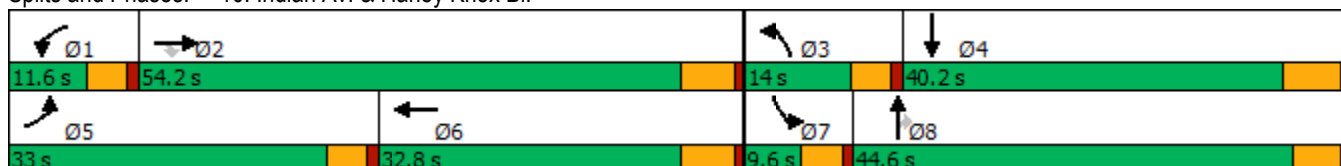


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑↑↑	↗	↙	↑↑↑	↙↗	↑↑	↗	↙	↑↗
Traffic Volume (vph)	240	386	46	14	390	57	215	24	44	239
Future Volume (vph)	240	386	46	14	390	57	215	24	44	239
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.0	35.0	35.0	6.0	15.4	6.7	20.8	20.8	5.5	18.7
Actuated g/C Ratio	0.23	0.44	0.44	0.08	0.20	0.08	0.26	0.26	0.07	0.24
v/c Ratio	0.73	0.21	0.07	0.13	0.50	0.24	0.28	0.06	0.44	0.68
Control Delay	42.6	16.4	0.2	46.6	32.4	43.3	25.5	0.2	55.7	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	16.4	0.2	46.6	32.4	43.3	25.5	0.2	55.7	21.4
LOS	D	B	A	D	C	D	C	A	E	C
Approach Delay		24.6			32.9		26.9			24.0
Approach LOS		C			C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 78.9  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 26.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

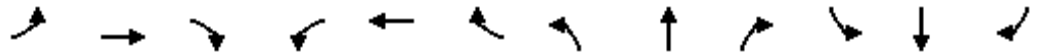
Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘↗	↑↑	↗	↘	↑↗	
Traffic Volume (veh/h)	240	386	46	14	390	13	57	215	24	44	239	294
Future Volume (veh/h)	240	386	46	14	390	13	57	215	24	44	239	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	300	482	47	18	488	14	71	269	14	55	299	247
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	356	1763	547	39	852	24	201	869	383	90	441	353
Arrive On Green	0.20	0.34	0.34	0.02	0.16	0.16	0.06	0.24	0.24	0.05	0.23	0.23
Sat Flow, veh/h	1810	5187	1610	1810	5183	148	3510	3610	1589	1810	1890	1516
Grp Volume(v), veh/h	300	482	47	18	325	177	71	269	14	55	285	261
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1873	1755	1805	1589	1810	1805	1600
Q Serve(g_s), s	9.7	4.1	1.2	0.6	5.3	5.3	1.2	3.7	0.4	1.8	8.8	9.1
Cycle Q Clear(g_c), s	9.7	4.1	1.2	0.6	5.3	5.3	1.2	3.7	0.4	1.8	8.8	9.1
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	356	1763	547	39	569	308	201	869	383	90	421	373
V/C Ratio(X)	0.84	0.27	0.09	0.46	0.57	0.57	0.35	0.31	0.04	0.61	0.68	0.70
Avail Cap(c_a), veh/h	844	4122	1280	208	1533	830	542	2323	1023	149	1008	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	14.6	13.7	29.4	23.5	23.5	27.6	19.0	17.7	28.4	21.3	21.4
Incr Delay (d2), s/veh	2.1	0.1	0.1	3.1	0.9	1.7	0.4	0.2	0.0	2.5	1.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.3	0.4	0.3	2.0	2.2	0.5	1.4	0.1	0.8	3.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	14.7	13.7	32.6	24.4	25.2	28.0	19.2	17.7	30.9	23.2	23.8
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		829			520			354			601	
Approach Delay, s/veh		18.6			24.9			20.9			24.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.9	26.5	8.1	20.4	16.6	15.8	7.6	20.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	*39				
Max Q Clear Time (g_c+I1), s	2.6	6.1	3.2	11.1	11.7	7.3	3.8	5.7				
Green Ext Time (p_c), s	0.0	3.3	0.0	3.1	0.4	2.7	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

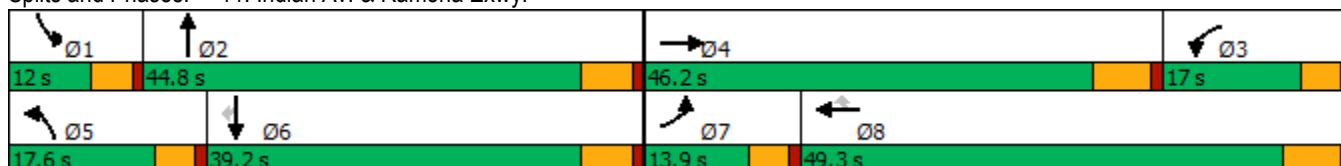


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↘	↑↑↑	↗	↘	↑↑	↘	↑↑	↗
Traffic Volume (vph)	57	1330	120	1198	30	97	63	62	172	60
Future Volume (vph)	57	1330	120	1198	30	97	63	62	172	60
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	13.9	46.2	17.0	49.3	49.3	17.6	44.8	12.0	39.2	39.2
Total Split (%)	11.6%	38.5%	14.2%	41.1%	41.1%	14.7%	37.3%	10.0%	32.7%	32.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	34.5	10.4	40.5	40.5	9.4	16.3	6.9	14.1	14.1
Actuated g/C Ratio	0.08	0.39	0.12	0.46	0.46	0.11	0.19	0.08	0.16	0.16
v/c Ratio	0.39	0.73	0.58	0.52	0.04	0.52	0.15	0.45	0.31	0.14
Control Delay	52.2	26.8	53.4	20.7	0.1	52.5	23.1	55.9	36.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	26.8	53.4	20.7	0.1	52.5	23.1	55.9	36.2	0.7
LOS	D	C	D	C	A	D	C	E	D	A
Approach Delay		27.8		23.2			38.0		33.1	
Approach LOS		C		C			D		C	

Intersection Summary

























Cycle Length: 120  
 Actuated Cycle Length: 87.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 26.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1330	96	120	1198	30	97	63	31	62	172	60
Future Volume (veh/h)	57	1330	96	120	1198	30	97	63	31	62	172	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	59	1371	81	124	1235	25	100	65	17	64	177	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	87	1944	115	159	2335	715	130	455	115	90	498	222
Arrive On Green	0.05	0.39	0.39	0.09	0.45	0.45	0.07	0.16	0.16	0.05	0.14	0.14
Sat Flow, veh/h	1810	5005	296	1810	5187	1588	1810	2856	720	1810	3610	1610
Grp Volume(v), veh/h	59	947	505	124	1235	25	100	40	42	64	177	28
Grp Sat Flow(s),veh/h/ln	1810	1729	1842	1810	1729	1588	1810	1805	1770	1810	1805	1610
Q Serve(g_s), s	2.3	16.7	16.7	4.9	12.5	0.6	3.9	1.4	1.5	2.5	3.2	1.1
Cycle Q Clear(g_c), s	2.3	16.7	16.7	4.9	12.5	0.6	3.9	1.4	1.5	2.5	3.2	1.1
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	87	1343	716	159	2335	715	130	288	282	90	498	222
V/C Ratio(X)	0.68	0.71	0.71	0.78	0.53	0.03	0.77	0.14	0.15	0.71	0.36	0.13
Avail Cap(c_a), veh/h	232	1908	1016	309	3084	944	324	971	952	185	1663	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	18.7	18.7	32.4	14.4	11.1	33.1	26.2	26.2	33.9	28.3	27.4
Incr Delay (d2), s/veh	3.5	0.7	1.3	3.2	0.2	0.0	3.6	0.2	0.2	3.8	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.7	6.2	2.1	4.0	0.2	1.8	0.6	0.6	1.1	1.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	19.4	20.0	35.5	14.6	11.2	36.7	26.4	26.5	37.7	28.8	27.7
LnGrp LOS	D	B	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1511			1384			182			269	
Approach Delay, s/veh		20.3			16.4			32.1			30.8	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	17.4	12.6	34.4	9.8	15.8	8.1	38.8				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.4	39.0	12.4	* 40	13.0	33.4	9.3	43.1				
Max Q Clear Time (g_c+I1), s	4.5	3.5	6.9	18.7	5.9	5.2	4.3	14.5				
Green Ext Time (p_c), s	0.0	0.4	0.1	9.3	0.1	1.1	0.0	9.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.2									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

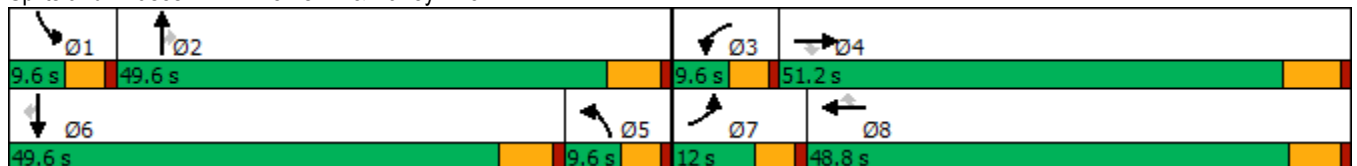
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	138	72	6	105	71	18	831	5	111	1119	286
Future Volume (vph)	220	138	72	6	105	71	18	831	5	111	1119	286
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	26.2	26.2	5.4	14.9	14.9	5.4	23.3	23.3	5.4	30.6	30.6
Actuated g/C Ratio	0.11	0.35	0.35	0.07	0.20	0.20	0.07	0.31	0.31	0.07	0.41	0.41
v/c Ratio	1.23	0.12	0.12	0.03	0.11	0.17	0.08	0.55	0.01	0.47	0.57	0.37
Control Delay	173.1	18.9	0.4	43.7	25.1	0.8	42.6	22.4	0.0	45.6	19.6	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	173.1	18.9	0.4	43.7	25.1	0.8	42.6	22.4	0.0	45.6	19.6	4.0
LOS	F	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		94.7			16.3			22.7			18.5	
Approach LOS		F			B			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 74.1  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.23  
 Intersection Signal Delay: 30.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.3%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↕	↱	↰	↕	↱	↰	↕	↱	↰	↕	↱
Traffic Volume (veh/h)	220	138	72	6	105	71	18	831	5	111	1119	286
Future Volume (veh/h)	220	138	72	6	105	71	18	831	5	111	1119	286
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	239	150	28	7	114	32	20	903	5	121	1216	235
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	200	921	410	32	798	244	81	1826	567	235	1960	608
Arrive On Green	0.11	0.26	0.26	0.01	0.15	0.15	0.02	0.35	0.35	0.07	0.38	0.38
Sat Flow, veh/h	1810	3610	1608	3510	5187	1589	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	239	150	28	7	114	32	20	903	5	121	1216	235
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1755	1729	1589	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	7.4	2.2	0.6	0.1	1.3	1.2	0.4	9.1	0.1	2.2	12.8	4.1
Cycle Q Clear(g_c), s	7.4	2.2	0.6	0.1	1.3	1.2	0.4	9.1	0.1	2.2	12.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	921	410	32	798	244	81	1826	567	235	1960	608
V/C Ratio(X)	1.19	0.16	0.07	0.22	0.14	0.13	0.25	0.49	0.01	0.52	0.62	0.39
Avail Cap(c_a), veh/h	200	2427	1081	262	3333	1021	262	3395	1054	262	3395	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	19.4	10.0	32.9	24.5	24.5	32.1	17.0	14.1	30.2	16.9	5.0
Incr Delay (d2), s/veh	126.0	0.1	0.1	1.3	0.1	0.2	0.6	0.2	0.0	0.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	0.8	0.3	0.1	0.5	0.4	0.2	3.1	0.0	0.9	4.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.7	19.5	10.1	34.2	24.6	24.7	32.7	17.2	14.1	30.8	17.2	5.4
LnGrp LOS	F	B	B	C	C	C	C	B	B	C	B	A
Approach Vol, veh/h		417			153			928			1572	
Approach Delay, s/veh		96.9			25.0			17.5			16.5	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	29.4	5.2	23.3	7.4	31.1	12.0	16.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.2	11.1	2.1	4.2	2.4	14.8	9.4	3.3				
Green Ext Time (p_c), s	0.0	6.6	0.0	0.9	0.0	10.4	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

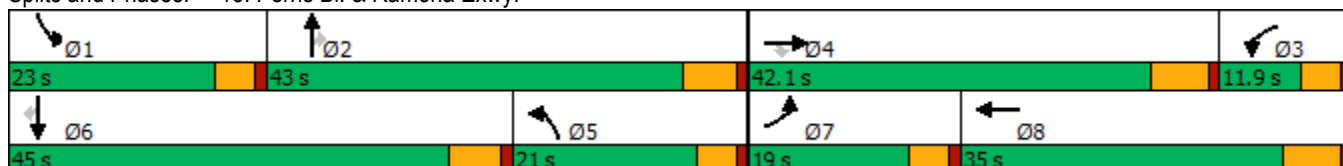
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	241	1030	151	96	784	300	437	96	326	606	264	
Future Volume (vph)	241	1030	151	96	784	300	437	96	326	606	264	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	19.0	42.1	42.1	11.9	35.0	21.0	43.0	43.0	23.0	45.0	45.0	
Total Split (%)	15.8%	35.1%	35.1%	9.9%	29.2%	17.5%	35.8%	35.8%	19.2%	37.5%	37.5%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	11.1	29.9	29.9	7.0	23.2	12.6	23.3	23.3	13.5	24.2	24.2	
Actuated g/C Ratio	0.12	0.32	0.32	0.08	0.25	0.14	0.25	0.25	0.15	0.26	0.26	
v/c Ratio	0.59	0.63	0.24	0.38	0.70	0.64	0.49	0.19	0.65	0.66	0.45	
Control Delay	47.7	30.7	4.1	50.2	35.7	47.2	32.8	0.8	46.2	35.2	7.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.7	30.7	4.1	50.2	35.7	47.2	32.8	0.8	46.2	35.2	7.0	
LOS	D	C	A	D	D	D	C	A	D	D	A	
Approach Delay		30.8			37.2		34.3			32.0		
Approach LOS		C			D		C			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 93.1  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 33.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.4%  
 ICU Level of Service C  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.





HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	241	1030	151	96	784	98	300	437	96	326	606	264
Future Volume (veh/h)	241	1030	151	96	784	98	300	437	96	326	606	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	246	1051	113	98	800	87	306	446	57	333	618	213
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	334	1502	466	191	1273	138	397	930	408	426	908	403
Arrive On Green	0.10	0.29	0.29	0.05	0.27	0.27	0.11	0.26	0.26	0.12	0.25	0.25
Sat Flow, veh/h	3510	5187	1609	3510	4744	513	3510	3610	1584	3510	3610	1601
Grp Volume(v), veh/h	246	1051	113	98	582	305	306	446	57	333	618	213
Grp Sat Flow(s),veh/h/ln	1755	1729	1609	1755	1729	1799	1755	1805	1584	1755	1805	1601
Q Serve(g_s), s	5.6	14.9	4.4	2.2	12.2	12.3	7.0	8.6	1.7	7.6	12.7	6.7
Cycle Q Clear(g_c), s	5.6	14.9	4.4	2.2	12.2	12.3	7.0	8.6	1.7	7.6	12.7	6.7
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	1502	466	191	928	483	397	930	408	426	908	403
V/C Ratio(X)	0.74	0.70	0.24	0.51	0.63	0.63	0.77	0.48	0.14	0.78	0.68	0.53
Avail Cap(c_a), veh/h	614	2262	702	311	1210	630	699	1632	716	785	1719	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	26.0	22.3	37.9	26.5	26.5	35.5	25.9	12.5	35.1	27.8	13.2
Incr Delay (d2), s/veh	1.2	0.6	0.3	0.8	0.7	1.4	1.2	0.4	0.2	1.2	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.6	1.5	0.9	4.6	4.9	2.9	3.5	0.8	3.1	5.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	26.6	22.6	38.7	27.2	27.9	36.7	26.3	12.7	36.3	28.7	14.3
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1410			985			809			1164	
Approach Delay, s/veh		28.2			28.6			29.2			28.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	27.0	10.7	30.0	15.1	26.5	12.4	28.3				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	18.4	37.2	7.3	* 36	16.4	* 39	14.4	28.8				
Max Q Clear Time (g_c+I1), s	9.6	10.6	4.2	16.9	9.0	14.7	7.6	14.3				
Green Ext Time (p_c), s	0.4	2.9	0.0	6.8	0.3	4.7	0.2	4.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.5								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

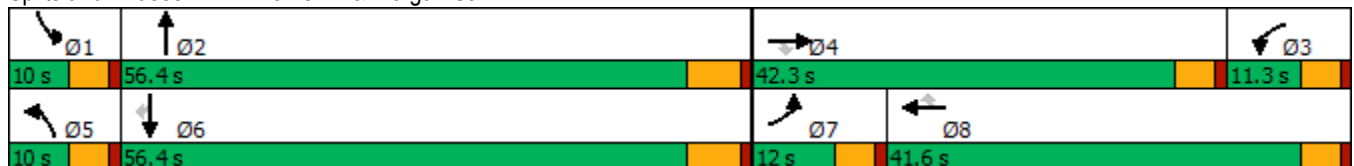


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	36	23	29	33	6	36	13	752	15	917	15
Future Volume (vph)	36	23	29	33	6	36	13	752	15	917	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.3	42.3	11.3	41.6	41.6	10.0	56.4	10.0	56.4	56.4
Total Split (%)	10.0%	35.3%	35.3%	9.4%	34.7%	34.7%	8.3%	47.0%	8.3%	47.0%	47.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	18.3	18.3	9.5	18.8	18.8	8.3	35.0	8.3	35.0	35.0
Actuated g/C Ratio	0.17	0.36	0.36	0.18	0.37	0.37	0.16	0.68	0.16	0.68	0.68
v/c Ratio	0.13	0.02	0.05	0.11	0.01	0.06	0.05	0.24	0.05	0.41	0.01
Control Delay	35.4	24.8	0.1	33.2	23.5	0.2	38.5	10.5	38.3	12.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	24.8	0.1	33.2	23.5	0.2	38.5	10.5	38.3	12.7	0.0
LOS	D	C	A	C	C	A	D	B	D	B	A
Approach Delay		21.1			16.5			11.0		12.9	
Approach LOS		C			B			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 51.5  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 12.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.3%  
 ICU Level of Service A  
 Analysis Period (min) 15




























Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	36	23	29	33	6	36	13	752	11	15	917	15
Future Volume (veh/h)	36	23	29	33	6	36	13	752	11	15	917	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	25	16	36	7	37	14	826	12	16	1008	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	76	573	255	73	298	253	32	2169	31	36	1495	667
Arrive On Green	0.04	0.16	0.16	0.04	0.16	0.16	0.02	0.41	0.41	0.02	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5267	76	1810	3610	1610
Grp Volume(v), veh/h	40	25	16	36	7	37	14	542	296	16	1008	15
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1610
Q Serve(g_s), s	1.1	0.3	0.3	1.0	0.2	1.1	0.4	5.8	5.8	0.5	12.0	0.3
Cycle Q Clear(g_c), s	1.1	0.3	0.3	1.0	0.2	1.1	0.4	5.8	5.8	0.5	12.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	76	573	255	73	298	253	32	1424	776	36	1495	667
V/C Ratio(X)	0.53	0.04	0.06	0.50	0.02	0.15	0.44	0.38	0.38	0.45	0.67	0.02
Avail Cap(c_a), veh/h	252	2566	1144	229	1325	1123	184	3299	1798	184	3444	1536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	18.9	11.3	24.9	18.9	19.3	25.8	10.9	10.9	25.7	12.6	9.2
Incr Delay (d2), s/veh	2.1	0.0	0.1	1.9	0.0	0.3	3.5	0.2	0.3	3.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.2	0.5	0.1	0.4	0.2	1.7	1.9	0.2	3.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	18.9	11.4	26.9	19.0	19.6	29.3	11.0	11.2	28.9	13.2	9.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	A
Approach Vol, veh/h		81			80			852			1039	
Approach Delay, s/veh		21.4			22.8			11.4			13.4	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	27.6	6.7	13.0	5.5	27.8	6.8	12.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.7	37.7	5.4	50.6	7.4	37.0				
Max Q Clear Time (g_c+I1), s	2.5	7.8	3.0	2.3	2.4	14.0	3.1	3.1				
Green Ext Time (p_c), s	0.0	5.6	0.0	0.2	0.0	7.9	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								

Timings  
15: Perris Bl. & Rider St.

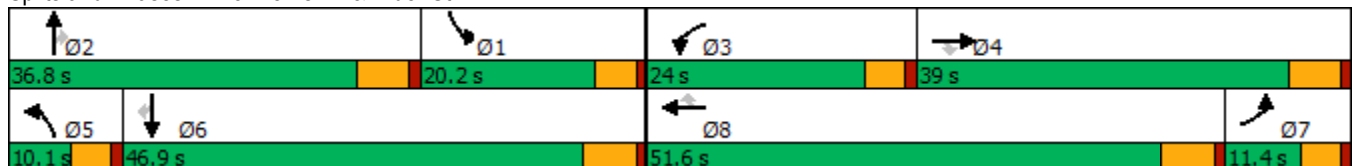
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	182	49	166	63	148	18	584	189	127	848	15
Future Volume (vph)	38	182	49	166	63	148	18	584	189	127	848	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.4	39.0	39.0	24.0	51.6	51.6	10.1	36.8	36.8	20.2	46.9	46.9
Total Split (%)	9.5%	32.5%	32.5%	20.0%	43.0%	43.0%	8.4%	30.7%	30.7%	16.8%	39.1%	39.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.8	13.8	13.8	12.0	24.4	24.4	5.6	16.6	16.6	10.2	28.5	28.5
Actuated g/C Ratio	0.12	0.18	0.18	0.16	0.33	0.33	0.07	0.22	0.22	0.14	0.38	0.38
v/c Ratio	0.18	0.28	0.12	0.60	0.06	0.24	0.14	0.52	0.39	0.53	0.44	0.02
Control Delay	36.8	29.2	0.6	42.0	23.7	4.6	44.7	28.7	7.3	43.2	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	29.2	0.6	42.0	23.7	4.6	44.7	28.7	7.3	43.2	20.3	0.1
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		25.0			24.2			23.9			22.9	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 75  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 23.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 56.3%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (veh/h)	38	182	49	166	63	148	18	584	189	127	848	15
Future Volume (veh/h)	38	182	49	166	63	148	18	584	189	127	848	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	188	17	171	65	69	19	602	135	131	874	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	647	288	219	650	290	41	1129	345	170	1609	499
Arrive On Green	0.10	0.18	0.18	0.12	0.18	0.18	0.02	0.22	0.22	0.09	0.31	0.31
Sat Flow, veh/h	1810	3610	1607	1810	3610	1610	1810	5187	1584	1810	5187	1609
Grp Volume(v), veh/h	39	188	17	171	65	69	19	602	135	131	874	6
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1610	1810	1729	1584	1810	1729	1609
Q Serve(g_s), s	1.1	2.6	0.5	5.2	0.9	2.1	0.6	5.8	2.5	4.0	7.9	0.1
Cycle Q Clear(g_c), s	1.1	2.6	0.5	5.2	0.9	2.1	0.6	5.8	2.5	4.0	7.9	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	647	288	219	650	290	41	1129	345	170	1609	499
V/C Ratio(X)	0.22	0.29	0.06	0.78	0.10	0.24	0.46	0.53	0.39	0.77	0.54	0.01
Avail Cap(c_a), veh/h	217	2114	941	619	2916	1301	176	2836	866	498	3760	1166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	20.1	19.3	24.2	19.4	19.9	27.4	19.6	7.1	25.1	16.2	4.2
Incr Delay (d2), s/veh	0.2	0.2	0.1	2.3	0.1	0.4	3.0	0.4	0.7	2.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.2	2.1	0.3	0.7	0.3	2.0	1.3	1.6	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	20.4	19.4	26.5	19.5	20.3	30.3	20.0	7.8	27.9	16.5	4.3
LnGrp LOS	C	C	B	C	B	C	C	C	A	C	B	A
Approach Vol, veh/h		244			305			756			1011	
Approach Delay, s/veh		20.9			23.6			18.1			17.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	18.1	11.5	16.0	5.9	23.4	11.4	16.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	15.6	* 31	19.4	33.2	5.5	41.1	6.8	* 46				
Max Q Clear Time (g_c+I1), s	6.0	7.8	7.2	4.6	2.6	9.9	3.1	4.1				
Green Ext Time (p_c), s	0.1	4.3	0.2	1.1	0.0	6.3	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	7	247	173	2	3		
Future Volume (vph)	7	247	173	2	3		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	12.0	38.0	28.0	72.4	44.4	9.6	35.6
Total Split (%)	10.0%	31.7%	23.3%	60.3%	37.0%	8%	30%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effect Green (s)	6.9	15.7	13.5	18.0	15.8		
Actuated g/C Ratio	0.15	0.35	0.30	0.40	0.35		
v/c Ratio	0.03	0.21	0.35	0.00	0.01		
Control Delay	30.3	0.4	20.7	8.5	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	30.3	0.4	20.7	8.5	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.6			
Approach LOS				C			

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 45.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.35  
 Intersection Signal Delay: 8.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 33.9%  
 ICU Level of Service A  
 Analysis Period (min) 15






















Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	247	0	0	0	173	2	0	0	3	9
Future Volume (veh/h)	7	0	247	0	0	0	173	2	0	0	3	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	8	0	266	0	0	0	190	2	0	0	3	9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	19	568	481	6	257	0	252	1187	0	0	66	59
Arrive On Green	0.01	0.00	0.30	0.00	0.00	0.00	0.14	0.33	0.00	0.00	0.04	0.04
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	8	0	266	0	0	0	190	2	0	0	3	9
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.1	0.0	4.2	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.1	0.0	4.2	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	19	568	481	6	257	0	252	1187	0	0	66	59
V/C Ratio(X)	0.41	0.00	0.55	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.05	0.15
Avail Cap(c_a), veh/h	445	2034	1724	301	1959	0	1408	8043	0	0	2341	2088
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	8.9	0.0	0.0	0.0	12.5	6.8	0.0	0.0	14.0	14.0
Incr Delay (d2), s/veh	5.1	0.0	1.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	9.8	0.0	0.0	0.0	14.2	6.8	0.0	0.0	14.3	15.2
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		274			0			192			12	
Approach Delay, s/veh		10.1			0.0			14.1			15.0	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		15.3	0.0	14.8	8.8	6.5	4.9	9.9				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		67.0	5.0	32.2	23.4	39.0	7.4	* 31				
Max Q Clear Time (g_c+I1), s		2.0	0.0	6.2	5.0	2.2	2.1	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.8	0.2	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	34	5	161	255	3
Future Vol, veh/h	8	34	5	161	255	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	38	6	179	283	3
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8.1	7.6	9.1
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	97%
Vol Right, %	0%	0%	0%	0%	100%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	81	81	8	34	170	88
LT Vol	5	0	0	8	0	0	0
Through Vol	0	81	81	0	0	170	85
RT Vol	0	0	0	0	34	0	3
Lane Flow Rate	6	89	89	9	38	189	98
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.009	0.129	0.087	0.015	0.052	0.259	0.134
Departure Headway (Hd)	5.697	5.196	3.49	6.13	4.928	4.942	4.918
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	630	691	1027	584	725	727	729
Service Time	3.419	2.918	1.212	3.868	2.666	2.672	2.648
HCM Lane V/C Ratio	0.01	0.129	0.087	0.015	0.052	0.26	0.134
HCM Control Delay	8.5	8.7	6.5	9	7.9	9.4	8.4
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.4	0.3	0	0.2	1	0.5



Timings  
18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

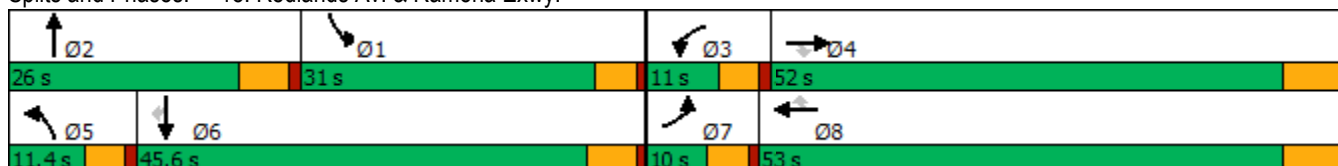


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	15	1424	56	28	1020	85	43	66	219	47	10
Future Volume (vph)	15	1424	56	28	1020	85	43	66	219	47	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	10.0	52.0	52.0	11.0	53.0	53.0	11.4	26.0	31.0	45.6	45.6
Total Split (%)	8.3%	43.3%	43.3%	9.2%	44.2%	44.2%	9.5%	21.7%	25.8%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	35.8	35.8	6.1	38.1	38.1	6.3	12.7	16.6	28.5	28.5
Actuated g/C Ratio	0.06	0.41	0.41	0.07	0.43	0.43	0.07	0.14	0.19	0.32	0.32
v/c Ratio	0.14	0.71	0.08	0.23	0.48	0.11	0.35	0.46	0.68	0.08	0.02
Control Delay	52.5	25.1	0.2	52.8	19.6	0.4	54.9	37.2	47.0	27.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	25.1	0.2	52.8	19.6	0.4	54.9	37.2	47.0	27.8	0.1
LOS	D	C	A	D	B	A	D	D	D	C	A
Approach Delay		24.5			19.0			41.8		42.0	
Approach LOS		C			B			D		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 25.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.9%  
 ICU Level of Service B  
 Analysis Period (min) 15





























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	15	1424	56	28	1020	85	43	66	56	219	47	10
Future Volume (veh/h)	15	1424	56	28	1020	85	43	66	56	219	47	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	1499	51	29	1074	61	45	69	40	231	49	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	2131	643	54	2189	670	72	146	85	275	479	406
Arrive On Green	0.02	0.41	0.41	0.03	0.42	0.42	0.04	0.13	0.13	0.15	0.25	0.25
Sat Flow, veh/h	1810	5187	1565	1810	5187	1587	1810	1126	653	1810	1900	1610
Grp Volume(v), veh/h	16	1499	51	29	1074	61	45	0	109	231	49	7
Grp Sat Flow(s),veh/h/ln	1810	1729	1565	1810	1729	1587	1810	0	1779	1810	1900	1610
Q Serve(g_s), s	0.7	18.6	1.5	1.2	11.7	0.9	1.9	0.0	4.4	9.7	1.5	0.3
Cycle Q Clear(g_c), s	0.7	18.6	1.5	1.2	11.7	0.9	1.9	0.0	4.4	9.7	1.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	34	2131	643	54	2189	670	72	0	230	275	479	406
V/C Ratio(X)	0.47	0.70	0.08	0.54	0.49	0.09	0.62	0.00	0.47	0.84	0.10	0.02
Avail Cap(c_a), veh/h	126	3054	922	149	3120	955	158	0	471	614	982	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	19.0	14.0	37.2	16.4	3.1	36.8	0.0	31.4	32.1	22.3	21.9
Incr Delay (d2), s/veh	3.7	0.4	0.1	3.0	0.2	0.1	3.2	0.0	1.5	2.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.4	0.5	0.6	4.0	0.5	0.9	0.0	1.9	4.2	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	19.4	14.0	40.2	16.6	3.2	40.0	0.0	32.9	34.7	22.4	21.9
LnGrp LOS	D	B	B	D	B	A	D	A	C	C	C	C
Approach Vol, veh/h		1566			1164			154			287	
Approach Delay, s/veh		19.5			16.4			35.0			32.3	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.2	15.5	6.9	38.2	7.7	25.0	6.1	39.0				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	26.4	* 21	6.4	45.8	6.8	40.2	5.4	46.8				
Max Q Clear Time (g_c+I1), s	11.7	6.4	3.2	20.6	3.9	3.5	2.7	13.7				
Green Ext Time (p_c), s	0.3	0.4	0.0	11.3	0.0	0.2	0.0	8.1				

Intersection Summary

HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	42	8	0	4	19	7	0	73	0	7	25	32
Future Vol, veh/h	42	8	0	4	19	7	0	73	0	7	25	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	46	9	0	4	21	8	0	79	0	8	27	35

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	155	140	45	144	157	79	62	0	0	79	0	0
Stage 1	61	61	-	79	79	-	-	-	-	-	-	-
Stage 2	94	79	-	65	78	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	816	755	1031	830	739	987	1554	-	-	1532	-	-
Stage 1	955	848	-	935	833	-	-	-	-	-	-	-
Stage 2	918	833	-	951	834	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	789	751	1031	819	735	987	1554	-	-	1532	-	-
Mov Cap-2 Maneuver	789	751	-	819	735	-	-	-	-	-	-	-
Stage 1	955	844	-	935	833	-	-	-	-	-	-	-
Stage 2	888	833	-	936	830	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	9.8		9.7			0			0.8		
HCM LOS	A		A								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1554	-	-	789	751	793	1532	-	-
HCM Lane V/C Ratio	-	-	-	0.058	0.012	0.041	0.005	-	-
HCM Control Delay (s)	0	-	-	9.8	9.9	9.7	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.1	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	9	64	0	0	29
Future Vol, veh/h	0	9	64	0	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	70	0	0	32

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	35	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1037	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	1037	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1037	-
HCM Lane V/C Ratio	-	- 0.009	-
HCM Control Delay (s)	-	- 8.5	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	2	0	0	0	0	19	0	43	2	7	21	2
Future Vol, veh/h	2	0	0	0	0	19	0	43	2	7	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	0	0	0	0	21	0	47	2	8	23	2

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	64	89	24	88	89	25	-	0	0	49	0	0
Stage 1	40	40	-	48	48	-	-	-	-	-	-	-
Stage 2	24	49	-	40	41	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.2	7.3	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	932	805	1058	898	805	1052	0	-	-	1571	-	-
Stage 1	980	866	-	965	859	-	0	-	-	-	-	-
Stage 2	996	858	-	980	865	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	911	801	1058	894	801	1052	-	-	-	1571	-	-
Mov Cap-2 Maneuver	911	801	-	894	801	-	-	-	-	-	-	-
Stage 1	980	862	-	965	859	-	-	-	-	-	-	-
Stage 2	976	858	-	975	861	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	9		8.5			0			1.7		
HCM LOS	A		A								

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	911	1052	1571	-	-
HCM Lane V/C Ratio	-	-	0.002	0.02	0.005	-	-
HCM Control Delay (s)	-	-	9	8.5	7.3	-	-
HCM Lane LOS	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0	-	-

Timings  
22: Redlands Av. & Driveway 2

	↙	↑	↘	↓
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations	↙	↑↘	↘	↑
Traffic Volume (vph)	8	5	17	4
Future Volume (vph)	8	5	17	4
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	5.0	10.0
Minimum Split (s)	21.6	22.4	9.6	15.4
Total Split (s)	27.0	30.0	33.0	63.0
Total Split (%)	30.0%	33.3%	36.7%	70.0%
Yellow Time (s)	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	10.0	63.5	5.5	65.8
Actuated g/C Ratio	0.13	0.82	0.07	0.85
v/c Ratio	0.20	0.00	0.14	0.00
Control Delay	14.9	4.3	36.0	2.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	4.3	36.0	2.5
LOS	B	A	D	A
Approach Delay	14.9	4.3		29.9
Approach LOS	B	A		C

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 77.8  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.20  
 Intersection Signal Delay: 18.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 25.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 22: Redlands Av. & Driveway 2



HCM 6th Signalized Intersection Summary  
 22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)

12/10/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↕	↕
Traffic Volume (veh/h)	8	39	5	2	17	4
Future Volume (veh/h)	8	39	5	2	17	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	42	5	2	18	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	25	118	1782	668	38	1475
Arrive On Green	0.09	0.09	0.69	0.69	0.02	0.78
Sat Flow, veh/h	285	1330	2664	963	1810	1900
Grp Volume(v), veh/h	52	0	3	4	18	4
Grp Sat Flow(s),veh/h/ln	1646	0	1805	1727	1810	1900
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.7	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	0.0	0.7	0.0
Prop In Lane	0.17	0.81		0.56	1.00	
Lane Grp Cap(c), veh/h	146	0	1252	1198	38	1475
V/C Ratio(X)	0.36	0.00	0.00	0.00	0.48	0.00
Avail Cap(c_a), veh/h	497	0	1252	1198	693	1475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	3.5	3.5	35.9	1.9
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.3	0.0	3.5	3.5	39.3	1.9
LnGrp LOS	C	A	A	A	D	A
Approach Vol, veh/h	52		7			22
Approach Delay, s/veh	33.3		3.5			32.5
Approach LOS	C		A			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	56.9			63.0	11.2
Change Period (Y+Rc), s	4.6	5.4			5.4	4.6
Max Green Setting (Gmax), s	28.4	24.6			57.6	22.4
Max Q Clear Time (g_c+I1), s	2.7	2.0			2.0	4.2
Green Ext Time (p_c), s	0.0	0.0			0.0	0.1

Intersection Summary

HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	4	3	2	0	12
Future Vol, veh/h	0	4	3	2	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	3	2	0	13

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	3	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1086	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	1086	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1086	-
HCM Lane V/C Ratio	-	- 0.004	-
HCM Control Delay (s)	-	- 8.3	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-



Timings  
24: Redlands Av. & Rider St.

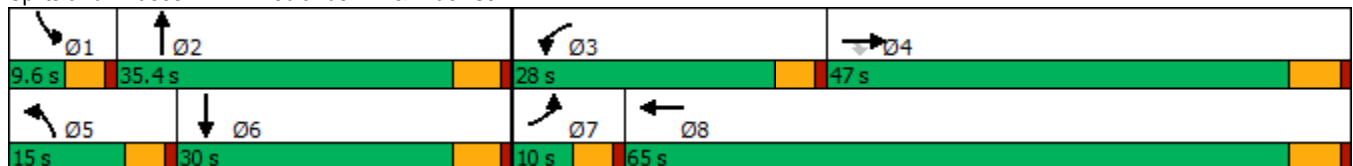


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations	↖	↑	↗	↖	↕	↖	↗	↗	
Traffic Volume (vph)	3	477	35	84	386	27	2	4	
Future Volume (vph)	3	477	35	84	386	27	2	4	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	NA	
Protected Phases	7	4		3	8	5	2	6	1
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	9.6	27.4	27.4	9.6
Total Split (s)	10.0	47.0	47.0	28.0	65.0	15.0	35.4	30.0	9.6
Total Split (%)	8.3%	39.2%	39.2%	23.3%	54.2%	12.5%	29.5%	25.0%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	5.1	52.8	52.8	8.8	62.6	7.0	12.3	10.1	
Actuated g/C Ratio	0.06	0.60	0.60	0.10	0.71	0.08	0.14	0.11	
v/c Ratio	0.03	0.45	0.04	0.51	0.16	0.20	0.38	0.06	
Control Delay	42.3	13.3	0.1	47.3	5.4	41.6	10.1	25.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.3	13.3	0.1	47.3	5.4	41.6	10.1	25.7	
LOS	D	B	A	D	A	D	B	C	
Approach Delay		12.5			12.9		16.0	25.7	
Approach LOS		B			B		B	C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 87.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	477	35	84	386	0	27	2	113	0	4	8
Future Volume (veh/h)	3	477	35	84	386	0	27	2	113	0	4	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	518	38	91	420	0	29	2	123	0	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	7	1103	934	118	2315	0	51	5	291	2	55	123
Arrive On Green	0.00	0.58	0.58	0.07	0.64	0.00	0.03	0.18	0.18	0.00	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	1810	26	1588	1810	520	1170
Grp Volume(v), veh/h	3	518	38	91	420	0	29	0	125	0	0	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1810	0	1614	1810	0	1689
Q Serve(g_s), s	0.2	14.5	0.9	4.6	4.4	0.0	1.5	0.0	6.3	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.2	14.5	0.9	4.6	4.4	0.0	1.5	0.0	6.3	0.0	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.98	1.00		0.69
Lane Grp Cap(c), veh/h	7	1103	934	118	2315	0	51	0	296	2	0	178
V/C Ratio(X)	0.41	0.47	0.04	0.77	0.18	0.00	0.56	0.00	0.42	0.00	0.00	0.07
Avail Cap(c_a), veh/h	106	1103	934	459	2315	0	204	0	525	98	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	11.2	8.3	42.5	6.7	0.0	44.3	0.0	33.4	0.0	0.0	37.2
Incr Delay (d2), s/veh	13.4	1.4	0.1	4.0	0.2	0.0	3.6	0.0	1.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.6	0.3	2.1	1.4	0.0	0.7	0.0	2.5	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	12.6	8.4	46.5	6.9	0.0	47.8	0.0	34.3	0.0	0.0	37.4
LnGrp LOS	E	B	A	D	A	A	D	A	C	A	A	D
Approach Vol, veh/h		559			511			154				13
Approach Delay, s/veh		12.6			13.9			36.9				37.4
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	22.3	10.6	59.4	7.2	15.1	5.0	65.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	5.0	30.0	23.4	41.2	10.4	24.6	5.4	59.2				
Max Q Clear Time (g_c+I1), s	0.0	8.3	6.6	16.5	3.5	2.6	2.2	6.4				
Green Ext Time (p_c), s	0.0	0.6	0.1	3.2	0.0	0.0	0.0	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.4								
HCM 6th LOS				B								

Timings  
25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

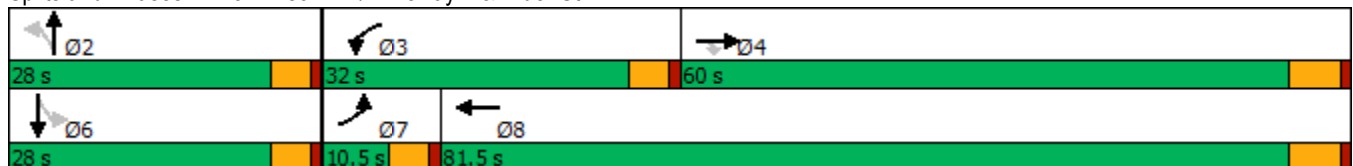


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↑	↗	↖	↕		↕	↕
Traffic Volume (vph)	11	519	48	104	399	36	0	0
Future Volume (vph)	11	519	48	104	399	36	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	26.6	26.6	26.6
Total Split (s)	10.5	60.0	60.0	32.0	81.5	28.0	28.0	28.0
Total Split (%)	8.8%	50.0%	50.0%	26.7%	67.9%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.3	63.3	63.3	10.8	76.8		11.1	11.1
Actuated g/C Ratio	0.05	0.63	0.63	0.11	0.77		0.11	0.11
v/c Ratio	0.12	0.47	0.05	0.58	0.16		0.56	0.05
Control Delay	49.9	12.1	0.4	54.7	3.8		22.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	49.9	12.1	0.4	54.7	3.8		22.7	0.1
LOS	D	B	A	D	A		C	A
Approach Delay		11.8			14.3		22.7	0.1
Approach LOS		B			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.2  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 13.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av./Driveway 4 & Rider St.



HCM 6th Signalized Intersection Summary  
 25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	519	48	104	399	0	36	0	101	0	0	27
Future Volume (veh/h)	11	519	48	104	399	0	36	0	101	0	0	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	564	52	113	434	0	39	0	110	0	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	25	1257	1064	142	2621	0	80	12	135	0	0	187
Arrive On Green	0.01	0.66	0.66	0.08	0.73	0.00	0.12	0.00	0.12	0.00	0.00	0.12
Sat Flow, veh/h	1810	1900	1609	1810	3705	0	313	101	1166	0	0	1610
Grp Volume(v), veh/h	12	564	52	113	434	0	149	0	0	0	0	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1609	1810	1805	0	1579	0	0	0	0	1610
Q Serve(g_s), s	0.7	14.9	1.2	6.4	3.9	0.0	6.8	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.7	14.9	1.2	6.4	3.9	0.0	9.5	0.0	0.0	0.0	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.00	0.26		0.74	0.00		1.00
Lane Grp Cap(c), veh/h	25	1257	1064	142	2621	0	227	0	0	0	0	187
V/C Ratio(X)	0.47	0.45	0.05	0.79	0.17	0.00	0.66	0.00	0.00	0.00	0.00	0.16
Avail Cap(c_a), veh/h	102	1257	1064	476	2621	0	395	0	0	0	0	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	8.5	6.2	47.2	4.4	0.0	44.9	0.0	0.0	0.0	0.0	41.5
Incr Delay (d2), s/veh	4.9	1.2	0.1	3.8	0.1	0.0	3.2	0.0	0.0	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.4	0.4	2.9	1.1	0.0	4.0	0.0	0.0	0.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	9.6	6.3	51.0	4.6	0.0	48.1	0.0	0.0	0.0	0.0	41.9
LnGrp LOS	E	A	A	D	A	A	D	A	A	A	A	D
Approach Vol, veh/h		628			547			149				29
Approach Delay, s/veh		10.3			14.2			48.1				41.9
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.7	12.8	74.8		16.7	6.1	81.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	5.9	75.7				
Max Q Clear Time (g_c+I1), s		11.5	8.4	16.9		3.7	2.7	5.9				
Green Ext Time (p_c), s		0.6	0.1	3.8		0.1	0.0	2.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.7								
HCM 6th LOS				B								

**APPENDIX 6.2:**

**E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

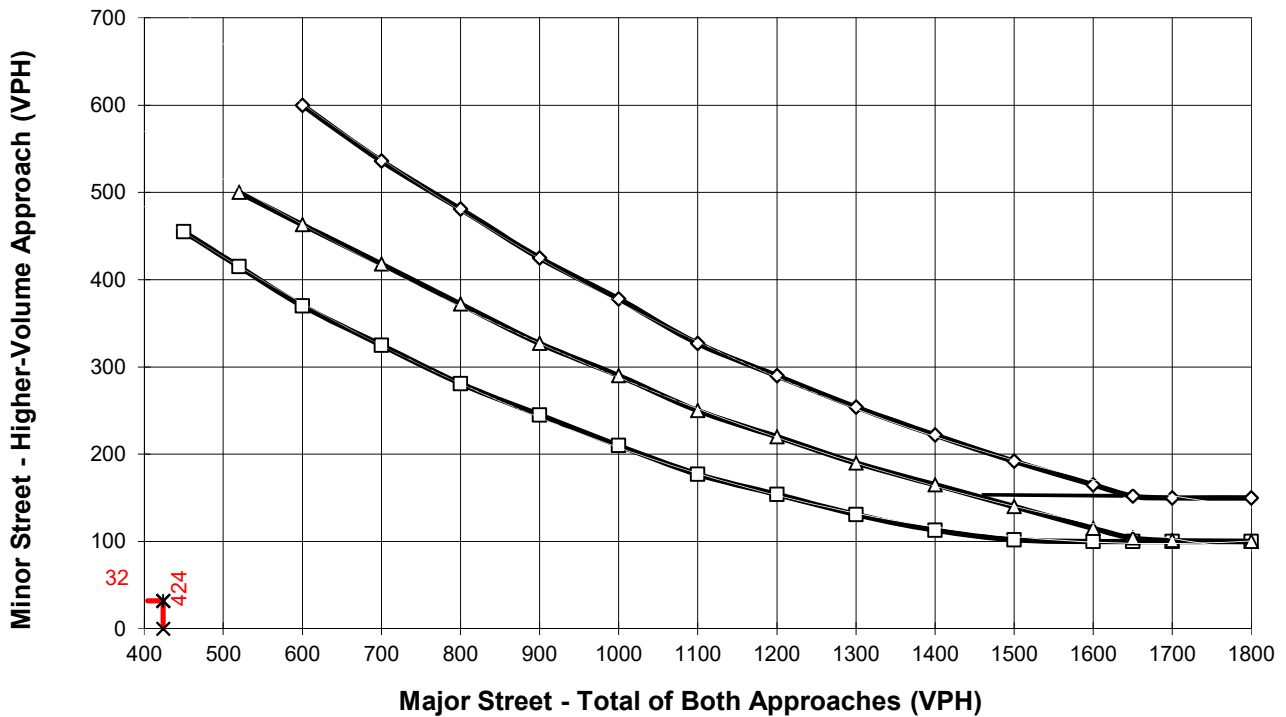
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **424**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Markham St.**

High Volume Approach (VPH) = **32**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

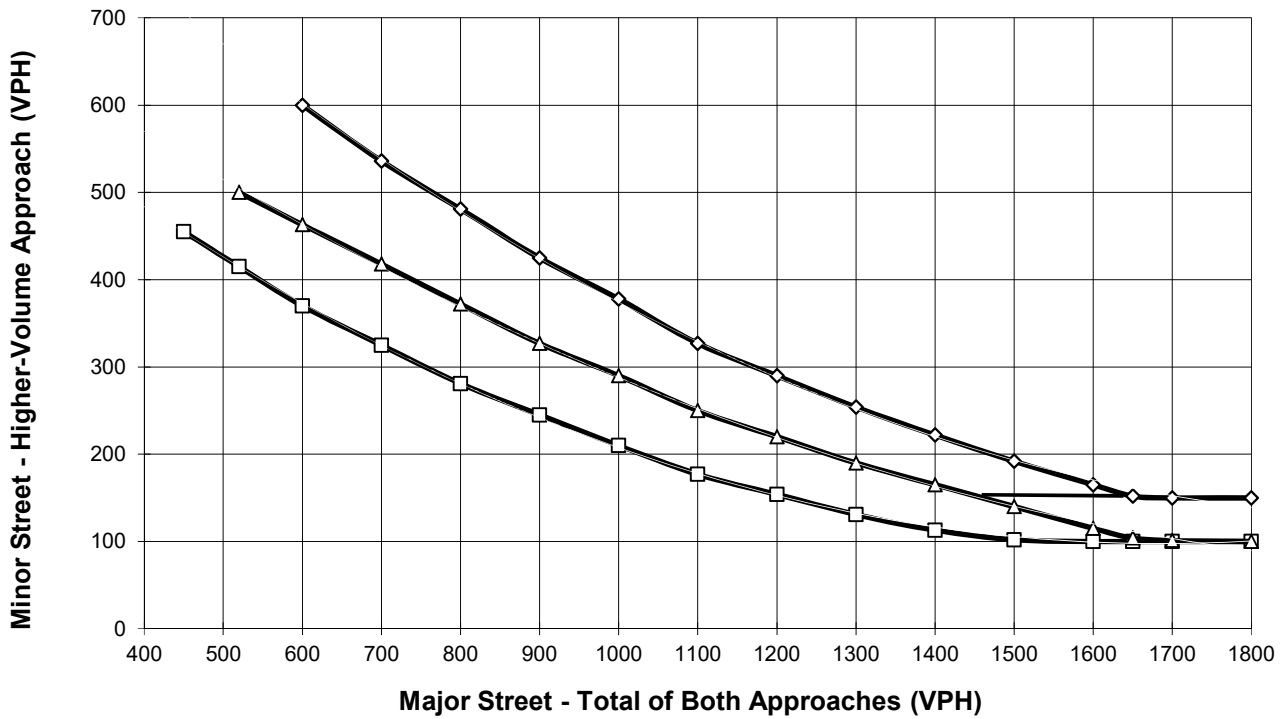
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **137**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **50**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane



### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

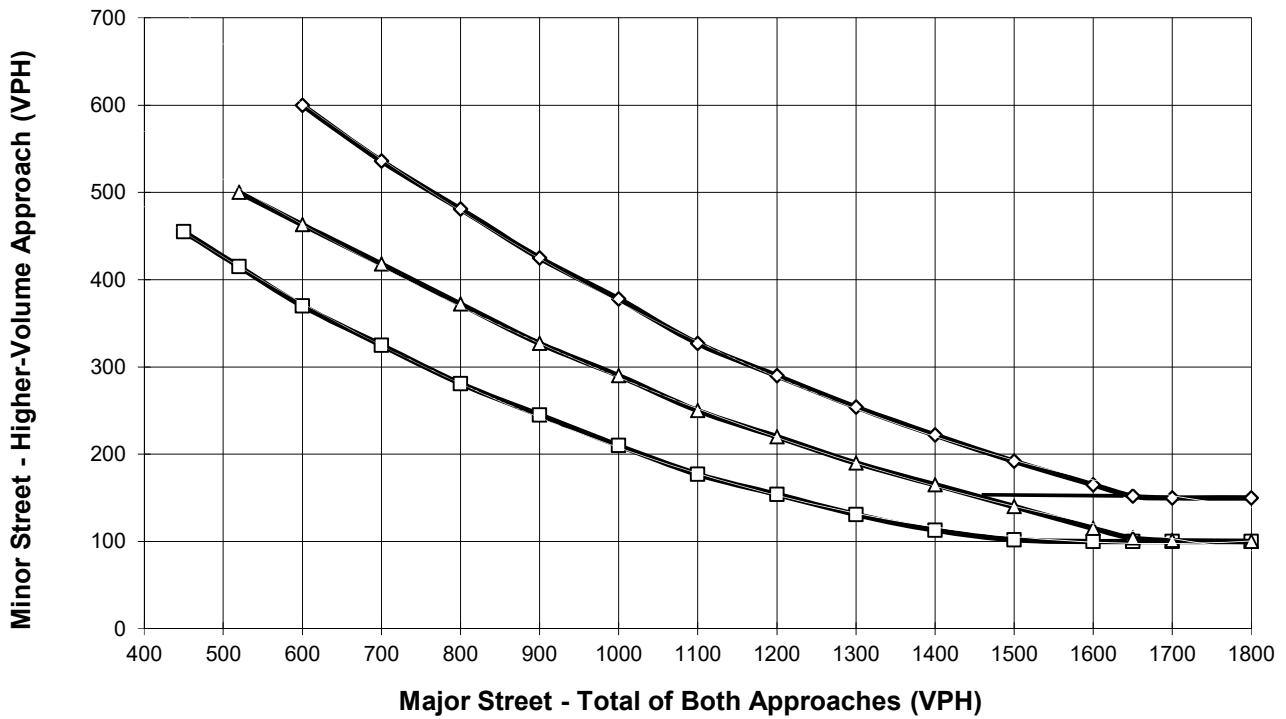
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **71**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Sinclair St.**

High Volume Approach (VPH) = **23**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>RV</u>	TRAFFIC CONDITIONS	<u>E+P</u>	
Jurisdiction: <u>City of Perris</u>				CHK <u>CH</u>	DATE <u>08/02/18</u>		
Major Street: <u>Redlands Av.</u>					Critical Approach Speed (Major) <u>40</u> mph		
Minor Street: <u>Driveway 2</u>					Critical Approach Speed (Minor) <u>25</u> mph		
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane				
Major Street Future ADT = <u>670</u>	vpd	Minor Street Future ADT = <u>571</u>	vpd				
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>	
						or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
<b>XX</b>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<b>CONDITION A - Minimum Vehicular Volume Satisfied</b>	<b>Not Satisfied</b>				
	<b>XX</b>				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + <b>670</b>	1 <b>571</b>	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<b>CONDITION B - Interruption of Continuous Traffic Satisfied</b>	<b>Not Satisfied</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
	<b>XX</b>				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + <b>670</b>	1 <b>571</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<b>Combination of CONDITIONS A + B Satisfied</b>	<b>Not Satisfied</b>	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....	<b>XX</b>				
	<b>A</b>				
	<b>7%</b>				
	<b>B</b>				
	<b>5%</b>				

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

**APPENDIX 6.3:**

**E+P CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues



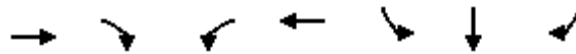
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	476	8	165	188	554	171
v/c Ratio	0.39	0.01	0.69	0.09	1.08	0.29
Control Delay	16.3	0.0	31.5	12.3	88.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.3	0.0	31.5	12.3	88.3	4.9
Queue Length 50th (ft)	67	0	58	31	~232	0
Queue Length 95th (ft)	103	0	#132	55	#399	37
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1234	623	255	1985	513	580
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.01	0.65	0.09	1.08	0.29

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

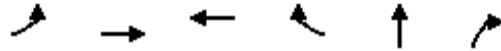
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	738	344	301	1000	319	321	199
v/c Ratio	0.60	0.44	0.79	0.47	0.61	0.61	0.35
Control Delay	33.7	5.3	27.5	5.5	38.7	38.7	14.3
Queue Delay	0.0	0.0	0.0	0.4	59.8	59.7	0.0
Total Delay	33.7	5.3	27.5	6.0	98.4	98.5	14.3
Queue Length 50th (ft)	227	0	85	63	202	203	42
Queue Length 95th (ft)	317	68	40	26	303	306	103
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1224	775	484	2133	522	523	573
Starvation Cap Reductn	0	0	0	605	0	0	0
Spillback Cap Reductn	0	0	0	0	256	257	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.44	0.62	0.65	1.20	1.21	0.35

Intersection Summary

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	289	728	338	771	12	117
v/c Ratio	0.70	0.27	0.21	0.78	0.08	0.48
Control Delay	14.4	0.1	11.6	13.4	26.7	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	0.1	11.6	13.4	26.7	13.6
Queue Length 50th (ft)	15	0	37	66	4	0
Queue Length 95th (ft)	19	m0	70	#313	18	41
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1611	990	150	242
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.27	0.21	0.78	0.08	0.48

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	179	1182	960	735	166	165	453
v/c Ratio	0.75	0.54	0.61	0.66	0.34	0.34	0.88
Control Delay	48.4	23.1	27.3	5.0	32.2	32.1	50.8
Queue Delay	0.0	10.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	33.1	27.3	5.0	32.2	32.1	50.8
Queue Length 50th (ft)	135	465	288	0	93	93	252
Queue Length 95th (ft)	206	546	371	82	152	151	#408
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	270	2206	1577	1119	553	555	571
Starvation Cap Reductn	0	1000	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.98	0.61	0.66	0.30	0.30	0.79

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



Queues



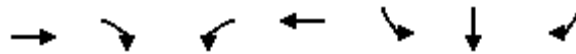
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	382	16	307	190	437	180
v/c Ratio	0.32	0.03	1.13	0.09	0.88	0.31
Control Delay	15.8	0.1	118.1	11.3	42.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	0.1	118.1	11.3	42.7	4.9
Queue Length 50th (ft)	53	0	~144	30	148	0
Queue Length 95th (ft)	83	0	#282	54	#293	38
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	617	271	2017	513	586
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.03	1.13	0.09	0.85	0.31

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

2: I-215 SB Ramps & Ramona Exwy.

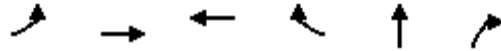


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	809	323	367	863	389	393	174
v/c Ratio	0.72	0.44	0.86	0.40	0.75	0.75	0.29
Control Delay	38.6	5.5	32.4	5.0	44.6	44.9	7.0
Queue Delay	0.0	0.0	0.0	0.3	57.7	57.6	0.0
Total Delay	38.6	5.5	32.4	5.3	102.3	102.5	7.0
Queue Length 50th (ft)	271	0	244	74	260	263	7
Queue Length 95th (ft)	353	66	#154	22	383	386	57
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1128	727	484	2133	522	523	603
Starvation Cap Reductn	0	0	0	579	0	0	0
Spillback Cap Reductn	0	0	0	0	240	241	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.44	0.76	0.56	1.38	1.39	0.29

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	262	596	502	679	29	291
v/c Ratio	0.67	0.22	0.30	0.67	0.19	0.73
Control Delay	15.9	0.2	11.8	8.1	28.8	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	0.2	11.8	8.1	28.8	16.7
Queue Length 50th (ft)	20	1	56	37	10	0
Queue Length 95th (ft)	16	m1	94	124	30	#70
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1655	1011	152	401
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.22	0.30	0.67	0.19	0.73

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	206	1381	900	756	169	169	405
v/c Ratio	0.78	0.60	0.56	0.67	0.38	0.38	0.85
Control Delay	44.0	21.1	25.6	5.2	34.4	34.4	47.8
Queue Delay	0.0	38.2	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	59.3	25.6	5.2	34.4	34.4	47.8
Queue Length 50th (ft)	158	546	254	0	102	102	224
Queue Length 95th (ft)	m#232	626	342	86	154	154	324
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	280	2289	1615	1128	553	555	571
Starvation Cap Reductn	0	1003	0	0	0	0	0
Spillback Cap Reductn	0	0	30	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.07	0.57	0.67	0.31	0.30	0.71

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 6.4:**

**E+P CONDITIONS BASIC FREEWAY SEGMENT ANALYSIS WORKSHEETS**

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# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3915	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1504
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.63
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	21.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3537	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1332
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	19.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3411	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1261
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.53
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	70.0
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	18.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5260	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2021
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.84
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	62.2
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	32.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4525	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1722
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	66.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	25.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4453	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1677
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	24.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	Existing (2019)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5365	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2002
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	62.6
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	32.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5211	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1927
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5038	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1844
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.2
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	28.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4637	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1730
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	66.7
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	25.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4212	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1557
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	22.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4048	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1497
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.62
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.0
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	21.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

**APPENDIX 6.5:**

**E+P CONDITIONS MERGE/DIVERGE ANALYSIS WORKSHEETS**

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# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3915	508
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	6.00	23.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.943	0.813
Flow Rate (vi),pc/h	4513	679
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.63	0.32

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.6
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.359
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1472
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	59.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.616	Outer Lanes Freeway Speed (SO), mi/h	74.9
Flow in Lanes 1 and 2 (v12), pc/h	3041	Ramp Junction Speed (S), mi/h	64.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.5
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3407	129
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	19.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.840
Flow Rate (vi),pc/h	3814	167
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.55	0.08

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	918.8	Density in Ramp Influence Area (DR), pc/mi/ln	22.5
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.341
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1583
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	66.1
Flow in Lanes 1 and 2 (v12), pc/h	2231	Ramp Junction Speed (S), mi/h	62.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	2398	Average Density (D), pc/mi/ln	21.2
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3537	692
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.885
Flow Rate (vi),pc/h	3996	850
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.56	0.40

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	24.5
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.375
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1192
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.5
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.621	Outer Lanes Freeway Speed (SO), mi/h	76.0
Flow in Lanes 1 and 2 (v12), pc/h	2804	Ramp Junction Speed (S), mi/h	63.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	20.9
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	2845	566
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.926
Flow Rate (vi),pc/h	3124	664
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.53	0.32

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	20.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.302
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1253
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	61.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	67.3
Flow in Lanes 1 and 2 (v12), pc/h	1871	Ramp Junction Speed (S), mi/h	63.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	2535	Average Density (D), pc/mi/ln	19.9
Level of Service (LOS)	C		



# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4430	830
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	14.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.877
Flow Rate (vi),pc/h	5005	1029
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.84	0.49

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1375.9	Density in Ramp Influence Area (DR), pc/mi/ln	34.1
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.499
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2072
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.0
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.586	Outer Lanes Freeway Speed (SO), mi/h	64.3
Flow in Lanes 1 and 2 (v12), pc/h	2933	Ramp Junction Speed (S), mi/h	58.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	3962	Average Density (D), pc/mi/ln	34.3
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4525	96
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	20.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.833
Flow Rate (vi),pc/h	5166	125
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.72	0.06

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.309
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1890
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	61.3
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.625	Outer Lanes Freeway Speed (SO), mi/h	73.3
Flow in Lanes 1 and 2 (v12), pc/h	3276	Ramp Junction Speed (S), mi/h	65.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	26.4
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3764	762
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	12.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.893
Flow Rate (vi),pc/h	4213	928
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.44

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.385
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1706
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.2
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.7
Flow in Lanes 1 and 2 (v12), pc/h	2507	Ramp Junction Speed (S), mi/h	61.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	3435	Average Density (D), pc/mi/ln	28.0
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4453	689
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	9.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.917
Flow Rate (vi),pc/h	5031	817
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.70	0.39

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.372
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1698
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.6
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.597	Outer Lanes Freeway Speed (SO), mi/h	74.1
Flow in Lanes 1 and 2 (v12), pc/h	3333	Ramp Junction Speed (S), mi/h	63.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	26.3
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5365	426
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.826
Flow Rate (vi),pc/h	6006	561
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.83	0.27

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	34.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.348
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2265
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	60.3
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.584	Outer Lanes Freeway Speed (SO), mi/h	71.9
Flow in Lanes 1 and 2 (v12), pc/h	3741	Ramp Junction Speed (S), mi/h	64.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	31.2
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4939	272
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.926
Flow Rate (vi),pc/h	5478	319
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.15

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1307.4	Density in Ramp Influence Area (DR), pc/mi/ln	31.3
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.430
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2273
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.0
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	63.6
Flow in Lanes 1 and 2 (v12), pc/h	3205	Ramp Junction Speed (S), mi/h	60.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	3524	Average Density (D), pc/mi/ln	32.2
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5211	826
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.909
Flow Rate (vi),pc/h	5780	988
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.80	0.47

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	32.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.387
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2061
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.2
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.570	Outer Lanes Freeway Speed (SO), mi/h	72.7
Flow in Lanes 1 and 2 (v12), pc/h	3719	Ramp Junction Speed (S), mi/h	63.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.4
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4385	654
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.952
Flow Rate (vi),pc/h	4814	747
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.77	0.36

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.400
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1930
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.8
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	64.9
Flow in Lanes 1 and 2 (v12), pc/h	2884	Ramp Junction Speed (S), mi/h	60.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	3631	Average Density (D), pc/mi/ln	30.5
Level of Service (LOS)	D		



# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3990	647
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	16.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.862
Flow Rate (vi),pc/h	4381	816
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.72	0.39

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1196.8	Density in Ramp Influence Area (DR), pc/mi/ln	29.7
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.409
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1814
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.586	Outer Lanes Freeway Speed (SO), mi/h	65.3
Flow in Lanes 1 and 2 (v12), pc/h	2567	Ramp Junction Speed (S), mi/h	60.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	3383	Average Density (D), pc/mi/ln	28.5
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4212	222
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	22.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.820
Flow Rate (vi),pc/h	4672	294
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.65	0.14

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.324
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1620
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.630	Outer Lanes Freeway Speed (SO), mi/h	74.4
Flow in Lanes 1 and 2 (v12), pc/h	3052	Ramp Junction Speed (S), mi/h	65.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.0
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3368	844
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.926
Flow Rate (vi),pc/h	3698	991
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.65	0.47

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	26.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.359
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1498
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.9
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	66.4
Flow in Lanes 1 and 2 (v12), pc/h	2200	Ramp Junction Speed (S), mi/h	61.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	3191	Average Density (D), pc/mi/ln	25.3
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4048	680
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.926
Flow Rate (vi),pc/h	4490	798
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.62	0.38

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	25.5
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.370
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1436
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.6
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.611	Outer Lanes Freeway Speed (SO), mi/h	75.1
Flow in Lanes 1 and 2 (v12), pc/h	3054	Ramp Junction Speed (S), mi/h	63.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.5
Level of Service (LOS)	C		

**APPENDIX 7.1:**

**EA (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

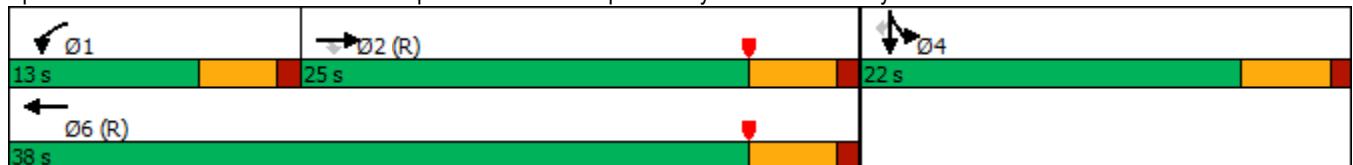


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	465	8	153	184	2	167
Future Volume (vph)	465	8	153	184	2	167
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.5	20.5	8.0	33.0	17.0	17.0
Actuated g/C Ratio	0.34	0.34	0.13	0.55	0.28	0.28
v/c Ratio	0.41	0.01	0.69	0.10	1.05	0.31
Control Delay	16.6	0.0	31.4	12.1	80.3	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.0	31.4	12.1	80.3	4.8
LOS	B	A	C	B	F	A
Approach Delay	16.3			20.9	61.3	
Approach LOS	B			C	E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 37.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 103.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

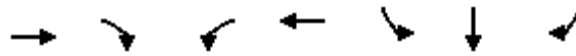
09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	465	8	153	184	0	0	0	0	496	2	167
Future Volume (veh/h)	0	465	8	153	184	0	0	0	0	496	2	167
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	505	8	166	200	0				539	2	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1306	582	205	1986	0				511	2	456
Arrive On Green	0.00	0.36	0.36	0.23	1.00	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1609	1810	3705	0				1803	7	1610
Grp Volume(v), veh/h	0	505	8	166	200	0				541	0	125
Grp Sat Flow(s),veh/h/ln	0	1805	1609	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	6.2	0.2	5.2	0.0	0.0				17.0	0.0	3.6
Cycle Q Clear(g_c), s	0.0	6.2	0.2	5.2	0.0	0.0				17.0	0.0	3.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1306	582	205	1986	0				513	0	456
V/C Ratio(X)	0.00	0.39	0.01	0.81	0.10	0.00				1.06	0.00	0.27
Avail Cap(c_a), veh/h	0	1306	582	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.2	12.3	22.6	0.0	0.0				21.5	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.9	0.0	11.5	0.1	0.0				55.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.1	2.4	0.0	0.0				13.8	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.1	12.3	34.1	0.1	0.0				76.5	0.0	17.0
LnGrp LOS	A	B	B	C	A	A				F	A	B
Approach Vol, veh/h		513			366						666	
Approach Delay, s/veh		15.0			15.5						65.4	
Approach LOS		B			B						E	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	11.3	26.7		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	7.2	8.2		19.0		2.0						
Green Ext Time (p_c), s	0.0	1.6		0.0		0.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				36.8								
HCM 6th LOS				D								



Timings  
2: I-215 SB Ramps & Ramona Exwy.

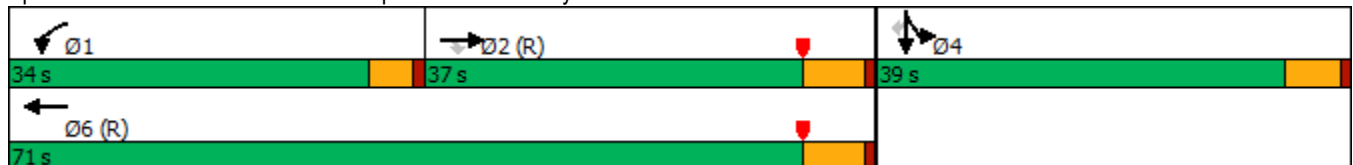


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵	↵
Traffic Volume (vph)	743	347	299	1007	624	1	201
Future Volume (vph)	743	347	299	1007	624	1	201
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	37.0	37.0	34.0	71.0	39.0	39.0	39.0
Total Split (%)	33.6%	33.6%	30.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	36.7	36.7	23.8	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.33	0.33	0.22	0.59	0.30	0.30	0.30
v/c Ratio	0.65	0.47	0.81	0.50	0.63	0.63	0.38
Control Delay	35.3	5.3	27.2	5.2	39.3	39.3	17.5
Queue Delay	0.0	0.0	0.0	0.5	61.3	61.2	0.0
Total Delay	35.3	5.3	27.2	5.7	100.5	100.6	17.5
LOS	D	A	C	A	F	F	B
Approach Delay	25.7			10.7		80.3	
Approach LOS	C			B		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 33.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 78.8%  
 ICU Level of Service D  
 Analysis Period (min) 15













Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



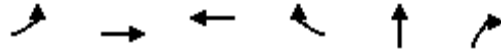
HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	743	347	299	1007	0	0	0	0	624	1	201
Future Volume (veh/h)	0	743	347	299	1007	0	0	0	0	624	1	201
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	782	304	315	1060	0				658	0	129
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1282	572	353	2133	0				1102	0	490
Arrive On Green	0.00	0.36	0.36	0.13	0.40	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	782	304	315	1060	0				658	0	129
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	19.6	16.5	18.8	24.3	0.0				17.0	0.0	6.7
Cycle Q Clear(g_c), s	0.0	19.6	16.5	18.8	24.3	0.0				17.0	0.0	6.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1282	572	353	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.61	0.53	0.89	0.50	0.00				0.60	0.00	0.26
Avail Cap(c_a), veh/h	0	1282	572	485	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.2	28.2	46.7	20.9	0.0				32.5	0.0	28.9
Incr Delay (d2), s/veh	0.0	2.2	3.5	11.6	0.6	0.0				2.4	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.3	6.5	9.7	10.7	0.0				7.5	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	31.4	31.7	58.3	21.6	0.0				34.9	0.0	30.2
LnGrp LOS	A	C	C	E	C	A				C	A	C
Approach Vol, veh/h		1086			1375						787	
Approach Delay, s/veh		31.5			30.0						34.1	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	25.9	45.1		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	29.5	31.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	20.8	21.6		19.0		26.3						
Green Ext Time (p_c), s	0.6	2.7		2.5		4.8						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.5								
HCM 6th LOS				C								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings

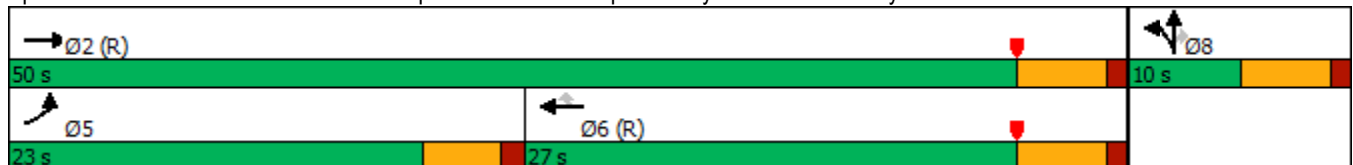


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	286	675	325	749	0	87
Future Volume (vph)	286	675	325	749	0	87
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	14.2	45.0	26.3	26.3	5.0	5.0
Actuated g/C Ratio	0.24	0.75	0.44	0.44	0.08	0.08
v/c Ratio	0.72	0.27	0.22	0.83	0.09	0.39
Control Delay	14.7	0.1	11.9	17.0	26.8	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	0.1	11.9	17.0	26.8	9.5
LOS	B	A	B	B	C	A
Approach Delay		4.5	15.5		11.6	
Approach LOS		A	B		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 10.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 103.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	286	675	0	0	325	749	12	0	87	0	0	0
Future Volume (veh/h)	286	675	0	0	325	749	12	0	87	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	308	726	0	0	349	805	13	0	29			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	366	2708	0	0	1706	761	151	0	134			
Arrive On Green	0.14	0.50	0.00	0.00	0.47	0.47	0.08	0.00	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	308	726	0	0	349	805	13	0	29			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	10.0	6.9	0.0	0.0	3.4	28.4	0.4	0.0	1.0			
Cycle Q Clear(g_c), s	10.0	6.9	0.0	0.0	3.4	28.4	0.4	0.0	1.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	366	2708	0	0	1706	761	151	0	134			
V/C Ratio(X)	0.84	0.27	0.00	0.00	0.20	1.06	0.09	0.00	0.22			
Avail Cap(c_a), veh/h	558	2708	0	0	1706	761	151	0	134			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.0	5.5	0.0	0.0	9.2	15.8	25.4	0.0	25.7			
Incr Delay (d2), s/veh	4.0	0.2	0.0	0.0	0.2	47.8	1.1	0.0	3.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	0.8	0.0	0.0	1.1	17.6	0.2	0.0	0.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	5.7	0.0	0.0	9.5	63.6	26.5	0.0	29.3			
LnGrp LOS	C	A	A	A	A	F	C	A	C			
Approach Vol, veh/h		1034			1154			42				
Approach Delay, s/veh		12.6			47.2			28.5				
Approach LOS		B			D			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			16.6	33.4		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		8.9			12.0	30.4		3.0				
Green Ext Time (p_c), s		3.1			0.3	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					30.8							
HCM 6th LOS					C							

Timings  
4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	183	1185	974	743	332	5	449
Future Volume (vph)	183	1185	974	743	332	5	449
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	15.1	66.5	46.9	46.9	32.0	32.0	32.0
Actuated g/C Ratio	0.14	0.60	0.43	0.43	0.29	0.29	0.29
v/c Ratio	0.77	0.57	0.66	0.68	0.35	0.35	0.90
Control Delay	49.4	24.3	29.0	5.3	32.0	32.0	52.0
Queue Delay	0.0	26.6	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	50.9	29.0	5.3	32.0	32.0	52.0
LOS	D	D	C	A	C	C	D
Approach Delay		50.7	18.8			43.4	
Approach LOS		D	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 35.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	183	1185	0	0	974	743	332	5	449	0	0	0
Future Volume (veh/h)	183	1185	0	0	974	743	332	5	449	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	191	1234	0	0	1015	617	350	0	285			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	218	2487	0	0	1904	849	747	0	332			
Arrive On Green	0.24	1.00	0.00	0.00	0.53	0.53	0.21	0.00	0.21			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	191	1234	0	0	1015	617	350	0	285			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	11.2	0.0	0.0	0.0	20.3	32.3	9.3	0.0	18.8			
Cycle Q Clear(g_c), s	11.2	0.0	0.0	0.0	20.3	32.3	9.3	0.0	18.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	218	2487	0	0	1904	849	747	0	332			
V/C Ratio(X)	0.87	0.50	0.00	0.00	0.53	0.73	0.47	0.00	0.86			
Avail Cap(c_a), veh/h	271	2487	0	0	1904	849	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.9	0.0	0.0	0.0	17.1	19.9	38.3	0.0	42.1			
Incr Delay (d2), s/veh	17.0	0.5	0.0	0.0	1.1	5.4	0.5	0.0	8.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.2	0.2	0.0	0.0	7.8	11.9	4.0	0.0	7.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	0.5	0.0	0.0	18.2	25.3	38.8	0.0	50.5			
LnGrp LOS	E	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1425			1632			635				
Approach Delay, s/veh		8.2			20.9			44.0				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.8			17.8	64.0		28.2				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			13.2	34.3		20.8				
Green Ext Time (p_c), s		6.1			0.1	3.5		1.9				

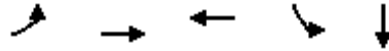
Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
5: Harley Knox Blvd. & Western Way

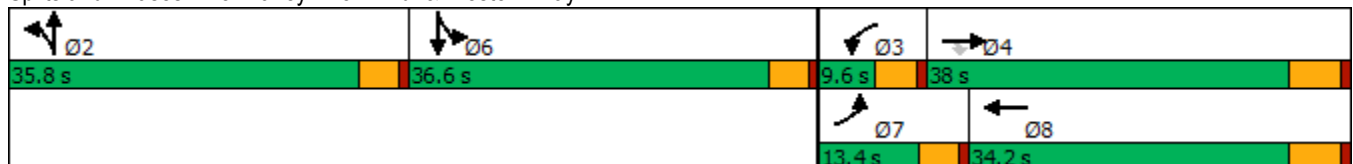


Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↘		
Traffic Volume (vph)	77	691	1045	8	0		
Future Volume (vph)	77	691	1045	8	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	13.4	38.0	34.2	36.6	36.6	35.8	9.6
Total Split (%)	11.2%	31.7%	28.5%	30.5%	30.5%	30%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.8	36.1	25.9	11.7	11.7		
Actuated g/C Ratio	0.17	0.78	0.56	0.25	0.25		
v/c Ratio	0.27	0.18	0.40	0.02	0.06		
Control Delay	24.2	3.2	10.2	20.4	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	24.2	3.2	10.2	20.4	0.1		
LOS	C	A	B	C	A		
Approach Delay		5.3	10.2		3.1		
Approach LOS		A	B		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 46	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 46.1%	ICU Level of Service A
Analysis Period (min) 15	



























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
 5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	77	691	0	0	1045	38	0	0	0	8	0	48
Future Volume (veh/h)	77	691	0	0	1045	38	0	0	0	8	0	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	743	0	0	1124	41	0	0	0	9	0	52
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	139	3129	971	5	2087	76	5	5	0	226	0	201
Arrive On Green	0.08	0.60	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5137	187	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	83	743	0	0	756	409	0	0	0	9	0	52
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1866	1810	1900	0	1810	0	1610
Q Serve(g_s), s	1.7	2.5	0.0	0.0	6.4	6.4	0.0	0.0	0.0	0.2	0.0	1.1
Cycle Q Clear(g_c), s	1.7	2.5	0.0	0.0	6.4	6.4	0.0	0.0	0.0	0.2	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	3129	971	5	1405	758	5	5	0	226	0	201
V/C Ratio(X)	0.60	0.24	0.00	0.00	0.54	0.54	0.00	0.00	0.00	0.04	0.00	0.26
Avail Cap(c_a), veh/h	417	4369	1356	237	2569	1387	1477	1551	0	1515	0	1348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	3.5	0.0	0.0	8.6	8.6	0.0	0.0	0.0	14.7	0.0	15.1
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.0	0.0	1.4	1.5	0.0	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	3.6	0.0	0.0	8.9	9.2	0.0	0.0	0.0	14.8	0.0	15.8
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		826			1165			0				61
Approach Delay, s/veh		5.1			9.0			0.0				15.7
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	28.9		9.4	7.5	21.3				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		31.2	5.0	32.2		32.0	8.8	28.4				
Max Q Clear Time (g_c+I1), s		0.0	0.0	4.5		3.1	3.7	8.4				
Green Ext Time (p_c), s		0.0	0.0	5.0		0.3	0.0	7.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									



Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

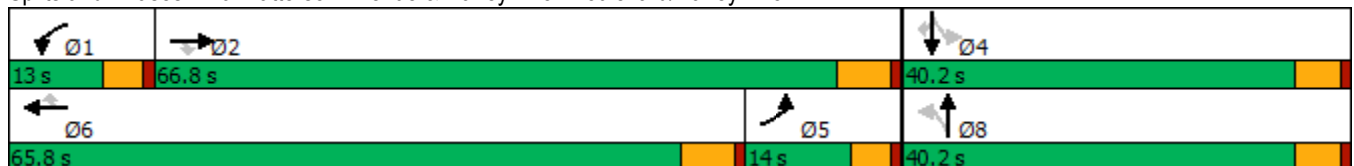


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↙	↗
Traffic Volume (vph)	27	627	12	19	919	30	62	9	28	4	23
Future Volume (vph)	27	627	12	19	919	30	62	9	28	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	14.0	66.8	66.8	13.0	65.8	65.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	11.7%	55.7%	55.7%	10.8%	54.8%	54.8%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	33.7	33.7	7.4	31.8	31.8		16.7		16.7	16.7
Actuated g/C Ratio	0.14	0.62	0.62	0.14	0.59	0.59		0.31		0.31	0.31
v/c Ratio	0.11	0.21	0.01	0.09	0.47	0.03		0.21		0.08	0.04
Control Delay	34.8	8.6	0.0	35.4	12.6	0.4		21.0		22.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	34.8	8.6	0.0	35.4	12.6	0.4		21.0		22.0	0.1
LOS	C	A	A	D	B	A		C		C	A
Approach Delay		9.5			12.7			21.0		12.7	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 54.2	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

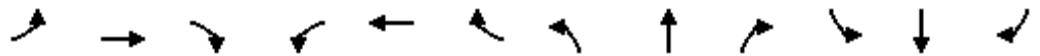


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	27	627	12	19	919	30	62	9	16	28	4	23
Future Volume (veh/h)	27	627	12	19	919	30	62	9	16	28	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	682	12	21	999	33	67	10	15	30	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	60	2634	817	46	1722	768	285	47	41	356	40	273
Arrive On Green	0.03	0.51	0.51	0.03	0.48	0.48	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	5187	1609	1810	3610	1610	978	276	244	1334	235	1610
Grp Volume(v), veh/h	29	682	12	21	999	33	92	0	0	34	0	22
Grp Sat Flow(s),veh/h/ln	1810	1729	1609	1810	1805	1610	1498	0	0	1569	0	1610
Q Serve(g_s), s	0.8	3.9	0.2	0.6	10.4	0.6	1.9	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.8	3.9	0.2	0.6	10.4	0.6	2.7	0.0	0.0	0.8	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	0.73		0.16	0.88		1.00
Lane Grp Cap(c), veh/h	60	2634	817	46	1722	768	373	0	0	396	0	273
V/C Ratio(X)	0.49	0.26	0.01	0.46	0.58	0.04	0.25	0.00	0.00	0.09	0.00	0.08
Avail Cap(c_a), veh/h	327	6076	1884	292	4159	1855	1119	0	0	1129	0	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	7.3	6.4	25.0	9.8	7.3	19.1	0.0	0.0	18.3	0.0	18.2
Incr Delay (d2), s/veh	2.3	0.1	0.0	2.7	0.4	0.0	0.3	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	0.0	0.3	2.9	0.1	0.9	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	7.3	6.4	27.7	10.3	7.3	19.4	0.0	0.0	18.4	0.0	18.3
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	B
Approach Vol, veh/h		723			1053			92				56
Approach Delay, s/veh		8.1			10.5			19.4				18.4
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	32.2		13.9	7.5	30.6		13.9				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	9.4	* 60		35.1				
Max Q Clear Time (g_c+I1), s	2.6	5.9		2.8	2.8	12.4		4.7				
Green Ext Time (p_c), s	0.0	7.3		0.2	0.0	12.4		0.5				

Intersection Summary

HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1382	252	18	1708	0	68
Future Vol, veh/h	1382	252	18	1708	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1455	265	19	1798	0	72

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1720	0	860
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	373	-	303
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	373	-	303
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	20.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	303	-	-	373	-
HCM Lane V/C Ratio	0.236	-	-	0.051	-
HCM Control Delay (s)	20.5	-	-	15.2	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0.9	-	-	0.2	-

Intersection			
Intersection Delay, s/veh	12.8		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1035	23
Demand Flow Rate, veh/h	0	1035	23
Vehicles Circulating, veh/h	11	10	701
Vehicles Exiting, veh/h	1034	714	32
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	13.0	5.0
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.435	0.565
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1035	10	13
Cap Entry Lane, veh/h	1407	750	750
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1035	10	13
Cap Entry, veh/h	1407	750	750
V/C Ratio	0.735	0.013	0.017
Control Delay, s/veh	13.0	4.9	5.0
LOS	B	A	A
95th %tile Queue, veh	7	0	0

Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

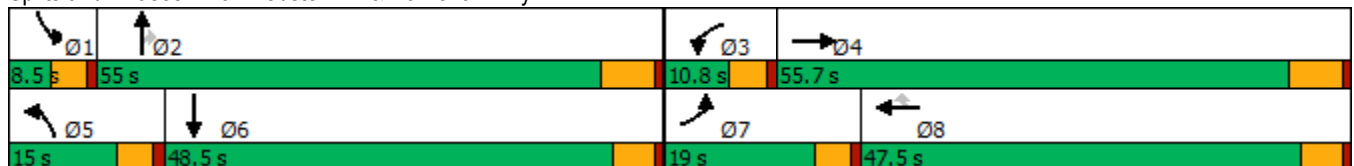


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	174	1217	29	1493	24	115	38	31	13	
Future Volume (vph)	174	1217	29	1493	24	115	38	31	13	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	19.0	55.7	10.8	47.5	47.5	15.0	55.0	55.0	48.5	8.5
Total Split (%)	14.6%	42.8%	8.3%	36.5%	36.5%	11.5%	42.3%	42.3%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.3	53.6	5.8	42.3	42.3	10.1	57.0	57.0	0.0	
Actuated g/C Ratio	0.11	0.41	0.04	0.33	0.33	0.08	0.44	0.44	0.00	
v/c Ratio	0.92	0.63	0.38	0.93	0.04	0.86	0.05	0.04	3.05	
Control Delay	103.7	32.3	73.8	52.9	0.1	104.5	21.1	0.1	978.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.7	32.3	73.8	52.9	0.1	104.5	21.1	0.1	978.4	
LOS	F	C	E	D	A	F	C	A	F	
Approach Delay		40.9		52.4			69.6		978.4	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 129.5  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.05  
 Intersection Signal Delay: 96.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 72.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕	↖	↖	↕	↖		↕↕	
Traffic Volume (veh/h)	174	1217	59	29	1493	24	115	38	31	43	13	118
Future Volume (veh/h)	174	1217	59	29	1493	24	115	38	31	43	13	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	183	1281	55	31	1572	22	121	40	17	45	14	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2547	109	56	2116	657	153	498	421	0	27	172
Arrive On Green	0.12	0.50	0.50	0.03	0.41	0.41	0.08	0.26	0.26	0.00	0.12	0.12
Sat Flow, veh/h	1810	5100	219	1810	5187	1610	1810	1900	1608	0	219	1424
Grp Volume(v), veh/h	183	869	467	31	1572	22	121	40	17	0	0	105
Grp Sat Flow(s),veh/h/ln	1810	1729	1861	1810	1729	1610	1810	1900	1608	0	0	1644
Q Serve(g_s), s	8.1	13.7	13.7	1.4	21.1	0.7	5.4	1.3	0.6	0.0	0.0	4.9
Cycle Q Clear(g_c), s	8.1	13.7	13.7	1.4	21.1	0.7	5.4	1.3	0.6	0.0	0.0	4.9
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	0.00		0.87
Lane Grp Cap(c), veh/h	221	1727	929	56	2116	657	153	498	421	0	0	199
V/C Ratio(X)	0.83	0.50	0.50	0.55	0.74	0.03	0.79	0.08	0.04	0.00	0.00	0.53
Avail Cap(c_a), veh/h	318	2092	1125	137	2687	834	230	1133	959	0	0	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	13.7	13.7	39.1	20.6	14.5	36.7	22.8	22.5	0.0	0.0	33.8
Incr Delay (d2), s/veh	7.7	0.2	0.4	3.2	0.9	0.0	5.3	0.1	0.0	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.4	4.8	0.6	7.4	0.2	2.5	0.6	0.2	0.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	13.9	14.1	42.3	21.4	14.6	42.1	22.8	22.6	0.0	0.0	35.9
LnGrp LOS	D	B	B	D	C	B	D	C	C	A	A	D
Approach Vol, veh/h		1519			1625			178				105
Approach Delay, s/veh		17.5			21.7			35.9				35.9
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	27.6	7.1	47.1	11.5	16.1	14.6	39.6				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	48.8	6.2	49.5	10.4	* 43	14.4	* 42				
Max Q Clear Time (g_c+1), s	0.0	3.3	3.4	15.7	7.4	6.9	10.1	23.1				
Green Ext Time (p_c), s	0.0	0.2	0.0	9.8	0.0	0.6	0.1	10.3				

Intersection Summary

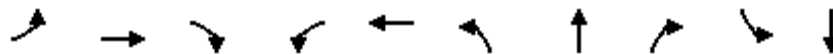
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/09/2019

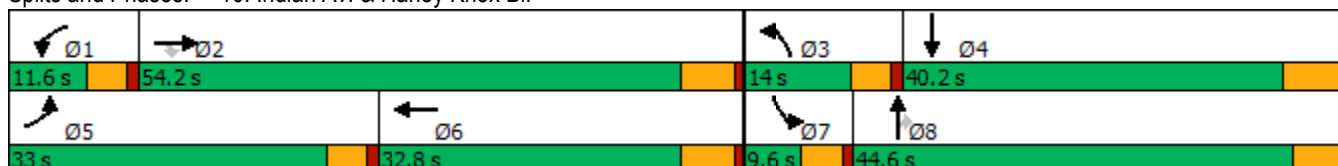


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑↑↑	↗	↙	↑↑↑	↙↗	↑↑	↗	↙	↑↗
Traffic Volume (vph)	276	302	51	15	690	117	276	21	12	73
Future Volume (vph)	276	302	51	15	690	117	276	21	12	73
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.4	39.4	39.4	5.8	19.8	7.6	25.8	25.8	5.3	13.8
Actuated g/C Ratio	0.22	0.48	0.48	0.07	0.24	0.09	0.31	0.31	0.06	0.17
v/c Ratio	0.75	0.13	0.07	0.13	0.65	0.40	0.27	0.04	0.11	0.37
Control Delay	43.8	14.1	0.2	46.7	32.0	43.5	23.6	0.1	48.2	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	14.1	0.2	46.7	32.0	43.5	23.6	0.1	48.2	12.7
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		26.0			32.3		28.1			14.4
Approach LOS		C			C		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 82  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 27.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	302	51	15	690	45	117	276	21	12	73	160
Future Volume (veh/h)	276	302	51	15	690	45	117	276	21	12	73	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	303	332	42	16	758	34	129	303	15	13	80	146
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	358	2140	664	35	1192	53	250	774	345	29	287	256
Arrive On Green	0.20	0.41	0.41	0.02	0.23	0.23	0.07	0.21	0.21	0.02	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	5089	228	3510	3610	1610	1810	1805	1610
Grp Volume(v), veh/h	303	332	42	16	514	278	129	303	15	13	80	146
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1859	1755	1805	1610	1810	1805	1610
Q Serve(g_s), s	10.1	2.5	1.0	0.5	8.4	8.4	2.2	4.5	0.5	0.4	2.4	5.3
Cycle Q Clear(g_c), s	10.1	2.5	1.0	0.5	8.4	8.4	2.2	4.5	0.5	0.4	2.4	5.3
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	2140	664	35	810	435	250	774	345	29	287	256
V/C Ratio(X)	0.85	0.16	0.06	0.46	0.64	0.64	0.52	0.39	0.04	0.44	0.28	0.57
Avail Cap(c_a), veh/h	818	3997	1241	202	1487	799	525	2253	1005	144	977	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	11.6	11.1	30.5	21.6	21.7	28.1	21.2	19.6	30.6	23.2	24.4
Incr Delay (d2), s/veh	2.2	0.0	0.0	3.4	0.8	1.6	0.6	0.3	0.1	3.9	0.5	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.8	0.3	0.3	3.0	3.4	0.9	1.7	0.2	0.2	1.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	11.6	11.2	33.9	22.5	23.2	28.7	21.5	19.6	34.5	23.7	26.4
LnGrp LOS	C	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		677			808			447			239	
Approach Delay, s/veh		18.2			22.9			23.5			26.0	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	31.7	9.1	16.2	17.0	20.5	5.6	19.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.5	4.5	4.2	7.3	12.1	10.4	2.4	6.5				
Green Ext Time (p_c), s	0.0	2.2	0.1	1.2	0.4	4.3	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
11: Indian Av. & Ramona Exwy.

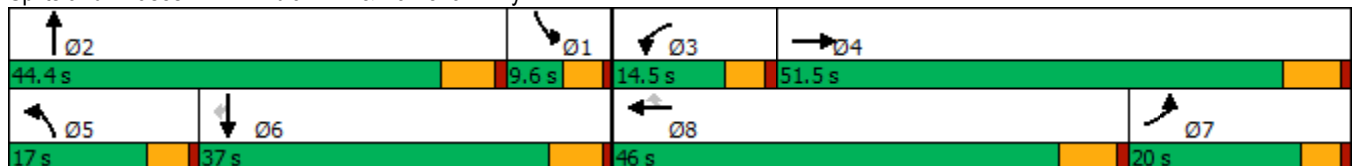


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	153	1046	68	1494	106	91	144	21	53	41
Future Volume (vph)	153	1046	68	1494	106	91	144	21	53	41
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	51.5	14.5	46.0	46.0	17.0	44.4	9.6	37.0	37.0
Total Split (%)	16.7%	42.9%	12.1%	38.3%	38.3%	14.2%	37.0%	8.0%	30.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	44.5	7.9	37.0	37.0	9.2	20.4	6.2	13.7	13.7
Actuated g/C Ratio	0.14	0.49	0.09	0.40	0.40	0.10	0.22	0.07	0.15	0.15
v/c Ratio	0.66	0.47	0.46	0.76	0.15	0.54	0.25	0.18	0.10	0.11
Control Delay	55.2	19.3	55.5	28.3	1.0	55.6	25.6	51.2	37.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	19.3	55.5	28.3	1.0	55.6	25.6	51.2	37.0	0.6
LOS	E	B	E	C	A	E	C	D	D	A
Approach Delay		23.6		27.7			35.3		26.5	
Approach LOS		C		C			D		C	

Intersection Summary



























Cycle Length: 120  
 Actuated Cycle Length: 91.5  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 26.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	153	1046	65	68	1494	106	91	144	48	21	53	41
Future Volume (veh/h)	153	1046	65	68	1494	106	91	144	48	21	53	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	1113	57	72	1589	83	97	153	28	22	56	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	2469	126	93	2121	658	125	383	69	98	451	201
Arrive On Green	0.11	0.49	0.49	0.05	0.41	0.41	0.07	0.13	0.13	0.05	0.13	0.13
Sat Flow, veh/h	1810	5053	259	1810	5187	1610	1810	3058	548	1810	3610	1610
Grp Volume(v), veh/h	163	761	409	72	1589	83	97	89	92	22	56	35
Grp Sat Flow(s),veh/h/ln	1810	1729	1853	1810	1729	1610	1810	1805	1801	1810	1805	1610
Q Serve(g_s), s	7.0	11.5	11.5	3.1	20.8	2.6	4.2	3.6	3.8	0.9	1.1	1.1
Cycle Q Clear(g_c), s	7.0	11.5	11.5	3.1	20.8	2.6	4.2	3.6	3.8	0.9	1.1	1.1
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	201	1690	906	93	2121	658	125	226	226	98	451	201
V/C Ratio(X)	0.81	0.45	0.45	0.77	0.75	0.13	0.77	0.39	0.41	0.22	0.12	0.17
Avail Cap(c_a), veh/h	349	1962	1052	224	2586	803	281	873	871	113	1411	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	13.4	13.4	37.4	20.1	14.7	36.5	32.1	32.2	36.2	31.0	15.4
Incr Delay (d2), s/veh	3.0	0.2	0.4	5.0	1.0	0.1	3.8	1.1	1.2	0.4	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.7	4.0	1.4	7.3	0.8	1.9	1.6	1.6	0.4	0.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	13.6	13.7	42.4	21.1	14.8	40.4	33.2	33.4	36.6	31.2	15.8
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1333			1744			278			113	
Approach Delay, s/veh		16.6			21.7			35.8			27.4	
Approach LOS		B			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	15.8	8.7	45.2	10.1	15.8	15.1	38.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	5.0	* 39	9.9	45.3	12.4	31.2	15.4	* 40				
Max Q Clear Time (g_c+I1), s	2.9	5.8	5.1	13.5	6.2	3.1	9.0	22.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	8.1	0.0	0.4	0.1	9.8				

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

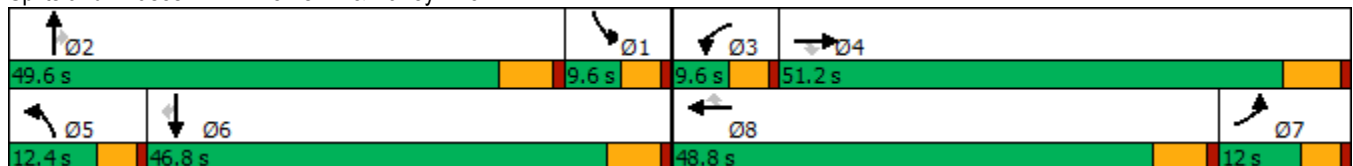


Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations	↘	↑↑	↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	
Traffic Volume (vph)	255	43	31	212	148	162	1207	5	28	648	358	
Future Volume (vph)	255	43	31	212	148	162	1207	5	28	648	358	
Turn Type	Prot	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		8		5	2		1	6		3
Permitted Phases			4		8			2			6	
Detector Phase	7	4	4	8	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	47.2	47.2	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8	9.6
Total Split (s)	12.0	51.2	51.2	48.8	48.8	12.4	49.6	49.6	9.6	46.8	46.8	9.6
Total Split (%)	10.0%	42.7%	42.7%	40.7%	40.7%	10.3%	41.3%	41.3%	8.0%	39.0%	39.0%	8%
Yellow Time (s)	3.6	5.2	5.2	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	27.4	27.4	14.8	14.8	7.8	29.8	29.8	5.4	20.2	20.2	
Actuated g/C Ratio	0.11	0.37	0.37	0.20	0.20	0.11	0.41	0.41	0.07	0.28	0.28	
v/c Ratio	1.34	0.03	0.05	0.21	0.33	0.45	0.59	0.01	0.11	0.47	0.52	
Control Delay	213.7	16.5	0.1	25.0	5.0	40.2	20.0	0.0	41.8	23.1	5.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	213.7	16.5	0.1	25.0	5.0	40.2	20.0	0.0	41.8	23.1	5.5	
LOS	F	B	A	C	A	D	C	A	D	C	A	
Approach Delay		168.0		16.8			22.3			17.5		
Approach LOS		F		B			C			B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 73.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.34  
 Intersection Signal Delay: 35.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 67.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖↗	↑↑↑	↗	↖↗	↑↑↑	↗	↖↗	↑↑↑	↗
Traffic Volume (veh/h)	255	43	31	0	212	148	162	1207	5	28	648	358
Future Volume (veh/h)	255	43	31	0	212	148	162	1207	5	28	648	358
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	263	44	19	0	219	63	167	1244	4	29	668	264
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1228	548	5	760	236	258	1908	592	109	1780	553
Arrive On Green	0.11	0.34	0.34	0.00	0.15	0.15	0.07	0.37	0.37	0.03	0.34	0.34
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	263	44	19	0	219	63	167	1244	4	29	668	264
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.4	0.6	0.5	0.0	2.6	2.4	3.2	13.6	0.1	0.6	6.6	5.0
Cycle Q Clear(g_c), s	7.4	0.6	0.5	0.0	2.6	2.4	3.2	13.6	0.1	0.6	6.6	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1228	548	5	760	236	258	1908	592	109	1780	553
V/C Ratio(X)	1.34	0.04	0.03	0.00	0.29	0.27	0.65	0.65	0.01	0.27	0.38	0.48
Avail Cap(c_a), veh/h	196	2382	1063	257	3271	1015	402	3332	1034	257	3119	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	15.0	15.0	0.0	25.9	25.9	30.7	17.9	10.2	32.3	16.9	5.7
Incr Delay (d2), s/veh	182.9	0.0	0.0	0.0	0.2	0.6	1.0	0.4	0.0	0.5	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.2	0.2	0.0	1.0	0.9	1.3	4.7	0.0	0.2	2.3	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.3	15.0	15.1	0.0	26.1	26.5	31.8	18.3	10.2	32.8	17.0	6.3
LnGrp LOS	F	B	B	A	C	C	C	B	B	C	B	A
Approach Vol, veh/h		326			282			1415			961	
Approach Delay, s/veh		175.0			26.2			19.9			14.5	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	30.9	0.0	29.4	9.6	29.2	13.6	15.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	* 44	5.0	45.0	7.8	41.0	7.4	* 43				
Max Q Clear Time (g_c+I1), s	2.6	15.6	0.0	2.6	5.2	8.6	9.4	4.6				
Green Ext Time (p_c), s	0.0	9.5	0.0	0.3	0.1	5.6	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

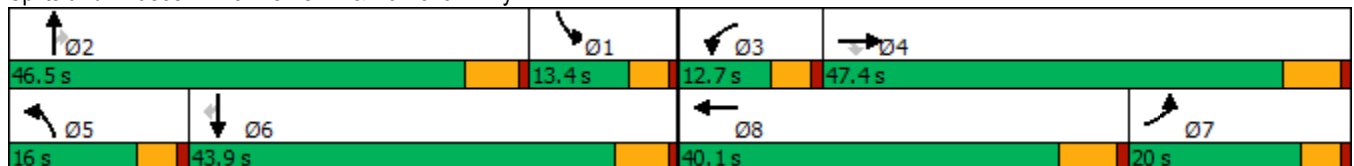
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	404	620	91	110	1230	290	780	63	130	377	148	
Future Volume (vph)	404	620	91	110	1230	290	780	63	130	377	148	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	47.4	47.4	12.7	40.1	16.0	46.5	46.5	13.4	43.9	43.9	
Total Split (%)	16.7%	39.5%	39.5%	10.6%	33.4%	13.3%	38.8%	38.8%	11.2%	36.6%	36.6%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	15.2	41.9	41.9	7.3	34.1	11.3	31.3	31.3	7.9	27.8	27.8	
Actuated g/C Ratio	0.14	0.38	0.38	0.07	0.31	0.10	0.29	0.29	0.07	0.25	0.25	
v/c Ratio	0.87	0.33	0.13	0.49	0.94	0.84	0.79	0.11	0.54	0.43	0.29	
Control Delay	66.5	25.6	0.4	58.5	49.8	69.8	42.3	0.4	58.8	35.3	5.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	66.5	25.6	0.4	58.5	49.8	69.8	42.3	0.4	58.8	35.3	5.0	
LOS	E	C	A	E	D	E	D	A	E	D	A	
Approach Delay		38.4			50.4		47.0			33.1		
Approach LOS		D			D		D			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 44.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 83.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	620	91	110	1230	208	290	780	63	130	377	148
Future Volume (veh/h)	404	620	91	110	1230	208	290	780	63	130	377	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	421	646	69	115	1281	190	302	812	36	135	393	124
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	481	2131	662	174	1406	209	362	994	442	196	863	384
Arrive On Green	0.14	0.41	0.41	0.05	0.31	0.31	0.10	0.28	0.28	0.06	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	3510	4559	676	3510	3610	1605	3510	3610	1608
Grp Volume(v), veh/h	421	646	69	115	972	499	302	812	36	135	393	124
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1729	1778	1755	1805	1605	1755	1805	1608
Q Serve(g_s), s	12.6	9.0	2.8	3.5	29.0	29.0	9.1	22.6	1.4	4.1	10.0	4.6
Cycle Q Clear(g_c), s	12.6	9.0	2.8	3.5	29.0	29.0	9.1	22.6	1.4	4.1	10.0	4.6
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	2131	662	174	1067	548	362	994	442	196	863	384
V/C Ratio(X)	0.88	0.30	0.10	0.66	0.91	0.91	0.83	0.82	0.08	0.69	0.46	0.32
Avail Cap(c_a), veh/h	503	2131	662	265	1091	561	373	1368	608	288	1280	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	21.3	19.5	50.2	35.7	35.7	47.3	36.4	18.4	49.8	34.9	15.3
Incr Delay (d2), s/veh	14.6	0.1	0.1	1.6	11.2	18.9	13.7	2.8	0.1	1.6	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	3.4	1.0	1.5	13.0	14.6	4.5	9.8	0.7	1.8	4.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	21.4	19.5	51.8	46.9	54.6	60.9	39.2	18.5	51.4	35.3	15.8
LnGrp LOS	E	C	B	D	D	D	E	D	B	D	D	B
Approach Vol, veh/h		1136			1586			1150			652	
Approach Delay, s/veh		35.6			49.7			44.3			34.9	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	35.4	9.9	50.3	15.7	31.5	20.9	39.3				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	8.8	* 41	8.1	41.2	11.4	38.1	15.4	* 34				
Max Q Clear Time (g_c+I1), s	6.1	24.6	5.5	11.0	11.1	12.0	14.6	31.0				
Green Ext Time (p_c), s	0.1	4.8	0.0	4.4	0.0	2.8	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Perris Bl. & Morgan St.

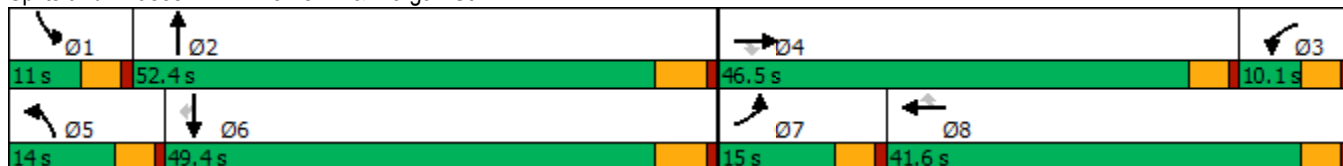
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	16	21	17	27	3	36	1032	5	499	105	
Future Volume (vph)	38	16	21	17	27	3	36	1032	5	499	105	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8	
Total Split (s)	15.0	46.5	46.5	10.1	41.6	41.6	14.0	52.4	11.0	49.4	49.4	
Total Split (%)	12.5%	38.8%	38.8%	8.4%	34.7%	34.7%	11.7%	43.7%	9.2%	41.2%	41.2%	
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	10.0	19.8	19.8	9.1	18.4	18.4	8.9	34.0	8.1	31.8	31.8	
Actuated g/C Ratio	0.20	0.39	0.39	0.18	0.36	0.36	0.18	0.67	0.16	0.63	0.63	
v/c Ratio	0.12	0.01	0.03	0.06	0.05	0.00	0.13	0.35	0.02	0.25	0.11	
Control Delay	32.7	21.2	0.1	32.6	22.0	0.0	33.9	12.2	38.2	14.8	3.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.7	21.2	0.1	32.6	22.0	0.0	33.9	12.2	38.2	14.8	3.7	
LOS	C	C	A	C	C	A	C	B	D	B	A	
Approach Delay		21.1			24.6			12.9		13.1		
Approach LOS		C			C			B		B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 50.8  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.35  
 Intersection Signal Delay: 13.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 45.8%  
 ICU Level of Service A  
 Analysis Period (min) 15




























Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	38	16	21	17	27	3	36	1032	19	5	499	105
Future Volume (veh/h)	38	16	21	17	27	3	36	1032	19	5	499	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	18	8	19	31	1	41	1173	20	6	567	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	559	249	45	255	216	80	2104	36	14	1316	575
Arrive On Green	0.05	0.15	0.15	0.02	0.13	0.13	0.04	0.40	0.40	0.01	0.36	0.36
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5252	90	1810	3610	1576
Grp Volume(v), veh/h	43	18	8	19	31	1	41	772	421	6	567	108
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1884	1810	1805	1576
Q Serve(g_s), s	1.1	0.2	0.1	0.5	0.7	0.0	1.1	8.2	8.2	0.2	5.6	2.2
Cycle Q Clear(g_c), s	1.1	0.2	0.1	0.5	0.7	0.0	1.1	8.2	8.2	0.2	5.6	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	82	559	249	45	255	216	80	1385	755	14	1316	575
V/C Ratio(X)	0.52	0.03	0.03	0.42	0.12	0.00	0.52	0.56	0.56	0.41	0.43	0.19
Avail Cap(c_a), veh/h	395	3177	1417	209	1477	1252	357	3385	1844	243	3306	1444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	17.1	8.8	22.9	18.1	17.9	22.3	11.0	11.0	23.5	11.4	10.3
Incr Delay (d2), s/veh	1.9	0.0	0.1	2.3	0.2	0.0	1.9	0.4	0.6	6.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	0.2	0.3	0.0	0.4	2.2	2.5	0.1	1.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	17.1	8.9	25.2	18.3	17.9	24.2	11.4	11.7	30.4	11.6	10.5
LnGrp LOS	C	B	A	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		69			51			1234			681	
Approach Delay, s/veh		20.5			20.9			11.9			11.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	24.9	5.8	12.0	6.7	23.2	6.8	11.0				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	46.6	5.5	41.9	9.4	43.6	10.4	37.0				
Max Q Clear Time (g_c+1), s	2.2	10.2	2.5	2.2	3.1	7.6	3.1	2.7				
Green Ext Time (p_c), s	0.0	8.8	0.0	0.1	0.0	4.1	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.3									
HCM 6th LOS			B									



Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

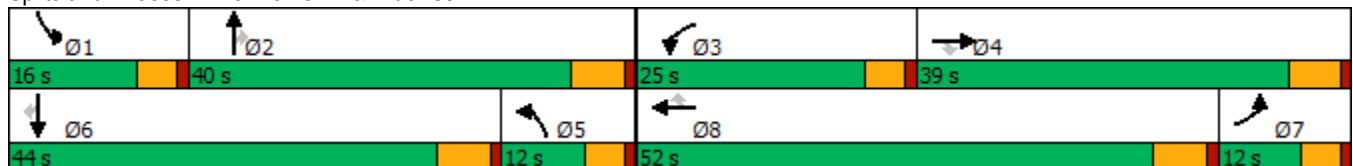
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	155	17	162	313	269	44	840	78	78	401	42
Future Volume (vph)	39	155	17	162	313	269	44	840	78	78	401	42
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	12.0	39.0	39.0	25.0	52.0	52.0	12.0	40.0	40.0	16.0	44.0	44.0
Total Split (%)	10.0%	32.5%	32.5%	20.8%	43.3%	43.3%	10.0%	33.3%	33.3%	13.3%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.4	13.9	13.9	12.0	23.0	23.0	11.9	20.5	20.5	8.1	19.1	19.1
Actuated g/C Ratio	0.11	0.19	0.19	0.16	0.31	0.31	0.16	0.28	0.28	0.11	0.26	0.26
v/c Ratio	0.19	0.23	0.04	0.56	0.28	0.40	0.15	0.59	0.14	0.40	0.30	0.08
Control Delay	38.4	29.9	0.2	41.4	25.0	5.7	33.9	26.8	0.5	44.1	26.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	29.9	0.2	41.4	25.0	5.7	33.9	26.8	0.5	44.1	26.9	0.3
LOS	D	C	A	D	C	A	C	C	A	D	C	A
Approach Delay		29.1			21.6			25.0			27.3	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 74.3  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 24.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 55.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	155	17	162	313	269	44	840	78	78	401	42
Future Volume (veh/h)	39	155	17	162	313	269	44	840	78	78	401	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	157	5	164	316	137	44	848	47	79	405	27
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	173	634	283	211	634	283	259	1452	445	113	925	287
Arrive On Green	0.10	0.18	0.18	0.12	0.18	0.18	0.14	0.28	0.28	0.06	0.18	0.18
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	5187	1588	1810	5187	1610
Grp Volume(v), veh/h	39	157	5	164	316	137	44	848	47	79	405	27
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1729	1588	1810	1729	1610
Q Serve(g_s), s	1.1	2.1	0.1	5.0	4.5	3.1	1.2	8.0	1.3	2.4	4.0	0.8
Cycle Q Clear(g_c), s	1.1	2.1	0.1	5.0	4.5	3.1	1.2	8.0	1.3	2.4	4.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	634	283	211	634	283	259	1452	445	113	925	287
V/C Ratio(X)	0.23	0.25	0.02	0.78	0.50	0.48	0.17	0.58	0.11	0.70	0.44	0.09
Avail Cap(c_a), veh/h	235	2105	939	648	2929	1306	259	3115	954	362	3479	1080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	20.2	6.5	24.4	21.2	10.4	21.4	17.6	15.2	26.2	20.9	19.6
Incr Delay (d2), s/veh	0.2	0.2	0.0	2.3	0.6	1.3	0.1	0.4	0.1	2.9	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.0	2.0	1.7	1.5	0.5	2.7	0.4	1.0	1.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	20.4	6.5	26.8	21.8	11.7	21.5	18.0	15.3	29.0	21.2	19.7
LnGrp LOS	C	C	A	C	C	B	C	B	B	C	C	B
Approach Vol, veh/h		201			617			939			511	
Approach Delay, s/veh		20.8			20.9			18.1			22.3	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	21.7	11.2	15.8	14.0	16.0	11.2	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	11.4	34.2	20.4	33.2	7.4	* 38	7.4	* 46				
Max Q Clear Time (g_c+I1), s	4.4	10.0	7.0	4.1	3.2	6.0	3.1	6.5				
Green Ext Time (p_c), s	0.0	5.8	0.2	0.9	0.0	2.7	0.0	2.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	11	65	354	4	1		
Future Volume (vph)	11	65	354	4	1		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	9.6	31.8	36.0	78.6	42.6	9.6	31.8
Total Split (%)	8.0%	26.5%	30.0%	65.5%	35.5%	8%	27%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effect Green (s)	7.8	17.4	20.7	22.7	17.6		
Actuated g/C Ratio	0.17	0.39	0.46	0.50	0.39		
v/c Ratio	0.04	0.06	0.50	0.00	0.01		
Control Delay	32.8	0.1	19.4	7.8	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.8	0.1	19.4	7.8	0.0		
LOS	C	A	B	A	A		
Approach Delay				19.3			
Approach LOS				B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 45.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 43.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↑↗			↑↗	
Traffic Volume (veh/h)	11	0	65	0	0	0	354	4	0	0	1	6
Future Volume (veh/h)	11	0	65	0	0	0	354	4	0	0	1	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	13	0	59	0	0	0	412	5	0	0	1	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	31	286	242	6	6	0	518	1713	0	0	62	55
Arrive On Green	0.02	0.00	0.15	0.00	0.00	0.00	0.29	0.47	0.00	0.00	0.03	0.03
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	13	0	59	0	0	0	412	5	0	0	1	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.2	0.0	1.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	1.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	31	286	242	6	6	0	518	1713	0	0	62	55
V/C Ratio(X)	0.42	0.00	0.24	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.02	0.13
Avail Cap(c_a), veh/h	303	1653	1401	303	1729	0	1901	8843	0	0	2247	2005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	11.2	0.0	0.0	0.0	9.8	4.1	0.0	0.0	13.9	14.0
Incr Delay (d2), s/veh	3.3	0.0	0.5	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	11.7	0.0	0.0	0.0	10.9	4.1	0.0	0.0	14.0	15.0
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		72			0			417				8
Approach Delay, s/veh		12.8			0.0			10.8				14.9
Approach LOS		B						B				B
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		19.6	0.0	10.3	13.2	6.4	5.1	5.2				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		73.2	5.0	26.0	31.4	37.2	5.0	* 27				
Max Q Clear Time (g_c+I1), s		2.0	0.0	3.0	8.3	2.1	2.2	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.1	0.6	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	28	52	362	57	6
Future Vol, veh/h	4	28	52	362	57	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	32	60	416	66	7
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8	7.9	8.3
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	76%
Vol Right, %	0%	0%	0%	0%	100%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	181	181	4	28	38	25
LT Vol	52	0	0	4	0	0	0
Through Vol	0	181	181	0	0	38	19
RT Vol	0	0	0	0	28	0	6
Lane Flow Rate	60	208	208	5	32	44	29
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.088	0.276	0.177	0.008	0.044	0.065	0.041
Departure Headway (Hd)	5.273	4.772	3.069	6.158	4.957	5.338	5.169
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	684	757	1175	582	723	672	694
Service Time	2.973	2.472	0.769	3.884	2.684	3.059	2.89
HCM Lane V/C Ratio	0.088	0.275	0.177	0.009	0.044	0.065	0.042
HCM Control Delay	8.5	9.3	6.4	8.9	7.9	8.4	8.1
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	1.1	0.6	0	0.1	0.2	0.1

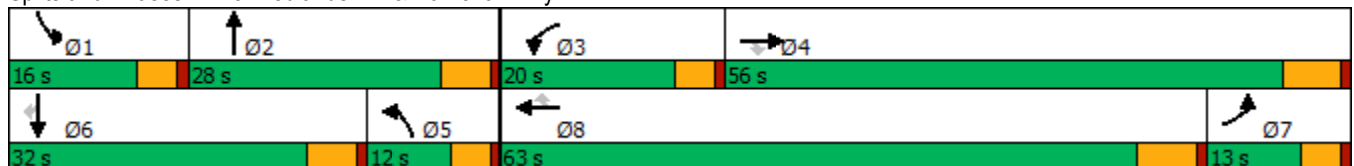
Timings  
18: Redlands Av. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	30	812	23	83	1606	368	33	6	51	1	10	
Future Volume (vph)	30	812	23	83	1606	368	33	6	51	1	10	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4	
Total Split (s)	13.0	56.0	56.0	20.0	63.0	63.0	12.0	28.0	16.0	32.0	32.0	
Total Split (%)	10.8%	46.7%	46.7%	16.7%	52.5%	52.5%	10.0%	23.3%	13.3%	26.7%	26.7%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	7.4	43.5	43.5	9.8	48.5	48.5	10.9	13.8	8.3	13.8	13.8	
Actuated g/C Ratio	0.10	0.56	0.56	0.13	0.63	0.63	0.14	0.18	0.11	0.18	0.18	
v/c Ratio	0.18	0.29	0.02	0.38	0.51	0.33	0.13	0.29	0.27	0.00	0.02	
Control Delay	47.7	14.8	0.0	45.9	14.5	2.5	42.0	12.7	46.6	40.0	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	47.7	14.8	0.0	45.9	14.5	2.5	42.0	12.7	46.6	40.0	0.1	
LOS	D	B	A	D	B	A	D	B	D	D	A	
Approach Delay		15.5			13.6			19.7		39.2		
Approach LOS		B			B			B		D		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 14.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.2%  
 ICU Level of Service B  
 Analysis Period (min) 15





























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	30	812	23	83	1606	368	33	6	97	51	1	10
Future Volume (veh/h)	30	812	23	83	1606	368	33	6	97	51	1	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	846	21	86	1673	317	34	6	37	53	1	7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	58	2550	792	112	2593	805	62	27	169	81	227	192
Arrive On Green	0.03	0.49	0.49	0.06	0.50	0.50	0.03	0.12	0.12	0.04	0.12	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	230	1416	1810	1900	1610
Grp Volume(v), veh/h	31	846	21	86	1673	317	34	0	43	53	1	7
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	0	1645	1810	1900	1610
Q Serve(g_s), s	1.2	7.3	0.3	3.5	17.6	5.6	1.4	0.0	1.7	2.1	0.0	0.3
Cycle Q Clear(g_c), s	1.2	7.3	0.3	3.5	17.6	5.6	1.4	0.0	1.7	2.1	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	58	2550	792	112	2593	805	62	0	197	81	227	192
V/C Ratio(X)	0.54	0.33	0.03	0.77	0.65	0.39	0.55	0.00	0.22	0.65	0.00	0.04
Avail Cap(c_a), veh/h	206	3504	1088	378	3997	1241	182	0	504	280	686	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	11.4	3.8	34.1	13.6	4.4	35.0	0.0	29.3	34.6	28.6	28.7
Incr Delay (d2), s/veh	2.9	0.1	0.0	4.1	0.3	0.3	2.9	0.0	0.6	3.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.2	0.1	1.5	5.4	2.3	0.6	0.0	0.7	1.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	11.5	3.8	38.2	13.9	4.7	37.9	0.0	29.9	37.9	28.6	28.8
LnGrp LOS	D	B	A	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		898			2076			77			61	
Approach Delay, s/veh		12.2			13.5			33.4			36.7	
Approach LOS		B			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	14.2	9.2	42.4	7.9	14.2	8.5	43.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	5.4	* 5.4	6.2	* 6.2				
Max Green Setting (Gmax), s	11.4	22.6	15.4	49.8	7.4	* 27	8.4	* 57				
Max Q Clear Time (g_c+I1), s	4.1	3.7	5.5	9.3	3.4	2.3	3.2	19.6				
Green Ext Time (p_c), s	0.0	0.1	0.1	6.0	0.0	0.0	0.0	17.3				

Intersection Summary

HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘			↕			↕			↖	↗
Traffic Vol, veh/h	34	0	0	0	0	0	0	0	0	0	0	49
Future Vol, veh/h	34	0	0	0	0	0	0	0	0	0	0	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	0	0	0	0	0	0	0	0	0	0	53
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.1	0	0	6.8
HCM LOS	A	-	-	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	0%	0%	0%
Vol Thru, %	100%	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	34	0	0	0	49
LT Vol	0	34	0	0	0	0
Through Vol	0	0	0	0	0	0
RT Vol	0	0	0	0	0	49
Lane Flow Rate	0	37	0	0	0	53
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0	0.052	0	0	0	0.057
Departure Headway (Hd)	4.605	5.093	4.593	4.622	4.565	3.865
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	705	0	0	0	924
Service Time	2.652	2.813	2.313	2.658	2.303	1.602
HCM Lane V/C Ratio	0	0.052	0	0	0	0.057
HCM Control Delay	7.7	8.1	7.3	7.7	7.3	6.8
HCM Lane LOS	N	A	N	N	N	A
HCM 95th-tile Q	0	0.2	0	0	0	0.2



Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1027	1090	1635	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1027	1090	1635	-	-	-
Mov Cap-2 Maneuver	1027	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1635	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↗		↖		↗		↔	
Traffic Vol, veh/h	0	357	11	171	727	0	48	0	203	0	0	0
Future Vol, veh/h	0	357	11	171	727	0	48	0	203	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	120	-	-	150	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	388	12	186	790	0	52	0	221	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	400	0	0	1155	-	388	1667	1562	395
Stage 1	-	-	-	-	-	-	388	-	-	1162	1162	-
Stage 2	-	-	-	-	-	-	767	-	-	505	400	-
Critical Hdwy	-	-	-	4.1	-	-	7.3	-	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	-	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	-	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	-	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1170	-	-	165	0	665	71	113	610
Stage 1	0	-	-	-	-	-	640	0	-	211	272	-
Stage 2	0	-	-	-	-	-	365	0	-	553	605	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1170	-	-	145	-	665	42	95	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	145	-	-	42	95	-
Stage 1	-	-	-	-	-	-	640	-	-	211	229	-
Stage 2	-	-	-	-	-	-	307	-	-	370	605	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.6			18.9			0		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	145	665	-	-	1170	-	-	-
HCM Lane V/C Ratio	0.36	0.332	-	-	0.159	-	-	-
HCM Control Delay (s)	43.2	13.1	-	-	8.7	-	-	0
HCM Lane LOS	E	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	1.5	1.5	-	-	0.6	-	-	-

Intersection						
Int Delay, s/veh	4.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	530	19	220	847	33	181
Future Vol, veh/h	530	19	220	847	33	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	185	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	624	22	259	996	39	213

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	646	0	1640
Stage 1	-	-	-	-	624
Stage 2	-	-	-	-	1016
Critical Hdwy	-	-	4.1	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	949	-	102
Stage 1	-	-	-	-	538
Stage 2	-	-	-	-	315
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	949	-	74
Mov Cap-2 Maneuver	-	-	-	-	174
Stage 1	-	-	-	-	538
Stage 2	-	-	-	-	229

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	30.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	382	-	-	949	-
HCM Lane V/C Ratio	0.659	-	-	0.273	-
HCM Control Delay (s)	30.9	-	-	10.2	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	4.5	-	-	1.1	-

Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

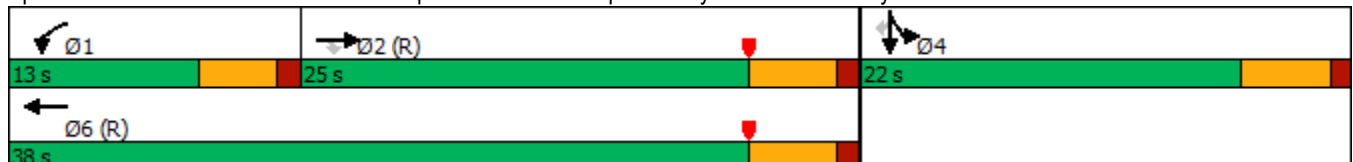


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	365	15	269	181	7	172
Future Volume (vph)	365	15	269	181	7	172
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	9.0	33.5	16.5	16.5
Actuated g/C Ratio	0.33	0.33	0.15	0.56	0.28	0.28
v/c Ratio	0.34	0.03	1.11	0.10	0.89	0.33
Control Delay	16.0	0.1	111.2	11.2	44.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	0.1	111.2	11.2	44.6	4.9
LOS	B	A	F	B	D	A
Approach Delay	15.4			71.0	32.7	
Approach LOS	B			E	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.11  
 Intersection Signal Delay: 40.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 65.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/09/2019



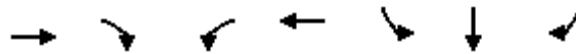
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	365	15	269	181	0	0	0	0	394	7	172
Future Volume (veh/h)	0	365	15	269	181	0	0	0	0	394	7	172
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	406	14	299	201	0				438	8	113
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1235	551	256	2017	0				488	9	442
Arrive On Green	0.00	0.34	0.34	0.24	0.93	0.00				0.27	0.27	0.27
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1779	32	1610
Grp Volume(v), veh/h	0	406	14	299	201	0				446	0	113
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1811	0	1610
Q Serve(g_s), s	0.0	5.0	0.3	8.5	0.2	0.0				14.2	0.0	3.3
Cycle Q Clear(g_c), s	0.0	5.0	0.3	8.5	0.2	0.0				14.2	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1235	551	256	2017	0				497	0	442
V/C Ratio(X)	0.00	0.33	0.03	1.17	0.10	0.00				0.90	0.00	0.26
Avail Cap(c_a), veh/h	0	1235	551	256	2017	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.6	13.1	22.9	0.9	0.0				20.9	0.0	17.0
Incr Delay (d2), s/veh	0.0	0.7	0.1	107.7	0.1	0.0				18.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	0.1	10.5	0.1	0.0				7.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.3	13.2	130.6	1.0	0.0				38.9	0.0	17.3
LnGrp LOS	A	B	B	F	A	A				D	A	B
Approach Vol, veh/h		420			500						559	
Approach Delay, s/veh		15.3			78.5						34.6	
Approach LOS		B			E						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.5		21.5		38.5						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	10.5	7.0		16.2		2.2						
Green Ext Time (p_c), s	0.0	1.3		0.3		0.7						

Intersection Summary

HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D

Timings

2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↙	↘
Traffic Volume (vph)	841	337	366	898	800	3	181
Future Volume (vph)	841	337	366	898	800	3	181
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	44.0	28.0	72.0	38.0	38.0	38.0
Total Split (%)	40.0%	40.0%	25.5%	65.5%	34.5%	34.5%	34.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.0	38.0	23.5	66.0	32.5	32.5	32.5
Actuated g/C Ratio	0.35	0.35	0.21	0.60	0.30	0.30	0.30
v/c Ratio	0.69	0.44	0.97	0.42	0.81	0.81	0.32
Control Delay	34.4	4.7	57.0	4.3	49.7	49.9	9.7
Queue Delay	0.0	0.0	0.0	0.3	59.6	59.4	0.0
Total Delay	34.4	4.7	57.0	4.6	109.2	109.3	9.7
LOS	C	A	E	A	F	F	A
Approach Delay	25.9			19.7		90.9	
Approach LOS	C			B		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 42.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 127.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

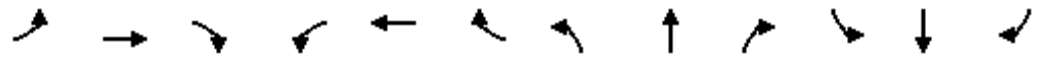
Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘	↖	↗
Traffic Volume (veh/h)	0	841	337	366	898	0	0	0	0	800	3	181
Future Volume (veh/h)	0	841	337	366	898	0	0	0	0	800	3	181
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	858	279	373	916	0				818	0	106
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1247	556	387	2166	0				1069	0	476
Arrive On Green	0.00	0.35	0.35	0.14	0.40	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	858	279	373	916	0				818	0	106
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	22.4	15.1	22.5	20.1	0.0				22.6	0.0	5.5
Cycle Q Clear(g_c), s	0.0	22.4	15.1	22.5	20.1	0.0				22.6	0.0	5.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1247	556	387	2166	0				1069	0	476
V/C Ratio(X)	0.00	0.69	0.50	0.96	0.42	0.00				0.77	0.00	0.22
Avail Cap(c_a), veh/h	0	1247	556	387	2166	0				1069	0	476
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.9	28.5	46.7	19.2	0.0				35.3	0.0	29.2
Incr Delay (d2), s/veh	0.0	3.1	3.2	32.0	0.5	0.0				5.2	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.7	6.0	13.7	8.8	0.0				10.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.0	31.7	78.7	19.7	0.0				40.5	0.0	30.3
LnGrp LOS	A	C	C	E	B	A				D	A	C
Approach Vol, veh/h		1137			1289						924	
Approach Delay, s/veh		33.5			36.7						39.3	
Approach LOS		C			D						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	28.0	44.0		38.0		72.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	23.5	38.0		32.5		66.0						
Max Q Clear Time (g_c+I1), s	24.5	24.4		24.6		22.1						
Green Ext Time (p_c), s	0.0	3.4		2.3		4.0						

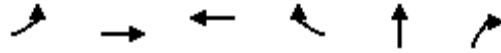
Intersection Summary

HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings

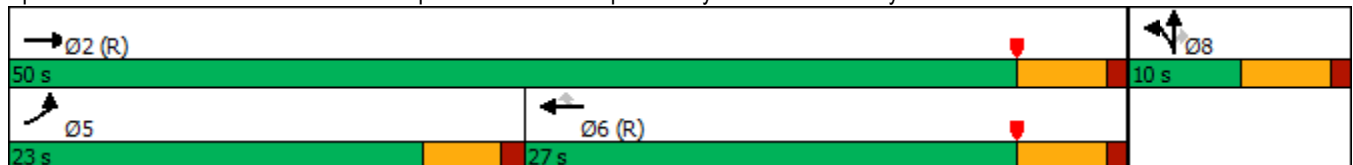


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	237	523	429	575	4	252
Future Volume (vph)	237	523	429	575	4	252
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	45.0	27.0	27.0	5.0	5.0
Actuated g/C Ratio	0.22	0.75	0.45	0.45	0.08	0.08
v/c Ratio	0.69	0.23	0.31	0.68	0.20	0.73
Control Delay	15.8	0.2	12.1	8.9	29.1	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	0.2	12.1	8.9	29.1	16.9
LOS	B	A	B	A	C	B
Approach Delay		5.1	10.3		18.0	
Approach LOS		A	B		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 9.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 65.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.





HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	237	523	0	0	429	575	22	4	252	0	0	0
Future Volume (veh/h)	237	523	0	0	429	575	22	4	252	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	279	615	0	0	505	625	26	5	102			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	340	2708	0	0	1759	784	127	25	134			
Arrive On Green	0.06	0.25	0.00	0.00	0.49	0.49	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1529	294	1610			
Grp Volume(v), veh/h	279	615	0	0	505	625	31	0	102			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1824	0	1610			
Q Serve(g_s), s	9.1	8.1	0.0	0.0	5.0	19.5	1.0	0.0	3.7			
Cycle Q Clear(g_c), s	9.1	8.1	0.0	0.0	5.0	19.5	1.0	0.0	3.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.84		1.00			
Lane Grp Cap(c), veh/h	340	2708	0	0	1759	784	152	0	134			
V/C Ratio(X)	0.82	0.23	0.00	0.00	0.29	0.80	0.20	0.00	0.76			
Avail Cap(c_a), veh/h	558	2708	0	0	1759	784	152	0	134			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.1	8.7	0.0	0.0	9.2	12.9	25.6	0.0	26.9			
Incr Delay (d2), s/veh	1.8	0.2	0.0	0.0	0.4	7.6	3.0	0.0	32.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.1	1.2	0.0	0.0	1.6	6.8	0.5	0.0	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	8.9	0.0	0.0	9.6	20.5	28.7	0.0	59.6			
LnGrp LOS	C	A	A	A	A	C	C	A	E			
Approach Vol, veh/h		894			1130			133				
Approach Delay, s/veh		15.2			15.6			52.4				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			15.8	34.2		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		10.1			11.1	21.5		5.7				
Green Ext Time (p_c), s		2.5			0.2	0.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					17.7							
HCM 6th LOS					B							

Timings  
4: I-215 NB Ramps & Ramona Exwy.

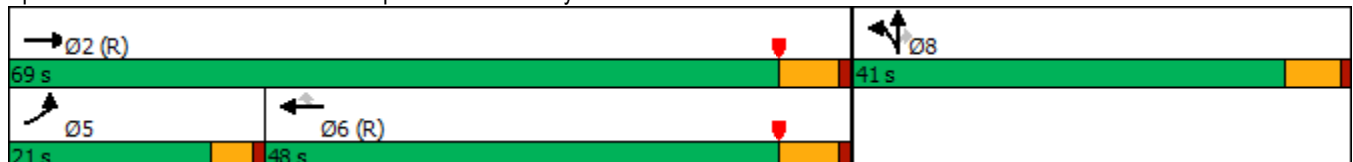


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	215	1426	920	762	344	8	415
Future Volume (vph)	215	1426	920	762	344	8	415
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	16.5	68.7	47.8	47.8	29.8	29.8	29.8
Actuated g/C Ratio	0.15	0.62	0.43	0.43	0.27	0.27	0.27
v/c Ratio	0.81	0.65	0.60	0.69	0.39	0.39	0.86
Control Delay	58.2	21.9	27.2	5.6	33.9	33.9	48.5
Queue Delay	0.0	33.1	0.0	0.0	0.0	0.0	0.0
Total Delay	58.2	55.0	27.2	5.6	33.9	33.9	48.5
LOS	E	D	C	A	C	C	D
Approach Delay		55.4	17.4			41.8	
Approach LOS		E	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 37.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 127.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗	↘	↘	↗	↘			
Traffic Volume (veh/h)	215	1426	0	0	920	762	344	8	415	0	0	0
Future Volume (veh/h)	215	1426	0	0	920	762	344	8	415	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	219	1455	0	0	939	554	357	0	320			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	245	2411	0	0	1774	790	824	0	367			
Arrive On Green	0.27	1.00	0.00	0.00	0.49	0.49	0.23	0.00	0.23			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	219	1455	0	0	939	554	357	0	320			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	12.8	0.0	0.0	0.0	19.7	29.4	9.3	0.0	21.1			
Cycle Q Clear(g_c), s	12.8	0.0	0.0	0.0	19.7	29.4	9.3	0.0	21.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	245	2411	0	0	1774	790	824	0	367			
V/C Ratio(X)	0.89	0.60	0.00	0.00	0.53	0.70	0.43	0.00	0.87			
Avail Cap(c_a), veh/h	271	2411	0	0	1774	790	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.4	0.0	0.0	0.0	19.2	21.7	36.4	0.0	40.9			
Incr Delay (d2), s/veh	21.5	0.8	0.0	0.0	1.1	5.2	0.4	0.0	11.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.1	0.3	0.0	0.0	7.7	11.1	4.0	0.0	9.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	0.8	0.0	0.0	20.4	26.8	36.8	0.0	52.2			
LnGrp LOS	E	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1674			1493			677				
Approach Delay, s/veh		8.7			22.8			44.0				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		79.5			19.4	60.1		30.5				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			14.8	31.4		23.1				
Green Ext Time (p_c), s		7.9			0.1	3.9		2.0				

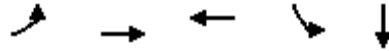
Intersection Summary

HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
5: Harley Knox Blvd. & Western Way



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↗		
Traffic Volume (vph)	29	760	927	10	0		
Future Volume (vph)	29	760	927	10	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	11.0	38.8	37.4	36.6	36.6	35.0	9.6
Total Split (%)	9.2%	32.3%	31.2%	30.5%	30.5%	29%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	24.9	21.7	11.7	11.7		
Actuated g/C Ratio	0.16	0.63	0.55	0.29	0.29		
v/c Ratio	0.12	0.28	0.40	0.02	0.12		
Control Delay	21.3	5.2	9.2	17.4	0.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	21.3	5.2	9.2	17.4	0.3		
LOS	C	A	A	B	A		
Approach Delay		5.8	9.2		2.0		
Approach LOS		A	A		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 39.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	29	760	0	0	927	9	0	0	0	10	0	89
Future Volume (veh/h)	29	760	0	0	927	9	0	0	0	10	0	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	916	0	0	1117	11	0	0	0	12	0	107
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	2866	890	5	2097	21	5	5	0	334	0	297
Arrive On Green	0.04	0.55	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.18	0.00	0.18
Sat Flow, veh/h	1810	5187	1610	1810	5296	52	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	35	916	0	0	729	399	0	0	0	12	0	107
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1891	1810	1900	0	1810	0	1610
Q Serve(g_s), s	0.7	3.8	0.0	0.0	6.4	6.4	0.0	0.0	0.0	0.2	0.0	2.3
Cycle Q Clear(g_c), s	0.7	3.8	0.0	0.0	6.4	6.4	0.0	0.0	0.0	0.2	0.0	2.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	2866	890	5	1369	749	5	5	0	334	0	297
V/C Ratio(X)	0.48	0.32	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.04	0.00	0.36
Avail Cap(c_a), veh/h	293	4328	1344	229	2763	1511	1391	1461	0	1464	0	1303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	4.8	0.0	0.0	9.1	9.1	0.0	0.0	0.0	13.2	0.0	14.1
Incr Delay (d2), s/veh	1.8	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.0	0.0	1.5	1.7	0.0	0.0	0.0	0.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	4.9	0.0	0.0	9.5	9.7	0.0	0.0	0.0	13.3	0.0	14.8
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		951			1128			0				119
Approach Delay, s/veh		5.4			9.6			0.0				14.7
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	27.7		11.9	6.2	21.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		30.4	5.0	33.0		32.0	6.4	31.6				
Max Q Clear Time (g_c+I1), s		0.0	0.0	5.8		4.3	2.7	8.4				
Green Ext Time (p_c), s		0.0	0.0	6.4		0.7	0.0	7.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

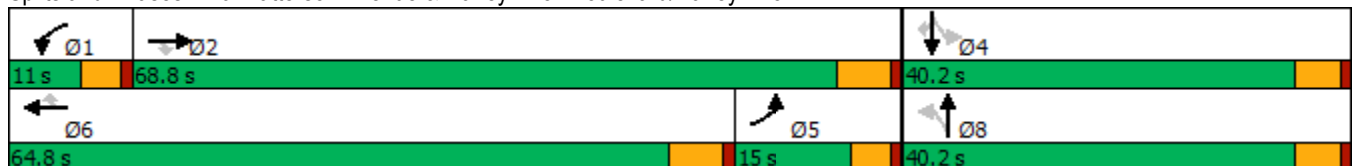


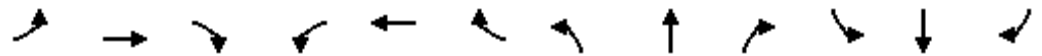
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	39	681	20	2	799	12	40	2	21	4	33
Future Volume (vph)	39	681	20	2	799	12	40	2	21	4	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.6	40.3	40.3	7.3	35.7	35.7		17.2		17.2	17.2
Actuated g/C Ratio	0.16	0.75	0.75	0.14	0.67	0.67		0.32		0.32	0.32
v/c Ratio	0.17	0.21	0.02	0.01	0.41	0.01		0.13		0.07	0.07
Control Delay	33.7	6.9	0.1	38.5	12.7	0.0		21.4		23.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	33.7	6.9	0.1	38.5	12.7	0.0		21.4		23.0	0.2
LOS	C	A	A	D	B	A		C		C	A
Approach Delay		8.1			12.5			21.4		10.1	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 53.6  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	39	681	20	2	799	12	40	2	5	21	4	33
Future Volume (veh/h)	39	681	20	2	799	12	40	2	5	21	4	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	830	23	2	974	15	49	2	5	26	5	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	87	2770	860	5	1679	734	314	17	20	331	53	261
Arrive On Green	0.05	0.53	0.53	0.00	0.47	0.47	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	3610	1577	1130	104	121	1251	328	1610
Grp Volume(v), veh/h	48	830	23	2	974	15	56	0	0	31	0	39
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1805	1577	1356	0	0	1579	0	1610
Q Serve(g_s), s	1.3	4.6	0.3	0.1	10.2	0.3	1.4	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.3	4.6	0.3	0.1	10.2	0.3	2.1	0.0	0.0	0.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.87		0.09	0.84		1.00
Lane Grp Cap(c), veh/h	87	2770	860	5	1679	734	351	0	0	385	0	261
V/C Ratio(X)	0.55	0.30	0.03	0.40	0.58	0.02	0.16	0.00	0.00	0.08	0.00	0.15
Avail Cap(c_a), veh/h	366	6347	1970	225	4137	1807	1086	0	0	1159	0	1098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	6.7	5.7	25.6	10.1	7.4	19.0	0.0	0.0	18.4	0.0	18.5
Incr Delay (d2), s/veh	2.0	0.1	0.0	18.5	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.1	0.0	2.8	0.1	0.5	0.0	0.0	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	6.7	5.7	44.1	10.5	7.4	19.3	0.0	0.0	18.5	0.0	18.8
LnGrp LOS	C	A	A	D	B	A	B	A	A	B	A	B
Approach Vol, veh/h		901			991			56				70
Approach Delay, s/veh		7.7			10.6			19.3				18.6
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	33.3		13.5	8.3	29.8		13.5				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	2.1	6.6		3.1	3.3	12.2		4.1				
Green Ext Time (p_c), s	0.0	9.5		0.2	0.0	11.8		0.2				

Intersection Summary

HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1550	292	15	1679	0	38
Future Vol, veh/h	1550	292	15	1679	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1582	298	15	1713	0	39

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1880	0	940
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	323	-	269
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	323	-	269
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	269	-	-	323	-
HCM Lane V/C Ratio	0.144	-	-	0.047	-
HCM Control Delay (s)	20.6	-	-	16.7	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-



Intersection			
Intersection Delay, s/veh	11.4		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	942	54
Demand Flow Rate, veh/h	0	942	54
Vehicles Circulating, veh/h	10	42	860
Vehicles Exiting, veh/h	974	872	48
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	11.7	6.1
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.778	0.222
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	942	42	12
Cap Entry Lane, veh/h	1367	649	649
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	942	42	12
Cap Entry, veh/h	1367	649	649
V/C Ratio	0.689	0.065	0.018
Control Delay, s/veh	11.7	6.3	5.7
LOS	B	A	A
95th %tile Queue, veh	6	0	0

Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

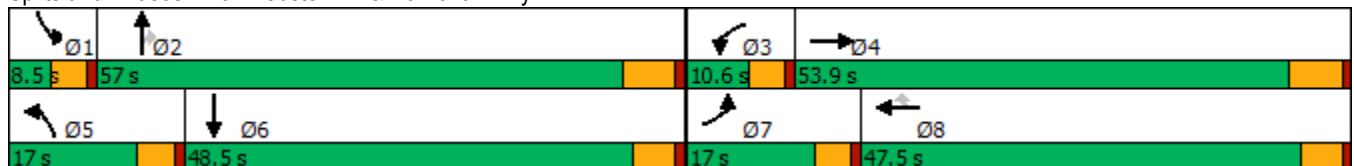


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	147	1413	25	1412	25	147	30	23	26	
Future Volume (vph)	147	1413	25	1412	25	147	30	23	26	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	17.0	53.9	10.6	47.5	47.5	17.0	57.0	57.0	48.5	8.5
Total Split (%)	13.1%	41.5%	8.2%	36.5%	36.5%	13.1%	43.8%	43.8%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.1	50.5	5.7	41.1	41.1	12.1	59.1	59.1	0.0	
Actuated g/C Ratio	0.09	0.39	0.04	0.32	0.32	0.09	0.46	0.46	0.00	
v/c Ratio	0.89	0.73	0.33	0.88	0.04	0.89	0.04	0.03	7.20	
Control Delay	102.8	36.3	71.4	48.2	0.1	102.8	19.8	0.1	2855.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	102.8	36.3	71.4	48.2	0.1	102.8	19.8	0.1	2855.7	
LOS	F	D	E	D	A	F	B	A	F	
Approach Delay		42.5		47.8			78.5		2855.7	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130	
Actuated Cycle Length: 128.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 7.20	
Intersection Signal Delay: 243.4	Intersection LOS: F
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/09/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖	↖	↑	↖		↕	
Traffic Volume (veh/h)	147	1413	28	25	1412	25	147	30	23	83	26	135
Future Volume (veh/h)	147	1413	28	25	1412	25	147	30	23	83	26	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	1457	25	26	1456	21	152	31	16	86	27	106
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	189	2455	42	50	2026	629	189	550	460	0	43	167
Arrive On Green	0.10	0.47	0.47	0.03	0.39	0.39	0.10	0.29	0.29	0.00	0.13	0.13
Sat Flow, veh/h	1810	5250	90	1810	5187	1610	1810	1900	1590	0	337	1324
Grp Volume(v), veh/h	152	960	522	26	1456	21	152	31	16	0	0	133
Grp Sat Flow(s),veh/h/ln	1810	1729	1882	1810	1729	1610	1810	1900	1590	0	0	1662
Q Serve(g_s), s	6.5	16.1	16.1	1.1	18.7	0.6	6.5	0.9	0.6	0.0	0.0	6.0
Cycle Q Clear(g_c), s	6.5	16.1	16.1	1.1	18.7	0.6	6.5	0.9	0.6	0.0	0.0	6.0
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.00		0.80
Lane Grp Cap(c), veh/h	189	1617	880	50	2026	629	189	550	460	0	0	210
V/C Ratio(X)	0.80	0.59	0.59	0.52	0.72	0.03	0.80	0.06	0.03	0.00	0.00	0.63
Avail Cap(c_a), veh/h	285	2092	1139	138	2790	866	285	1224	1024	0	0	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	34.5	15.5	15.5	37.8	20.3	14.8	34.5	20.2	20.1	0.0	0.0	32.7
Incr Delay (d2), s/veh	5.3	0.4	0.6	3.1	0.6	0.0	5.3	0.0	0.0	0.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.3	5.8	0.5	6.6	0.2	3.0	0.4	0.2	0.0	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	15.8	16.1	40.9	20.9	14.8	39.8	20.3	20.1	0.0	0.0	35.8
LnGrp LOS	D	B	B	D	C	B	D	C	C	A	A	D
Approach Vol, veh/h		1634			1503			199				133
Approach Delay, s/veh		18.1			21.2			35.2				35.8
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	29.0	6.8	43.1	12.8	16.2	12.8	37.0				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	50.8	6.0	47.7	12.4	* 43	12.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	2.9	3.1	18.1	8.5	8.0	8.5	20.7				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.9	0.1	0.8	0.1	10.1				

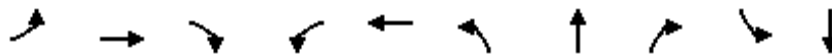
Intersection Summary												
HCM 6th Ctrl Delay											21.1	
HCM 6th LOS											C	

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/09/2019

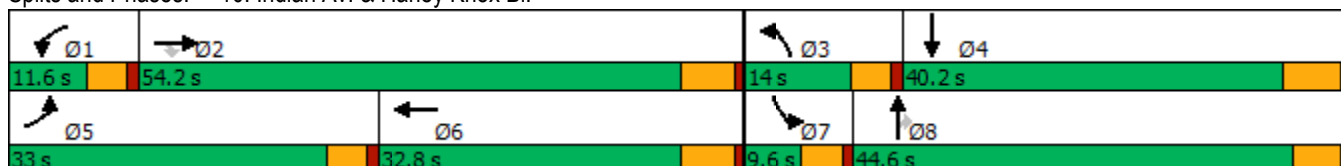


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	255	385	49	15	352	61	228	26	47	253
Future Volume (vph)	255	385	49	15	352	61	228	26	47	253
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.2	35.7	35.7	6.1	14.9	6.8	21.9	21.9	5.5	19.7
Actuated g/C Ratio	0.24	0.44	0.44	0.08	0.18	0.08	0.27	0.27	0.07	0.24
v/c Ratio	0.74	0.21	0.08	0.14	0.48	0.26	0.29	0.06	0.48	0.71
Control Delay	43.1	16.9	0.4	47.6	33.5	44.2	25.5	0.2	58.7	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	16.9	0.4	47.6	33.5	44.2	25.5	0.2	58.7	22.7
LOS	D	B	A	D	C	D	C	A	E	C
Approach Delay		25.5			34.0		27.0			25.4
Approach LOS		C			C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.6  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 27.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.3%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	255	385	49	15	352	14	61	228	26	47	253	312
Future Volume (veh/h)	255	385	49	15	352	14	61	228	26	47	253	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	481	50	19	440	16	76	285	16	59	316	269
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	374	1772	550	41	810	29	204	906	399	92	453	376
Arrive On Green	0.21	0.34	0.34	0.02	0.16	0.16	0.06	0.25	0.25	0.05	0.24	0.24
Sat Flow, veh/h	1810	5187	1610	1810	5139	186	3510	3610	1589	1810	1858	1542
Grp Volume(v), veh/h	319	481	50	19	295	161	76	285	16	59	307	278
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1867	1755	1805	1589	1810	1805	1595
Q Serve(g_s), s	10.8	4.3	1.3	0.7	5.0	5.0	1.3	4.1	0.5	2.0	9.8	10.1
Cycle Q Clear(g_c), s	10.8	4.3	1.3	0.7	5.0	5.0	1.3	4.1	0.5	2.0	9.8	10.1
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h	374	1772	550	41	545	294	204	906	399	92	440	389
V/C Ratio(X)	0.85	0.27	0.09	0.47	0.54	0.55	0.37	0.31	0.04	0.64	0.70	0.72
Avail Cap(c_a), veh/h	810	3956	1228	200	1471	794	520	2230	982	143	967	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	15.2	14.2	30.6	24.6	24.6	28.8	19.3	18.0	29.5	21.9	22.0
Incr Delay (d2), s/veh	2.2	0.1	0.1	3.1	0.8	1.6	0.4	0.2	0.0	2.7	2.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.4	0.4	0.3	1.9	2.1	0.5	1.5	0.2	0.9	3.8	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	15.2	14.3	33.7	25.5	26.2	29.2	19.5	18.0	32.3	23.9	24.4
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		850			475			377			644	
Approach Delay, s/veh		19.4			26.1			21.4			24.9	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	27.5	8.3	21.7	17.7	15.8	7.8	22.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.7	6.3	3.3	12.1	12.8	7.0	4.0	6.1				
Green Ext Time (p_c), s	0.0	3.3	0.0	3.3	0.4	2.4	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

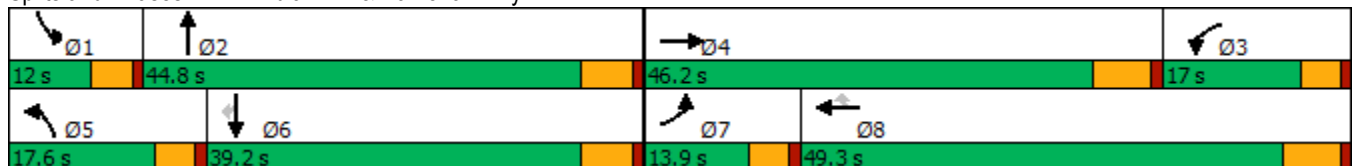


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↗↗↗	↘	↗↗↗	↗	↘	↗↗	↘	↗↗	↗
Traffic Volume (vph)	61	1394	128	1230	31	103	67	66	182	63
Future Volume (vph)	61	1394	128	1230	31	103	67	66	182	63
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	13.9	46.2	17.0	49.3	49.3	17.6	44.8	12.0	39.2	39.2
Total Split (%)	11.6%	38.5%	14.2%	41.1%	41.1%	14.7%	37.3%	10.0%	32.7%	32.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	36.0	10.7	41.8	41.8	9.6	19.3	6.9	14.1	14.1
Actuated g/C Ratio	0.08	0.39	0.12	0.45	0.45	0.10	0.21	0.07	0.15	0.15
v/c Ratio	0.43	0.77	0.63	0.54	0.04	0.57	0.14	0.50	0.34	0.15
Control Delay	54.7	28.6	56.8	21.5	0.1	55.1	23.0	59.4	37.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	28.6	56.8	21.5	0.1	55.1	23.0	59.4	37.5	0.8
LOS	D	C	E	C	A	E	C	E	D	A
Approach Delay		29.7		24.2			39.4		34.7	
Approach LOS		C		C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.2  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 28.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.0%  
 ICU Level of Service C  
 Analysis Period (min) 15



























Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/09/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	61	1394	102	128	1230	31	103	67	32	66	182	63
Future Volume (veh/h)	61	1394	102	128	1230	31	103	67	32	66	182	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	63	1437	87	132	1268	26	106	69	18	68	188	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	88	1984	120	167	2397	734	137	451	113	91	479	213
Arrive On Green	0.05	0.40	0.40	0.09	0.46	0.46	0.08	0.16	0.16	0.05	0.13	0.13
Sat Flow, veh/h	1810	4997	302	1810	5187	1588	1810	2857	719	1810	3610	1610
Grp Volume(v), veh/h	63	995	529	132	1268	26	106	43	44	68	188	31
Grp Sat Flow(s),veh/h/ln	1810	1729	1841	1810	1729	1588	1810	1805	1771	1810	1805	1610
Q Serve(g_s), s	2.6	18.4	18.4	5.4	13.1	0.7	4.3	1.5	1.6	2.8	3.6	1.3
Cycle Q Clear(g_c), s	2.6	18.4	18.4	5.4	13.1	0.7	4.3	1.5	1.6	2.8	3.6	1.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	88	1373	731	167	2397	734	137	285	279	91	479	213
V/C Ratio(X)	0.72	0.72	0.72	0.79	0.53	0.04	0.77	0.15	0.16	0.75	0.39	0.15
Avail Cap(c_a), veh/h	223	1834	977	298	2964	908	312	933	916	178	1599	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	19.2	19.2	33.5	14.4	11.1	34.2	27.4	27.4	35.3	29.9	28.9
Incr Delay (d2), s/veh	4.0	1.0	1.8	3.1	0.2	0.0	3.5	0.2	0.3	4.5	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.3	6.9	2.3	4.2	0.2	1.9	0.6	0.7	1.3	1.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	20.2	21.0	36.6	14.6	11.1	37.7	27.6	27.7	39.8	30.5	29.2
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1587			1426			193			287	
Approach Delay, s/veh		21.3			16.6			33.2			32.5	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	17.7	13.2	36.1	10.3	15.8	8.3	41.1				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.4	39.0	12.4	* 40	13.0	33.4	9.3	43.1				
Max Q Clear Time (g_c+I1), s	4.8	3.6	7.4	20.4	6.3	5.6	4.6	15.1				
Green Ext Time (p_c), s	0.0	0.4	0.1	9.5	0.1	1.2	0.0	9.5				

Intersection Summary

HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

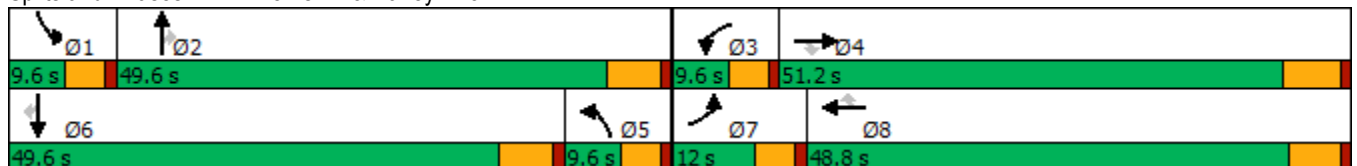
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	122	77	6	50	76	19	868	5	117	1182	303
Future Volume (vph)	234	122	77	6	50	76	19	868	5	117	1182	303
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.7	23.1	23.1	5.6	15.2	15.2	5.6	24.1	24.1	5.6	31.8	31.8
Actuated g/C Ratio	0.13	0.32	0.32	0.08	0.21	0.21	0.08	0.33	0.33	0.08	0.44	0.44
v/c Ratio	1.06	0.12	0.14	0.03	0.05	0.18	0.08	0.55	0.01	0.47	0.56	0.37
Control Delay	113.3	19.8	0.5	44.5	25.6	0.9	43.3	21.5	0.0	46.1	18.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.3	19.8	0.5	44.5	25.6	0.9	43.3	21.5	0.0	46.1	18.9	4.2
LOS	F	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		66.8			12.3			21.8			18.1	
Approach LOS		E			B			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 72.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 25.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	234	122	77	6	50	76	19	868	5	117	1182	303
Future Volume (veh/h)	234	122	77	6	50	76	19	868	5	117	1182	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	254	133	34	7	54	38	21	943	5	127	1285	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	195	896	399	32	775	237	84	1906	592	233	2035	631
Arrive On Green	0.11	0.25	0.25	0.01	0.15	0.15	0.02	0.37	0.37	0.07	0.39	0.39
Sat Flow, veh/h	1810	3610	1608	3510	5187	1588	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	254	133	34	7	54	38	21	943	5	127	1285	253
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1755	1729	1588	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	7.4	2.0	0.8	0.1	0.6	1.4	0.4	9.6	0.1	2.4	13.7	4.5
Cycle Q Clear(g_c), s	7.4	2.0	0.8	0.1	0.6	1.4	0.4	9.6	0.1	2.4	13.7	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	896	399	32	775	237	84	1906	592	233	2035	631
V/C Ratio(X)	1.30	0.15	0.09	0.22	0.07	0.16	0.25	0.49	0.01	0.54	0.63	0.40
Avail Cap(c_a), veh/h	195	2367	1055	256	3250	995	256	3310	1028	256	3310	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	20.1	10.7	33.8	25.1	25.4	32.9	16.8	13.8	31.0	16.8	4.9
Incr Delay (d2), s/veh	168.0	0.1	0.1	1.3	0.0	0.3	0.6	0.2	0.0	0.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	0.7	0.4	0.1	0.2	0.5	0.2	3.3	0.0	1.0	4.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	198.6	20.2	10.8	35.0	25.1	25.7	33.4	17.0	13.8	31.8	17.2	5.4
LnGrp LOS	F	C	B	D	C	C	C	B	B	C	B	A
Approach Vol, veh/h		421			99			969			1665	
Approach Delay, s/veh		127.1			26.1			17.3			16.5	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	31.0	5.2	23.2	7.4	32.7	12.0	16.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.4	11.6	2.1	4.0	2.4	15.7	9.4	3.4				
Green Ext Time (p_c), s	0.0	6.9	0.0	0.8	0.0	11.1	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

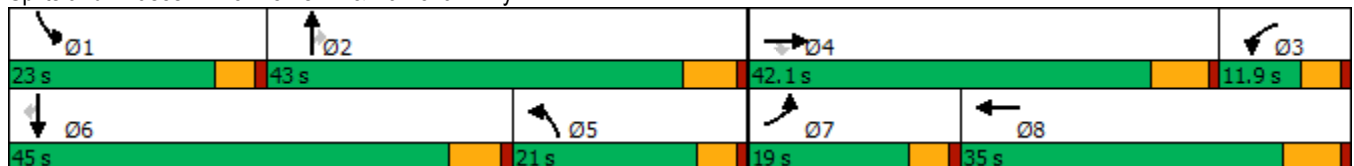
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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	256	1089	148	102	823	286	451	102	346	638	280	
Future Volume (vph)	256	1089	148	102	823	286	451	102	346	638	280	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	19.0	42.1	42.1	11.9	35.0	21.0	43.0	43.0	23.0	45.0	45.0	
Total Split (%)	15.8%	35.1%	35.1%	9.9%	29.2%	17.5%	35.8%	35.8%	19.2%	37.5%	37.5%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	11.5	31.5	31.5	7.0	24.3	12.5	23.8	23.8	14.1	25.4	25.4	
Actuated g/C Ratio	0.12	0.33	0.33	0.07	0.25	0.13	0.25	0.25	0.15	0.27	0.27	
v/c Ratio	0.62	0.65	0.23	0.41	0.72	0.64	0.51	0.20	0.68	0.68	0.47	
Control Delay	49.4	31.3	3.8	52.0	36.7	48.5	34.0	1.3	47.9	36.2	8.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.4	31.3	3.8	52.0	36.7	48.5	34.0	1.3	47.9	36.2	8.0	
LOS	D	C	A	D	D	D	C	A	D	D	A	
Approach Delay		31.7			38.2		35.0			33.2		
Approach LOS		C			D		C			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.6  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 34.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.1%  
 ICU Level of Service C  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	256	1089	148	102	823	104	286	451	102	346	638	280
Future Volume (veh/h)	256	1089	148	102	823	104	286	451	102	346	638	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	1111	110	104	840	93	292	460	63	353	651	230
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	346	1546	479	188	1287	142	379	920	404	443	934	414
Arrive On Green	0.10	0.30	0.30	0.05	0.27	0.27	0.11	0.25	0.25	0.13	0.26	0.26
Sat Flow, veh/h	3510	5187	1609	3510	4734	521	3510	3610	1584	3510	3610	1601
Grp Volume(v), veh/h	261	1111	110	104	612	321	292	460	63	353	651	230
Grp Sat Flow(s),veh/h/ln	1755	1729	1609	1755	1729	1797	1755	1805	1584	1755	1805	1601
Q Serve(g_s), s	6.2	16.3	4.4	2.5	13.4	13.5	6.9	9.3	1.9	8.3	13.9	7.4
Cycle Q Clear(g_c), s	6.2	16.3	4.4	2.5	13.4	13.5	6.9	9.3	1.9	8.3	13.9	7.4
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	1546	479	188	940	489	379	920	404	443	934	414
V/C Ratio(X)	0.75	0.72	0.23	0.55	0.65	0.66	0.77	0.50	0.16	0.80	0.70	0.56
Avail Cap(c_a), veh/h	593	2184	677	301	1168	607	675	1575	691	758	1660	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	26.7	22.6	39.3	27.5	27.5	37.0	27.1	13.5	36.2	28.6	13.5
Incr Delay (d2), s/veh	1.3	0.7	0.2	0.9	0.9	1.8	1.3	0.4	0.2	1.3	0.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.1	1.5	1.0	5.1	5.5	2.9	3.8	0.9	3.4	5.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.7	27.4	22.8	40.3	28.4	29.3	38.2	27.6	13.6	37.5	29.5	14.7
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1482			1037			815			1234	
Approach Delay, s/veh		29.1			29.9			30.3			29.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	27.5	10.8	31.6	15.0	27.9	13.0	29.4				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	18.4	37.2	7.3	* 36	16.4	* 39	14.4	28.8				
Max Q Clear Time (g_c+I1), s	10.3	11.3	4.5	18.3	8.9	15.9	8.2	15.5				
Green Ext Time (p_c), s	0.4	3.0	0.0	7.0	0.3	4.9	0.2	4.5				

Intersection Summary

HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Perris Bl. & Morgan St.

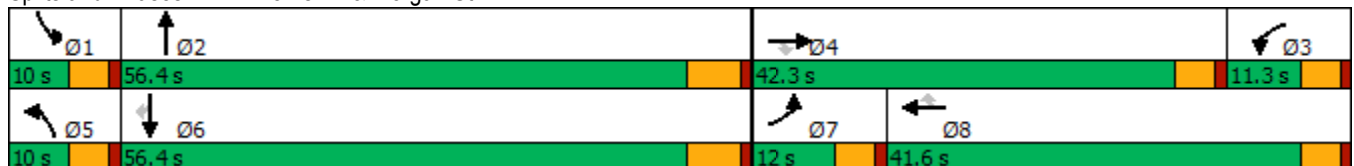


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	38	25	31	35	6	18	14	773	8	963	16
Future Volume (vph)	38	25	31	35	6	18	14	773	8	963	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.3	42.3	11.3	41.6	41.6	10.0	56.4	10.0	56.4	56.4
Total Split (%)	10.0%	35.3%	35.3%	9.4%	34.7%	34.7%	8.3%	47.0%	8.3%	47.0%	47.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.0	18.2	18.2	9.5	18.7	18.7	8.3	36.6	8.2	36.6	36.6
Actuated g/C Ratio	0.19	0.34	0.34	0.18	0.35	0.35	0.16	0.69	0.15	0.69	0.69
v/c Ratio	0.12	0.02	0.05	0.12	0.01	0.03	0.05	0.24	0.03	0.43	0.02
Control Delay	35.6	25.6	0.2	34.1	24.5	0.1	39.6	10.3	40.0	12.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	25.6	0.2	34.1	24.5	0.1	39.6	10.3	40.0	12.7	0.0
LOS	D	C	A	C	C	A	D	B	D	B	A
Approach Delay		21.3			22.6			10.8		12.7	
Approach LOS		C			C			B		B	

Intersection Summary

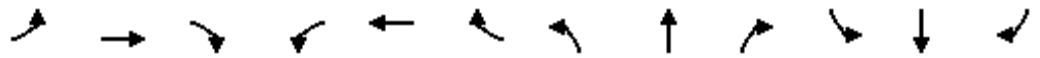
Cycle Length: 120  
 Actuated Cycle Length: 53.1  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.43  
 Intersection Signal Delay: 12.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 51.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷	↶	↷	↷	↶	↷		↶	↷	↷
Traffic Volume (veh/h)	38	25	31	35	6	18	14	773	12	8	963	16
Future Volume (veh/h)	38	25	31	35	6	18	14	773	12	8	963	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	27	18	38	7	17	15	849	13	9	1058	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	541	241	74	280	238	34	2295	35	21	1549	691
Arrive On Green	0.04	0.15	0.15	0.04	0.15	0.15	0.02	0.44	0.44	0.01	0.43	0.43
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5262	80	1810	3610	1610
Grp Volume(v), veh/h	42	27	18	38	7	17	15	558	304	9	1058	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1884	1810	1805	1610
Q Serve(g_s), s	1.2	0.3	0.4	1.1	0.2	0.5	0.4	5.9	5.9	0.3	12.8	0.3
Cycle Q Clear(g_c), s	1.2	0.3	0.4	1.1	0.2	0.5	0.4	5.9	5.9	0.3	12.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	78	541	241	74	280	238	34	1508	822	21	1549	691
V/C Ratio(X)	0.54	0.05	0.07	0.51	0.02	0.07	0.44	0.37	0.37	0.43	0.68	0.02
Avail Cap(c_a), veh/h	247	2509	1119	224	1296	1098	180	3226	1758	180	3368	1502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	19.8	12.0	25.5	19.8	19.9	26.3	10.3	10.3	26.6	12.5	8.9
Incr Delay (d2), s/veh	2.1	0.0	0.1	2.0	0.0	0.1	3.4	0.2	0.3	5.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.2	0.5	0.1	0.2	0.2	1.7	1.8	0.1	3.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	19.8	12.1	27.5	19.8	20.0	29.7	10.4	10.6	31.6	13.0	8.9
LnGrp LOS	C	B	B	C	B	C	C	B	B	C	B	A
Approach Vol, veh/h		87			62			877			1084	
Approach Delay, s/veh		21.9			24.6			10.8			13.1	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.2	29.5	6.8	12.7	5.6	29.1	6.9	12.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.7	37.7	5.4	50.6	7.4	37.0				
Max Q Clear Time (g_c+I1), s	2.3	7.9	3.1	2.4	2.4	14.8	3.2	2.5				
Green Ext Time (p_c), s	0.0	5.8	0.0	0.2	0.0	8.4	0.0	0.1				

Intersection Summary												
HCM 6th Ctrl Delay											12.9	
HCM 6th LOS											B	

Timings  
15: Perris Bl. & Rider St.

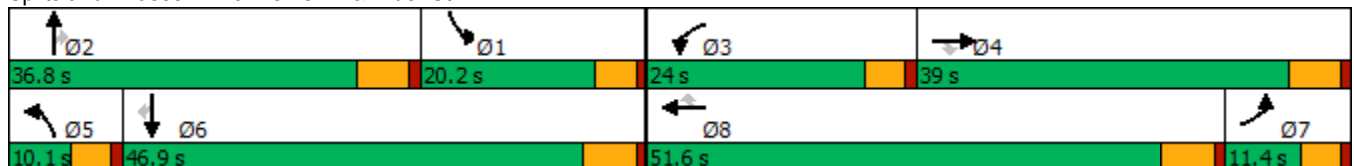
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	193	52	163	67	133	19	620	195	125	899	16
Future Volume (vph)	40	193	52	163	67	133	19	620	195	125	899	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.4	39.0	39.0	24.0	51.6	51.6	10.1	36.8	36.8	20.2	46.9	46.9
Total Split (%)	9.5%	32.5%	32.5%	20.0%	43.0%	43.0%	8.4%	30.7%	30.7%	16.8%	39.1%	39.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	13.9	13.9	11.9	20.8	20.8	5.6	17.5	17.5	10.2	29.3	29.3
Actuated g/C Ratio	0.13	0.18	0.18	0.16	0.27	0.27	0.07	0.23	0.23	0.13	0.39	0.39
v/c Ratio	0.17	0.30	0.13	0.59	0.07	0.24	0.15	0.53	0.39	0.53	0.46	0.02
Control Delay	35.8	29.6	0.6	42.4	26.6	3.4	45.3	28.7	7.1	43.6	20.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	29.6	0.6	42.4	26.6	3.4	45.3	28.7	7.1	43.6	20.4	0.1
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		25.2			25.2			24.0			22.9	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 75.8  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 23.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 57.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
 15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	193	52	163	67	133	19	620	195	125	899	16
Future Volume (veh/h)	40	193	52	163	67	133	19	620	195	125	899	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	199	20	168	69	53	20	639	141	129	927	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	176	640	285	215	644	287	43	1177	360	168	1643	510
Arrive On Green	0.10	0.18	0.18	0.12	0.18	0.18	0.02	0.23	0.23	0.09	0.32	0.32
Sat Flow, veh/h	1810	3610	1607	1810	3610	1610	1810	5187	1584	1810	5187	1609
Grp Volume(v), veh/h	41	199	20	168	69	53	20	639	141	129	927	7
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1610	1810	1729	1584	1810	1729	1609
Q Serve(g_s), s	1.2	2.7	0.6	5.2	0.9	1.6	0.6	6.2	2.6	4.0	8.5	0.1
Cycle Q Clear(g_c), s	1.2	2.7	0.6	5.2	0.9	1.6	0.6	6.2	2.6	4.0	8.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	640	285	215	644	287	43	1177	360	168	1643	510
V/C Ratio(X)	0.23	0.31	0.07	0.78	0.11	0.18	0.46	0.54	0.39	0.77	0.56	0.01
Avail Cap(c_a), veh/h	215	2092	932	613	2886	1287	174	2807	857	493	3721	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	20.5	19.6	24.5	19.7	20.0	27.6	19.5	7.0	25.4	16.3	4.2
Incr Delay (d2), s/veh	0.2	0.3	0.1	2.3	0.1	0.3	2.9	0.4	0.7	2.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.2	2.1	0.3	0.5	0.3	2.2	1.4	1.6	2.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	20.8	19.7	26.8	19.8	20.3	30.5	19.9	7.7	28.2	16.6	4.2
LnGrp LOS	C	C	B	C	B	C	C	B	A	C	B	A
Approach Vol, veh/h		260			290			800			1063	
Approach Delay, s/veh		21.2			24.0			18.0			17.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	18.8	11.4	16.0	6.0	23.9	11.4	16.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	15.6	* 31	19.4	33.2	5.5	41.1	6.8	* 46				
Max Q Clear Time (g_c+I1), s	6.0	8.2	7.2	4.7	2.6	10.5	3.2	3.6				
Green Ext Time (p_c), s	0.1	4.5	0.2	1.2	0.0	6.7	0.0	0.5				

Intersection Summary

HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
16: Redlands Av. & Harley Knox Bl.

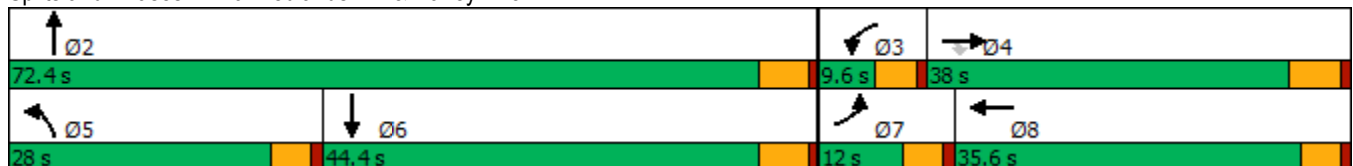


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	8	238	122	2	3		
Future Volume (vph)	8	238	122	2	3		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	12.0	38.0	28.0	72.4	44.4	9.6	35.6
Total Split (%)	10.0%	31.7%	23.3%	60.3%	37.0%	8%	30%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effect Green (s)	7.2	16.2	11.6	18.0	16.3		
Actuated g/C Ratio	0.17	0.38	0.28	0.43	0.39		
v/c Ratio	0.03	0.20	0.27	0.00	0.01		
Control Delay	28.9	0.4	20.8	9.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	28.9	0.4	20.8	9.0	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.6			
Approach LOS				C			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 42.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 32.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 16: Redlands Av. & Harley Knox Bl.


























HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	238	0	0	0	122	2	0	0	3	10
Future Volume (veh/h)	8	0	238	0	0	0	122	2	0	0	3	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	9	0	257	0	0	0	134	2	0	0	3	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	22	577	489	6	254	0	206	1123	0	0	71	63
Arrive On Green	0.01	0.00	0.30	0.00	0.00	0.00	0.11	0.31	0.00	0.00	0.04	0.04
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	9	0	257	0	0	0	134	2	0	0	3	10
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.1	0.0	3.8	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.1	0.0	3.8	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	22	577	489	6	254	0	206	1123	0	0	71	63
V/C Ratio(X)	0.41	0.00	0.53	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.04	0.16
Avail Cap(c_a), veh/h	460	2104	1783	311	2025	0	1456	8317	0	0	2421	2159
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	8.4	0.0	0.0	0.0	12.3	6.9	0.0	0.0	13.4	13.5
Incr Delay (d2), s/veh	4.6	0.0	0.9	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	0.0	9.3	0.0	0.0	0.0	13.6	6.9	0.0	0.0	13.7	14.7
LnGrp LOS	B	A	A	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		266			0			136				13
Approach Delay, s/veh		9.6			0.0			13.5				14.4
Approach LOS		A						B				B
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		14.4	0.0	14.6	7.9	6.5	5.0	9.7				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		67.0	5.0	32.2	23.4	39.0	7.4	* 31				
Max Q Clear Time (g_c+I1), s		2.0	0.0	5.8	4.1	2.2	2.1	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.8	0.1	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	36	5	109	246	3
Future Vol, veh/h	8	36	5	109	246	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	40	6	121	273	3
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	2	2	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8	7.4	8.9
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	96%
Vol Right, %	0%	0%	0%	0%	100%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	55	55	8	36	164	85
LT Vol	5	0	0	8	0	0	0
Through Vol	0	55	55	0	0	164	82
RT Vol	0	0	0	0	36	0	3
Lane Flow Rate	6	61	61	9	40	182	94
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.009	0.087	0.058	0.015	0.053	0.247	0.127
Departure Headway (Hd)	5.674	5.172	3.466	5.975	4.774	4.874	4.849
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	632	694	1033	599	750	742	744
Service Time	3.395	2.893	1.187	3.708	2.507	2.574	2.549
HCM Lane V/C Ratio	0.009	0.088	0.059	0.015	0.053	0.245	0.126
HCM Control Delay	8.4	8.4	6.4	8.8	7.8	9.2	8.3
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.2	0	0.2	1	0.4

Timings

18: Redlands Av. & Ramona Exwy.

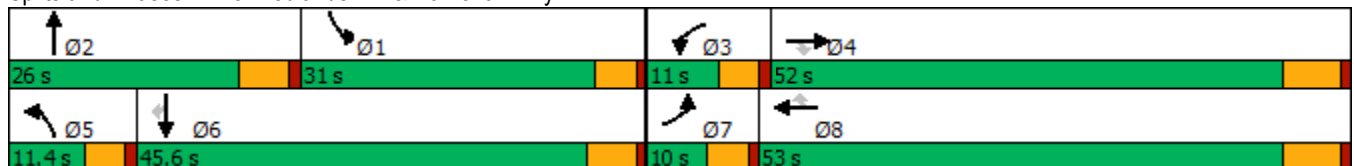


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	16	1511	56	24	1082	90	37	9	232	25	10
Future Volume (vph)	16	1511	56	24	1082	90	37	9	232	25	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	10.0	52.0	52.0	11.0	53.0	53.0	11.4	26.0	31.0	45.6	45.6
Total Split (%)	8.3%	43.3%	43.3%	9.2%	44.2%	44.2%	9.5%	21.7%	25.8%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.9	36.9	36.9	6.3	37.2	37.2	6.7	12.6	18.2	24.1	24.1
Actuated g/C Ratio	0.07	0.44	0.44	0.08	0.45	0.45	0.08	0.15	0.22	0.29	0.29
v/c Ratio	0.13	0.69	0.08	0.18	0.49	0.12	0.27	0.20	0.62	0.05	0.02
Control Delay	51.1	22.7	0.2	50.5	19.1	0.7	51.4	17.5	42.5	27.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	22.7	0.2	50.5	19.1	0.7	51.4	17.5	42.5	27.7	0.1
LOS	D	C	A	D	B	A	D	B	D	C	A
Approach Delay		22.2			18.3			31.1		39.4	
Approach LOS		C			B			C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 83.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 22.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 58.4%  
 ICU Level of Service B  
 Analysis Period (min) 15






























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	16	1511	56	24	1082	90	37	9	47	232	25	10
Future Volume (veh/h)	16	1511	56	24	1082	90	37	9	47	232	25	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	17	1591	51	25	1139	67	39	9	30	244	26	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	2213	668	48	2249	688	66	45	150	288	475	402
Arrive On Green	0.02	0.43	0.43	0.03	0.43	0.43	0.04	0.12	0.12	0.16	0.25	0.25
Sat Flow, veh/h	1810	5187	1566	1810	5187	1587	1810	384	1279	1810	1900	1610
Grp Volume(v), veh/h	17	1591	51	25	1139	67	39	0	39	244	26	7
Grp Sat Flow(s),veh/h/ln	1810	1729	1566	1810	1729	1587	1810	0	1663	1810	1900	1610
Q Serve(g_s), s	0.7	20.2	1.5	1.1	12.7	0.9	1.7	0.0	1.7	10.5	0.8	0.3
Cycle Q Clear(g_c), s	0.7	20.2	1.5	1.1	12.7	0.9	1.7	0.0	1.7	10.5	0.8	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	36	2213	668	48	2249	688	66	0	195	288	475	402
V/C Ratio(X)	0.48	0.72	0.08	0.52	0.51	0.10	0.59	0.00	0.20	0.85	0.05	0.02
Avail Cap(c_a), veh/h	122	2978	899	145	3043	931	154	0	429	599	957	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	18.9	13.6	38.3	16.4	2.9	37.9	0.0	31.8	32.6	22.8	22.5
Incr Delay (d2), s/veh	3.7	0.6	0.0	3.2	0.2	0.1	3.2	0.0	0.5	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.9	0.5	0.5	4.3	0.6	0.8	0.0	0.7	4.5	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	19.5	13.6	41.5	16.6	2.9	41.0	0.0	32.3	35.3	22.8	22.6
LnGrp LOS	D	B	B	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		1659			1231			78			277	
Approach Delay, s/veh		19.5			16.3			36.7			33.8	
Approach LOS		B			B			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.1	14.7	6.7	40.2	7.5	25.3	6.2	40.8				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	26.4	* 21	6.4	45.8	6.8	40.2	5.4	46.8				
Max Q Clear Time (g_c+I1), s	12.5	3.7	3.1	22.2	3.7	2.8	2.7	14.7				
Green Ext Time (p_c), s	0.3	0.1	0.0	11.8	0.0	0.1	0.0	8.7				

Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕			↖	↗
Traffic Vol, veh/h	44	0	0	0	0	0	0	2	0	0	2	34
Future Vol, veh/h	44	0	0	0	0	0	0	2	0	0	2	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	0	0	0	0	0	0	2	0	0	2	37
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	8.2	0	7.7	6.8
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	0%	0%	0%
Vol Thru, %	100%	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	44	0	0	2	34
LT Vol	0	44	0	0	0	0
Through Vol	2	0	0	0	2	0
RT Vol	0	0	0	0	0	34
Lane Flow Rate	2	48	0	0	2	37
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.003	0.067	0	0	0.003	0.04
Departure Headway (Hd)	4.615	5.072	4.571	4.608	4.586	3.886
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	771	708	0	0	777	916
Service Time	2.67	2.789	2.289	2.647	2.335	1.634
HCM Lane V/C Ratio	0.003	0.068	0	0	0.003	0.04
HCM Control Delay	7.7	8.2	7.3	7.6	7.3	6.8
HCM Lane LOS	A	A	N	N	A	A
HCM 95th-tile Q	0	0.2	0	0	0	0.1

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	0	0	0	0	2
Future Vol, veh/h	2	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	0	0	0	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1	1	2	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1027	1090	1634	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1027	1090	1634	-	-	-
Mov Cap-2 Maneuver	1027	-	-	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1634	-	1027	-	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	0	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↗		↖		↗		↕	
Traffic Vol, veh/h	0	494	37	89	381	0	28	0	120	0	0	0
Future Vol, veh/h	0	494	37	89	381	0	28	0	120	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	120	-	-	150	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	537	40	97	414	0	30	0	130	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	577	0	0	938	-	537	1230	1185	207
Stage 1	-	-	-	-	-	-	537	-	-	608	608	-
Stage 2	-	-	-	-	-	-	401	-	-	622	577	-
Critical Hdwy	-	-	-	4.1	-	-	7.3	-	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	-	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	-	-	6.1	5.5	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	-	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1006	-	-	234	0	548	146	191	805
Stage 1	0	-	-	-	-	-	532	0	-	454	489	-
Stage 2	0	-	-	-	-	-	602	0	-	478	505	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1006	-	-	217	-	548	103	173	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	-	-	103	173	-
Stage 1	-	-	-	-	-	-	532	-	-	454	442	-
Stage 2	-	-	-	-	-	-	544	-	-	364	505	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.7			15.6			0		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	217	548	-	-	1006	-	-	-
HCM Lane V/C Ratio	0.14	0.238	-	-	0.096	-	-	-
HCM Control Delay (s)	24.3	13.6	-	-	9	-	-	0
HCM Lane LOS	C	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.5	0.9	-	-	0.3	-	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	551	51	110	423	38	107
Future Vol, veh/h	551	51	110	423	38	107
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	185	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	599	55	120	460	41	116

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	655	0	1070
Stage 1	-	-	-	-	600
Stage 2	-	-	-	-	470
Critical Hdwy	-	-	4.1	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	942	-	233
Stage 1	-	-	-	-	552
Stage 2	-	-	-	-	601
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	941	-	203
Mov Cap-2 Maneuver	-	-	-	-	338
Stage 1	-	-	-	-	551
Stage 2	-	-	-	-	524

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	17.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	447	-	-	941	-
HCM Lane V/C Ratio	0.353	-	-	0.127	-
HCM Control Delay (s)	17.4	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.6	-	-	0.4	-



**APPENDIX 7.2:**

**EAP (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

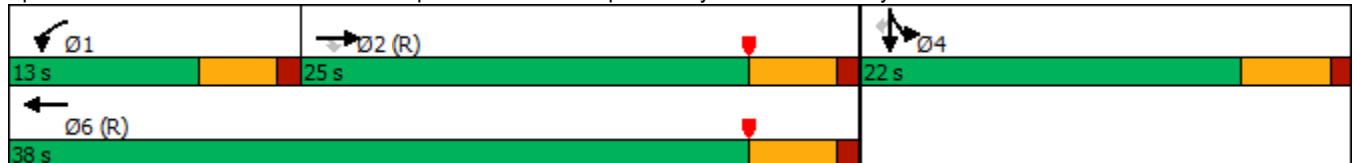


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	465	8	161	184	2	167
Future Volume (vph)	465	8	161	184	2	167
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.4	20.4	8.1	33.0	17.0	17.0
Actuated g/C Ratio	0.34	0.34	0.14	0.55	0.28	0.28
v/c Ratio	0.41	0.01	0.72	0.10	1.14	0.31
Control Delay	16.6	0.0	33.8	12.1	110.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.0	33.8	12.1	110.1	4.8
LOS	B	A	C	B	F	A
Approach Delay	16.3			22.2	85.2	
Approach LOS	B			C	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 49.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 108.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

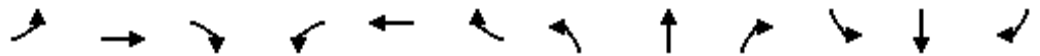


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

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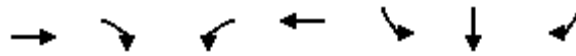


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	465	8	161	184	0	0	0	0	537	2	167
Future Volume (veh/h)	0	465	8	161	184	0	0	0	0	537	2	167
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	505	8	175	200	0				584	2	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1287	574	214	1986	0				511	2	456
Arrive On Green	0.00	0.36	0.36	0.24	1.00	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1609	1810	3705	0				1804	6	1610
Grp Volume(v), veh/h	0	505	8	175	200	0				586	0	125
Grp Sat Flow(s),veh/h/ln	0	1805	1609	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	6.3	0.2	5.5	0.0	0.0				17.0	0.0	3.6
Cycle Q Clear(g_c), s	0.0	6.3	0.2	5.5	0.0	0.0				17.0	0.0	3.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1287	574	214	1986	0				513	0	456
V/C Ratio(X)	0.00	0.39	0.01	0.82	0.10	0.00				1.14	0.00	0.27
Avail Cap(c_a), veh/h	0	1287	574	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.4	12.5	22.3	0.0	0.0				21.5	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.9	0.0	13.1	0.1	0.0				85.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	0.1	2.6	0.0	0.0				18.2	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.3	12.5	35.4	0.1	0.0				106.9	0.0	17.0
LnGrp LOS	A	B	B	D	A	A				F	A	B
Approach Vol, veh/h		513			375						711	
Approach Delay, s/veh		15.3			16.6						91.1	
Approach LOS		B			B						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	11.6	26.4		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	7.5	8.3		19.0		2.0						
Green Ext Time (p_c), s	0.0	1.6		0.0		0.7						

Intersection Summary

HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Timings  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↖	↘
Traffic Volume (vph)	743	347	303	1007	642	1	201
Future Volume (vph)	743	347	303	1007	642	1	201
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	37.0	37.0	34.0	71.0	39.0	39.0	39.0
Total Split (%)	33.6%	33.6%	30.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	36.5	36.5	24.0	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.33	0.33	0.22	0.59	0.30	0.30	0.30
v/c Ratio	0.65	0.47	0.81	0.50	0.65	0.65	0.38
Control Delay	35.4	5.4	27.1	5.1	40.0	40.0	17.5
Queue Delay	0.0	0.0	0.0	0.5	61.2	61.2	0.0
Total Delay	35.4	5.4	27.1	5.6	101.2	101.2	17.5
LOS	D	A	C	A	F	F	B
Approach Delay	25.9			10.6		81.2	
Approach LOS	C			B		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 34.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 79.1%  
 ICU Level of Service D  
 Analysis Period (min) 15













Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



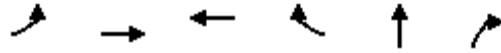
HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘	↙	↗
Traffic Volume (veh/h)	0	743	347	303	1007	0	0	0	0	642	1	201
Future Volume (veh/h)	0	743	347	303	1007	0	0	0	0	642	1	201
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	782	304	319	1060	0				677	0	129
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1274	568	357	2133	0				1102	0	490
Arrive On Green	0.00	0.35	0.35	0.13	0.40	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	782	304	319	1060	0				677	0	129
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	19.7	16.6	19.1	24.3	0.0				17.6	0.0	6.7
Cycle Q Clear(g_c), s	0.0	19.7	16.6	19.1	24.3	0.0				17.6	0.0	6.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1274	568	357	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.61	0.53	0.89	0.50	0.00				0.61	0.00	0.26
Avail Cap(c_a), veh/h	0	1274	568	485	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.4	28.4	46.6	20.9	0.0				32.7	0.0	28.9
Incr Delay (d2), s/veh	0.0	2.2	3.6	11.9	0.6	0.0				2.6	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.4	6.6	9.9	10.7	0.0				7.8	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	31.6	32.0	58.5	21.6	0.0				35.3	0.0	30.2
LnGrp LOS	A	C	C	E	C	A				D	A	C
Approach Vol, veh/h		1086			1379						806	
Approach Delay, s/veh		31.7			30.1						34.5	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	26.2	44.8		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	29.5	31.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	21.1	21.7		19.6		26.3						
Green Ext Time (p_c), s	0.6	2.7		2.6		4.8						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.7								
HCM 6th LOS				C								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings

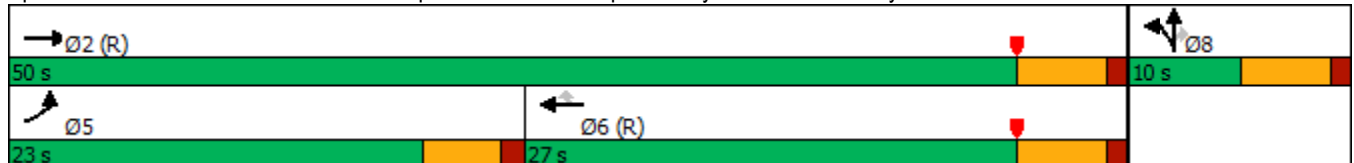


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	286	716	333	760	0	114
Future Volume (vph)	286	716	333	760	0	114
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effect Green (s)	14.2	45.0	26.3	26.3	5.0	5.0
Actuated g/C Ratio	0.24	0.75	0.44	0.44	0.08	0.08
v/c Ratio	0.72	0.28	0.23	0.84	0.09	0.50
Control Delay	14.7	0.1	11.9	18.1	26.8	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	0.1	11.9	18.1	26.8	13.8
LOS	B	A	B	B	C	B
Approach Delay		4.3	16.2		15.0	
Approach LOS		A	B		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 108.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

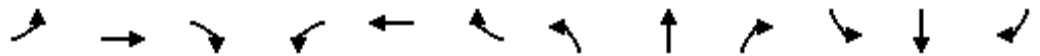


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	286	716	0	0	333	760	12	0	114	0	0	0
Future Volume (veh/h)	286	716	0	0	333	760	12	0	114	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	308	770	0	0	358	817	13	0	58			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	366	2708	0	0	1706	761	151	0	134			
Arrive On Green	0.14	0.50	0.00	0.00	0.47	0.47	0.08	0.00	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	308	770	0	0	358	817	13	0	58			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	10.0	7.4	0.0	0.0	3.5	28.4	0.4	0.0	2.1			
Cycle Q Clear(g_c), s	10.0	7.4	0.0	0.0	3.5	28.4	0.4	0.0	2.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	366	2708	0	0	1706	761	151	0	134			
V/C Ratio(X)	0.84	0.28	0.00	0.00	0.21	1.07	0.09	0.00	0.43			
Avail Cap(c_a), veh/h	558	2708	0	0	1706	761	151	0	134			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.0	5.6	0.0	0.0	9.3	15.8	25.4	0.0	26.2			
Incr Delay (d2), s/veh	4.0	0.2	0.0	0.0	0.3	53.0	1.1	0.0	9.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	0.9	0.0	0.0	1.1	18.7	0.2	0.0	1.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	5.8	0.0	0.0	9.5	68.8	26.5	0.0	36.0			
LnGrp LOS	C	A	A	A	A	F	C	A	D			
Approach Vol, veh/h		1078			1175			71				
Approach Delay, s/veh		12.4			50.8			34.3				
Approach LOS		B			D			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			16.6	33.4		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		9.4			12.0	30.4		4.1				
Green Ext Time (p_c), s		3.3			0.3	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					32.5							
HCM 6th LOS					C							



Timings  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↙	↕↕	↕↕	↘	↙	↕	↘
Traffic Volume (vph)	183	1203	978	748	332	5	461
Future Volume (vph)	183	1203	978	748	332	5	461
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	15.0	66.1	46.6	46.6	32.4	32.4	32.4
Actuated g/C Ratio	0.14	0.60	0.42	0.42	0.29	0.29	0.29
v/c Ratio	0.78	0.58	0.67	0.69	0.35	0.35	0.91
Control Delay	49.7	24.5	29.3	5.4	31.8	31.7	53.8
Queue Delay	0.0	37.1	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	61.6	29.3	5.4	31.8	31.7	53.8
LOS	D	E	C	A	C	C	D
Approach Delay		60.0	19.0			44.5	
Approach LOS		E	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 38.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.1%  
 ICU Level of Service D  
 Analysis Period (min) 15






















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



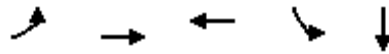
HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	183	1203	0	0	978	748	332	5	461	0	0	0
Future Volume (veh/h)	183	1203	0	0	978	748	332	5	461	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	191	1253	0	0	1019	622	350	0	297			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	218	2461	0	0	1878	838	773	0	344			
Arrive On Green	0.24	1.00	0.00	0.00	0.52	0.52	0.21	0.00	0.21			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	191	1253	0	0	1019	622	350	0	297			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	11.2	0.0	0.0	0.0	20.8	33.2	9.3	0.0	19.6			
Cycle Q Clear(g_c), s	11.2	0.0	0.0	0.0	20.8	33.2	9.3	0.0	19.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	218	2461	0	0	1878	838	773	0	344			
V/C Ratio(X)	0.87	0.51	0.00	0.00	0.54	0.74	0.45	0.00	0.86			
Avail Cap(c_a), veh/h	271	2461	0	0	1878	838	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.71	0.71	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.9	0.0	0.0	0.0	17.6	20.6	37.6	0.0	41.7			
Incr Delay (d2), s/veh	16.8	0.5	0.0	0.0	1.1	5.9	0.4	0.0	9.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.2	0.2	0.0	0.0	8.0	12.4	4.0	0.0	8.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	0.5	0.0	0.0	18.8	26.5	38.1	0.0	51.1			
LnGrp LOS	E	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1444			1641			647				
Approach Delay, s/veh		8.1			21.7			44.0				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.0			17.8	63.2		29.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			13.2	35.2		21.6				
Green Ext Time (p_c), s		6.2			0.1	3.3		1.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.3								
HCM 6th LOS				C								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings  
5: Harley Knox Blvd. & Western Way

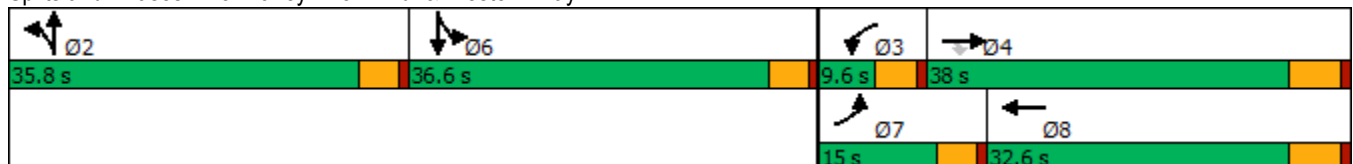


Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↘		
Traffic Volume (vph)	77	759	1064	8	0		
Future Volume (vph)	77	759	1064	8	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	15.0	38.0	32.6	36.6	36.6	35.8	9.6
Total Split (%)	12.5%	31.7%	27.2%	30.5%	30.5%	30%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	38.6	28.4	11.0	11.0		
Actuated g/C Ratio	0.15	0.79	0.58	0.23	0.23		
v/c Ratio	0.31	0.20	0.39	0.02	0.06		
Control Delay	25.7	3.2	9.9	21.0	0.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	25.7	3.2	9.9	21.0	0.1		
LOS	C	A	A	C	A		
Approach Delay		5.3	9.9		3.2		
Approach LOS		A	A		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 48.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 7.8	Intersection LOS: A
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	77	759	0	0	1064	38	0	0	0	8	0	48
Future Volume (veh/h)	77	759	0	0	1064	38	0	0	0	8	0	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	816	0	0	1144	41	0	0	0	9	0	52
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	139	3129	971	5	2088	75	5	5	0	226	0	201
Arrive On Green	0.08	0.60	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5141	184	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	83	816	0	0	769	416	0	0	0	9	0	52
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1867	1810	1900	0	1810	0	1610
Q Serve(g_s), s	1.7	2.8	0.0	0.0	6.5	6.5	0.0	0.0	0.0	0.2	0.0	1.1
Cycle Q Clear(g_c), s	1.7	2.8	0.0	0.0	6.5	6.5	0.0	0.0	0.0	0.2	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	3129	971	5	1405	758	5	5	0	226	0	201
V/C Ratio(X)	0.60	0.26	0.00	0.00	0.55	0.55	0.00	0.00	0.00	0.04	0.00	0.26
Avail Cap(c_a), veh/h	492	4370	1357	237	2425	1309	1477	1551	0	1515	0	1348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	3.6	0.0	0.0	8.7	8.7	0.0	0.0	0.0	14.7	0.0	15.1
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.0	0.0	1.4	1.6	0.0	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	3.6	0.0	0.0	9.0	9.3	0.0	0.0	0.0	14.8	0.0	15.8
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		899			1185			0				61
Approach Delay, s/veh		5.0			9.1			0.0				15.7
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	28.9		9.4	7.5	21.3				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		31.2	5.0	32.2		32.0	10.4	26.8				
Max Q Clear Time (g_c+I1), s		0.0	0.0	4.8		3.1	3.7	8.5				
Green Ext Time (p_c), s		0.0	0.0	5.6		0.3	0.0	7.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.6									
HCM 6th LOS			A									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

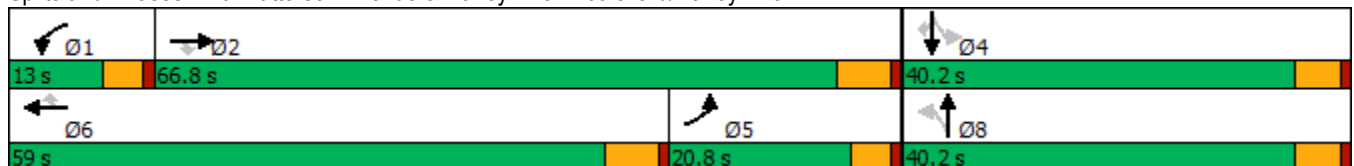


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	27	695	12	19	938	30	62	9	28	4	23
Future Volume (vph)	27	695	12	19	938	30	62	9	28	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	20.8	66.8	66.8	13.0	59.0	59.0	40.2	40.2	40.2	40.2	40.2
Total Split (%)	17.3%	55.7%	55.7%	10.8%	49.2%	49.2%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	32.7	32.7	7.5	32.6	32.6		16.8		16.8	16.8
Actuated g/C Ratio	0.14	0.59	0.59	0.14	0.59	0.59		0.30		0.30	0.30
v/c Ratio	0.11	0.24	0.01	0.09	0.48	0.03		0.21		0.08	0.04
Control Delay	35.4	9.9	0.0	36.1	12.7	0.4		21.6		22.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	35.4	9.9	0.0	36.1	12.7	0.4		21.6		22.6	0.1
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		10.7			12.7			21.6		13.1	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

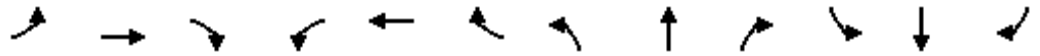


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	27	695	12	19	938	30	62	9	16	28	4	23
Future Volume (veh/h)	27	695	12	19	938	30	62	9	16	28	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	29	755	12	21	1020	33	67	10	15	30	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2643	820	45	1729	771	284	47	41	355	40	272
Arrive On Green	0.03	0.51	0.51	0.03	0.48	0.48	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	5187	1609	1810	3610	1610	978	276	244	1334	235	1610
Grp Volume(v), veh/h	29	755	12	21	1020	33	92	0	0	34	0	22
Grp Sat Flow(s),veh/h/ln	1810	1729	1609	1810	1805	1610	1498	0	0	1569	0	1610
Q Serve(g_s), s	0.8	4.4	0.2	0.6	10.7	0.6	1.9	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.8	4.4	0.2	0.6	10.7	0.6	2.8	0.0	0.0	0.8	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	0.73		0.16	0.88		1.00
Lane Grp Cap(c), veh/h	59	2643	820	45	1729	771	372	0	0	395	0	272
V/C Ratio(X)	0.49	0.29	0.01	0.46	0.59	0.04	0.25	0.00	0.00	0.09	0.00	0.08
Avail Cap(c_a), veh/h	561	6050	1876	291	3672	1638	1115	0	0	1124	0	1081
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.9	7.4	6.3	25.1	9.9	7.3	19.2	0.0	0.0	18.4	0.0	18.3
Incr Delay (d2), s/veh	2.3	0.1	0.0	2.7	0.5	0.0	0.3	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	0.0	0.3	3.0	0.1	0.9	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	7.4	6.3	27.8	10.4	7.3	19.5	0.0	0.0	18.5	0.0	18.4
LnGrp LOS	C	A	A	C	B	A	B	A	A	B	A	B
Approach Vol, veh/h		796			1074			92				56
Approach Delay, s/veh		8.1			10.6			19.5				18.5
Approach LOS		A			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	32.4		13.9	7.5	30.8		13.9				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	16.2	* 53		35.1				
Max Q Clear Time (g_c+I1), s	2.6	6.4		2.8	2.8	12.7		4.8				
Green Ext Time (p_c), s	0.0	8.3		0.2	0.0	12.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1412	252	18	1717	0	68
Future Vol, veh/h	1412	252	18	1717	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1486	265	19	1807	0	72

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1751	0	- 876
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	- 6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	- 3.3
Pot Cap-1 Maneuver	-	-	363	-	0 296
Stage 1	-	-	-	-	0 -
Stage 2	-	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	363	-	- 296
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	296	-	-	363	-
HCM Lane V/C Ratio	0.242	-	-	0.052	-
HCM Control Delay (s)	21	-	-	15.5	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0.9	-	-	0.2	-

Intersection			
Intersection Delay, s/veh	13.4		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1056	23
Demand Flow Rate, veh/h	0	1056	23
Vehicles Circulating, veh/h	11	10	776
Vehicles Exiting, veh/h	1055	789	32
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	13.5	5.3
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.435	0.565
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1056	10	13
Cap Entry Lane, veh/h	1407	701	701
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1056	10	13
Cap Entry, veh/h	1407	701	701
V/C Ratio	0.750	0.014	0.019
Control Delay, s/veh	13.5	5.3	5.3
LOS	B	A	A
95th %tile Queue, veh	8	0	0



Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

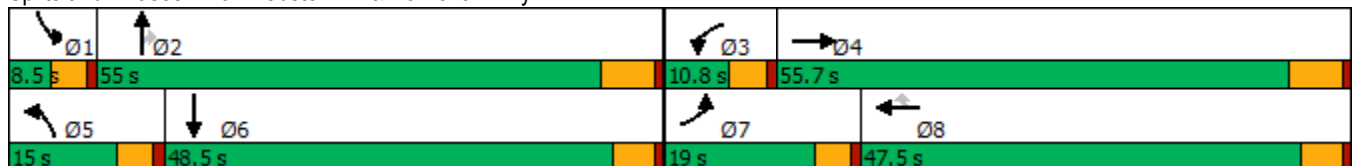


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕	
Traffic Volume (vph)	174	1247	29	1502	24	115	38	31	13	
Future Volume (vph)	174	1247	29	1502	24	115	38	31	13	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	19.0	55.7	10.8	47.5	47.5	15.0	55.0	55.0	48.5	8.5
Total Split (%)	14.6%	42.8%	8.3%	36.5%	36.5%	11.5%	42.3%	42.3%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.3	53.7	5.8	42.4	42.4	10.1	57.1	57.1	0.0	
Actuated g/C Ratio	0.11	0.41	0.04	0.33	0.33	0.08	0.44	0.44	0.00	
v/c Ratio	0.92	0.64	0.38	0.93	0.04	0.86	0.05	0.04	3.05	
Control Delay	103.9	32.7	73.8	53.3	0.1	104.6	21.1	0.1	978.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.9	32.7	73.8	53.3	0.1	104.6	21.1	0.1	978.4	
LOS	F	C	E	D	A	F	C	A	F	
Approach Delay		41.0		52.9			69.6		978.4	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 129.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.05  
 Intersection Signal Delay: 96.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 72.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖	↖	↑	↖		↕	
Traffic Volume (veh/h)	174	1247	59	29	1502	24	115	38	31	43	13	118
Future Volume (veh/h)	174	1247	59	29	1502	24	115	38	31	43	13	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	183	1313	55	31	1581	22	121	40	17	45	14	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2555	107	56	2122	659	153	497	421	0	26	172
Arrive On Green	0.12	0.50	0.50	0.03	0.41	0.41	0.08	0.26	0.26	0.00	0.12	0.12
Sat Flow, veh/h	1810	5106	214	1810	5187	1610	1810	1900	1608	0	219	1424
Grp Volume(v), veh/h	183	889	479	31	1581	22	121	40	17	0	0	105
Grp Sat Flow(s),veh/h/ln	1810	1729	1862	1810	1729	1610	1810	1900	1608	0	0	1644
Q Serve(g_s), s	8.1	14.2	14.2	1.4	21.3	0.7	5.4	1.3	0.6	0.0	0.0	4.9
Cycle Q Clear(g_c), s	8.1	14.2	14.2	1.4	21.3	0.7	5.4	1.3	0.6	0.0	0.0	4.9
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	0.00		0.87
Lane Grp Cap(c), veh/h	221	1731	932	56	2122	659	153	497	421	0	0	198
V/C Ratio(X)	0.83	0.51	0.51	0.55	0.75	0.03	0.79	0.08	0.04	0.00	0.00	0.53
Avail Cap(c_a), veh/h	317	2085	1123	137	2680	832	229	1130	956	0	0	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	13.8	13.8	39.2	20.6	14.5	36.8	22.9	22.6	0.0	0.0	33.9
Incr Delay (d2), s/veh	7.8	0.2	0.4	3.2	0.9	0.0	5.5	0.1	0.0	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.6	5.0	0.6	7.5	0.2	2.5	0.6	0.2	0.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	14.0	14.2	42.4	21.5	14.5	42.3	22.9	22.7	0.0	0.0	36.1
LnGrp LOS	D	B	B	D	C	B	D	C	C	A	A	D
Approach Vol, veh/h		1551			1634			178				105
Approach Delay, s/veh		17.5			21.8			36.1				36.1
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	27.7	7.1	47.3	11.6	16.1	14.6	39.8				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	48.8	6.2	49.5	10.4	* 43	14.4	* 42				
Max Q Clear Time (g_c+11), s	0.0	3.3	3.4	16.2	7.4	6.9	10.1	23.3				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.1	0.0	0.6	0.1	10.3				

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

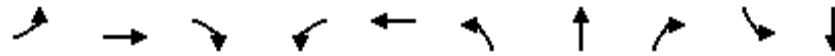
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

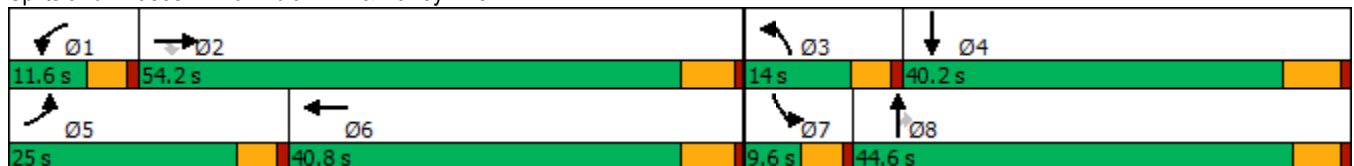


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑↑↑	↘	↙	↑↑↑	↙	↑↑	↘	↙	↑↑
Traffic Volume (vph)	276	370	51	15	709	117	276	21	12	73
Future Volume (vph)	276	370	51	15	709	117	276	21	12	73
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	25.0	54.2	54.2	11.6	40.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	20.8%	45.2%	45.2%	9.7%	34.0%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.7	43.9	43.9	5.7	20.2	7.5	25.4	25.4	5.2	13.8
Actuated g/C Ratio	0.25	0.52	0.52	0.07	0.24	0.09	0.30	0.30	0.06	0.16
v/c Ratio	0.68	0.15	0.06	0.13	0.67	0.41	0.28	0.04	0.12	0.38
Control Delay	40.8	12.8	0.1	45.6	32.1	43.5	23.8	0.1	46.9	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	12.8	0.1	45.6	32.1	43.5	23.8	0.1	46.9	12.4
LOS	D	B	A	D	C	D	C	A	D	B
Approach Delay		22.9			32.4		28.2			14.1
Approach LOS		C			C		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 84  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 26.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 60.2%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	276	370	51	15	709	45	117	276	21	12	73	160
Future Volume (veh/h)	276	370	51	15	709	45	117	276	21	12	73	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	303	407	42	16	779	34	129	303	15	13	80	146
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	355	2192	680	35	1252	54	247	760	339	29	282	252
Arrive On Green	0.20	0.42	0.42	0.02	0.25	0.25	0.07	0.21	0.21	0.02	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	5096	222	3510	3610	1610	1810	1805	1610
Grp Volume(v), veh/h	303	407	42	16	528	285	129	303	15	13	80	146
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1860	1755	1805	1610	1810	1805	1610
Q Serve(g_s), s	10.3	3.1	1.0	0.6	8.7	8.7	2.3	4.6	0.5	0.5	2.5	5.4
Cycle Q Clear(g_c), s	10.3	3.1	1.0	0.6	8.7	8.7	2.3	4.6	0.5	0.5	2.5	5.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	2192	680	35	850	457	247	760	339	29	282	252
V/C Ratio(X)	0.85	0.19	0.06	0.46	0.62	0.62	0.52	0.40	0.04	0.45	0.28	0.58
Avail Cap(c_a), veh/h	577	3925	1218	198	1892	1018	516	2212	987	141	959	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	11.6	10.9	31.0	21.5	21.5	28.7	21.8	20.1	31.2	23.8	25.0
Incr Delay (d2), s/veh	3.5	0.0	0.0	3.4	0.7	1.4	0.6	0.3	0.1	3.9	0.5	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.0	0.3	0.3	3.1	3.5	0.9	1.8	0.2	0.2	1.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	11.6	11.0	34.5	22.2	22.9	29.3	22.1	20.2	35.1	24.4	27.1
LnGrp LOS	C	B	B	C	C	C	C	C	C	D	C	C
Approach Vol, veh/h		752			829			447			239	
Approach Delay, s/veh		18.3			22.7			24.1			26.6	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	32.8	9.1	16.2	17.2	21.5	5.6	19.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	20.4	35.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.6	5.1	4.3	7.4	12.3	10.7	2.5	6.6				
Green Ext Time (p_c), s	0.0	2.7	0.1	1.2	0.3	5.0	0.0	1.9				

Intersection Summary

HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

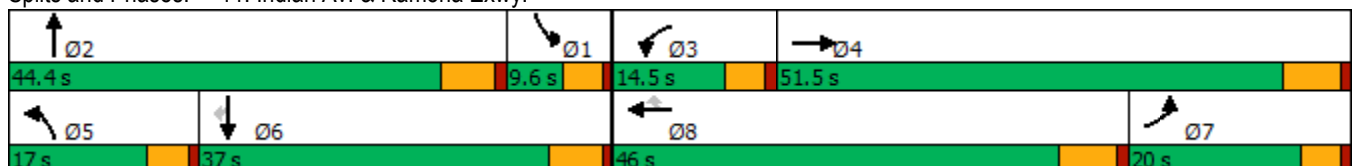
Timings  
11: Indian Av. & Ramona Exwy.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	153	1076	68	1503	106	91	144	21	53	41
Future Volume (vph)	153	1076	68	1503	106	91	144	21	53	41
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	51.5	14.5	46.0	46.0	17.0	44.4	9.6	37.0	37.0
Total Split (%)	16.7%	42.9%	12.1%	38.3%	38.3%	14.2%	37.0%	8.0%	30.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	44.7	7.9	37.1	37.1	9.2	20.4	6.2	13.7	13.7
Actuated g/C Ratio	0.14	0.49	0.09	0.40	0.40	0.10	0.22	0.07	0.15	0.15
v/c Ratio	0.66	0.48	0.47	0.76	0.15	0.54	0.25	0.18	0.10	0.11
Control Delay	55.3	19.4	55.6	28.4	1.0	55.6	25.6	51.3	37.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	19.4	55.6	28.4	1.0	55.6	25.6	51.3	37.0	0.6
LOS	E	B	E	C	A	E	C	D	D	A
Approach Delay		23.7		27.7			35.3		26.5	
Approach LOS		C		C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 91.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 26.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.6%  
 ICU Level of Service C  
 Analysis Period (min) 15























Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1076	65	68	1503	106	91	144	48	21	53	41
Future Volume (veh/h)	153	1076	65	68	1503	106	91	144	48	21	53	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	1145	57	72	1599	83	97	153	28	22	56	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	2478	123	93	2127	660	125	382	68	98	450	201
Arrive On Green	0.11	0.49	0.49	0.05	0.41	0.41	0.07	0.12	0.12	0.05	0.12	0.12
Sat Flow, veh/h	1810	5061	252	1810	5187	1610	1810	3058	548	1810	3610	1610
Grp Volume(v), veh/h	163	782	420	72	1599	83	97	89	92	22	56	35
Grp Sat Flow(s),veh/h/ln	1810	1729	1855	1810	1729	1610	1810	1805	1801	1810	1805	1610
Q Serve(g_s), s	7.0	11.9	12.0	3.1	21.0	2.6	4.2	3.6	3.8	0.9	1.1	1.1
Cycle Q Clear(g_c), s	7.0	11.9	12.0	3.1	21.0	2.6	4.2	3.6	3.8	0.9	1.1	1.1
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	201	1694	908	93	2127	660	125	225	225	98	450	201
V/C Ratio(X)	0.81	0.46	0.46	0.77	0.75	0.13	0.77	0.39	0.41	0.22	0.12	0.17
Avail Cap(c_a), veh/h	348	1956	1049	224	2578	800	280	870	868	113	1407	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	13.5	13.5	37.5	20.1	14.7	36.6	32.3	32.3	36.3	31.2	15.4
Incr Delay (d2), s/veh	3.0	0.2	0.4	5.0	1.0	0.1	3.8	1.1	1.2	0.4	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.9	4.2	1.4	7.4	0.8	1.9	1.6	1.6	0.4	0.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	13.7	13.8	42.5	21.2	14.8	40.5	33.4	33.5	36.7	31.3	15.8
LnGrp LOS	D	B	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1365			1754			278			113	
Approach Delay, s/veh		16.6			21.7			35.9			27.6	
Approach LOS		B			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	15.8	8.7	45.4	10.1	15.8	15.1	39.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	5.0	* 39	9.9	45.3	12.4	31.2	15.4	* 40				
Max Q Clear Time (g_c+I1), s	2.9	5.8	5.1	14.0	6.2	3.1	9.0	23.0				
Green Ext Time (p_c), s	0.0	1.0	0.0	8.3	0.0	0.4	0.1	9.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.0								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

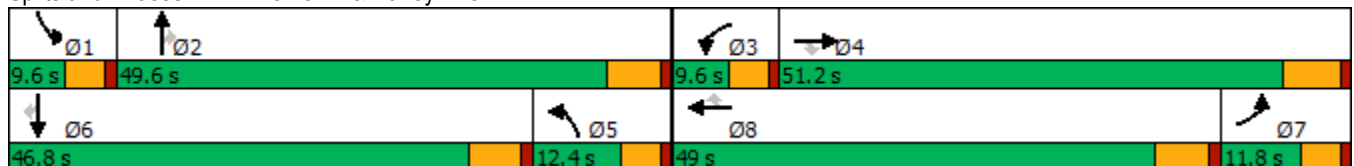


Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations	↘	↑↑	↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	
Traffic Volume (vph)	255	111	31	231	148	162	1210	5	28	657	358	
Future Volume (vph)	255	111	31	231	148	162	1210	5	28	657	358	
Turn Type	Prot	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		8		5	2		1	6		3
Permitted Phases			4		8			2			6	
Detector Phase	7	4	4	8	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	47.2	47.2	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8	9.6
Total Split (s)	11.8	51.2	51.2	49.0	49.0	12.4	49.6	49.6	9.6	46.8	46.8	9.6
Total Split (%)	9.8%	42.7%	42.7%	40.8%	40.8%	10.3%	41.3%	41.3%	8.0%	39.0%	39.0%	8%
Yellow Time (s)	3.6	5.2	5.2	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.8	27.2	27.2	14.9	14.9	9.1	30.3	30.3	5.4	19.4	19.4	
Actuated g/C Ratio	0.11	0.37	0.37	0.20	0.20	0.12	0.41	0.41	0.07	0.26	0.26	
v/c Ratio	1.38	0.09	0.05	0.23	0.33	0.39	0.58	0.01	0.11	0.50	0.53	
Control Delay	231.8	16.7	0.1	25.2	5.0	36.8	19.8	0.0	41.8	24.7	6.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	231.8	16.7	0.1	25.2	5.0	36.8	19.8	0.0	41.8	24.7	6.0	
LOS	F	B	A	C	A	D	B	A	D	C	A	
Approach Delay		153.8		17.3			21.7			18.7		
Approach LOS		F		B			C			B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 73.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.38  
 Intersection Signal Delay: 36.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 67.3%  
 ICU Level of Service C  
 Analysis Period (min) 15



































Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	  		 	  		 	  	
Traffic Volume (veh/h)	255	111	31	0	231	148	162	1210	5	28	657	358
Future Volume (veh/h)	255	111	31	0	231	148	162	1210	5	28	657	358
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	263	114	19	0	238	63	167	1247	4	29	677	264
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1250	557	5	781	242	444	1933	600	109	1345	418
Arrive On Green	0.11	0.35	0.35	0.00	0.15	0.15	0.13	0.37	0.37	0.03	0.26	0.26
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	263	114	19	0	238	63	167	1247	4	29	677	264
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.2	1.4	0.3	0.0	2.7	1.8	2.9	13.2	0.1	0.5	7.4	9.6
Cycle Q Clear(g_c), s	7.2	1.4	0.3	0.0	2.7	1.8	2.9	13.2	0.1	0.5	7.4	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1250	557	5	781	242	444	1933	600	109	1345	418
V/C Ratio(X)	1.34	0.09	0.03	0.00	0.30	0.26	0.38	0.65	0.01	0.26	0.50	0.63
Avail Cap(c_a), veh/h	196	2446	1091	264	3374	1047	444	3420	1062	264	3202	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	14.7	4.0	0.0	25.1	15.1	26.6	17.2	13.1	31.4	21.0	21.8
Incr Delay (d2), s/veh	183.5	0.0	0.0	0.0	0.2	0.6	0.2	0.4	0.0	0.5	0.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	0.5	0.2	0.0	1.0	0.8	1.1	4.4	0.0	0.2	2.7	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.2	14.7	4.1	0.0	25.3	15.7	26.8	17.6	13.1	31.9	21.2	23.4
LnGrp LOS	F	B	A	A	C	B	C	B	B	C	C	C
Approach Vol, veh/h		396			301			1418			970	
Approach Delay, s/veh		146.0			23.3			18.6			22.1	
Approach LOS		F			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	30.6	0.0	29.2	14.2	23.0	13.4	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	7.8	* 41	7.2	* 43				
Max Q Clear Time (g_c+I1), s	2.5	15.2	0.0	3.4	4.9	11.6	9.2	4.7				
Green Ext Time (p_c), s	0.0	9.6	0.0	0.7	0.1	5.6	0.0	1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			36.5									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

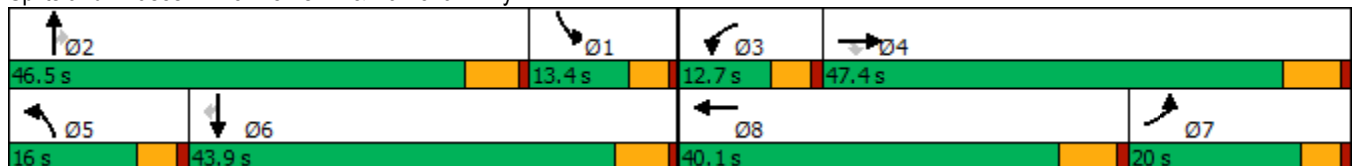
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	404	626	115	110	1232	297	783	63	130	386	148	
Future Volume (vph)	404	626	115	110	1232	297	783	63	130	386	148	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	47.4	47.4	12.7	40.1	16.0	46.5	46.5	13.4	43.9	43.9	
Total Split (%)	16.7%	39.5%	39.5%	10.6%	33.4%	13.3%	38.8%	38.8%	11.2%	36.6%	36.6%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	15.2	41.9	41.9	7.3	34.1	11.5	31.4	31.4	7.9	27.8	27.8	
Actuated g/C Ratio	0.14	0.38	0.38	0.07	0.31	0.10	0.29	0.29	0.07	0.25	0.25	
v/c Ratio	0.87	0.33	0.17	0.49	0.94	0.85	0.79	0.11	0.54	0.44	0.29	
Control Delay	66.6	25.7	2.1	58.5	50.1	70.9	42.3	0.4	58.9	35.5	5.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	66.6	25.7	2.1	58.5	50.1	70.9	42.3	0.4	58.9	35.5	5.0	
LOS	E	C	A	E	D	E	D	A	E	D	A	
Approach Delay		37.8			50.7		47.4			33.3		
Approach LOS		D			D		D			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 109.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 44.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 84.0%  
 ICU Level of Service E  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	404	626	115	110	1232	208	297	783	63	130	386	148
Future Volume (veh/h)	404	626	115	110	1232	208	297	783	63	130	386	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	421	652	94	115	1283	190	309	816	36	135	402	124
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	481	2129	661	174	1405	208	369	997	443	196	859	383
Arrive On Green	0.14	0.41	0.41	0.05	0.31	0.31	0.11	0.28	0.28	0.06	0.24	0.24
Sat Flow, veh/h	3510	5187	1610	3510	4560	675	3510	3610	1605	3510	3610	1608
Grp Volume(v), veh/h	421	652	94	115	973	500	309	816	36	135	402	124
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1729	1778	1755	1805	1605	1755	1805	1608
Q Serve(g_s), s	12.7	9.1	3.9	3.5	29.2	29.2	9.3	22.8	1.4	4.1	10.3	4.6
Cycle Q Clear(g_c), s	12.7	9.1	3.9	3.5	29.2	29.2	9.3	22.8	1.4	4.1	10.3	4.6
Prop In Lane	1.00		1.00	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	2129	661	174	1066	548	369	997	443	196	859	383
V/C Ratio(X)	0.88	0.31	0.14	0.66	0.91	0.91	0.84	0.82	0.08	0.69	0.47	0.32
Avail Cap(c_a), veh/h	502	2129	661	264	1089	560	372	1365	607	287	1278	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	21.4	19.9	50.3	35.8	35.8	47.3	36.4	18.4	49.9	35.2	15.4
Incr Delay (d2), s/veh	14.7	0.1	0.1	1.6	11.4	19.2	14.5	2.9	0.1	1.6	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	3.5	1.4	1.5	13.1	14.7	4.7	9.9	0.7	1.8	4.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	21.5	20.0	51.9	47.3	55.1	61.8	39.3	18.5	51.5	35.6	15.9
LnGrp LOS	E	C	B	D	D	E	E	D	B	D	D	B
Approach Vol, veh/h		1167			1588			1161			661	
Approach Delay, s/veh		35.3			50.1			44.7			35.1	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	35.5	9.9	50.4	15.9	31.4	20.9	39.4				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	8.8	* 41	8.1	41.2	11.4	38.1	15.4	* 34				
Max Q Clear Time (g_c+I1), s	6.1	24.8	5.5	11.1	11.3	12.3	14.7	31.2				
Green Ext Time (p_c), s	0.1	4.8	0.0	4.5	0.0	2.8	0.1	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			42.8									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

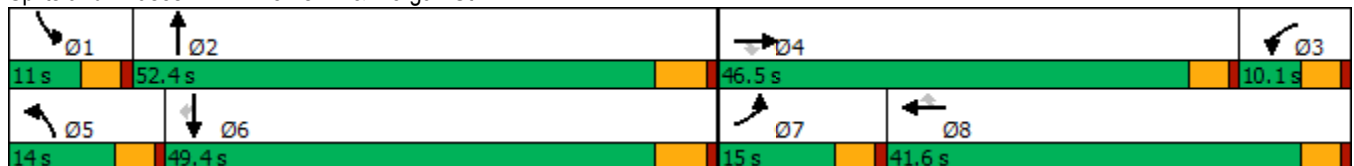
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	16	21	17	27	7	36	1037	20	517	105	
Future Volume (vph)	38	16	21	17	27	7	36	1037	20	517	105	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8	
Total Split (s)	15.0	46.5	46.5	10.1	41.6	41.6	14.0	52.4	11.0	49.4	49.4	
Total Split (%)	12.5%	38.8%	38.8%	8.4%	34.7%	34.7%	11.7%	43.7%	9.2%	41.2%	41.2%	
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	9.3	22.6	22.6	9.5	19.2	19.2	9.3	35.7	8.7	33.2	33.2	
Actuated g/C Ratio	0.17	0.41	0.41	0.17	0.34	0.34	0.17	0.64	0.16	0.59	0.59	
v/c Ratio	0.14	0.01	0.03	0.06	0.05	0.01	0.14	0.36	0.08	0.27	0.12	
Control Delay	36.8	22.5	0.1	35.7	25.0	0.0	37.1	14.7	39.9	17.0	3.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	36.8	22.5	0.1	35.7	25.0	0.0	37.1	14.7	39.9	17.0	3.5	
LOS	D	C	A	D	C	A	D	B	D	B	A	
Approach Delay		23.4			25.1			15.5		15.6		
Approach LOS		C			C			B		B		

Intersection Summary

























Cycle Length: 120  
 Actuated Cycle Length: 55.8  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.36  
 Intersection Signal Delay: 16.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 45.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	16	21	17	27	7	36	1037	19	20	517	105
Future Volume (veh/h)	38	16	21	17	27	7	36	1037	19	20	517	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	18	8	19	31	6	41	1178	20	23	588	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	560	250	48	260	220	79	2074	35	50	1367	597
Arrive On Green	0.05	0.15	0.15	0.03	0.14	0.14	0.04	0.39	0.39	0.03	0.38	0.38
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5253	89	1810	3610	1576
Grp Volume(v), veh/h	43	18	8	19	31	6	41	775	423	23	588	108
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1884	1810	1805	1576
Q Serve(g_s), s	1.2	0.2	0.2	0.5	0.7	0.2	1.1	8.7	8.7	0.6	6.0	2.3
Cycle Q Clear(g_c), s	1.2	0.2	0.2	0.5	0.7	0.2	1.1	8.7	8.7	0.6	6.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	82	560	250	48	260	220	79	1366	744	50	1367	597
V/C Ratio(X)	0.53	0.03	0.03	0.39	0.12	0.03	0.52	0.57	0.57	0.46	0.43	0.18
Avail Cap(c_a), veh/h	380	3056	1363	201	1420	1204	344	3256	1774	234	3180	1389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	17.8	9.4	23.7	18.8	18.5	23.2	11.7	11.7	23.7	11.4	10.3
Incr Delay (d2), s/veh	2.0	0.0	0.1	1.9	0.2	0.0	2.0	0.4	0.7	2.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	0.2	0.3	0.1	0.4	2.5	2.7	0.3	1.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	17.8	9.5	25.6	19.0	18.6	25.1	12.1	12.4	26.2	11.6	10.4
LnGrp LOS	C	B	A	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		69			56			1239			719	
Approach Delay, s/veh		21.4			21.2			12.6			11.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	25.3	5.9	12.3	6.8	24.5	6.8	11.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	46.6	5.5	41.9	9.4	43.6	10.4	37.0				
Max Q Clear Time (g_c+I1), s	2.6	10.7	2.5	2.2	3.1	8.0	3.2	2.7				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.1	0.0	4.3	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				12.9								
HCM 6th LOS				B								

Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

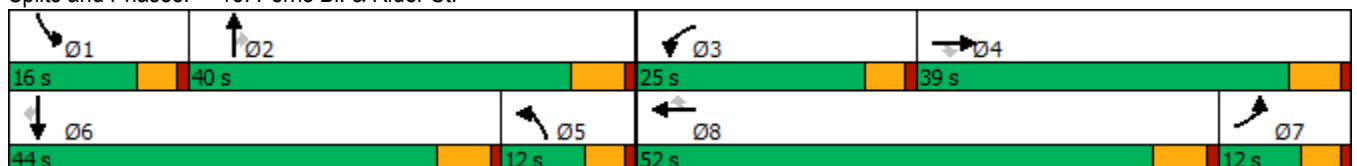
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	155	17	165	313	274	44	840	87	96	401	42
Future Volume (vph)	39	155	17	165	313	274	44	840	87	96	401	42
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	12.0	39.0	39.0	25.0	52.0	52.0	12.0	40.0	40.0	16.0	44.0	44.0
Total Split (%)	10.0%	32.5%	32.5%	20.8%	43.3%	43.3%	10.0%	33.3%	33.3%	13.3%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.4	13.9	13.9	12.3	23.1	23.1	12.3	21.1	21.1	8.7	19.8	19.8
Actuated g/C Ratio	0.11	0.18	0.18	0.16	0.31	0.31	0.16	0.28	0.28	0.12	0.26	0.26
v/c Ratio	0.19	0.24	0.04	0.57	0.29	0.40	0.15	0.59	0.16	0.47	0.30	0.08
Control Delay	38.8	30.3	0.2	41.8	25.3	5.7	33.8	27.1	0.6	45.5	27.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	30.3	0.2	41.8	25.3	5.7	33.8	27.1	0.6	45.5	27.0	0.3
LOS	D	C	A	D	C	A	C	C	A	D	C	A
Approach Delay		29.4			21.8			25.0			28.3	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 75.5  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 25.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 56.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
 15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	155	17	165	313	274	44	840	87	96	401	42
Future Volume (veh/h)	39	155	17	165	313	274	44	840	87	96	401	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	157	5	167	316	142	44	848	56	97	405	27
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	177	625	279	214	625	279	274	1446	443	126	912	283
Arrive On Green	0.10	0.17	0.17	0.12	0.17	0.17	0.15	0.28	0.28	0.07	0.18	0.18
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	5187	1588	1810	5187	1610
Grp Volume(v), veh/h	39	157	5	167	316	142	44	848	56	97	405	27
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1729	1588	1810	1729	1610
Q Serve(g_s), s	1.1	2.2	0.1	5.2	4.6	3.2	1.2	8.1	1.5	3.0	4.0	0.8
Cycle Q Clear(g_c), s	1.1	2.2	0.1	5.2	4.6	3.2	1.2	8.1	1.5	3.0	4.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	625	279	214	625	279	274	1446	443	126	912	283
V/C Ratio(X)	0.22	0.25	0.02	0.78	0.51	0.51	0.16	0.59	0.13	0.77	0.44	0.10
Avail Cap(c_a), veh/h	232	2076	926	639	2888	1288	274	3072	940	357	3431	1065
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	20.6	6.5	24.7	21.6	10.5	21.3	18.0	15.6	26.4	21.3	19.9
Incr Delay (d2), s/veh	0.2	0.2	0.0	2.3	0.6	1.4	0.1	0.4	0.1	3.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.8	0.1	2.1	1.7	1.6	0.5	2.8	0.5	1.3	1.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	20.8	6.5	27.1	22.3	12.0	21.4	18.3	15.7	30.1	21.6	20.1
LnGrp LOS	C	C	A	C	C	B	C	B	B	C	C	C
Approach Vol, veh/h		201			625			948			529	
Approach Delay, s/veh		21.2			21.2			18.3			23.1	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	21.9	11.4	15.8	14.6	16.0	11.4	15.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	11.4	34.2	20.4	33.2	7.4	* 38	7.4	* 46				
Max Q Clear Time (g_c+I1), s	5.0	10.1	7.2	4.2	3.2	6.0	3.1	6.6				
Green Ext Time (p_c), s	0.0	5.8	0.2	0.9	0.0	2.7	0.0	2.4				

Intersection Summary

HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	11	133	373	4	1		
Future Volume (vph)	11	133	373	4	1		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	9.6	31.8	36.0	78.6	42.6	9.6	31.8
Total Split (%)	8.0%	26.5%	30.0%	65.5%	35.5%	8%	27%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effect Green (s)	7.0	16.0	21.2	23.6	16.3		
Actuated g/C Ratio	0.14	0.33	0.43	0.48	0.33		
v/c Ratio	0.05	0.12	0.56	0.00	0.01		
Control Delay	33.4	0.2	21.0	7.5	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	33.4	0.2	21.0	7.5	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.8			
Approach LOS				C			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 49	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 45.0%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	133	0	0	0	373	4	0	0	1	6
Future Volume (veh/h)	11	0	133	0	0	0	373	4	0	0	1	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	13	0	138	0	0	0	434	5	0	0	1	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	31	419	355	5	136	0	530	1656	0	0	61	55
Arrive On Green	0.02	0.00	0.22	0.00	0.00	0.00	0.29	0.46	0.00	0.00	0.03	0.03
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	13	0	138	0	0	0	434	5	0	0	1	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.2	0.0	2.6	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	2.6	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	31	419	355	5	136	0	530	1656	0	0	61	55
V/C Ratio(X)	0.42	0.00	0.39	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.02	0.13
Avail Cap(c_a), veh/h	259	1416	1200	259	1481	0	1628	7573	0	0	1924	1717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	11.6	0.0	0.0	0.0	11.5	5.1	0.0	0.0	16.3	16.4
Incr Delay (d2), s/veh	3.4	0.0	0.7	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.8	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	0.0	12.3	0.0	0.0	0.0	12.7	5.1	0.0	0.0	16.4	17.4
LnGrp LOS	C	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		151			0			439			8	
Approach Delay, s/veh		13.0			0.0			12.6			17.3	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		21.4	0.0	13.5	14.8	6.6	5.2	8.3				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		73.2	5.0	26.0	31.4	37.2	5.0	* 27				
Max Q Clear Time (g_c+I1), s		2.0	0.0	4.6	9.8	2.1	2.2	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.4	0.6	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	28	52	381	125	6
Future Vol, veh/h	4	28	52	381	125	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	32	60	438	144	7
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	3	0	2
HCM Control Delay	8.3	8.3	8.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	87%
Vol Right, %	0%	0%	0%	0%	100%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	191	191	4	28	83	48
LT Vol	52	0	0	4	0	0	0
Through Vol	0	191	191	0	0	83	42
RT Vol	0	0	0	0	28	0	6
Lane Flow Rate	60	219	219	5	32	96	55
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.09	0.3	0.196	0.008	0.047	0.143	0.081
Departure Headway (Hd)	5.435	4.933	3.23	6.419	5.216	5.389	5.301
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	661	731	1112	557	685	666	676
Service Time	3.153	2.652	0.948	4.165	2.963	3.122	3.034
HCM Lane V/C Ratio	0.091	0.3	0.197	0.009	0.047	0.144	0.081
HCM Control Delay	8.7	9.8	6.7	9.2	8.2	9	8.5
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	1.3	0.7	0	0.1	0.5	0.3

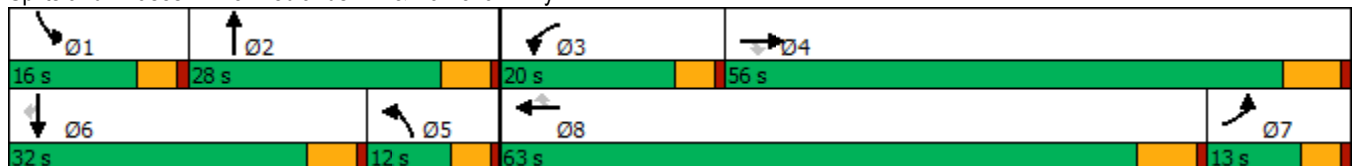
Timings  
18: Redlands Av. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	30	812	29	92	1606	368	35	25	51	69	10	
Future Volume (vph)	30	812	29	92	1606	368	35	25	51	69	10	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4	
Total Split (s)	13.0	56.0	56.0	20.0	63.0	63.0	12.0	28.0	16.0	32.0	32.0	
Total Split (%)	10.8%	46.7%	46.7%	16.7%	52.5%	52.5%	10.0%	23.3%	13.3%	26.7%	26.7%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	6.7	37.0	37.0	9.7	42.7	42.7	7.5	12.5	7.7	12.6	12.6	
Actuated g/C Ratio	0.08	0.46	0.46	0.12	0.53	0.53	0.09	0.16	0.10	0.16	0.16	
v/c Ratio	0.21	0.35	0.04	0.44	0.61	0.37	0.21	0.37	0.31	0.24	0.02	
Control Delay	48.4	16.0	0.1	47.1	15.9	2.7	46.4	17.1	47.7	40.9	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.4	16.0	0.1	47.1	15.9	2.7	46.4	17.1	47.7	40.9	0.1	
LOS	D	B	A	D	B	A	D	B	D	D	A	
Approach Delay		16.5			14.9			23.4		40.5		
Approach LOS		B			B			C		D		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.5  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 65.0%  
 ICU Level of Service C  
 Analysis Period (min) 15






























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	30	812	29	92	1606	368	35	25	100	51	69	10
Future Volume (veh/h)	30	812	29	92	1606	368	35	25	100	51	69	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	846	27	96	1673	317	36	26	40	53	72	7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	2484	771	125	2567	797	64	89	137	80	248	210
Arrive On Green	0.03	0.48	0.48	0.07	0.49	0.49	0.04	0.13	0.13	0.04	0.13	0.13
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	675	1038	1810	1900	1610
Grp Volume(v), veh/h	31	846	27	96	1673	317	36	0	66	53	72	7
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	0	1713	1810	1900	1610
Q Serve(g_s), s	1.3	7.7	0.4	3.9	18.1	5.9	1.5	0.0	2.6	2.2	2.6	0.3
Cycle Q Clear(g_c), s	1.3	7.7	0.4	3.9	18.1	5.9	1.5	0.0	2.6	2.2	2.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	57	2484	771	125	2567	797	64	0	226	80	248	210
V/C Ratio(X)	0.54	0.34	0.04	0.77	0.65	0.40	0.57	0.00	0.29	0.66	0.29	0.03
Avail Cap(c_a), veh/h	202	3427	1064	370	3909	1213	178	0	514	274	671	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	12.2	4.2	34.5	14.2	4.7	35.8	0.0	29.5	35.4	29.6	28.6
Incr Delay (d2), s/veh	2.9	0.1	0.0	3.8	0.3	0.3	2.9	0.0	0.7	3.4	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	0.2	1.7	5.6	2.4	0.7	0.0	1.1	1.0	1.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	12.3	4.2	38.3	14.5	5.0	38.7	0.0	30.3	38.8	30.3	28.7
LnGrp LOS	D	B	A	D	B	A	D	A	C	D	C	C
Approach Vol, veh/h		904			2086			102			132	
Approach Delay, s/veh		13.0			14.1			33.2			33.6	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	15.3	9.8	42.3	8.0	15.2	8.6	43.5				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	5.4	* 5.4	6.2	* 6.2				
Max Green Setting (Gmax), s	11.4	22.6	15.4	49.8	7.4	* 27	8.4	* 57				
Max Q Clear Time (g_c+I1), s	4.2	4.6	5.9	9.7	3.5	4.6	3.3	20.1				
Green Ext Time (p_c), s	0.0	0.2	0.1	6.1	0.0	0.3	0.0	17.2				

Intersection Summary

HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	15	0	1	4	2	0	22	0	20	63	49
Future Vol, veh/h	34	15	0	1	4	2	0	22	0	20	63	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	16	0	1	4	2	0	24	0	22	68	53

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	166	163	95	171	189	24	121	0	0	24	0	0
Stage 1	139	139	-	24	24	-	-	-	-	-	-	-
Stage 2	27	24	-	147	165	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	803	733	967	797	709	1058	1479	-	-	1604	-	-
Stage 1	869	785	-	999	879	-	-	-	-	-	-	-
Stage 2	996	879	-	860	766	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	789	723	967	775	699	1058	1479	-	-	1604	-	-
Mov Cap-2 Maneuver	789	723	-	775	699	-	-	-	-	-	-	-
Stage 1	869	774	-	999	879	-	-	-	-	-	-	-
Stage 2	989	879	-	830	755	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9.6	0	1.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1479	-	-	789	723	786	1604	-	-
HCM Lane V/C Ratio	-	-	-	0.047	0.023	0.01	0.014	-	-
HCM Control Delay (s)	0	-	-	9.8	10.1	9.6	7.3	-	-
HCM Lane LOS	A	-	-	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	3	19	0	0	64
Future Vol, veh/h	0	3	19	0	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	21	0	0	70

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	11	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1074	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	1074	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1074	-
HCM Lane V/C Ratio	-	- 0.003	-
HCM Control Delay (s)	-	- 8.4	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	6	0	13	3	16	48	0
Future Vol, veh/h	0	0	0	0	0	6	0	13	3	16	48	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	7	0	14	3	17	52	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	93	103	52	102	102	9	-	0	0	17	0	0
Stage 1	86	86	-	16	16	-	-	-	-	-	-	-
Stage 2	7	17	-	86	86	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.2	7.3	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	891	791	1021	879	792	1077	0	-	-	1613	-	-
Stage 1	927	827	-	1007	886	-	0	-	-	-	-	-
Stage 2	1019	885	-	927	827	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	879	782	1021	872	783	1077	-	-	-	1613	-	-
Mov Cap-2 Maneuver	879	782	-	872	783	-	-	-	-	-	-	-
Stage 1	927	818	-	1007	886	-	-	-	-	-	-	-
Stage 2	1013	885	-	917	818	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.4	0	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	-	1077	1613	-
HCM Lane V/C Ratio	-	-	-	0.006	0.011	-
HCM Control Delay (s)	-	-	0	8.4	7.3	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	0	-

Timings  
22: Redlands Av. & Driveway 2

	↙	↑	↘	↓
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations	↘	↑↘	↘	↑
Traffic Volume (vph)	2	4	47	1
Future Volume (vph)	2	4	47	1
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	5.0	10.0
Minimum Split (s)	21.6	22.4	9.6	15.4
Total Split (s)	27.0	30.0	33.0	63.0
Total Split (%)	30.0%	33.3%	36.7%	70.0%
Yellow Time (s)	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effct Green (s)	10.1	58.1	6.6	68.2
Actuated g/C Ratio	0.14	0.81	0.09	0.95
v/c Ratio	0.06	0.00	0.31	0.00
Control Delay	16.4	4.3	34.2	2.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.4	4.3	34.2	2.0
LOS	B	A	C	A
Approach Delay	16.4	4.3		33.6
Approach LOS	B	A		C

Intersection Summary

Cycle Length: 90	
Actuated Cycle Length: 71.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 25.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Redlands Av. & Driveway 2



HCM 6th Signalized Intersection Summary  
 22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)  
 12/10/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕↗		↵	↕
Traffic Volume (veh/h)	2	12	4	3	47	1
Future Volume (veh/h)	2	12	4	3	47	1
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	13	4	3	51	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	8	51	1471	980	81	1557
Arrive On Green	0.04	0.04	0.71	0.71	0.04	0.82
Sat Flow, veh/h	206	1339	2170	1382	1810	1900
Grp Volume(v), veh/h	16	0	3	4	51	1
Grp Sat Flow(s),veh/h/ln	1649	0	1805	1651	1810	1900
Q Serve(g_s), s	0.7	0.0	0.0	0.0	1.9	0.0
Cycle Q Clear(g_c), s	0.7	0.0	0.0	0.0	1.9	0.0
Prop In Lane	0.12	0.81		0.84	1.00	
Lane Grp Cap(c), veh/h	63	0	1280	1171	81	1557
V/C Ratio(X)	0.25	0.00	0.00	0.00	0.63	0.00
Avail Cap(c_a), veh/h	525	0	1280	1171	731	1557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	3.0	3.0	33.0	1.1
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.0	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.0	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.9	0.0	3.0	3.0	35.9	1.1
LnGrp LOS	C	A	A	A	D	A
Approach Vol, veh/h	16		7			52
Approach Delay, s/veh	34.9		3.0			35.3
Approach LOS	C		A			D
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.8	55.2			63.0	7.3
Change Period (Y+Rc), s	4.6	5.4			5.4	4.6
Max Green Setting (Gmax), s	28.4	24.6			57.6	22.4
Max Q Clear Time (g_c+I1), s	3.9	2.0			2.0	2.7
Green Ext Time (p_c), s	0.0	0.0			0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	1	6	3	0	3
Future Vol, veh/h	0	1	6	3	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	7	3	0	3

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	5	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	1083	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1083	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1083	-
HCM Lane V/C Ratio	-	- 0.001	-
HCM Control Delay (s)	-	- 8.3	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Timings  
24: Redlands Av. & Rider St.

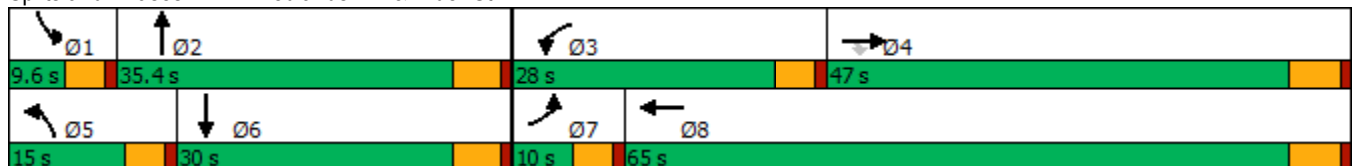


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations	↖	↑	↗	↖	↕	↖	↗	↗	
Traffic Volume (vph)	6	378	11	171	733	48	3	1	
Future Volume (vph)	6	378	11	171	733	48	3	1	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	NA	
Protected Phases	7	4		3	8	5	2	6	1
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	9.6	27.4	27.4	9.6
Total Split (s)	10.0	47.0	47.0	28.0	65.0	15.0	35.4	30.0	9.6
Total Split (%)	8.3%	39.2%	39.2%	23.3%	54.2%	12.5%	29.5%	25.0%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	5.1	44.1	44.1	13.0	60.1	8.5	12.6	10.1	
Actuated g/C Ratio	0.06	0.52	0.52	0.15	0.70	0.10	0.15	0.12	
v/c Ratio	0.06	0.42	0.01	0.68	0.31	0.29	0.53	0.01	
Control Delay	43.7	16.4	0.0	48.0	6.5	41.6	9.8	30.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.7	16.4	0.0	48.0	6.5	41.6	9.8	30.7	
LOS	D	B	A	D	A	D	A	C	
Approach Delay		16.4			14.4		15.8	30.7	
Approach LOS		B			B		B	C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 85.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	378	11	171	733	0	48	3	203	0	1	2
Future Volume (veh/h)	6	378	11	171	733	0	48	3	203	0	1	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	7	411	12	186	797	0	52	3	221	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	16	979	829	222	2270	0	71	4	309	2	60	120
Arrive On Green	0.01	0.52	0.52	0.12	0.63	0.00	0.04	0.19	0.19	0.00	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	1810	22	1592	1810	565	1131
Grp Volume(v), veh/h	7	411	12	186	797	0	52	0	224	0	0	3
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1810	0	1613	1810	0	1696
Q Serve(g_s), s	0.4	12.6	0.3	9.5	9.9	0.0	2.7	0.0	12.2	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.4	12.6	0.3	9.5	9.9	0.0	2.7	0.0	12.2	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.99	1.00		0.67
Lane Grp Cap(c), veh/h	16	979	829	222	2270	0	71	0	314	2	0	180
V/C Ratio(X)	0.44	0.42	0.01	0.84	0.35	0.00	0.73	0.00	0.71	0.00	0.00	0.02
Avail Cap(c_a), veh/h	104	979	829	450	2270	0	200	0	514	96	0	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	14.1	11.1	40.4	8.3	0.0	44.7	0.0	35.5	0.0	0.0	37.7
Incr Delay (d2), s/veh	6.7	1.3	0.0	3.2	0.4	0.0	5.2	0.0	3.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.1	0.1	4.2	3.3	0.0	1.3	0.0	4.9	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	15.4	11.2	43.6	8.7	0.0	49.9	0.0	38.5	0.0	0.0	37.7
LnGrp LOS	D	B	B	D	A	A	D	A	D	A	A	D
Approach Vol, veh/h		430			983			276				3
Approach Delay, s/veh		15.9			15.3			40.7				37.7
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	23.7	16.1	54.3	8.3	15.4	5.4	65.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	5.0	30.0	23.4	41.2	10.4	24.6	5.4	59.2				
Max Q Clear Time (g_c+I1), s	0.0	14.2	11.5	14.6	4.7	2.1	2.4	11.9				
Green Ext Time (p_c), s	0.0	1.1	0.2	2.3	0.0	0.0	0.0	5.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.7								
HCM 6th LOS				B								

Timings  
25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)  
12/10/2019

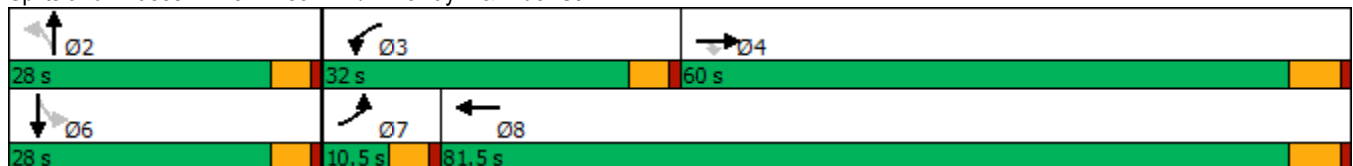


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↑	↗	↖	↑↓		↕	↕
Traffic Volume (vph)	21	530	19	220	847	33	0	0
Future Volume (vph)	21	530	19	220	847	33	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	26.6	26.6	26.6
Total Split (s)	10.5	60.0	60.0	32.0	81.5	28.0	28.0	28.0
Total Split (%)	8.8%	50.0%	50.0%	26.7%	67.9%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.5	58.4	58.4	19.0	76.1		12.0	12.0
Actuated g/C Ratio	0.05	0.56	0.56	0.18	0.73		0.11	0.11
v/c Ratio	0.26	0.59	0.02	0.79	0.38		0.69	0.02
Control Delay	57.4	19.7	0.1	58.4	6.7		21.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	57.4	19.7	0.1	58.4	6.7		21.7	0.2
LOS	E	B	A	E	A		C	A
Approach Delay		20.5			17.4		21.7	0.2
Approach LOS		C			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.5  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 18.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 72.2%  
 ICU Level of Service C  
 Analysis Period (min) 15




















Splits and Phases: 25: Wilson Av./Driveway 4 & Rider St.



HCM 6th Signalized Intersection Summary  
 25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	530	19	220	847	0	33	0	181	0	0	6
Future Volume (veh/h)	21	530	19	220	847	0	33	0	181	0	0	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	624	22	259	996	0	39	0	213	0	0	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	43	1010	856	290	2410	0	68	12	238	0	0	284
Arrive On Green	0.02	0.53	0.53	0.16	0.67	0.00	0.18	0.00	0.18	0.00	0.00	0.18
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	177	70	1351	0	0	1610
Grp Volume(v), veh/h	25	624	22	259	996	0	252	0	0	0	0	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1599	0	0	0	0	1610
Q Serve(g_s), s	1.6	26.0	0.7	15.9	14.4	0.0	11.9	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.6	26.0	0.7	15.9	14.4	0.0	17.4	0.0	0.0	0.0	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.00	0.15		0.85	0.00		1.00
Lane Grp Cap(c), veh/h	43	1010	856	290	2410	0	318	0	0	0	0	284
V/C Ratio(X)	0.57	0.62	0.03	0.89	0.41	0.00	0.79	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	94	1010	856	437	2410	0	366	0	0	0	0	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	54.8	18.5	12.6	46.7	8.7	0.0	45.6	0.0	0.0	0.0	0.0	38.6
Incr Delay (d2), s/veh	4.4	2.8	0.1	10.7	0.5	0.0	9.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	11.2	0.3	7.8	4.9	0.0	7.8	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	21.4	12.7	57.4	9.2	0.0	55.5	0.0	0.0	0.0	0.0	38.7
LnGrp LOS	E	C	B	E	A	A	E	A	A	A	A	D
Approach Vol, veh/h		671			1255			252				7
Approach Delay, s/veh		22.5			19.1			55.5				38.7
Approach LOS		C			B			E				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.6	22.8	66.1		24.6	7.3	81.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	5.9	75.7				
Max Q Clear Time (g_c+I1), s		19.4	17.9	28.0		2.4	3.6	16.4				
Green Ext Time (p_c), s		0.5	0.2	4.0		0.0	0.0	8.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			24.4									
HCM 6th LOS			C									

Timings

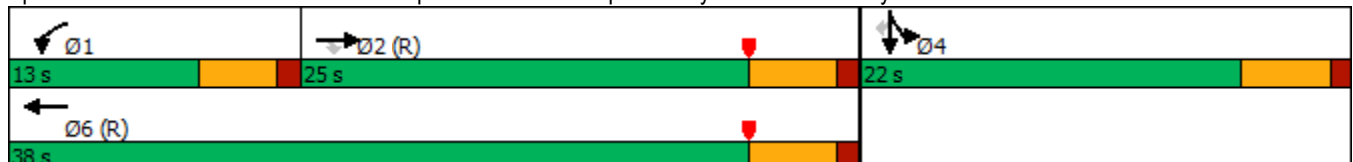


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Traffic Volume (vph)	365	15	292	181	7	172
Future Volume (vph)	365	15	292	181	7	172
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	8.8	33.3	16.7	16.7
Actuated g/C Ratio	0.33	0.33	0.15	0.56	0.28	0.28
v/c Ratio	0.34	0.03	1.23	0.10	0.91	0.32
Control Delay	16.0	0.1	155.0	11.2	47.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	0.1	155.0	11.2	47.4	4.8
LOS	B	A	F	B	D	A
Approach Delay	15.4			99.9	34.9	
Approach LOS	B			F	C	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.23  
 Intersection Signal Delay: 51.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 67.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

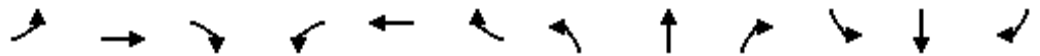


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

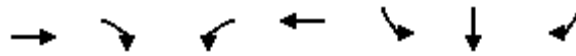
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	365	15	292	181	0	0	0	0	408	7	172
Future Volume (veh/h)	0	365	15	292	181	0	0	0	0	408	7	172
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	406	14	324	201	0				453	8	113
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1213	541	256	1996	0				499	9	452
Arrive On Green	0.00	0.34	0.34	0.24	0.92	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1780	31	1610
Grp Volume(v), veh/h	0	406	14	324	201	0				461	0	113
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1811	0	1610
Q Serve(g_s), s	0.0	5.0	0.3	8.5	0.3	0.0				14.7	0.0	3.3
Cycle Q Clear(g_c), s	0.0	5.0	0.3	8.5	0.3	0.0				14.7	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1213	541	256	1996	0				508	0	452
V/C Ratio(X)	0.00	0.33	0.03	1.26	0.10	0.00				0.91	0.00	0.25
Avail Cap(c_a), veh/h	0	1213	541	256	1996	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.9	13.3	22.9	1.0	0.0				20.8	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.7	0.1	144.9	0.1	0.0				19.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	0.1	13.1	0.1	0.0				8.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.6	13.4	167.8	1.1	0.0				40.6	0.0	17.0
LnGrp LOS	A	B	B	F	A	A				D	A	B
Approach Vol, veh/h		420			525						574	
Approach Delay, s/veh		15.6			104.0						36.0	
Approach LOS		B			F						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.2		21.8		38.2						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	10.5	7.0		16.7		2.3						
Green Ext Time (p_c), s	0.0	1.3		0.1		0.7						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				53.8								
HCM 6th LOS				D								

Timings  
2: I-215 SB Ramps & Ramona Exwy.

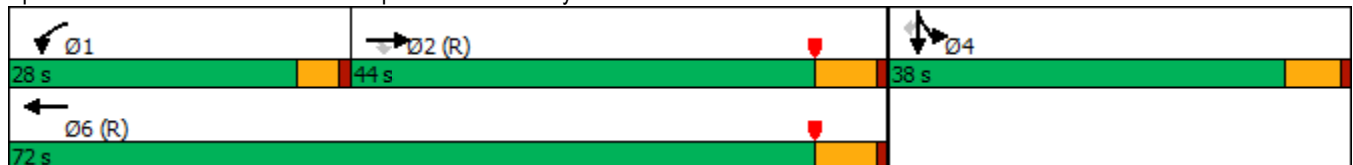


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑	↵
Traffic Volume (vph)	841	337	381	898	809	3	181
Future Volume (vph)	841	337	381	898	809	3	181
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	44.0	28.0	72.0	38.0	38.0	38.0
Total Split (%)	40.0%	40.0%	25.5%	65.5%	34.5%	34.5%	34.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.0	38.0	23.5	66.0	32.5	32.5	32.5
Actuated g/C Ratio	0.35	0.35	0.21	0.60	0.30	0.30	0.30
v/c Ratio	0.69	0.44	1.01	0.42	0.82	0.82	0.32
Control Delay	34.4	4.7	67.2	4.2	50.5	50.7	9.7
Queue Delay	0.0	0.0	0.0	0.3	59.7	59.6	0.0
Total Delay	34.4	4.7	67.2	4.5	110.2	110.3	9.7
LOS	C	A	E	A	F	F	A
Approach Delay	25.9			23.2		91.9	
Approach LOS	C			C		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 43.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 129.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.

















HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	841	337	381	898	0	0	0	0	809	3	181
Future Volume (veh/h)	0	841	337	381	898	0	0	0	0	809	3	181
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	858	279	389	916	0				828	0	106
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1247	556	387	2166	0				1069	0	476
Arrive On Green	0.00	0.35	0.35	0.14	0.40	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	858	279	389	916	0				828	0	106
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	22.4	15.1	23.5	20.1	0.0				23.0	0.0	5.5
Cycle Q Clear(g_c), s	0.0	22.4	15.1	23.5	20.1	0.0				23.0	0.0	5.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1247	556	387	2166	0				1069	0	476
V/C Ratio(X)	0.00	0.69	0.50	1.01	0.42	0.00				0.77	0.00	0.22
Avail Cap(c_a), veh/h	0	1247	556	387	2166	0				1069	0	476
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.79	0.79	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.9	28.5	47.1	19.2	0.0				35.4	0.0	29.2
Incr Delay (d2), s/veh	0.0	3.1	3.2	42.2	0.5	0.0				5.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.7	6.0	15.2	8.8	0.0				10.5	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.0	31.7	89.4	19.6	0.0				40.9	0.0	30.3
LnGrp LOS	A	C	C	F	B	A				D	A	C
Approach Vol, veh/h		1137			1305						934	
Approach Delay, s/veh		33.5			40.4						39.7	
Approach LOS		C			D						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	28.0	44.0		38.0		72.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	23.5	38.0		32.5		66.0						
Max Q Clear Time (g_c+I1), s	25.5	24.4		25.0		22.1						
Green Ext Time (p_c), s	0.0	3.4		2.3		4.0						

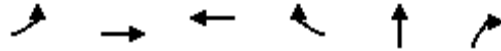
Intersection Summary

HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings

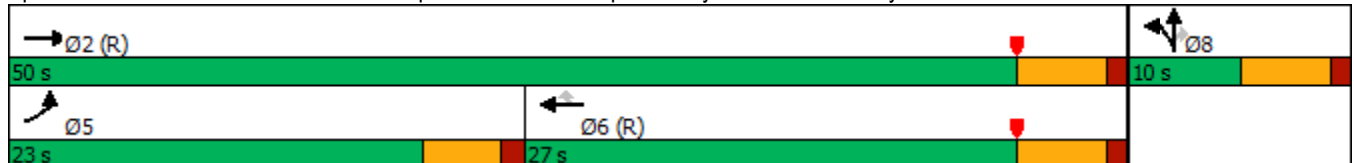


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	237	537	452	610	4	261
Future Volume (vph)	237	537	452	610	4	261
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	13.5	45.0	27.0	27.0	5.0	5.0
Actuated g/C Ratio	0.22	0.75	0.45	0.45	0.08	0.08
v/c Ratio	0.69	0.23	0.33	0.72	0.20	0.74
Control Delay	15.9	0.2	12.3	10.8	29.1	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	0.2	12.3	10.8	29.1	16.9
LOS	B	A	B	B	C	B
Approach Delay		5.0	11.4		18.0	
Approach LOS		A	B		B	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 10.0 Intersection LOS: A  
 Intersection Capacity Utilization 67.2% ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷	↶		↶	↷			
Traffic Volume (veh/h)	237	537	0	0	452	610	22	4	261	0	0	0
Future Volume (veh/h)	237	537	0	0	452	610	22	4	261	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	279	632	0	0	532	667	26	5	113			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	340	2708	0	0	1759	784	127	25	134			
Arrive On Green	0.06	0.25	0.00	0.00	0.49	0.49	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1529	294	1610			
Grp Volume(v), veh/h	279	632	0	0	532	667	31	0	113			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1824	0	1610			
Q Serve(g_s), s	9.1	8.4	0.0	0.0	5.3	21.8	1.0	0.0	4.2			
Cycle Q Clear(g_c), s	9.1	8.4	0.0	0.0	5.3	21.8	1.0	0.0	4.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.84		1.00			
Lane Grp Cap(c), veh/h	340	2708	0	0	1759	784	152	0	134			
V/C Ratio(X)	0.82	0.23	0.00	0.00	0.30	0.85	0.20	0.00	0.84			
Avail Cap(c_a), veh/h	558	2708	0	0	1759	784	152	0	134			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.92	0.92	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.1	8.8	0.0	0.0	9.3	13.5	25.6	0.0	27.1			
Incr Delay (d2), s/veh	1.8	0.2	0.0	0.0	0.4	10.4	3.0	0.0	44.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.1	1.3	0.0	0.0	1.7	8.0	0.5	0.0	3.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	9.0	0.0	0.0	9.7	23.9	28.7	0.0	71.3			
LnGrp LOS	C	A	A	A	A	C	C	A	E			
Approach Vol, veh/h		911			1199			144				
Approach Delay, s/veh		15.1			17.6			62.1				
Approach LOS		B			B			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			15.8	34.2		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		10.4			11.1	23.8		6.2				
Green Ext Time (p_c), s		2.6			0.2	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					19.4							
HCM 6th LOS					B							

Timings  
4: I-215 NB Ramps & Ramona Exwy.

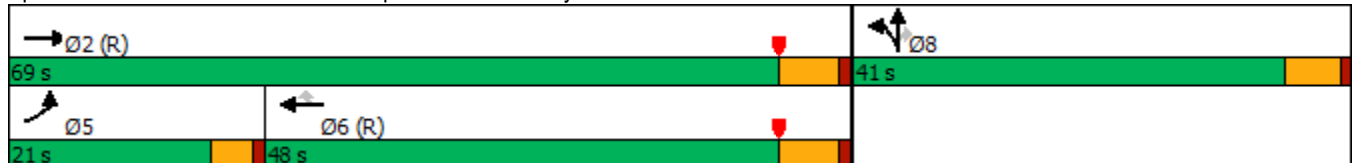


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	215	1435	935	785	344	8	421
Future Volume (vph)	215	1435	935	785	344	8	421
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	21.0	69.0	48.0	48.0	41.0	41.0	41.0
Total Split (%)	19.1%	62.7%	43.6%	43.6%	37.3%	37.3%	37.3%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	16.5	68.3	47.4	47.4	30.2	30.2	30.2
Actuated g/C Ratio	0.15	0.62	0.43	0.43	0.27	0.27	0.27
v/c Ratio	0.81	0.65	0.61	0.71	0.38	0.38	0.87
Control Delay	56.5	24.0	27.7	6.5	33.6	33.6	48.9
Queue Delay	0.0	36.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	60.0	27.7	6.5	33.6	33.6	48.9
LOS	E	E	C	A	C	C	D
Approach Delay		59.5	18.0			42.0	
Approach LOS		E	B			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 39.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 129.2%  
 ICU Level of Service H  
 Analysis Period (min) 15






















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	215	1435	0	0	935	785	344	8	421	0	0	0
Future Volume (veh/h)	215	1435	0	0	935	785	344	8	421	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	219	1464	0	0	954	577	357	0	327			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	245	2396	0	0	1759	783	839	0	373			
Arrive On Green	0.27	1.00	0.00	0.00	0.49	0.49	0.23	0.00	0.23			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	219	1464	0	0	954	577	357	0	327			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	12.8	0.0	0.0	0.0	20.3	31.6	9.2	0.0	21.5			
Cycle Q Clear(g_c), s	12.8	0.0	0.0	0.0	20.3	31.6	9.2	0.0	21.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	245	2396	0	0	1759	783	839	0	373			
V/C Ratio(X)	0.89	0.61	0.00	0.00	0.54	0.74	0.43	0.00	0.88			
Avail Cap(c_a), veh/h	271	2396	0	0	1759	783	1168	0	520			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.71	0.71	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.4	0.0	0.0	0.0	19.6	22.5	36.0	0.0	40.7			
Incr Delay (d2), s/veh	21.2	0.8	0.0	0.0	1.2	6.1	0.3	0.0	11.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.1	0.3	0.0	0.0	8.0	12.0	4.0	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	0.8	0.0	0.0	20.8	28.7	36.4	0.0	52.5			
LnGrp LOS	E	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1683			1531			684				
Approach Delay, s/veh		8.6			23.8			44.1				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		79.0			19.4	59.6		31.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		63.0			16.5	42.0		35.5				
Max Q Clear Time (g_c+I1), s		2.0			14.8	33.6		23.5				
Green Ext Time (p_c), s		8.0			0.1	3.5		2.0				

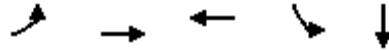
Intersection Summary

HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
5: Harley Knox Blvd. & Western Way



Lane Group	EBL	EBT	WBT	SBL	SBT	Ø2	Ø3
Lane Configurations	↖	↑↑↑	↑↑↑	↖	↘		
Traffic Volume (vph)	29	783	985	10	0		
Future Volume (vph)	29	783	985	10	0		
Turn Type	Prot	NA	NA	Split	NA		
Protected Phases	7	4	8	6	6	2	3
Permitted Phases							
Detector Phase	7	4	8	6	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	20.8	20.8	36.6	36.6	34.6	9.6
Total Split (s)	11.0	38.8	37.4	36.6	36.6	35.0	9.6
Total Split (%)	9.2%	32.3%	31.2%	30.5%	30.5%	29%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6		
Lead/Lag	Lead	Lag	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes				Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	6.2	26.8	23.5	11.5	11.5		
Actuated g/C Ratio	0.15	0.64	0.56	0.28	0.28		
v/c Ratio	0.13	0.28	0.41	0.02	0.12		
Control Delay	22.3	5.0	9.0	18.3	0.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	22.3	5.0	9.0	18.3	0.3		
LOS	C	A	A	B	A		
Approach Delay		5.7	9.0		2.1		
Approach LOS		A	A		A		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 41.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 7.2	Intersection LOS: A
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	29	783	0	0	985	9	0	0	0	10	0	89
Future Volume (veh/h)	29	783	0	0	985	9	0	0	0	10	0	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	943	0	0	1187	11	0	0	0	12	0	107
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	2920	907	4	2173	20	4	5	0	329	0	292
Arrive On Green	0.04	0.56	0.00	0.00	0.41	0.41	0.00	0.00	0.00	0.18	0.00	0.18
Sat Flow, veh/h	1810	5187	1610	1810	5300	49	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	35	943	0	0	774	424	0	0	0	12	0	107
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1891	1810	1900	0	1810	0	1610
Q Serve(g_s), s	0.8	4.0	0.0	0.0	6.9	6.9	0.0	0.0	0.0	0.2	0.0	2.4
Cycle Q Clear(g_c), s	0.8	4.0	0.0	0.0	6.9	6.9	0.0	0.0	0.0	0.2	0.0	2.4
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	2920	907	4	1418	775	4	5	0	329	0	292
V/C Ratio(X)	0.48	0.32	0.00	0.00	0.55	0.55	0.00	0.00	0.00	0.04	0.00	0.37
Avail Cap(c_a), veh/h	284	4202	1305	222	2683	1467	1351	1418	0	1422	0	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	4.8	0.0	0.0	9.1	9.1	0.0	0.0	0.0	13.7	0.0	14.6
Incr Delay (d2), s/veh	1.8	0.1	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.0	0.0	1.6	1.8	0.0	0.0	0.0	0.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	4.8	0.0	0.0	9.5	9.7	0.0	0.0	0.0	13.8	0.0	15.4
LnGrp LOS	C	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		978			1198			0				119
Approach Delay, s/veh		5.4			9.6			0.0				15.2
Approach LOS		A			A							B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		0.0	0.0	28.7		12.0	6.2	22.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		30.4	5.0	33.0		32.0	6.4	31.6				
Max Q Clear Time (g_c+I1), s		0.0	0.0	6.0		4.4	2.8	8.9				
Green Ext Time (p_c), s		0.0	0.0	6.6		0.7	0.0	7.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

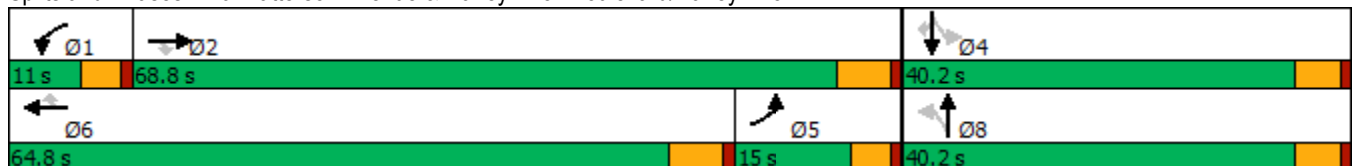


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	39	704	20	2	857	12	40	2	21	4	33
Future Volume (vph)	39	704	20	2	857	12	40	2	21	4	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.7	42.5	42.5	7.4	37.8	37.8		17.3		17.3	17.3
Actuated g/C Ratio	0.16	0.76	0.76	0.13	0.68	0.68		0.31		0.31	0.31
v/c Ratio	0.17	0.22	0.02	0.01	0.43	0.01		0.13		0.07	0.07
Control Delay	35.3	6.7	0.1	39.5	12.6	0.0		22.9		24.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	35.3	6.7	0.1	39.5	12.6	0.0		22.9		24.6	0.2
LOS	D	A	A	D	B	A		C		C	A
Approach Delay		8.0			12.4			22.9		10.8	
Approach LOS		A			B			C		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.8	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.



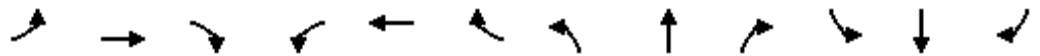


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	39	704	20	2	857	12	40	2	5	21	4	33
Future Volume (veh/h)	39	704	20	2	857	12	40	2	5	21	4	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	859	23	2	1045	15	49	2	5	26	5	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	86	2870	891	5	1756	767	302	16	19	320	51	253
Arrive On Green	0.05	0.55	0.55	0.00	0.49	0.49	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	5187	1610	1810	3610	1577	1126	103	121	1256	328	1610
Grp Volume(v), veh/h	48	859	23	2	1045	15	56	0	0	31	0	39
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1805	1577	1350	0	0	1583	0	1610
Q Serve(g_s), s	1.4	4.8	0.3	0.1	11.3	0.3	1.5	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.4	4.8	0.3	0.1	11.3	0.3	2.3	0.0	0.0	0.8	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.87		0.09	0.84		1.00
Lane Grp Cap(c), veh/h	86	2870	891	5	1756	767	337	0	0	371	0	253
V/C Ratio(X)	0.56	0.30	0.03	0.40	0.60	0.02	0.17	0.00	0.00	0.08	0.00	0.15
Avail Cap(c_a), veh/h	348	6046	1877	214	3941	1721	1034	0	0	1105	0	1046
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.2	6.5	5.5	26.9	10.0	7.2	20.3	0.0	0.0	19.5	0.0	19.7
Incr Delay (d2), s/veh	2.1	0.1	0.0	18.5	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.1	0.1	0.0	3.2	0.1	0.6	0.0	0.0	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	6.5	5.5	45.4	10.5	7.2	20.5	0.0	0.0	19.6	0.0	20.0
LnGrp LOS	C	A	A	D	B	A	C	A	A	B	A	B
Approach Vol, veh/h		930			1062			56				70
Approach Delay, s/veh		7.6			10.5			20.5				19.8
Approach LOS		A			B			C				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	35.7		13.6	8.4	32.1		13.6				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	2.1	6.8		3.1	3.4	13.3		4.3				
Green Ext Time (p_c), s	0.0	10.0		0.2	0.0	13.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		↗
Traffic Vol, veh/h	1566	292	15	1718	0	38
Future Vol, veh/h	1566	292	15	1718	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1598	298	15	1753	0	39

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1896	0	948
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	319	0	265
Stage 1	-	-	-	0	-
Stage 2	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	319	-	265
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	265	-	-	319	-
HCM Lane V/C Ratio	0.146	-	-	0.048	-
HCM Control Delay (s)	20.9	-	-	16.9	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Intersection			
Intersection Delay, s/veh	13.2		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1016	54
Demand Flow Rate, veh/h	0	1016	54
Vehicles Circulating, veh/h	10	42	890
Vehicles Exiting, veh/h	1048	902	48
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	13.5	6.3
Approach LOS	-	B	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.778	0.222
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1016	42	12
Cap Entry Lane, veh/h	1367	632	632
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1016	42	12
Cap Entry, veh/h	1367	632	632
V/C Ratio	0.743	0.066	0.019
Control Delay, s/veh	13.5	6.4	5.9
LOS	B	A	A
95th %tile Queue, veh	7	0	0

Timings  
9: Webster Av. & Ramona Exwy.

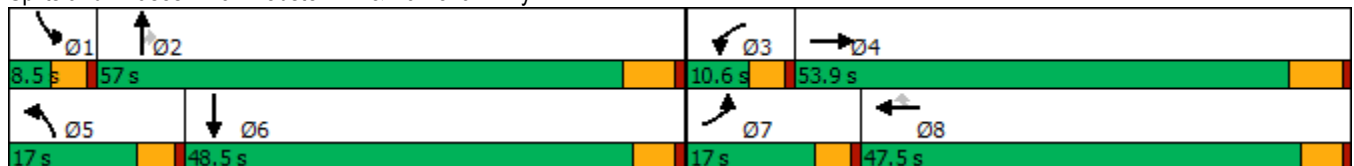


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↗↗↗	↘	↗↗↗	↗	↘	↗	↗	↗↗	
Traffic Volume (vph)	147	1429	25	1451	25	147	30	23	26	
Future Volume (vph)	147	1429	25	1451	25	147	30	23	26	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	17.0	53.9	10.6	47.5	47.5	17.0	57.0	57.0	48.5	8.5
Total Split (%)	13.1%	41.5%	8.2%	36.5%	36.5%	13.1%	43.8%	43.8%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.2	50.9	5.7	41.6	41.6	12.2	59.1	59.1	0.0	
Actuated g/C Ratio	0.09	0.40	0.04	0.32	0.32	0.09	0.46	0.46	0.00	
v/c Ratio	0.89	0.73	0.33	0.89	0.04	0.89	0.04	0.03	7.20	
Control Delay	103.4	36.4	71.5	49.4	0.1	103.4	19.8	0.1	2855.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.4	36.4	71.5	49.4	0.1	103.4	19.8	0.1	2855.7	
LOS	F	D	E	D	A	F	B	A	F	
Approach Delay		42.6		49.0			78.9		2855.7	
Approach LOS		D		D			E		F	

Intersection Summary

Cycle Length: 130	
Actuated Cycle Length: 128.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 7.20	
Intersection Signal Delay: 241.0	Intersection LOS: F
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖	↖	↑	↖		↕	
Traffic Volume (veh/h)	147	1429	28	25	1451	25	147	30	23	83	26	135
Future Volume (veh/h)	147	1429	28	25	1451	25	147	30	23	83	26	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	1473	25	26	1496	21	152	31	16	86	27	106
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	189	2487	42	50	2058	639	189	544	455	0	42	165
Arrive On Green	0.10	0.47	0.47	0.03	0.40	0.40	0.10	0.29	0.29	0.00	0.12	0.12
Sat Flow, veh/h	1810	5252	89	1810	5187	1610	1810	1900	1590	0	337	1324
Grp Volume(v), veh/h	152	970	528	26	1496	21	152	31	16	0	0	133
Grp Sat Flow(s),veh/h/ln	1810	1729	1883	1810	1729	1610	1810	1900	1590	0	0	1662
Q Serve(g_s), s	6.6	16.4	16.4	1.1	19.6	0.6	6.6	0.9	0.6	0.0	0.0	6.1
Cycle Q Clear(g_c), s	6.6	16.4	16.4	1.1	19.6	0.6	6.6	0.9	0.6	0.0	0.0	6.1
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.00		0.80
Lane Grp Cap(c), veh/h	189	1637	891	50	2058	639	189	544	455	0	0	207
V/C Ratio(X)	0.81	0.59	0.59	0.52	0.73	0.03	0.81	0.06	0.04	0.00	0.00	0.64
Avail Cap(c_a), veh/h	281	2062	1123	136	2750	854	281	1207	1010	0	0	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	15.4	15.4	38.4	20.5	14.7	35.0	20.7	20.6	0.0	0.0	33.3
Incr Delay (d2), s/veh	5.8	0.3	0.6	3.2	0.7	0.0	5.8	0.0	0.0	0.0	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.4	6.0	0.5	6.9	0.2	3.1	0.4	0.2	0.0	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	15.8	16.0	41.5	21.1	14.8	40.8	20.7	20.6	0.0	0.0	36.6
LnGrp LOS	D	B	B	D	C	B	D	C	C	A	A	D
Approach Vol, veh/h		1650			1543			199				133
Approach Delay, s/veh		18.2			21.4			36.1				36.6
Approach LOS		B			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	29.1	6.8	44.1	12.9	16.2	12.9	37.9				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	50.8	6.0	47.7	12.4	* 43	12.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	2.9	3.1	18.4	8.6	8.1	8.6	21.6				
Green Ext Time (p_c), s	0.0	0.2	0.0	11.0	0.1	0.8	0.1	10.2				

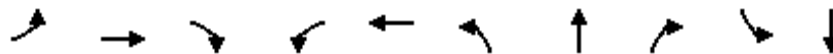
Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

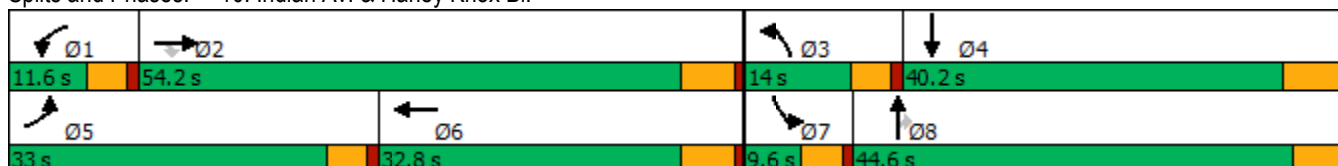


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↙	↑↑↑	↗	↙	↑↑↑	↙↗	↑↑	↗	↙	↑↗
Traffic Volume (vph)	255	408	49	15	410	61	228	26	47	253
Future Volume (vph)	255	408	49	15	410	61	228	26	47	253
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.5	37.0	37.0	6.1	16.0	6.9	22.1	22.1	5.5	19.9
Actuated g/C Ratio	0.24	0.45	0.45	0.07	0.19	0.08	0.27	0.27	0.07	0.24
v/c Ratio	0.75	0.22	0.08	0.14	0.53	0.26	0.29	0.06	0.49	0.71
Control Delay	44.0	16.8	0.4	48.4	34.1	45.1	26.1	0.2	60.2	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	16.8	0.4	48.4	34.1	45.1	26.1	0.2	60.2	23.2
LOS	D	B	A	D	C	D	C	A	E	C
Approach Delay		25.4			34.6		27.6			26.1
Approach LOS		C			C		C			C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 82.2  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 27.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.3%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	255	408	49	15	410	14	61	228	26	47	253	312
Future Volume (veh/h)	255	408	49	15	410	14	61	228	26	47	253	312
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	510	50	19	512	16	76	285	16	59	316	269
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	373	1817	564	40	862	27	202	900	396	91	450	374
Arrive On Green	0.21	0.35	0.35	0.02	0.17	0.17	0.06	0.25	0.25	0.05	0.24	0.24
Sat Flow, veh/h	1810	5187	1610	1810	5168	161	3510	3610	1589	1810	1858	1542
Grp Volume(v), veh/h	319	510	50	19	342	186	76	285	16	59	307	278
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1871	1755	1805	1589	1810	1805	1595
Q Serve(g_s), s	11.0	4.6	1.3	0.7	5.9	6.0	1.3	4.2	0.5	2.1	10.0	10.4
Cycle Q Clear(g_c), s	11.0	4.6	1.3	0.7	5.9	6.0	1.3	4.2	0.5	2.1	10.0	10.4
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h	373	1817	564	40	576	312	202	900	396	91	437	387
V/C Ratio(X)	0.86	0.28	0.09	0.47	0.59	0.60	0.38	0.32	0.04	0.65	0.70	0.72
Avail Cap(c_a), veh/h	794	3879	1204	196	1442	780	510	2186	963	140	948	838
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	15.2	14.1	31.3	24.9	25.0	29.4	19.8	18.4	30.2	22.4	22.5
Incr Delay (d2), s/veh	2.2	0.1	0.1	3.1	1.0	1.8	0.4	0.2	0.0	2.8	2.1	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	1.5	0.4	0.3	2.2	2.5	0.5	1.6	0.2	0.9	4.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	15.2	14.2	34.4	25.9	26.8	29.8	20.0	18.5	33.0	24.4	25.0
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	C	C
Approach Vol, veh/h		879			547			377			644	
Approach Delay, s/veh		19.4			26.5			21.9			25.5	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	28.5	8.3	21.9	17.9	16.6	7.9	22.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	2.7	6.6	3.3	12.4	13.0	8.0	4.1	6.2				
Green Ext Time (p_c), s	0.0	3.5	0.0	3.3	0.4	2.8	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.0								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Indian Av. & Ramona Exwy.

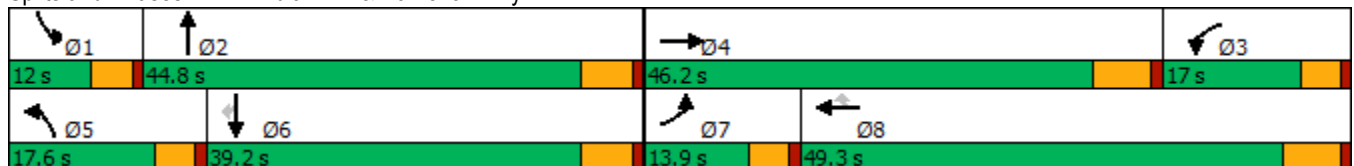


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕↕	↘	↕↕	↗
Traffic Volume (vph)	61	1410	128	1269	31	103	67	66	182	63
Future Volume (vph)	61	1410	128	1269	31	103	67	66	182	63
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	13.9	46.2	17.0	49.3	49.3	17.6	44.8	12.0	39.2	39.2
Total Split (%)	11.6%	38.5%	14.2%	41.1%	41.1%	14.7%	37.3%	10.0%	32.7%	32.7%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	36.6	10.7	42.3	42.3	9.6	19.3	6.9	14.1	14.1
Actuated g/C Ratio	0.08	0.39	0.12	0.46	0.46	0.10	0.21	0.07	0.15	0.15
v/c Ratio	0.44	0.77	0.64	0.55	0.04	0.57	0.14	0.51	0.34	0.15
Control Delay	54.9	28.6	57.2	21.6	0.1	55.5	23.1	59.8	37.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	28.6	57.2	21.6	0.1	55.5	23.1	59.8	37.7	0.8
LOS	D	C	E	C	A	E	C	E	D	A
Approach Delay		29.7		24.4			39.6		34.9	
Approach LOS		C		C			D		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 92.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 28.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.





HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1410	102	128	1269	31	103	67	32	66	182	63
Future Volume (veh/h)	61	1410	102	128	1269	31	103	67	32	66	182	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	63	1454	87	132	1308	26	106	69	18	68	188	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	88	1997	120	167	2410	738	137	449	113	91	476	212
Arrive On Green	0.05	0.40	0.40	0.09	0.46	0.46	0.08	0.16	0.16	0.05	0.13	0.13
Sat Flow, veh/h	1810	5000	299	1810	5187	1588	1810	2857	719	1810	3610	1610
Grp Volume(v), veh/h	63	1005	536	132	1308	26	106	43	44	68	188	31
Grp Sat Flow(s),veh/h/ln	1810	1729	1842	1810	1729	1588	1810	1805	1771	1810	1805	1610
Q Serve(g_s), s	2.6	18.7	18.7	5.4	13.7	0.7	4.4	1.5	1.6	2.8	3.6	1.3
Cycle Q Clear(g_c), s	2.6	18.7	18.7	5.4	13.7	0.7	4.4	1.5	1.6	2.8	3.6	1.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	88	1381	736	167	2410	738	137	284	278	91	476	212
V/C Ratio(X)	0.72	0.73	0.73	0.79	0.54	0.04	0.78	0.15	0.16	0.75	0.40	0.15
Avail Cap(c_a), veh/h	222	1824	972	296	2948	903	310	928	911	177	1590	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	19.3	19.3	33.7	14.5	11.1	34.4	27.6	27.6	35.5	30.1	29.1
Incr Delay (d2), s/veh	4.1	1.0	1.9	3.1	0.2	0.0	3.5	0.2	0.3	4.6	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.5	7.1	2.3	4.4	0.2	1.9	0.6	0.7	1.3	1.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	20.3	21.2	36.8	14.7	11.1	37.9	27.8	27.9	40.1	30.7	29.4
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1604			1466			193			287	
Approach Delay, s/veh		21.4			16.6			33.4			32.8	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	17.7	13.2	36.5	10.3	15.8	8.3	41.4				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	7.4	39.0	12.4	* 40	13.0	33.4	9.3	43.1				
Max Q Clear Time (g_c+I1), s	4.8	3.6	7.4	20.7	6.4	5.6	4.6	15.7				
Green Ext Time (p_c), s	0.0	0.4	0.1	9.5	0.1	1.2	0.0	9.8				

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

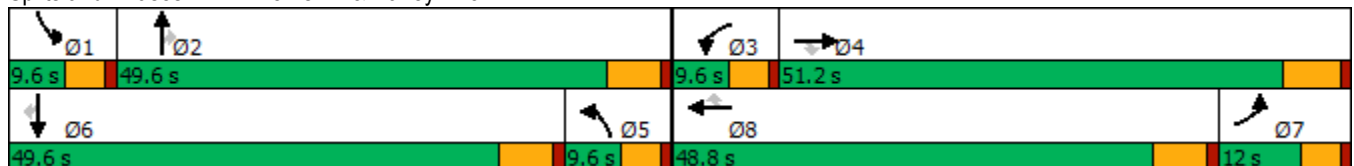
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	145	77	6	108	76	19	880	5	117	1187	303
Future Volume (vph)	234	145	77	6	108	76	19	880	5	117	1187	303
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.0	26.2	26.2	5.4	14.9	14.9	5.4	24.6	24.6	5.4	31.9	31.9
Actuated g/C Ratio	0.11	0.35	0.35	0.07	0.20	0.20	0.07	0.33	0.33	0.07	0.42	0.42
v/c Ratio	1.33	0.13	0.13	0.03	0.11	0.18	0.08	0.56	0.01	0.51	0.59	0.38
Control Delay	212.0	19.5	0.4	44.5	25.8	0.9	43.4	22.3	0.0	47.2	19.7	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	212.0	19.5	0.4	44.5	25.8	0.9	43.4	22.3	0.0	47.2	19.7	4.2
LOS	F	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		114.9			16.4			22.7			18.8	
Approach LOS		F			B			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 75.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 33.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.3%  
 ICU Level of Service B  
 Analysis Period (min) 15

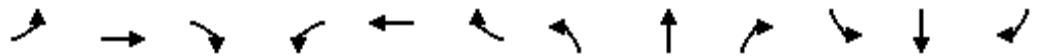
Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	234	145	77	6	108	76	19	880	5	117	1187	303
Future Volume (veh/h)	234	145	77	6	108	76	19	880	5	117	1187	303
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	254	158	34	7	117	38	21	957	5	127	1290	253
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	937	418	32	760	233	84	1893	588	229	2018	626
Arrive On Green	0.11	0.26	0.26	0.01	0.15	0.15	0.02	0.37	0.37	0.07	0.39	0.39
Sat Flow, veh/h	1810	3610	1608	3510	5187	1588	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	254	158	34	7	117	38	21	957	5	127	1290	253
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1755	1729	1588	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	7.4	2.4	0.8	0.1	1.4	1.1	0.4	10.1	0.1	2.5	14.2	8.0
Cycle Q Clear(g_c), s	7.4	2.4	0.8	0.1	1.4	1.1	0.4	10.1	0.1	2.5	14.2	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	937	418	32	760	233	84	1893	588	229	2018	626
V/C Ratio(X)	1.34	0.17	0.08	0.22	0.15	0.16	0.25	0.51	0.01	0.56	0.64	0.40
Avail Cap(c_a), veh/h	190	2308	1028	249	3168	970	249	3227	1002	249	3227	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	20.2	10.7	34.6	26.2	14.8	33.7	17.4	14.2	31.9	17.5	15.6
Incr Delay (d2), s/veh	182.1	0.1	0.1	1.3	0.1	0.3	0.6	0.2	0.0	1.0	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	0.9	0.4	0.1	0.5	0.5	0.2	3.5	0.0	1.0	4.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.6	20.3	10.8	35.9	26.3	15.1	34.3	17.6	14.2	32.9	17.8	16.0
LnGrp LOS	F	C	B	D	C	B	C	B	B	C	B	B
Approach Vol, veh/h		446			162			983			1670	
Approach Delay, s/veh		129.6			24.1			18.0			18.7	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	31.5	5.2	24.5	7.5	33.2	13.6	16.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	4.5	12.1	2.1	4.4	2.4	16.2	9.4	3.4				
Green Ext Time (p_c), s	0.0	7.0	0.0	1.0	0.0	11.1	0.0	0.8				

Intersection Summary

HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
13: Perris Bl. & Ramona Exwy.

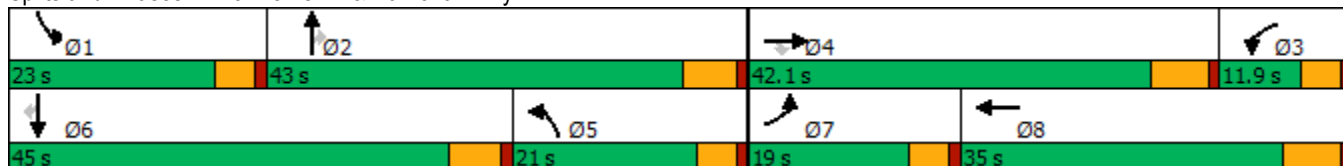
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	256	1092	160	102	831	317	463	102	346	643	280	
Future Volume (vph)	256	1092	160	102	831	317	463	102	346	643	280	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	19.0	42.1	42.1	11.9	35.0	21.0	43.0	43.0	23.0	45.0	45.0	
Total Split (%)	15.8%	35.1%	35.1%	9.9%	29.2%	17.5%	35.8%	35.8%	19.2%	37.5%	37.5%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	11.6	31.8	31.8	6.9	24.5	13.3	24.7	24.7	14.2	25.7	25.7	
Actuated g/C Ratio	0.12	0.33	0.33	0.07	0.25	0.14	0.25	0.25	0.15	0.27	0.27	
v/c Ratio	0.62	0.65	0.25	0.42	0.73	0.68	0.51	0.20	0.69	0.69	0.47	
Control Delay	50.1	31.8	4.7	52.8	37.5	49.5	33.9	1.3	48.7	36.8	8.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.1	31.8	4.7	52.8	37.5	49.5	33.9	1.3	48.7	36.8	8.2	
LOS	D	C	A	D	D	D	C	A	D	D	A	
Approach Delay		32.1			39.0		35.7			33.7		
Approach LOS		C			D		D			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.9  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 34.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 72.2%  
 ICU Level of Service C  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	256	1092	160	102	831	104	317	463	102	346	643	280
Future Volume (veh/h)	256	1092	160	102	831	104	317	463	102	346	643	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	1114	122	104	848	93	323	472	63	353	656	230
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	344	1538	477	185	1278	139	409	950	417	441	933	414
Arrive On Green	0.10	0.30	0.30	0.05	0.27	0.27	0.12	0.26	0.26	0.13	0.26	0.26
Sat Flow, veh/h	3510	5187	1609	3510	4739	517	3510	3610	1585	3510	3610	1601
Grp Volume(v), veh/h	261	1114	122	104	618	323	323	472	63	353	656	230
Grp Sat Flow(s),veh/h/ln	1755	1729	1609	1755	1729	1798	1755	1805	1585	1755	1805	1601
Q Serve(g_s), s	6.3	16.7	5.0	2.5	13.8	13.9	7.8	9.6	2.0	8.5	14.3	7.7
Cycle Q Clear(g_c), s	6.3	16.7	5.0	2.5	13.8	13.9	7.8	9.6	2.0	8.5	14.3	7.7
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	1538	477	185	932	485	409	950	417	441	933	414
V/C Ratio(X)	0.76	0.72	0.26	0.56	0.66	0.67	0.79	0.50	0.15	0.80	0.70	0.56
Avail Cap(c_a), veh/h	581	2140	664	294	1144	595	662	1543	677	742	1626	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	27.4	23.3	40.2	28.3	28.3	37.4	27.2	13.5	37.0	29.2	14.0
Incr Delay (d2), s/veh	1.3	0.8	0.3	1.0	1.0	2.1	1.3	0.4	0.2	1.3	1.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.4	1.8	1.0	5.3	5.7	3.2	3.9	0.9	3.5	5.9	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	28.2	23.6	41.2	29.3	30.4	38.7	27.6	13.7	38.3	30.2	15.1
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1497			1045			858			1239	
Approach Delay, s/veh		29.8			30.8			30.8			29.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	28.7	10.8	32.0	15.9	28.3	13.1	29.7				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	18.4	37.2	7.3	* 36	16.4	* 39	14.4	28.8				
Max Q Clear Time (g_c+I1), s	10.5	11.6	4.5	18.7	9.8	16.3	8.3	15.9				
Green Ext Time (p_c), s	0.4	3.1	0.0	7.0	0.3	4.9	0.2	4.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				30.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

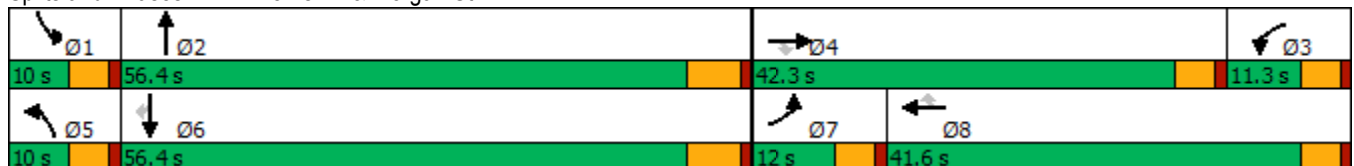


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	38	25	31	35	6	37	14	796	16	972	16
Future Volume (vph)	38	25	31	35	6	37	14	796	16	972	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.3	42.3	11.3	41.6	41.6	10.0	56.4	10.0	56.4	56.4
Total Split (%)	10.0%	35.3%	35.3%	9.4%	34.7%	34.7%	8.3%	47.0%	8.3%	47.0%	47.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.1	20.6	20.6	9.6	19.0	19.0	8.3	37.3	8.4	37.3	37.3
Actuated g/C Ratio	0.16	0.37	0.37	0.17	0.34	0.34	0.15	0.67	0.15	0.67	0.67
v/c Ratio	0.14	0.02	0.05	0.12	0.01	0.07	0.06	0.26	0.07	0.44	0.02
Control Delay	37.9	25.4	0.2	35.5	25.5	0.2	40.8	11.3	40.8	13.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	25.4	0.2	35.5	25.5	0.2	40.8	11.3	40.8	13.9	0.0
LOS	D	C	A	D	C	A	D	B	D	B	A
Approach Delay		22.2			17.9			11.8		14.1	
Approach LOS		C			B			B		B	

Intersection Summary




























Cycle Length: 120  
 Actuated Cycle Length: 55.6  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.44  
 Intersection Signal Delay: 13.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 51.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	38	25	31	35	6	37	14	796	12	16	972	16
Future Volume (veh/h)	38	25	31	35	6	37	14	796	12	16	972	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	27	18	38	7	38	15	875	13	18	1068	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	566	252	75	295	250	34	2245	33	40	1551	692
Arrive On Green	0.04	0.16	0.16	0.04	0.16	0.16	0.02	0.43	0.43	0.02	0.43	0.43
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5265	78	1810	3610	1610
Grp Volume(v), veh/h	42	27	18	38	7	38	15	574	314	18	1068	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1610
Q Serve(g_s), s	1.3	0.4	0.4	1.1	0.2	1.1	0.5	6.3	6.3	0.5	13.3	0.3
Cycle Q Clear(g_c), s	1.3	0.4	0.4	1.1	0.2	1.1	0.5	6.3	6.3	0.5	13.3	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	78	566	252	75	295	250	34	1474	804	40	1551	692
V/C Ratio(X)	0.54	0.05	0.07	0.51	0.02	0.15	0.45	0.39	0.39	0.46	0.69	0.02
Avail Cap(c_a), veh/h	242	2455	1095	219	1268	1075	176	3156	1720	176	3295	1470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	19.9	12.2	26.0	19.9	20.3	26.9	10.9	10.9	26.8	12.8	9.1
Incr Delay (d2), s/veh	2.2	0.0	0.1	2.0	0.0	0.3	3.4	0.2	0.3	3.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.2	0.5	0.1	0.4	0.2	1.8	2.0	0.2	4.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	19.9	12.3	28.0	19.9	20.5	30.3	11.1	11.2	29.8	13.4	9.1
LnGrp LOS	C	B	B	C	B	C	C	B	B	C	B	A
Approach Vol, veh/h		87			83			903			1103	
Approach Delay, s/veh		22.3			23.9			11.5			13.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	29.4	6.9	13.3	5.6	29.6	7.0	13.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.7	37.7	5.4	50.6	7.4	37.0				
Max Q Clear Time (g_c+I1), s	2.5	8.3	3.1	2.4	2.5	15.3	3.3	3.1				
Green Ext Time (p_c), s	0.0	6.0	0.0	0.2	0.0	8.5	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									

Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

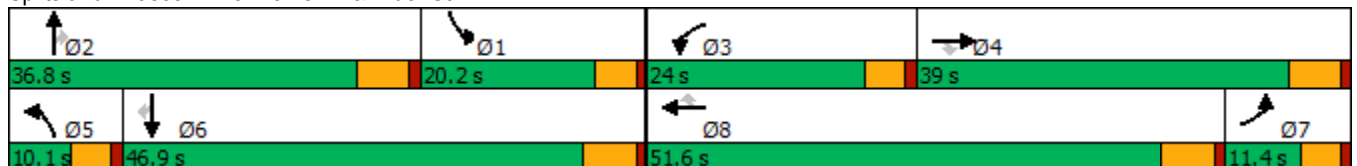
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	193	52	175	67	156	19	620	200	134	899	16
Future Volume (vph)	40	193	52	175	67	156	19	620	200	134	899	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.4	39.0	39.0	24.0	51.6	51.6	10.1	36.8	36.8	20.2	46.9	46.9
Total Split (%)	9.5%	32.5%	32.5%	20.0%	43.0%	43.0%	8.4%	30.7%	30.7%	16.8%	39.1%	39.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.4	13.9	13.9	12.4	21.0	21.0	5.6	17.7	17.7	10.6	29.9	29.9
Actuated g/C Ratio	0.14	0.18	0.18	0.16	0.27	0.27	0.07	0.23	0.23	0.14	0.39	0.39
v/c Ratio	0.17	0.30	0.13	0.62	0.07	0.28	0.15	0.54	0.39	0.56	0.46	0.02
Control Delay	35.8	30.1	0.6	43.3	27.0	5.6	45.8	29.1	7.2	44.4	20.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	30.1	0.6	43.3	27.0	5.6	45.8	29.1	7.2	44.4	20.5	0.1
LOS	D	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		25.5			25.7			24.2			23.3	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 76.8  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 24.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 57.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 15: Perris Bl. & Rider St.





























HCM 6th Signalized Intersection Summary  
 15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	193	52	175	67	156	19	620	200	134	899	16
Future Volume (veh/h)	40	193	52	175	67	156	19	620	200	134	899	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	199	20	180	69	77	20	639	146	138	927	7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	628	280	229	631	281	43	1167	356	178	1662	516
Arrive On Green	0.11	0.17	0.17	0.13	0.17	0.17	0.02	0.23	0.23	0.10	0.32	0.32
Sat Flow, veh/h	1810	3610	1607	1810	3610	1610	1810	5187	1584	1810	5187	1609
Grp Volume(v), veh/h	41	199	20	180	69	77	20	639	146	138	927	7
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1610	1810	1729	1584	1810	1729	1609
Q Serve(g_s), s	1.2	2.8	0.6	5.6	0.9	2.4	0.6	6.4	2.8	4.4	8.7	0.1
Cycle Q Clear(g_c), s	1.2	2.8	0.6	5.6	0.9	2.4	0.6	6.4	2.8	4.4	8.7	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	628	280	229	631	281	43	1167	356	178	1662	516
V/C Ratio(X)	0.22	0.32	0.07	0.79	0.11	0.27	0.47	0.55	0.41	0.77	0.56	0.01
Avail Cap(c_a), veh/h	210	2048	912	600	2826	1260	170	2748	839	482	3644	1130
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	21.1	20.2	24.8	20.3	20.9	28.2	20.0	7.1	25.7	16.4	4.2
Incr Delay (d2), s/veh	0.2	0.3	0.1	2.3	0.1	0.5	2.9	0.4	0.8	2.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.1	0.2	2.3	0.4	0.8	0.3	2.2	1.4	1.8	2.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	21.4	20.3	27.1	20.4	21.4	31.1	20.4	7.9	28.4	16.7	4.2
LnGrp LOS	C	C	C	C	C	C	C	C	A	C	B	A
Approach Vol, veh/h		260			326			805			1072	
Approach Delay, s/veh		21.8			24.3			18.4			18.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	19.0	12.0	16.0	6.0	24.6	12.0	16.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	15.6	* 31	19.4	33.2	5.5	41.1	6.8	* 46				
Max Q Clear Time (g_c+I1), s	6.4	8.4	7.6	4.8	2.6	10.7	3.2	4.4				
Green Ext Time (p_c), s	0.1	4.5	0.2	1.2	0.0	6.7	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.4								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.

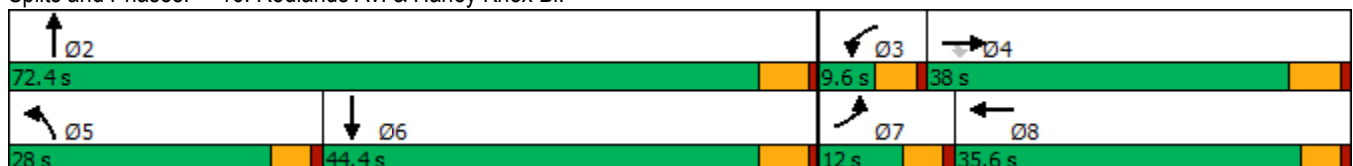


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	8	261	180	2	3		
Future Volume (vph)	8	261	180	2	3		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	12.0	38.0	28.0	72.4	44.4	9.6	35.6
Total Split (%)	10.0%	31.7%	23.3%	60.3%	37.0%	8%	30%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	15.9	13.7	18.2	16.0		
Actuated g/C Ratio	0.16	0.35	0.30	0.40	0.35		
v/c Ratio	0.03	0.23	0.36	0.00	0.01		
Control Delay	30.2	0.4	20.7	8.5	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	30.2	0.4	20.7	8.5	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.6			
Approach LOS				C			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 45.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 34.3%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	261	0	0	0	180	2	0	0	3	10
Future Volume (veh/h)	8	0	261	0	0	0	180	2	0	0	3	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	9	0	282	0	0	0	198	2	0	0	3	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	22	569	482	6	260	0	262	1207	0	0	71	63
Arrive On Green	0.01	0.00	0.30	0.00	0.00	0.00	0.14	0.33	0.00	0.00	0.04	0.04
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	9	0	282	0	0	0	198	2	0	0	3	10
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.2	0.0	4.5	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.2	0.0	4.5	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	22	569	482	6	260	0	262	1207	0	0	71	63
V/C Ratio(X)	0.41	0.00	0.59	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.04	0.16
Avail Cap(c_a), veh/h	438	2000	1695	296	1926	0	1384	7908	0	0	2302	2053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	0.0	9.1	0.0	0.0	0.0	12.6	6.8	0.0	0.0	14.1	14.2
Incr Delay (d2), s/veh	4.6	0.0	1.1	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.3	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	0.0	10.2	0.0	0.0	0.0	14.2	6.8	0.0	0.0	14.4	15.4
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		291			0			200			13	
Approach Delay, s/veh		10.5			0.0			14.2			15.1	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		15.6	0.0	15.0	9.0	6.6	5.0	10.0				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		67.0	5.0	32.2	23.4	39.0	7.4	* 31				
Max Q Clear Time (g_c+I1), s		2.0	0.0	6.5	5.2	2.2	2.2	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.9	0.2	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	36	5	167	269	3
Future Vol, veh/h	8	36	5	167	269	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	40	6	186	299	3
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	2	2	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8.2	7.7	9.2
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	97%
Vol Right, %	0%	0%	0%	0%	100%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	84	84	8	36	179	93
LT Vol	5	0	0	8	0	0	0
Through Vol	0	84	84	0	0	179	90
RT Vol	0	0	0	0	36	0	3
Lane Flow Rate	6	93	93	9	40	199	103
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.009	0.135	0.091	0.015	0.055	0.275	0.141
Departure Headway (Hd)	5.735	5.234	3.527	6.18	4.979	4.962	4.939
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	625	687	1016	578	717	723	726
Service Time	3.458	2.956	1.25	3.926	2.724	2.693	2.67
HCM Lane V/C Ratio	0.01	0.135	0.092	0.016	0.056	0.275	0.142
HCM Control Delay	8.5	8.8	6.6	9	8	9.6	8.5
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.5	0.3	0	0.2	1.1	0.5

Timings  
18: Redlands Av. & Ramona Exwy.

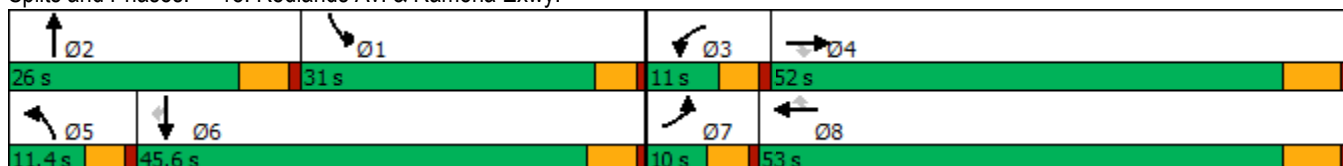
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	16	1511	59	29	1082	90	45	67	232	48	10
Future Volume (vph)	16	1511	59	29	1082	90	45	67	232	48	10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	10.0	52.0	52.0	11.0	53.0	53.0	11.4	26.0	31.0	45.6	45.6
Total Split (%)	8.3%	43.3%	43.3%	9.2%	44.2%	44.2%	9.5%	21.7%	25.8%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.5	37.6	37.6	6.0	40.0	40.0	6.4	12.8	17.4	29.3	29.3
Actuated g/C Ratio	0.06	0.41	0.41	0.07	0.44	0.44	0.07	0.14	0.19	0.32	0.32
v/c Ratio	0.15	0.74	0.08	0.26	0.50	0.12	0.37	0.48	0.71	0.08	0.02
Control Delay	53.9	26.2	0.2	54.5	20.2	0.7	56.7	38.5	48.8	28.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	26.2	0.2	54.5	20.2	0.7	56.7	38.5	48.8	28.1	0.1
LOS	D	C	A	D	C	A	E	D	D	C	A
Approach Delay		25.5			19.5			43.3		43.6	
Approach LOS		C			B			D		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 90.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 25.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.3%  
 ICU Level of Service C  
 Analysis Period (min) 15






























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	16	1511	59	29	1082	90	45	67	59	232	48	10
Future Volume (veh/h)	16	1511	59	29	1082	90	45	67	59	232	48	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	17	1591	54	31	1139	67	47	71	43	244	51	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	35	2191	661	56	2250	688	73	137	83	287	479	406
Arrive On Green	0.02	0.42	0.42	0.03	0.43	0.43	0.04	0.12	0.12	0.16	0.25	0.25
Sat Flow, veh/h	1810	5187	1566	1810	5187	1587	1810	1106	670	1810	1900	1610
Grp Volume(v), veh/h	17	1591	54	31	1139	67	47	0	114	244	51	7
Grp Sat Flow(s),veh/h/ln	1810	1729	1566	1810	1729	1587	1810	0	1776	1810	1900	1610
Q Serve(g_s), s	0.8	20.9	1.7	1.4	13.0	1.0	2.1	0.0	4.9	10.7	1.7	0.3
Cycle Q Clear(g_c), s	0.8	20.9	1.7	1.4	13.0	1.0	2.1	0.0	4.9	10.7	1.7	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	35	2191	661	56	2250	688	73	0	220	287	479	406
V/C Ratio(X)	0.48	0.73	0.08	0.55	0.51	0.10	0.65	0.00	0.52	0.85	0.11	0.02
Avail Cap(c_a), veh/h	120	2908	878	142	2972	909	151	0	448	585	935	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	19.7	14.1	39.0	16.8	3.0	38.6	0.0	33.5	33.4	23.5	23.0
Incr Delay (d2), s/veh	3.7	0.6	0.1	3.2	0.2	0.1	3.6	0.0	1.9	2.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.3	0.5	0.6	4.5	0.6	1.0	0.0	2.1	4.7	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	20.3	14.2	42.2	17.0	3.1	42.2	0.0	35.4	36.2	23.6	23.0
LnGrp LOS	D	C	B	D	B	A	D	A	D	D	C	C
Approach Vol, veh/h		1662			1237			161			302	
Approach Delay, s/veh		20.3			16.8			37.4			33.8	
Approach LOS		C			B			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.3	15.5	7.1	40.7	7.9	26.0	6.2	41.6				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	26.4	* 21	6.4	45.8	6.8	40.2	5.4	46.8				
Max Q Clear Time (g_c+I1), s	12.7	6.9	3.4	22.9	4.1	3.7	2.8	15.0				
Green Ext Time (p_c), s	0.3	0.4	0.0	11.6	0.0	0.2	0.0	8.7				

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↕		↶	↷		↶	↷	
Traffic Vol, veh/h	44	8	0	4	19	7	0	73	0	7	25	34
Future Vol, veh/h	44	8	0	4	19	7	0	73	0	7	25	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	9	0	4	21	8	0	79	0	8	27	37

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	156	141	46	145	159	79	64	0	0	79	0	0
Stage 1	62	62	-	79	79	-	-	-	-	-	-	-
Stage 2	94	79	-	66	80	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	815	754	1029	828	737	987	1551	-	-	1532	-	-
Stage 1	954	847	-	935	833	-	-	-	-	-	-	-
Stage 2	918	833	-	950	832	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	788	750	1029	817	733	987	1551	-	-	1532	-	-
Mov Cap-2 Maneuver	788	750	-	817	733	-	-	-	-	-	-	-
Stage 1	954	843	-	935	833	-	-	-	-	-	-	-
Stage 2	888	833	-	935	828	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9.7	0	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1551	-	-	788	750	791	1532	-	-
HCM Lane V/C Ratio	-	-	-	0.061	0.012	0.041	0.005	-	-
HCM Control Delay (s)	0	-	-	9.9	9.9	9.7	7.4	-	-
HCM Lane LOS	A	-	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.1	0	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			↕
Traffic Vol, veh/h	0	9	64	0	0	29
Future Vol, veh/h	0	9	64	0	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	70	0	0	32

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	35	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1037	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	1037	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1037	-
HCM Lane V/C Ratio	-	- 0.009	-
HCM Control Delay (s)	-	- 8.5	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-



Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	2	0	0	0	0	19	0	43	2	7	21	2
Future Vol, veh/h	2	0	0	0	0	19	0	43	2	7	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	0	0	0	0	21	0	47	2	8	23	2

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	64	89	24	88	89	25	-	0	0	49	0	0
Stage 1	40	40	-	48	48	-	-	-	-	-	-	-
Stage 2	24	49	-	40	41	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.2	7.3	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	932	805	1058	898	805	1052	0	-	-	1571	-	-
Stage 1	980	866	-	965	859	-	0	-	-	-	-	-
Stage 2	996	858	-	980	865	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	911	801	1058	894	801	1052	-	-	-	1571	-	-
Mov Cap-2 Maneuver	911	801	-	894	801	-	-	-	-	-	-	-
Stage 1	980	862	-	965	859	-	-	-	-	-	-	-
Stage 2	976	858	-	975	861	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	9		8.5			0			1.7		
HCM LOS	A		A								

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	911	1052	1571	-	-
HCM Lane V/C Ratio	-	-	0.002	0.02	0.005	-	-
HCM Control Delay (s)	-	-	9	8.5	7.3	-	-
HCM Lane LOS	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0	-	-

Timings  
22: Redlands Av. & Driveway 2

	↙	↑	↘	↓
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations	↙	↑↔	↘	↑
Traffic Volume (vph)	8	5	17	4
Future Volume (vph)	8	5	17	4
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	10.0	10.0	5.0	10.0
Minimum Split (s)	21.6	22.4	9.6	15.4
Total Split (s)	27.0	30.0	33.0	63.0
Total Split (%)	30.0%	33.3%	36.7%	70.0%
Yellow Time (s)	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	Max	None	Max
Act Effect Green (s)	10.0	63.5	5.5	65.8
Actuated g/C Ratio	0.13	0.82	0.07	0.85
v/c Ratio	0.20	0.00	0.14	0.00
Control Delay	14.9	4.3	36.0	2.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	4.3	36.0	2.5
LOS	B	A	D	A
Approach Delay	14.9	4.3		29.9
Approach LOS	B	A		C

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 77.8  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.20  
 Intersection Signal Delay: 18.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 25.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 22: Redlands Av. & Driveway 2



HCM 6th Signalized Intersection Summary  
 22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)  
 12/10/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↔		↘	↑
Traffic Volume (veh/h)	8	39	5	2	17	4
Future Volume (veh/h)	8	39	5	2	17	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	9	42	5	2	18	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	25	118	1782	668	38	1475
Arrive On Green	0.09	0.09	0.69	0.69	0.02	0.78
Sat Flow, veh/h	285	1330	2664	963	1810	1900
Grp Volume(v), veh/h	52	0	3	4	18	4
Grp Sat Flow(s),veh/h/ln	1646	0	1805	1727	1810	1900
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.7	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	0.0	0.7	0.0
Prop In Lane	0.17	0.81		0.56	1.00	
Lane Grp Cap(c), veh/h	146	0	1252	1198	38	1475
V/C Ratio(X)	0.36	0.00	0.00	0.00	0.48	0.00
Avail Cap(c_a), veh/h	497	0	1252	1198	693	1475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	3.5	3.5	35.9	1.9
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.3	0.0	3.5	3.5	39.3	1.9
LnGrp LOS	C	A	A	A	D	A
Approach Vol, veh/h	52		7			22
Approach Delay, s/veh	33.3		3.5			32.5
Approach LOS	C		A			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.1	56.9			63.0	11.2
Change Period (Y+Rc), s	4.6	5.4			5.4	4.6
Max Green Setting (Gmax), s	28.4	24.6			57.6	22.4
Max Q Clear Time (g_c+I1), s	2.7	2.0			2.0	4.2
Green Ext Time (p_c), s	0.0	0.0			0.0	0.1

Intersection Summary

HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑	↑↑			↑
Traffic Vol, veh/h	0	4	3	2	0	12
Future Vol, veh/h	0	4	3	2	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	3	2	0	13

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	3	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	1086	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	1086	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1086	-
HCM Lane V/C Ratio	-	- 0.004	-
HCM Control Delay (s)	-	- 8.3	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Timings  
24: Redlands Av. & Rider St.

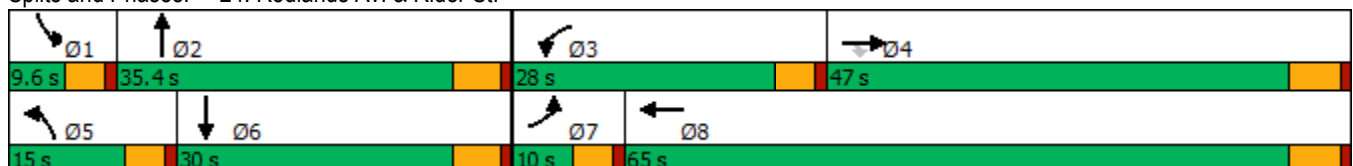


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	Ø1
Lane Configurations	↖	↑	↗	↖	↕	↖	↗	↗	
Traffic Volume (vph)	3	505	37	89	408	28	2	4	
Future Volume (vph)	3	505	37	89	408	28	2	4	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	NA	
Protected Phases	7	4		3	8	5	2	6	1
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	9.6	27.4	27.4	9.6
Total Split (s)	10.0	47.0	47.0	28.0	65.0	15.0	35.4	30.0	9.6
Total Split (%)	8.3%	39.2%	39.2%	23.3%	54.2%	12.5%	29.5%	25.0%	8%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	5.1	52.6	52.6	9.0	62.7	7.1	12.3	10.1	
Actuated g/C Ratio	0.06	0.60	0.60	0.10	0.71	0.08	0.14	0.11	
v/c Ratio	0.03	0.48	0.04	0.52	0.17	0.21	0.39	0.06	
Control Delay	42.3	13.9	0.1	47.6	5.5	41.7	10.0	25.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.3	13.9	0.1	47.6	5.5	41.7	10.0	25.7	
LOS	D	B	A	D	A	D	A	C	
Approach Delay		13.1			13.0		15.9	25.7	
Approach LOS		B			B		B	C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 88  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.52  
 Intersection Signal Delay: 13.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	505	37	89	408	0	28	2	120	0	4	8
Future Volume (veh/h)	3	505	37	89	408	0	28	2	120	0	4	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	549	40	97	443	0	30	2	130	0	4	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	7	1094	927	125	2313	0	53	5	293	2	55	124
Arrive On Green	0.00	0.58	0.58	0.07	0.64	0.00	0.03	0.18	0.18	0.00	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	1810	24	1589	1810	520	1170
Grp Volume(v), veh/h	3	549	40	97	443	0	30	0	132	0	0	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1810	0	1614	1810	0	1689
Q Serve(g_s), s	0.2	15.9	1.0	4.9	4.6	0.0	1.5	0.0	6.7	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.2	15.9	1.0	4.9	4.6	0.0	1.5	0.0	6.7	0.0	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.98	1.00		0.69
Lane Grp Cap(c), veh/h	7	1094	927	125	2313	0	53	0	298	2	0	178
V/C Ratio(X)	0.41	0.50	0.04	0.78	0.19	0.00	0.57	0.00	0.44	0.00	0.00	0.07
Avail Cap(c_a), veh/h	106	1094	927	458	2313	0	204	0	524	98	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	11.7	8.5	42.3	6.8	0.0	44.3	0.0	33.5	0.0	0.0	37.3
Incr Delay (d2), s/veh	13.4	1.6	0.1	3.9	0.2	0.0	3.6	0.0	1.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.2	0.3	2.2	1.5	0.0	0.7	0.0	2.6	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	13.4	8.6	46.2	7.0	0.0	47.9	0.0	34.5	0.0	0.0	37.4
LnGrp LOS	E	B	A	D	A	A	D	A	C	A	A	D
Approach Vol, veh/h		592			540			162				13
Approach Delay, s/veh		13.3			14.0			37.0				37.4
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	22.4	11.0	59.0	7.3	15.2	5.0	65.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	5.0	30.0	23.4	41.2	10.4	24.6	5.4	59.2				
Max Q Clear Time (g_c+I1), s	0.0	8.7	6.9	17.9	3.5	2.6	2.2	6.6				
Green Ext Time (p_c), s	0.0	0.6	0.1	3.4	0.0	0.0	0.0	2.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.8									
HCM 6th LOS			B									

Timings  
25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)  
12/10/2019

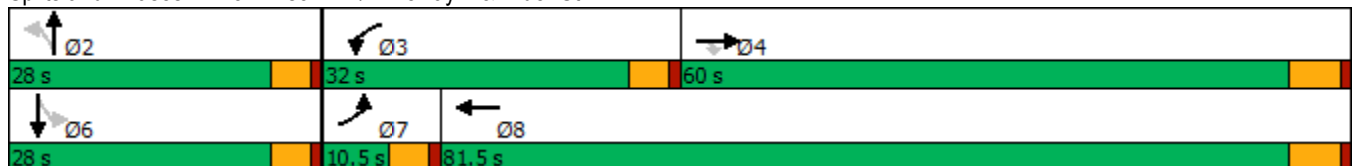


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations								
Traffic Volume (vph)	11	551	51	110	423	38	0	0
Future Volume (vph)	11	551	51	110	423	38	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	26.6	26.6	26.6
Total Split (s)	10.5	60.0	60.0	32.0	81.5	28.0	28.0	28.0
Total Split (%)	8.8%	50.0%	50.0%	26.7%	67.9%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.3	62.4	62.4	11.2	76.3		11.3	11.3
Actuated g/C Ratio	0.05	0.62	0.62	0.11	0.76		0.11	0.11
v/c Ratio	0.12	0.51	0.05	0.60	0.17		0.58	0.05
Control Delay	50.3	13.1	0.5	54.8	3.9		24.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	50.3	13.1	0.5	54.8	3.9		24.4	0.1
LOS	D	B	A	D	A		C	A
Approach Delay		12.7			14.5		24.4	0.1
Approach LOS		B			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 14.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.0%  
 ICU Level of Service B  
 Analysis Period (min) 15




















Splits and Phases: 25: Wilson Av./Driveway 4 & Rider St.



HCM 6th Signalized Intersection Summary  
 25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	551	51	110	423	0	38	0	107	0	0	27
Future Volume (veh/h)	11	551	51	110	423	0	38	0	107	0	0	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	599	55	120	460	0	41	0	116	0	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	25	1241	1051	150	2606	0	81	12	141	0	0	195
Arrive On Green	0.01	0.65	0.65	0.08	0.72	0.00	0.12	0.00	0.12	0.00	0.00	0.12
Sat Flow, veh/h	1810	1900	1609	1810	3705	0	314	98	1166	0	0	1610
Grp Volume(v), veh/h	12	599	55	120	460	0	157	0	0	0	0	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1609	1810	1805	0	1579	0	0	0	0	1610
Q Serve(g_s), s	0.7	16.8	1.3	6.8	4.3	0.0	7.3	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.7	16.8	1.3	6.8	4.3	0.0	10.1	0.0	0.0	0.0	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.00	0.26		0.74	0.00		1.00
Lane Grp Cap(c), veh/h	25	1241	1051	150	2606	0	235	0	0	0	0	195
V/C Ratio(X)	0.47	0.48	0.05	0.80	0.18	0.00	0.67	0.00	0.00	0.00	0.00	0.15
Avail Cap(c_a), veh/h	102	1241	1051	473	2606	0	393	0	0	0	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	51.3	9.2	6.5	47.3	4.7	0.0	44.9	0.0	0.0	0.0	0.0	41.2
Incr Delay (d2), s/veh	5.0	1.3	0.1	3.7	0.1	0.0	3.3	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.2	0.4	3.1	1.2	0.0	4.2	0.0	0.0	0.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	10.6	6.6	51.0	4.8	0.0	48.2	0.0	0.0	0.0	0.0	41.6
LnGrp LOS	E	B	A	D	A	A	D	A	A	A	A	D
Approach Vol, veh/h		666			580			157				29
Approach Delay, s/veh		11.1			14.4			48.2				41.6
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.3	13.3	74.3		17.3	6.1	81.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	5.9	75.7				
Max Q Clear Time (g_c+I1), s		12.1	8.8	18.8		3.7	2.7	6.3				
Green Ext Time (p_c), s		0.6	0.1	4.1		0.1	0.0	3.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			17.1									
HCM 6th LOS			B									



**APPENDIX 7.3:**

**EA (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2021) Conditions - Weekday PM Peak Hour**

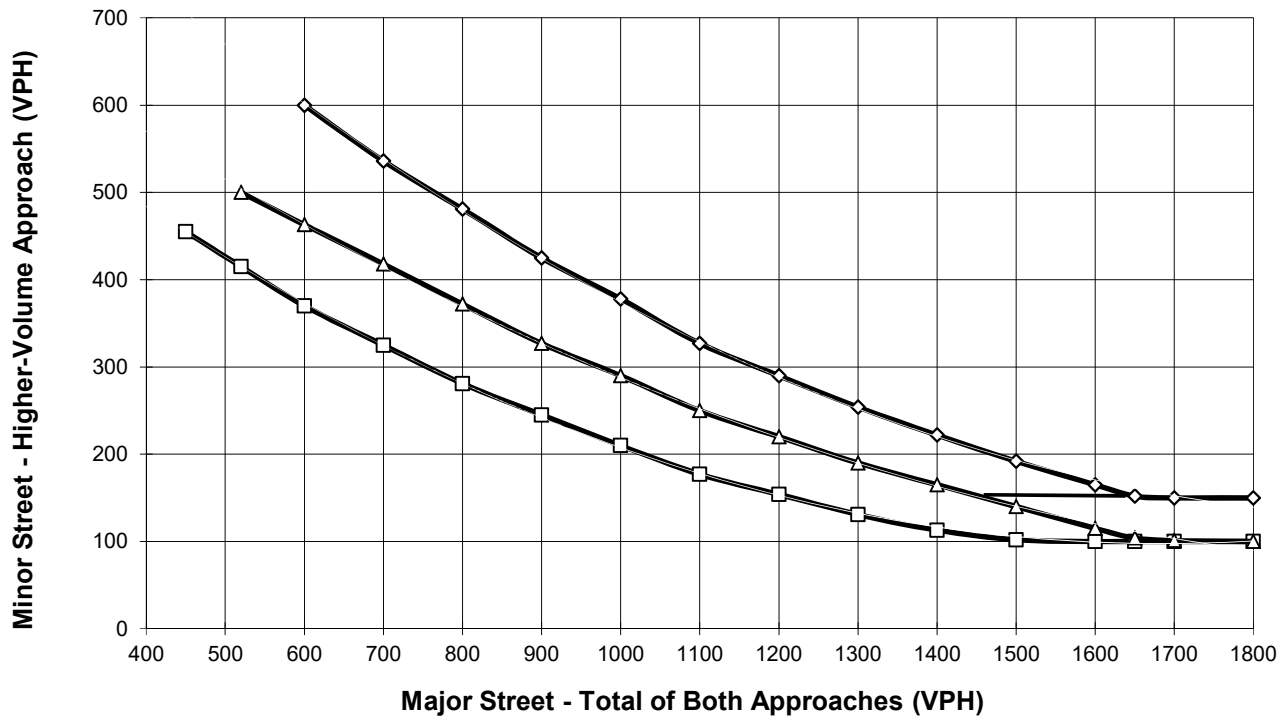
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **364**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Markham St.**

High Volume Approach (VPH) = **44**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2020) Conditions - Weekday AM Peak Hour**

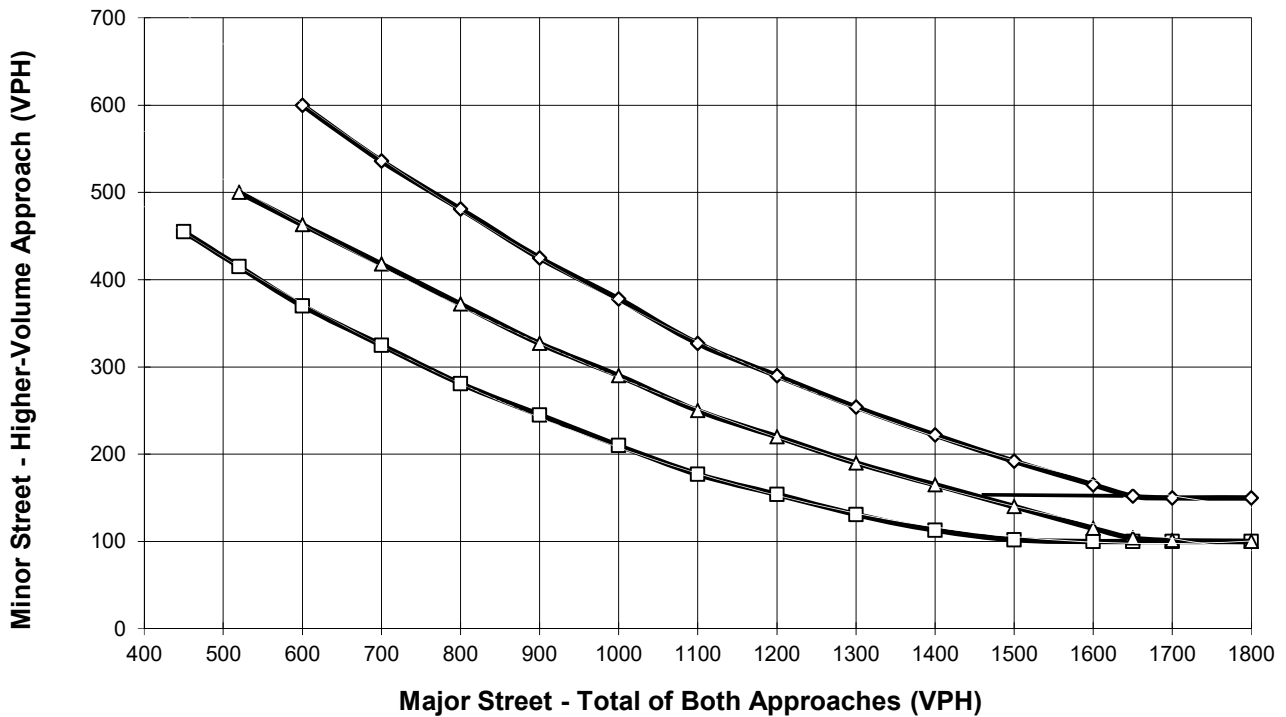
Major Street Name = **Morgan St.**

Total of Both Approaches (VPH) = **44**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Redlands Av.**

High Volume Approach (VPH) = **36**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2020) Conditions - Weekday PM Peak Hour**

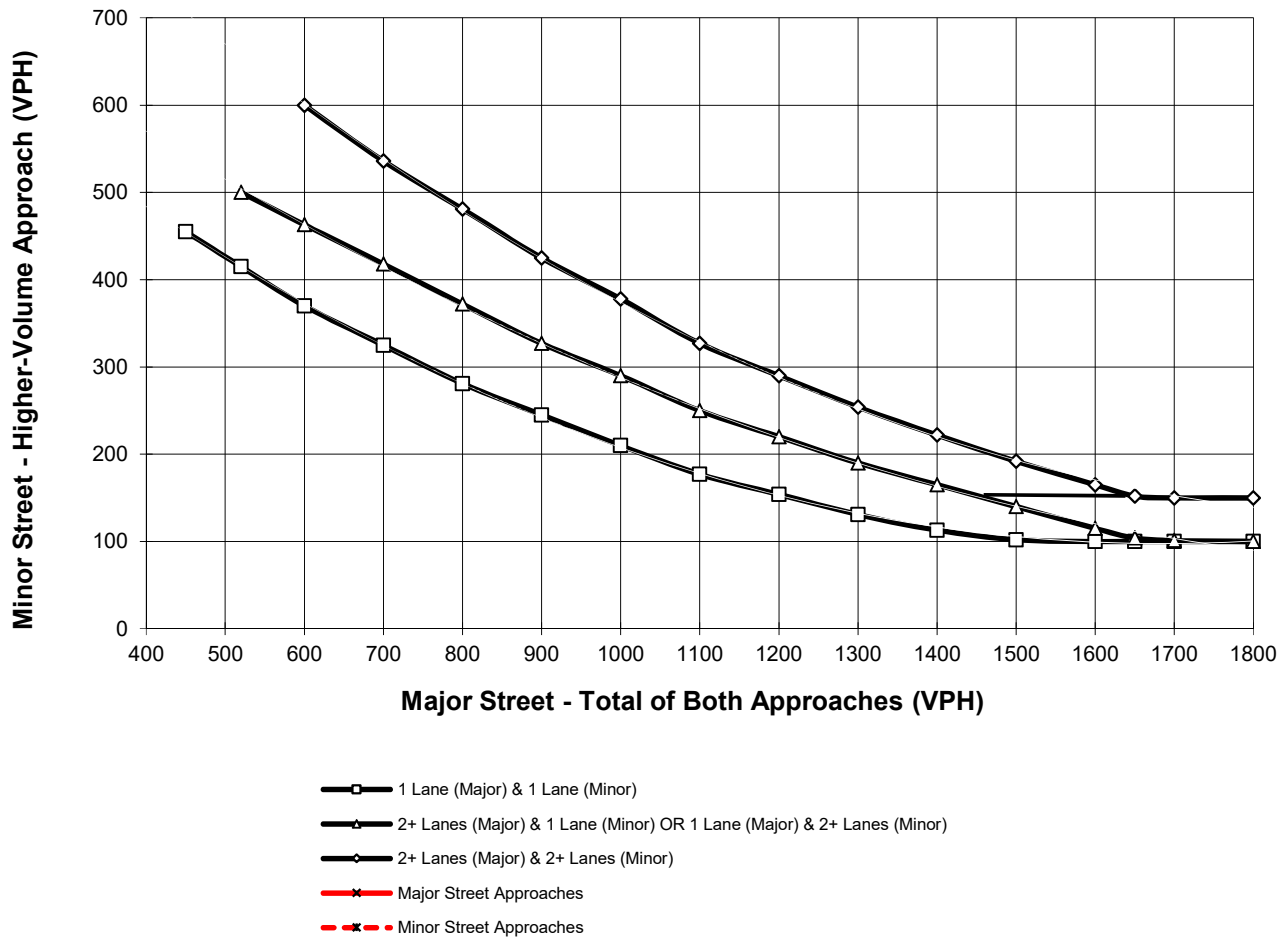
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **2**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Sinclair St.**

High Volume Approach (VPH) = **2**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

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**APPENDIX 7.4:**

**EAP (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP 2021 Conditions - Weekday PM Peak Hour**

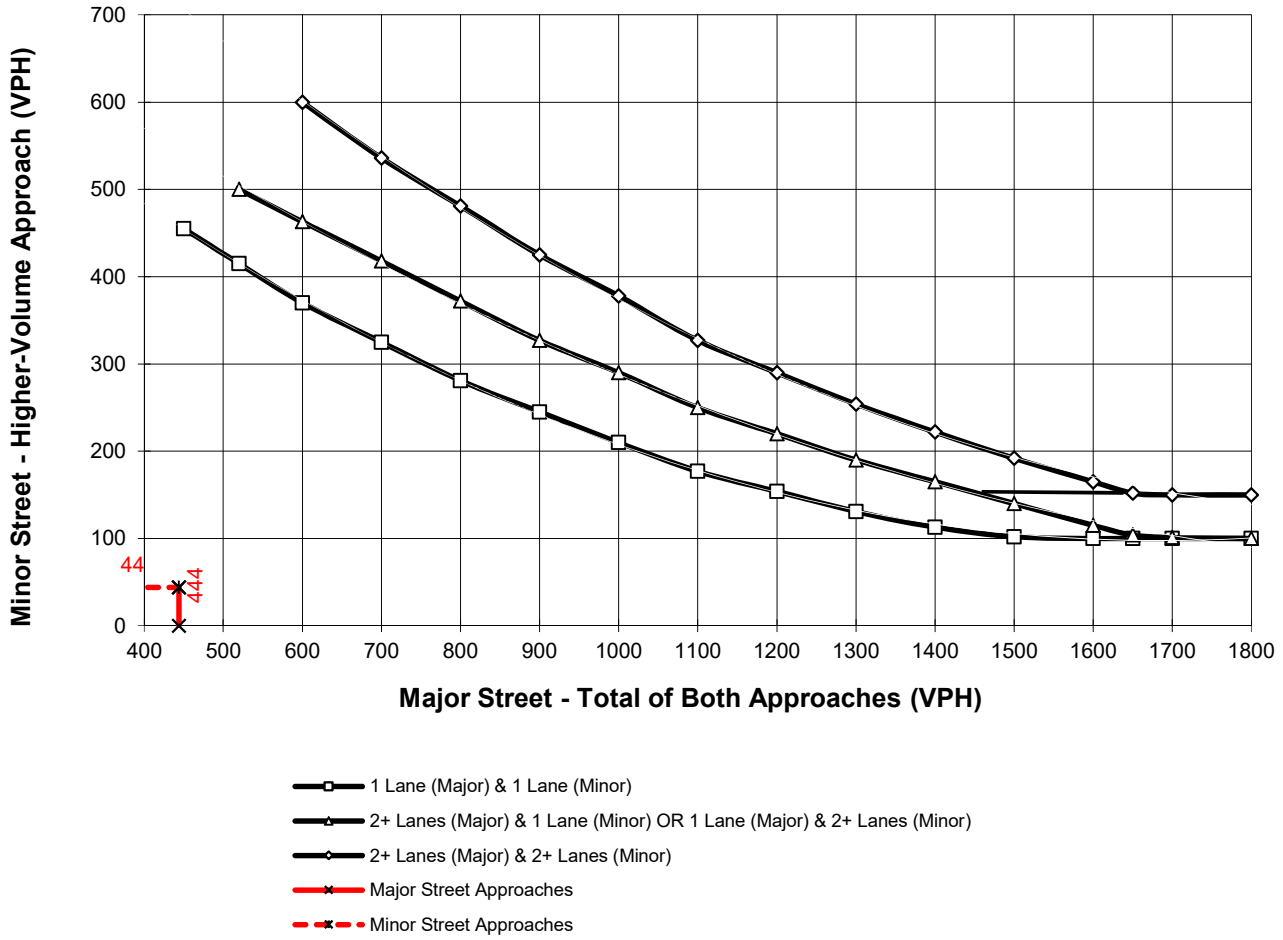
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **444**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Markham St.**

High Volume Approach (VPH) = **44**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane



### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP 2021 Conditions - Weekday PM Peak Hour**

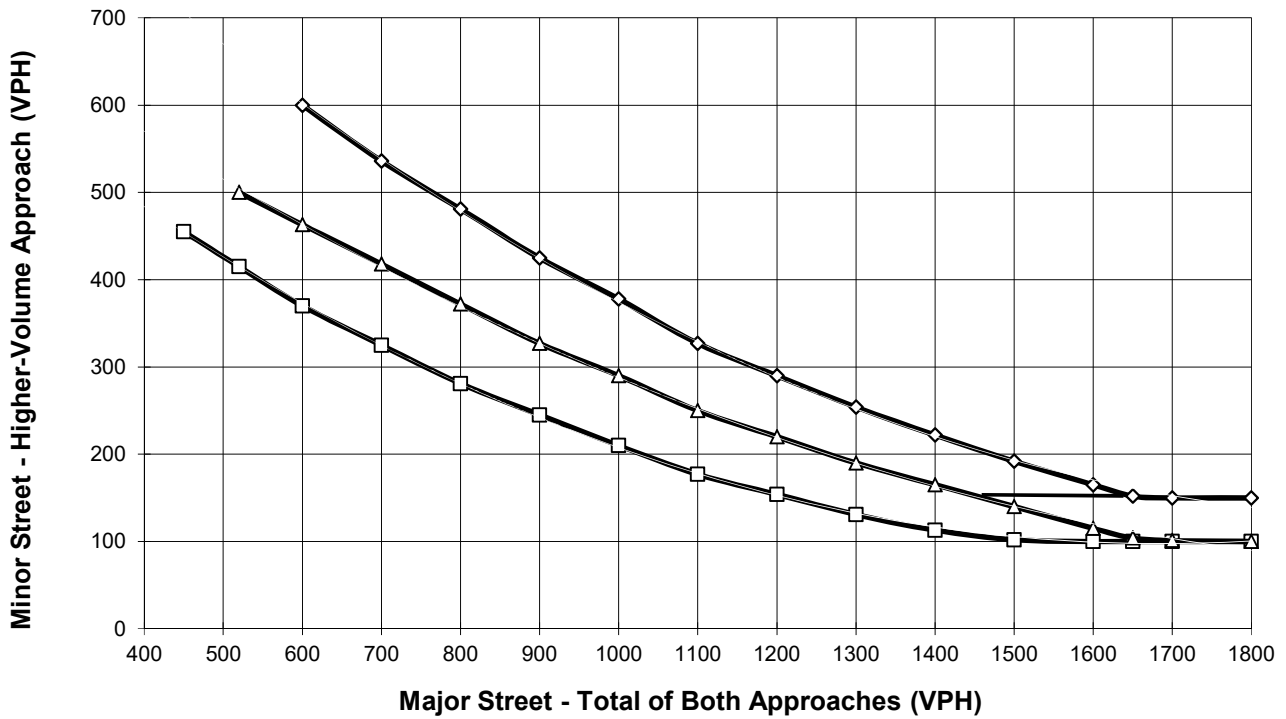
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **139**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **52**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP 2021 Conditions - Weekday PM Peak Hour**

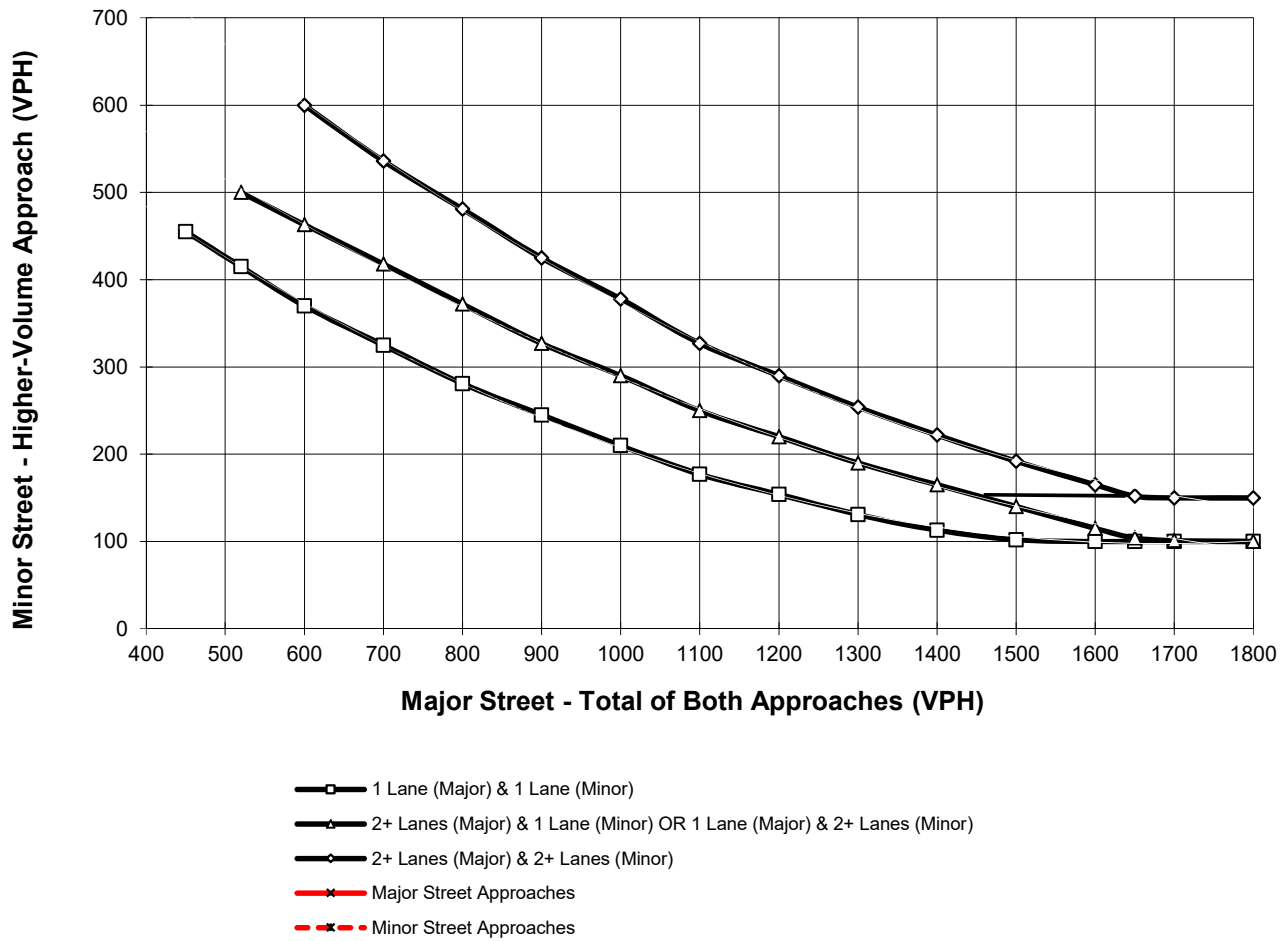
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **71**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Sinclair St.**

High Volume Approach (VPH) = **23**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>RV</u>	TRAFFIC CONDITIONS	<u>EAP 2021</u>	
Jurisdiction: <u>City of Perris</u>				CHK <u>CH</u>		DATE <u>08/02/18</u>	
Major Street: <u>Redlands Av.</u>					Critical Approach Speed (Major)	<u>40</u> mph	
Minor Street: <u>Driveway 2</u>					Critical Approach Speed (Minor)	<u>25</u> mph	
Major Street Approach Lanes =		<u>2</u>	lane	Minor Street Approach Lanes:		<u>1</u> lane	
Major Street Future ADT =		<u>670</u>	vpd	Minor Street Future ADT =		<u>571</u> vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....						<input type="checkbox"/>	
						or	<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....						<input type="checkbox"/>	

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u> <b>XX</b>	<u>RURAL</u>	Minimum Requirements EADT			
<u>CONDITION A - Minimum Vehicular Volume Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + <b>670</b>	1 <b>571</b>	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<u>CONDITION B - Interruption of Continuous Traffic Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + <b>670</b>	1 <b>571</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<u>Combination of CONDITIONS A + B Satisfied</u>		2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....					
<b>A</b> <b>7%</b>				<b>B</b> <b>5%</b>	

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

**APPENDIX 7.5:**

**EA (2021) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	505	9	166	200	541	182
v/c Ratio	0.41	0.01	0.69	0.10	1.05	0.31
Control Delay	16.6	0.0	31.4	12.1	80.3	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.0	31.4	12.1	80.3	4.8
Queue Length 50th (ft)	73	0	59	33	~221	0
Queue Length 95th (ft)	110	0	#131	57	#386	39
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1234	623	255	1985	513	588
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.01	0.65	0.10	1.05	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

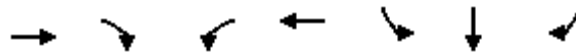
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

2: I-215 SB Ramps & Ramona Exwy.

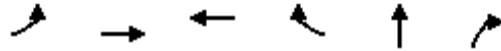


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	782	365	315	1060	328	330	212
v/c Ratio	0.65	0.47	0.81	0.50	0.63	0.63	0.38
Control Delay	35.3	5.3	27.2	5.2	39.3	39.3	17.5
Queue Delay	0.0	0.0	0.0	0.5	61.3	61.2	0.0
Total Delay	35.3	5.3	27.2	5.7	100.5	100.6	17.5
Queue Length 50th (ft)	247	0	49	22	209	210	58
Queue Length 95th (ft)	339	70	71	30	312	314	124
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1203	781	484	2133	522	523	562
Starvation Cap Reductn	0	0	0	591	0	0	0
Spillback Cap Reductn	0	0	0	0	286	287	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.47	0.65	0.69	1.39	1.40	0.38

Intersection Summary



Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	308	726	349	805	13	94
v/c Ratio	0.72	0.27	0.22	0.83	0.09	0.39
Control Delay	14.7	0.1	11.9	17.0	26.8	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	0.1	11.9	17.0	26.8	9.5
Queue Length 50th (ft)	14	0	39	93	4	0
Queue Length 95th (ft)	22	m0	72	#354	19	28
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1584	970	150	242
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.27	0.22	0.83	0.09	0.39

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.

09/09/2019



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	191	1234	1015	774	176	175	468
v/c Ratio	0.77	0.57	0.66	0.68	0.35	0.35	0.90
Control Delay	49.4	24.3	29.0	5.3	32.0	32.0	52.0
Queue Delay	0.0	26.6	0.0	0.0	0.0	0.0	0.0
Total Delay	49.4	50.9	29.0	5.3	32.0	32.0	52.0
Queue Length 50th (ft)	144	492	320	0	98	97	260
Queue Length 95th (ft)	#226	566	399	85	161	160	#433
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	271	2182	1539	1132	553	555	571
Starvation Cap Reductn	0	998	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.04	0.66	0.68	0.32	0.32	0.82

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues



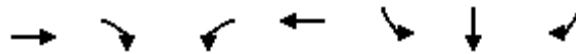
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	406	17	299	201	446	191
v/c Ratio	0.34	0.03	1.11	0.10	0.89	0.33
Control Delay	16.0	0.1	111.2	11.2	44.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	0.1	111.2	11.2	44.6	4.9
Queue Length 50th (ft)	56	0	~137	32	152	0
Queue Length 95th (ft)	88	0	#274	57	#302	39
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	617	269	2013	513	594
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.03	1.11	0.10	0.87	0.32

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

2: I-215 SB Ramps & Ramona Exwy.

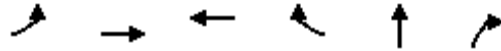


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	858	344	373	916	408	411	185
v/c Ratio	0.69	0.44	0.97	0.42	0.81	0.81	0.32
Control Delay	34.4	4.7	57.0	4.3	49.7	49.9	9.7
Queue Delay	0.0	0.0	0.0	0.3	59.6	59.4	0.0
Total Delay	34.4	4.7	57.0	4.6	109.2	109.3	9.7
Queue Length 50th (ft)	271	0	124	12	280	282	20
Queue Length 95th (ft)	343	61	#427	21	#441	#446	75
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1247	783	385	2166	506	508	580
Starvation Cap Reductn	0	0	0	583	0	0	0
Spillback Cap Reductn	0	0	0	0	283	284	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.44	0.97	0.58	1.83	1.83	0.32

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	279	615	505	676	31	296
v/c Ratio	0.69	0.23	0.31	0.68	0.20	0.73
Control Delay	15.8	0.2	12.1	8.9	29.1	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	0.2	12.1	8.9	29.1	16.9
Queue Length 50th (ft)	21	1	57	42	11	0
Queue Length 95th (ft)	16	m1	96	135	31	#71
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1625	991	152	405
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.23	0.31	0.68	0.20	0.73

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	219	1455	939	778	179	180	423
v/c Ratio	0.81	0.65	0.60	0.69	0.39	0.39	0.86
Control Delay	58.2	21.9	27.2	5.6	33.9	33.9	48.5
Queue Delay	0.0	33.1	0.0	0.0	0.0	0.0	0.0
Total Delay	58.2	55.0	27.2	5.6	33.9	33.9	48.5
Queue Length 50th (ft)	167	541	283	3	105	106	234
Queue Length 95th (ft)	#285	625	360	94	164	164	344
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	281	2255	1567	1126	553	555	571
Starvation Cap Reductn	0	885	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	1.06	0.60	0.69	0.32	0.32	0.74

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

**APPENDIX 7.6:**

**EAP (2021) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues



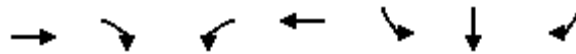
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	505	9	175	200	586	182
v/c Ratio	0.41	0.01	0.72	0.10	1.14	0.31
Control Delay	16.6	0.0	33.8	12.1	110.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	0.0	33.8	12.1	110.1	4.8
Queue Length 50th (ft)	73	0	62	33	~256	0
Queue Length 95th (ft)	110	0	#140	57	#427	39
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1229	621	255	1985	513	588
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.01	0.69	0.10	1.14	0.31

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

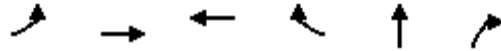
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	782	365	319	1060	338	339	212
v/c Ratio	0.65	0.47	0.81	0.50	0.65	0.65	0.38
Control Delay	35.4	5.4	27.1	5.1	40.0	40.0	17.5
Queue Delay	0.0	0.0	0.0	0.5	61.2	61.2	0.0
Total Delay	35.4	5.4	27.1	5.6	101.2	101.2	17.5
Queue Length 50th (ft)	248	0	50	21	216	217	58
Queue Length 95th (ft)	339	70	74	28	324	324	124
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1198	779	484	2133	522	523	562
Starvation Cap Reductn	0	0	0	593	0	0	0
Spillback Cap Reductn	0	0	0	0	288	289	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.47	0.66	0.69	1.44	1.45	0.38

Intersection Summary

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	308	770	358	817	13	123
v/c Ratio	0.72	0.28	0.23	0.84	0.09	0.50
Control Delay	14.7	0.1	11.9	18.1	26.8	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	0.1	11.9	18.1	26.8	13.8
Queue Length 50th (ft)	14	0	40	99	4	0
Queue Length 95th (ft)	22	m0	74	#364	19	42
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1584	970	150	247
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.28	0.23	0.84	0.09	0.50

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	191	1253	1019	779	176	175	480
v/c Ratio	0.78	0.58	0.67	0.69	0.35	0.35	0.91
Control Delay	49.7	24.5	29.3	5.4	31.8	31.7	53.8
Queue Delay	0.0	37.1	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	61.6	29.3	5.4	31.8	31.7	53.8
Queue Length 50th (ft)	145	502	322	0	97	97	271
Queue Length 95th (ft)	#226	574	401	86	161	160	#451
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	270	2169	1528	1132	553	555	571
Starvation Cap Reductn	0	998	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	1.07	0.67	0.69	0.32	0.32	0.84

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Queues



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	406	17	324	201	461	191
v/c Ratio	0.34	0.03	1.23	0.10	0.91	0.32
Control Delay	16.0	0.1	155.0	11.2	47.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	0.1	155.0	11.2	47.4	4.8
Queue Length 50th (ft)	56	0	~156	32	159	0
Queue Length 95th (ft)	88	0	#294	57	#316	39
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	617	263	2001	513	594
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.03	1.23	0.10	0.90	0.32

Intersection Summary

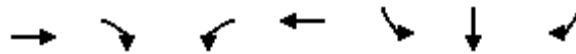
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	858	344	389	916	413	416	185
v/c Ratio	0.69	0.44	1.01	0.42	0.82	0.82	0.32
Control Delay	34.4	4.7	67.2	4.2	50.5	50.7	9.7
Queue Delay	0.0	0.0	0.0	0.3	59.7	59.6	0.0
Total Delay	34.4	4.7	67.2	4.5	110.2	110.3	9.7
Queue Length 50th (ft)	271	0	~126	13	284	287	20
Queue Length 95th (ft)	343	61	#454	21	#450	#453	75
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1247	783	385	2166	506	508	580
Starvation Cap Reductn	0	0	0	592	0	0	0
Spillback Cap Reductn	0	0	0	0	289	290	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.44	1.01	0.58	1.90	1.91	0.32

Intersection Summary

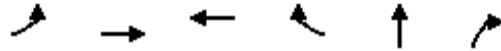
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	279	632	532	718	31	307
v/c Ratio	0.69	0.23	0.33	0.72	0.20	0.74
Control Delay	15.9	0.2	12.3	10.8	29.1	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	0.2	12.3	10.8	29.1	16.9
Queue Length 50th (ft)	21	1	62	52	11	0
Queue Length 95th (ft)	16	m1	102	#169	31	#73
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1625	991	152	416
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.23	0.33	0.72	0.20	0.74

Intersection Summary

- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	219	1464	954	801	179	180	430
v/c Ratio	0.81	0.65	0.61	0.71	0.38	0.38	0.87
Control Delay	56.5	24.0	27.7	6.5	33.6	33.6	48.9
Queue Delay	0.0	36.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	60.0	27.7	6.5	33.6	33.6	48.9
Queue Length 50th (ft)	168	566	292	13	105	105	238
Queue Length 95th (ft)	#285	646	368	124	164	164	352
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	281	2242	1555	1123	553	555	571
Starvation Cap Reductn	0	873	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	1.07	0.61	0.71	0.32	0.32	0.75

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



**APPENDIX 7.7:**

**EA (2021) CONDITIONS BASIC FREEWAY SEGMENT ANALYSIS WORKSHEETS**

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# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4116	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1566
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.65
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	22.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3729	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1391
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.58
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.6
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	20.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3610	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1335
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	19.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5570	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2140
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.89
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	59.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	35.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4784	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1802
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.75
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	27.4
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4700	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1770
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	66.2
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	26.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5676	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2118
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	60.2
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	35.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5508	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2036
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	61.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	32.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5319	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1947
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4880	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1821
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	27.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4440	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1642
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.68
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.7
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	24.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4284	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1584
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.3
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	23.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

**APPENDIX 7.8:**

**EAP (2021) CONDITIONS BASIC FREEWAY SEGMENT ANALYSIS WORKSHEETS**

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# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4151	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1595
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.2
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	23.4
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3751	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1413
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	20.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3618	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1338
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.56
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	19.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5580	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2144
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.89
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	59.7
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	35.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4800	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1827
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	27.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4723	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1779
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.74
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	66.1
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	26.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5691	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2124
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	60.1
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	35.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5527	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	2043
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.85
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	61.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	33.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5344	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1956
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4917	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1835
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.3
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	28.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4467	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1652
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.69
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.6
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	24.4
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4294	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1588
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.66
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	68.3
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	23.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

**APPENDIX 7.9:**

**EA (2021) CONDITIONS MERGE/DIVERGE ANALYSIS WORKSHEETS**

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# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4116	520
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.826
Flow Rate (vi),pc/h	4699	684
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.65	0.33

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.5
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.360
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1562
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	59.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.611	Outer Lanes Freeway Speed (SO), mi/h	74.6
Flow in Lanes 1 and 2 (v12), pc/h	3137	Ramp Junction Speed (S), mi/h	64.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.4
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3596	133
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	16.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.862
Flow Rate (vi),pc/h	4025	168
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.58	0.08

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	964.1	Density in Ramp Influence Area (DR), pc/mi/ln	23.5
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.346
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1670
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.3
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	65.8
Flow in Lanes 1 and 2 (v12), pc/h	2355	Ramp Junction Speed (S), mi/h	62.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2523	Average Density (D), pc/mi/ln	22.4
Level of Service (LOS)	C		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3729	715
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.885
Flow Rate (vi),pc/h	4174	878
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.58	0.42

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	25.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.377
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1269
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.4
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.615	Outer Lanes Freeway Speed (SO), mi/h	75.7
Flow in Lanes 1 and 2 (v12), pc/h	2905	Ramp Junction Speed (S), mi/h	63.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	21.9
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3014	596
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.926
Flow Rate (vi),pc/h	3309	700
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.56	0.33

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	21.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.310
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1327
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	61.3
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	67.0
Flow in Lanes 1 and 2 (v12), pc/h	1982	Ramp Junction Speed (S), mi/h	63.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	2682	Average Density (D), pc/mi/ln	21.2
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4694	875
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.885
Flow Rate (vi),pc/h	5304	1075
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.89	0.51

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1449.7	Density in Ramp Influence Area (DR), pc/mi/ln	35.6
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.544
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2217
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	54.8
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.582	Outer Lanes Freeway Speed (SO), mi/h	63.8
Flow in Lanes 1 and 2 (v12), pc/h	3087	Ramp Junction Speed (S), mi/h	57.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	4162	Average Density (D), pc/mi/ln	36.9
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4784	90
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.909
Flow Rate (vi),pc/h	5405	108
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.75	0.05

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	30.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.308
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2013
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	61.4
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.620	Outer Lanes Freeway Speed (SO), mi/h	72.8
Flow in Lanes 1 and 2 (v12), pc/h	3392	Ramp Junction Speed (S), mi/h	65.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.6
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3981	803
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	12.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.893
Flow Rate (vi),pc/h	4456	977
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.75	0.47

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.411
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1805
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.3
Flow in Lanes 1 and 2 (v12), pc/h	2651	Ramp Junction Speed (S), mi/h	60.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	3628	Average Density (D), pc/mi/ln	29.9
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4700	719
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.909
Flow Rate (vi),pc/h	5310	860
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.74	0.41

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.375
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1833
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.5
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.588	Outer Lanes Freeway Speed (SO), mi/h	73.5
Flow in Lanes 1 and 2 (v12), pc/h	3477	Ramp Junction Speed (S), mi/h	63.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.8
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5676	446
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	20.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.833
Flow Rate (vi),pc/h	6354	582
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.88	0.28

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	36.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.350
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2459
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	60.2
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.574	Outer Lanes Freeway Speed (SO), mi/h	71.1
Flow in Lanes 1 and 2 (v12), pc/h	3895	Ramp Junction Speed (S), mi/h	64.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	33.1
Level of Service (LOS)	E		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5230	278
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	4.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.962
Flow Rate (vi),pc/h	5801	314
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.85	0.15

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1375.5	Density in Ramp Influence Area (DR), pc/mi/ln	32.7
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.457
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2407
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.2
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	62.8
Flow in Lanes 1 and 2 (v12), pc/h	3394	Ramp Junction Speed (S), mi/h	59.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	3708	Average Density (D), pc/mi/ln	34.4
Level of Service (LOS)	D		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5508	867
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.909
Flow Rate (vi),pc/h	6109	1037
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.85	0.49

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	33.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.391
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2232
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.1
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.560	Outer Lanes Freeway Speed (SO), mi/h	72.0
Flow in Lanes 1 and 2 (v12), pc/h	3877	Ramp Junction Speed (S), mi/h	63.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	32.2
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4641	677
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.952
Flow Rate (vi),pc/h	5096	773
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.82	0.37

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	30.3
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.432
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2043
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.9
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	64.4
Flow in Lanes 1 and 2 (v12), pc/h	3053	Ramp Junction Speed (S), mi/h	60.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	3826	Average Density (D), pc/mi/ln	32.6
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4208	672
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	14.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.877
Flow Rate (vi),pc/h	4620	833
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.76	0.40

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1251.5	Density in Ramp Influence Area (DR), pc/mi/ln	30.9
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.428
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1913
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.0
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.586	Outer Lanes Freeway Speed (SO), mi/h	64.9
Flow in Lanes 1 and 2 (v12), pc/h	2707	Ramp Junction Speed (S), mi/h	60.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	3540	Average Density (D), pc/mi/ln	30.2
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4440	232
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.826
Flow Rate (vi),pc/h	4925	305
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.68	0.15

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.325
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1742
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.623	Outer Lanes Freeway Speed (SO), mi/h	73.9
Flow in Lanes 1 and 2 (v12), pc/h	3183	Ramp Junction Speed (S), mi/h	64.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	25.3
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3569	871
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	9.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.917
Flow Rate (vi),pc/h	3919	1032
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.69	0.49

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.3
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.377
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1587
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.4
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	66.1
Flow in Lanes 1 and 2 (v12), pc/h	2332	Ramp Junction Speed (S), mi/h	61.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	3364	Average Density (D), pc/mi/ln	26.9
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EA (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4284	715
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.926
Flow Rate (vi),pc/h	4752	839
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.66	0.40

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	26.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.374
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1553
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.5
Prop. Freeway Vehicles in Lane 1 and 2 (Pd)	0.603	Outer Lanes Freeway Speed (SO), mi/h	74.6
Flow in Lanes 1 and 2 (v12), pc/h	3199	Ramp Junction Speed (S), mi/h	63.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.9
Level of Service (LOS)	C		

**APPENDIX 7.10:**

**EAP (2021) CONDITIONS MERGE/DIVERGE ANALYSIS WORKSHEETS**

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# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4151	537
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	6.00	23.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.943	0.813
Flow Rate (vi),pc/h	4785	718
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.66	0.34

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.363
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1598
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	59.8
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.607	Outer Lanes Freeway Speed (SO), mi/h	74.5
Flow in Lanes 1 and 2 (v12), pc/h	3187	Ramp Junction Speed (S), mi/h	64.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.9
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3614	137
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	19.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.840
Flow Rate (vi),pc/h	4046	177
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.59	0.08

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	970.6	Density in Ramp Influence Area (DR), pc/mi/ln	23.7
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.347
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1679
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.3
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	65.8
Flow in Lanes 1 and 2 (v12), pc/h	2367	Ramp Junction Speed (S), mi/h	62.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2544	Average Density (D), pc/mi/ln	22.6
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3751	733
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.885
Flow Rate (vi),pc/h	4238	900
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.59	0.43

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	25.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.379
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1292
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.4
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.613	Outer Lanes Freeway Speed (SO), mi/h	75.7
Flow in Lanes 1 and 2 (v12), pc/h	2946	Ramp Junction Speed (S), mi/h	63.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	22.2
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3018	600
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.926
Flow Rate (vi),pc/h	3314	704
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.56	0.34

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	21.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.310
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1329
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	61.3
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	67.0
Flow in Lanes 1 and 2 (v12), pc/h	1985	Ramp Junction Speed (S), mi/h	63.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	2689	Average Density (D), pc/mi/ln	21.2
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4699	880
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.885
Flow Rate (vi),pc/h	5309	1081
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.89	0.51

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1452.1	Density in Ramp Influence Area (DR), pc/mi/ln	35.7
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.547
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2219
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	54.7
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.582	Outer Lanes Freeway Speed (SO), mi/h	63.8
Flow in Lanes 1 and 2 (v12), pc/h	3090	Ramp Junction Speed (S), mi/h	57.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	4171	Average Density (D), pc/mi/ln	37.0
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4800	101
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	19.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.840
Flow Rate (vi),pc/h	5480	131
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.76	0.06

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	31.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.310
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2049
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	61.3
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.617	Outer Lanes Freeway Speed (SO), mi/h	72.7
Flow in Lanes 1 and 2 (v12), pc/h	3431	Ramp Junction Speed (S), mi/h	65.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	28.1
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3992	808
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	12.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.893
Flow Rate (vi),pc/h	4469	983
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.76	0.47

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.5
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.413
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1810
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	58.4
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.3
Flow in Lanes 1 and 2 (v12), pc/h	2659	Ramp Junction Speed (S), mi/h	60.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	3642	Average Density (D), pc/mi/ln	30.0
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4723	731
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	9.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.917
Flow Rate (vi),pc/h	5336	866
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.74	0.41

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.376
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1846
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.5
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.587	Outer Lanes Freeway Speed (SO), mi/h	73.5
Flow in Lanes 1 and 2 (v12), pc/h	3490	Ramp Junction Speed (S), mi/h	63.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.9
Level of Service (LOS)	D		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5691	452
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.826
Flow Rate (vi),pc/h	6371	595
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.88	0.28

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	36.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.352
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2466
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	60.1
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.573	Outer Lanes Freeway Speed (SO), mi/h	71.1
Flow in Lanes 1 and 2 (v12), pc/h	3905	Ramp Junction Speed (S), mi/h	63.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	33.2
Level of Service (LOS)	E		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5239	288
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.926
Flow Rate (vi),pc/h	5811	338
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.85	0.16

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1382.7	Density in Ramp Influence Area (DR), pc/mi/ln	32.9
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.461
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2412
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.1
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	62.8
Flow in Lanes 1 and 2 (v12), pc/h	3399	Ramp Junction Speed (S), mi/h	59.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	3737	Average Density (D), pc/mi/ln	34.6
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5527	867
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.909
Flow Rate (vi),pc/h	6130	1037
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.85	0.49

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	33.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.391
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2246
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	59.1
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.559	Outer Lanes Freeway Speed (SO), mi/h	71.9
Flow in Lanes 1 and 2 (v12), pc/h	3884	Ramp Junction Speed (S), mi/h	63.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	32.3
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4651	692
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.952
Flow Rate (vi),pc/h	5106	790
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.82	0.38

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	30.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.436
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2048
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.8
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	64.4
Flow in Lanes 1 and 2 (v12), pc/h	3058	Ramp Junction Speed (S), mi/h	59.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	3848	Average Density (D), pc/mi/ln	32.8
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4231	686
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	16.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.862
Flow Rate (vi),pc/h	4645	865
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.77	0.41

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1263.7	Density in Ramp Influence Area (DR), pc/mi/ln	31.2
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.435
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1923
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.8
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.586	Outer Lanes Freeway Speed (SO), mi/h	64.9
Flow in Lanes 1 and 2 (v12), pc/h	2722	Ramp Junction Speed (S), mi/h	60.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	3587	Average Density (D), pc/mi/ln	30.6
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4467	236
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	22.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.820
Flow Rate (vi),pc/h	4955	313
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.69	0.15

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	29.3
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.326
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1755
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.622	Outer Lanes Freeway Speed (SO), mi/h	73.8
Flow in Lanes 1 and 2 (v12), pc/h	3200	Ramp Junction Speed (S), mi/h	64.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	25.4
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3573	894
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	9.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.917
Flow Rate (vi),pc/h	3923	1060
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.69	0.50

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.6
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.380
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1589
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.4
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	66.1
Flow in Lanes 1 and 2 (v12), pc/h	2334	Ramp Junction Speed (S), mi/h	61.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	3394	Average Density (D), pc/mi/ln	27.1
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4294	721
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.926
Flow Rate (vi),pc/h	4763	846
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.66	0.40

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	26.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.374
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1559
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	59.5
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.602	Outer Lanes Freeway Speed (SO), mi/h	74.6
Flow in Lanes 1 and 2 (v12), pc/h	3204	Ramp Junction Speed (S), mi/h	63.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.9
Level of Service (LOS)	C		



**APPENDIX 8.1:**

**EAC (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	542	29	208	258	2	303
Future Volume (vph)	542	29	208	258	2	303
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	8.5	33.0	17.0	17.0
Actuated g/C Ratio	0.33	0.33	0.14	0.55	0.28	0.28
v/c Ratio	0.49	0.05	0.89	0.14	1.98	0.48
Control Delay	17.6	0.2	52.2	9.5	470.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	0.2	52.2	9.5	470.4	5.6
LOS	B	A	D	A	F	A
Approach Delay	16.7			28.5	356.7	
Approach LOS	B			C	F	

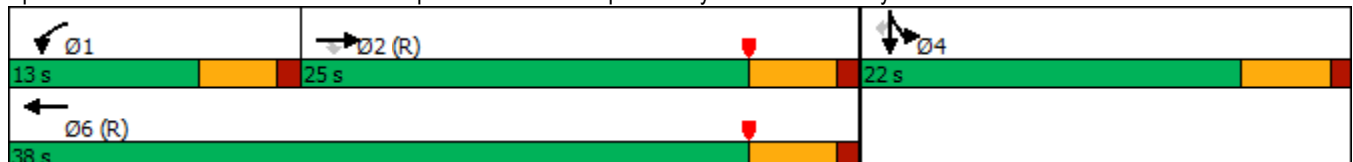
Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.98  
 Intersection Signal Delay: 204.1  
 Intersection Capacity Utilization 149.6%  
 Analysis Period (min) 15

Intersection LOS: F

ICU Level of Service H

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

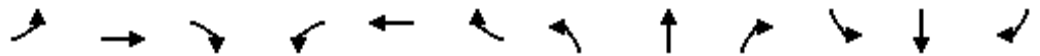


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

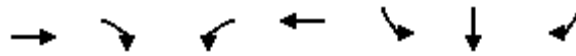
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑						↖	↗
Traffic Volume (veh/h)	0	542	29	208	258	0	0	0	0	933	2	303
Future Volume (veh/h)	0	542	29	208	258	0	0	0	0	933	2	303
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	589	31	226	280	0				1014	2	272
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1203	536	256	1986	0				512	1	456
Arrive On Green	0.00	0.33	0.33	0.28	1.00	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1609	1810	3705	0				1806	4	1610
Grp Volume(v), veh/h	0	589	31	226	280	0				1016	0	272
Grp Sat Flow(s),veh/h/ln	0	1805	1609	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	7.8	0.8	7.2	0.0	0.0				17.0	0.0	8.7
Cycle Q Clear(g_c), s	0.0	7.8	0.8	7.2	0.0	0.0				17.0	0.0	8.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1203	536	256	1986	0				513	0	456
V/C Ratio(X)	0.00	0.49	0.06	0.88	0.14	0.00				1.98	0.00	0.60
Avail Cap(c_a), veh/h	0	1203	536	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.9	13.6	21.0	0.0	0.0				21.5	0.0	18.5
Incr Delay (d2), s/veh	0.0	1.4	0.2	26.5	0.1	0.0				448.6	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	0.3	4.2	0.0	0.0				69.9	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.4	13.8	47.5	0.1	0.0				470.1	0.0	20.7
LnGrp LOS	A	B	B	D	A	A				F	A	C
Approach Vol, veh/h		620			506						1288	
Approach Delay, s/veh		17.2			21.3						375.2	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.0		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	9.2	9.8		19.0		2.0						
Green Ext Time (p_c), s	0.0	1.8		0.0		1.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				209.1								
HCM 6th LOS				F								

Timings  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵	↵
Traffic Volume (vph)	1037	457	379	1458	825	1	670
Future Volume (vph)	1037	457	379	1458	825	1	670
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	48.0	48.0	23.0	71.0	39.0	39.0	39.0
Total Split (%)	43.6%	43.6%	20.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	18.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.38	0.38	0.17	0.59	0.30	0.30	0.30
v/c Ratio	0.79	0.53	1.32	0.72	0.83	0.83	1.30
Control Delay	35.3	4.4	184.5	5.4	50.9	50.9	177.6
Queue Delay	0.0	0.0	0.0	1.2	60.6	60.6	0.0
Total Delay	35.3	4.4	184.5	6.6	111.5	111.5	177.6
LOS	D	A	F	A	F	F	F
Approach Delay	25.9			43.3		141.1	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 68.2  
 Intersection LOS: E  
 Intersection Capacity Utilization 163.3%  
 ICU Level of Service H  
 Analysis Period (min) 15













Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

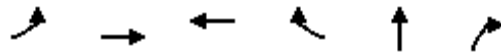
Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	1037	457	379	1458	0	0	0	0	825	1	670
Future Volume (veh/h)	0	1037	457	379	1458	0	0	0	0	825	1	670
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1092	420	399	1535	0				869	0	622
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1378	615	304	2133	0				1102	0	490
Arrive On Green	0.00	0.38	0.38	0.17	0.59	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	1092	420	399	1535	0				869	0	622
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	29.5	24.0	18.5	33.3	0.0				24.2	0.0	33.5
Cycle Q Clear(g_c), s	0.0	29.5	24.0	18.5	33.3	0.0				24.2	0.0	33.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1378	615	304	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.79	0.68	1.31	0.72	0.00				0.79	0.00	1.27
Avail Cap(c_a), veh/h	0	1378	615	304	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.36	0.36	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.1	28.4	45.8	16.0	0.0				35.0	0.0	38.3
Incr Delay (d2), s/veh	0.0	4.7	6.1	148.4	0.8	0.0				5.7	0.0	136.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.7	9.6	20.5	11.9	0.0				11.0	0.0	31.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.9	34.5	194.2	16.8	0.0				40.7	0.0	174.4
LnGrp LOS	A	C	C	F	B	A				D	A	F
Approach Vol, veh/h		1512			1934						1491	
Approach Delay, s/veh		34.8			53.4						96.5	
Approach LOS		C			D						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.0	48.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	18.5	42.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	20.5	31.5		35.5		35.3						
Green Ext Time (p_c), s	0.0	4.1		0.0		8.1						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				60.7								
HCM 6th LOS				E								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

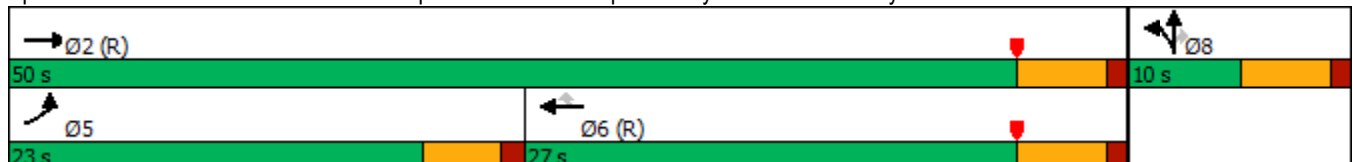


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖	↕	↕	↗	↖	↗
Traffic Volume (vph)	347	1014	406	901	0	283
Future Volume (vph)	347	1014	406	901	0	283
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effect Green (s)	15.7	45.0	24.8	24.8	5.0	5.0
Actuated g/C Ratio	0.26	0.75	0.41	0.41	0.08	0.08
v/c Ratio	0.79	0.40	0.29	1.07	0.43	1.08
Control Delay	16.2	0.4	13.2	65.0	35.6	94.5
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	16.2	0.9	13.2	65.0	35.6	94.5
LOS	B	A	B	E	D	F
Approach Delay		4.8	48.9		84.1	
Approach LOS		A	D		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 33.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 149.6%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	347	1014	0	0	406	901	60	0	283	0	0	0
Future Volume (veh/h)	347	1014	0	0	406	901	60	0	283	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	373	1090	0	0	437	969	65	0	239			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	427	2708	0	0	1586	707	151	0	134			
Arrive On Green	0.24	0.75	0.00	0.00	0.44	0.44	0.08	0.00	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	373	1090	0	0	437	969	65	0	239			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	11.9	6.5	0.0	0.0	4.6	26.4	2.0	0.0	5.0			
Cycle Q Clear(g_c), s	11.9	6.5	0.0	0.0	4.6	26.4	2.0	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	427	2708	0	0	1586	707	151	0	134			
V/C Ratio(X)	0.87	0.40	0.00	0.00	0.28	1.37	0.43	0.00	1.78			
Avail Cap(c_a), veh/h	558	2708	0	0	1586	707	151	0	134			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.87	0.00	0.00	0.82	0.82	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.1	2.7	0.0	0.0	10.7	16.8	26.1	0.0	27.5			
Incr Delay (d2), s/veh	8.7	0.4	0.0	0.0	0.4	173.9	8.7	0.0	379.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	0.6	0.0	0.0	1.5	41.5	1.2	0.0	15.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	3.1	0.0	0.0	11.1	190.7	34.9	0.0	407.3			
LnGrp LOS	C	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1463			1406			304				
Approach Delay, s/veh		10.1			134.9			327.7				
Approach LOS		B			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			18.6	31.4		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		8.5			13.9	28.4		7.0				
Green Ext Time (p_c), s		5.2			0.3	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					95.8							
HCM 6th LOS					F							



Timings  
4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	369	1493	1249	862	589	5	505
Future Volume (vph)	369	1493	1249	862	589	5	505
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	22.0	70.0	48.0	48.0	40.0	40.0	40.0
Total Split (%)	20.0%	63.6%	43.6%	43.6%	36.4%	36.4%	36.4%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	18.1	64.6	42.0	42.0	33.9	33.9	33.9
Actuated g/C Ratio	0.16	0.59	0.38	0.38	0.31	0.31	0.31
v/c Ratio	1.29	0.73	0.94	0.84	0.58	0.59	0.96
Control Delay	179.5	28.4	47.6	14.7	37.2	37.4	62.6
Queue Delay	0.0	49.0	2.2	0.0	0.0	0.0	0.0
Total Delay	179.5	77.3	49.8	14.7	37.2	37.4	62.6
LOS	F	E	D	B	D	D	E
Approach Delay		97.6	35.5			48.9	
Approach LOS		F	D			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.29  
 Intersection Signal Delay: 61.2  
 Intersection Capacity Utilization 163.3%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service H




















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	1493	0	0	1249	862	589	5	505	0	0	0
Future Volume (veh/h)	369	1493	0	0	1249	862	589	5	505	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	384	1555	0	0	1301	741	618	0	343			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	288	2343	0	0	1621	723	892	0	397			
Arrive On Green	0.32	1.00	0.00	0.00	0.45	0.45	0.25	0.00	0.25			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	384	1555	0	0	1301	741	618	0	343			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	34.2	49.4	17.1	0.0	22.4			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	34.2	49.4	17.1	0.0	22.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	288	2343	0	0	1621	723	892	0	397			
V/C Ratio(X)	1.33	0.66	0.00	0.00	0.80	1.02	0.69	0.00	0.86			
Avail Cap(c_a), veh/h	288	2343	0	0	1621	723	1135	0	505			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.49	0.49	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.5	0.0	0.0	0.0	26.1	30.3	37.7	0.0	39.7			
Incr Delay (d2), s/veh	161.6	0.7	0.0	0.0	4.3	40.0	1.3	0.0	12.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	18.8	0.2	0.0	0.0	14.3	25.2	7.4	0.0	9.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	199.1	0.7	0.0	0.0	30.4	70.3	39.0	0.0	51.7			
LnGrp LOS	F	A	A	A	C	F	D	A	D			
Approach Vol, veh/h		1939			2042			961				
Approach Delay, s/veh		40.0			44.9			43.5				
Approach LOS		D			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.4			22.0	55.4		32.6				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		64.0			17.5	42.0		34.5				
Max Q Clear Time (g_c+I1), s		2.0			19.5	51.4		24.4				
Green Ext Time (p_c), s		8.9			0.0	0.0		2.7				

Intersection Summary

HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

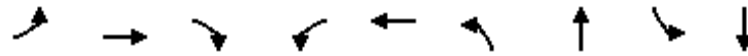
Notes

User approved volume balancing among the lanes for turning movement.

Timings  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	103	1312	9	12	1269	1	0	9	0
Future Volume (vph)	103	1312	9	12	1269	1	0	9	0
Turn Type	Prot	NA	Perm	Prot	NA	Split	NA	Split	NA
Protected Phases	7	4		3	8	2	2	6	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	20.8	20.8	9.6	20.8	34.6	34.6	36.6	36.6
Total Split (s)	13.4	38.0	38.0	9.6	34.2	35.8	35.8	36.6	36.6
Total Split (%)	11.2%	31.7%	31.7%	8.0%	28.5%	29.8%	29.8%	30.5%	30.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	44.3	44.3	5.2	29.5	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.14	0.75	0.75	0.09	0.50	0.18	0.18	0.18	0.18
v/c Ratio	0.43	0.36	0.01	0.08	0.54	0.00	0.00	0.03	0.08
Control Delay	32.3	7.2	0.0	31.8	13.5	27.0	0.0	26.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	7.2	0.0	31.8	13.5	27.0	0.0	26.3	0.2
LOS	C	A	A	C	B	C	A	C	A
Approach Delay		8.9			13.7		9.0		3.9
Approach LOS		A			B		A		A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 58.8  
 Natural Cycle: 125  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 11.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

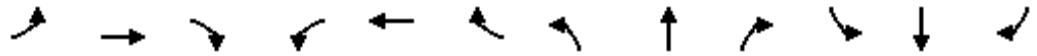
Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
 5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑	↖	↗	↑↑↑		↖	↖		↖	↖	
Traffic Volume (veh/h)	103	1312	9	12	1269	41	1	0	2	9	0	56
Future Volume (veh/h)	103	1312	9	12	1269	41	1	0	2	9	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	111	1411	10	13	1365	44	1	0	2	10	0	60
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	144	2429	754	30	2093	67	15	0	13	223	0	198
Arrive On Green	0.08	0.47	0.47	0.02	0.41	0.41	0.01	0.00	0.01	0.12	0.00	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5162	166	1810	0	1610	1810	0	1610
Grp Volume(v), veh/h	111	1411	10	13	914	495	1	0	2	10	0	60
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1870	1810	0	1610	1810	0	1610
Q Serve(g_s), s	3.1	10.1	0.2	0.4	10.9	10.9	0.0	0.0	0.1	0.2	0.0	1.7
Cycle Q Clear(g_c), s	3.1	10.1	0.2	0.4	10.9	10.9	0.0	0.0	0.1	0.2	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	2429	754	30	1402	758	15	0	13	223	0	198
V/C Ratio(X)	0.77	0.58	0.01	0.44	0.65	0.65	0.07	0.00	0.15	0.04	0.00	0.30
Avail Cap(c_a), veh/h	312	3270	1015	177	1923	1040	1105	0	984	1134	0	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	9.9	7.3	24.9	12.3	12.3	25.1	0.0	25.2	19.7	0.0	20.4
Incr Delay (d2), s/veh	3.3	0.2	0.0	3.7	0.5	1.0	1.9	0.0	5.2	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.6	0.0	0.2	3.1	3.5	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	10.1	7.3	28.6	12.8	13.2	27.0	0.0	30.4	19.8	0.0	21.2
LnGrp LOS	C	B	A	C	B	B	C	A	C	B	A	C
Approach Vol, veh/h		1532			1422			3				70
Approach Delay, s/veh		11.3			13.1			29.3				21.0
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.0	5.4	29.7		10.9	8.7	26.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		31.2	5.0	32.2		32.0	8.8	28.4				
Max Q Clear Time (g_c+I1), s		2.1	2.4	12.1		3.7	5.1	12.9				
Green Ext Time (p_c), s		0.0	0.0	9.6		0.3	0.0	7.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

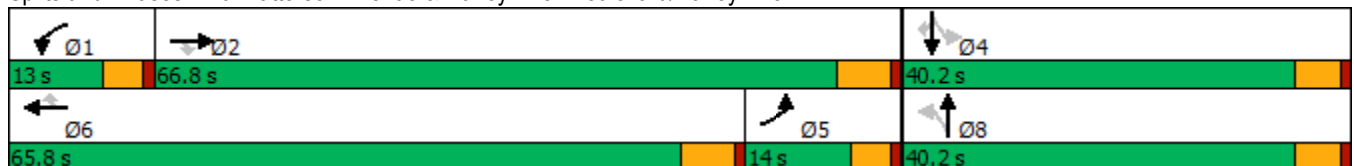


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕		↖	↗
Traffic Volume (vph)	28	1180	76	52	1130	31	80	9	28	4	23
Future Volume (vph)	28	1180	76	52	1130	31	80	9	28	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	14.0	66.8	66.8	13.0	65.8	65.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	11.7%	55.7%	55.7%	10.8%	54.8%	54.8%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.7	35.2	35.2	7.4	37.9	37.9		16.1		16.1	16.1
Actuated g/C Ratio	0.10	0.50	0.50	0.11	0.54	0.54		0.23		0.23	0.23
v/c Ratio	0.17	0.49	0.10	0.30	0.63	0.04		0.44		0.10	0.05
Control Delay	43.1	13.4	3.6	43.4	14.5	0.3		28.0		27.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	43.1	13.4	3.6	43.4	14.5	0.3		28.0		27.9	0.2
LOS	D	B	A	D	B	A		C		C	A
Approach Delay		13.5			15.4			28.0		16.2	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 70.2	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

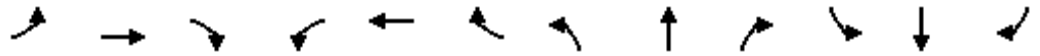


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	28	1180	76	52	1130	31	80	9	52	28	4	23
Future Volume (veh/h)	28	1180	76	52	1130	31	80	9	52	28	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	1283	82	57	1228	34	87	10	55	30	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2797	868	92	1941	866	211	36	88	312	35	254
Arrive On Green	0.03	0.54	0.54	0.05	0.54	0.54	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	5187	1609	1810	3610	1610	751	230	556	1280	223	1610
Grp Volume(v), veh/h	30	1283	82	57	1228	34	152	0	0	34	0	22
Grp Sat Flow(s),veh/h/ln	1810	1729	1609	1810	1805	1610	1537	0	0	1503	0	1610
Q Serve(g_s), s	1.0	9.3	1.5	1.9	14.7	0.6	4.4	0.0	0.0	0.0	0.0	0.7
Cycle Q Clear(g_c), s	1.0	9.3	1.5	1.9	14.7	0.6	5.6	0.0	0.0	1.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	0.57		0.36	0.88		1.00
Lane Grp Cap(c), veh/h	59	2797	868	92	1941	866	335	0	0	348	0	254
V/C Ratio(X)	0.51	0.46	0.09	0.62	0.63	0.04	0.45	0.00	0.00	0.10	0.00	0.09
Avail Cap(c_a), veh/h	277	5146	1596	247	3523	1571	955	0	0	928	0	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	8.7	6.9	28.6	10.0	6.7	24.1	0.0	0.0	22.2	0.0	22.1
Incr Delay (d2), s/veh	2.5	0.2	0.1	2.6	0.5	0.0	1.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.5	0.4	0.8	4.2	0.2	2.0	0.0	0.0	0.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	8.8	6.9	31.2	10.4	6.7	25.0	0.0	0.0	22.4	0.0	22.2
LnGrp LOS	C	A	A	C	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1395			1319			152				56
Approach Delay, s/veh		9.2			11.2			25.0				22.3
Approach LOS		A			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	39.0		14.8	7.8	38.9		14.8				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	9.4	* 60		35.1				
Max Q Clear Time (g_c+I1), s	3.9	11.3		3.1	3.0	16.7		7.6				
Green Ext Time (p_c), s	0.0	17.9		0.2	0.0	16.4		0.8				

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1746	252	18	2102	0	68
Future Vol, veh/h	1746	252	18	2102	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1838	265	19	2213	0	72

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	2103	0	1052
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	265	-	226
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	265	-	226
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	28.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	226	-	-	265	-
HCM Lane V/C Ratio	0.317	-	-	0.071	-
HCM Control Delay (s)	28.1	-	-	19.6	-
HCM Lane LOS	D	-	-	C	-
HCM 95th %tile Q(veh)	1.3	-	-	0.2	-

Intersection			
Intersection Delay, s/veh	26.8		
Intersection LOS	D		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1229	87
Demand Flow Rate, veh/h	0	1229	87
Vehicles Circulating, veh/h	14	73	1177
Vehicles Exiting, veh/h	1288	1191	196
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	28.0	9.2
Approach LOS	-	D	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.839	0.161
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1229	73	14
Cap Entry Lane, veh/h	1329	487	487
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1229	73	14
Cap Entry, veh/h	1329	487	487
V/C Ratio	0.925	0.150	0.029
Control Delay, s/veh	28.0	9.5	7.8
LOS	D	A	A
95th %tile Queue, veh	16	1	0



Timings  
9: Webster Av. & Ramona Exwy.

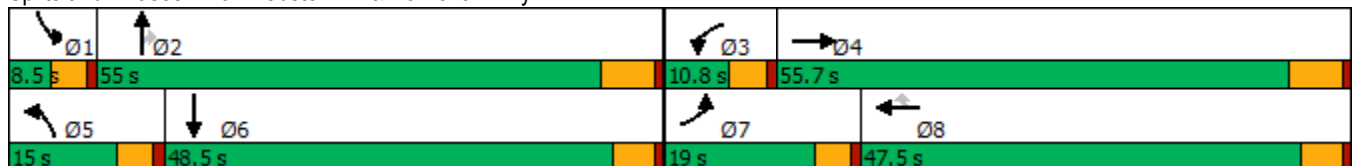


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕	
Traffic Volume (vph)	208	1526	39	1871	40	121	38	34	13	
Future Volume (vph)	208	1526	39	1871	40	121	38	34	13	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	19.0	55.7	10.8	47.5	47.5	15.0	55.0	55.0	48.5	8.5
Total Split (%)	14.6%	42.8%	8.3%	36.5%	36.5%	11.5%	42.3%	42.3%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	51.7	5.9	42.4	42.4	10.3	57.2	57.2	0.0	
Actuated g/C Ratio	0.11	0.40	0.05	0.33	0.33	0.08	0.44	0.44	0.00	
v/c Ratio	1.10	0.82	0.50	1.16	0.06	0.89	0.05	0.05	3.39	
Control Delay	145.4	39.6	81.0	120.2	0.2	109.0	21.1	0.1	1129.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	145.4	39.6	81.0	120.2	0.2	109.0	21.1	0.1	1129.6	
LOS	F	D	F	F	A	F	C	A	F	
Approach Delay		51.8		116.9			72.4		1129.6	
Approach LOS		D		F			E		F	

Intersection Summary



























Cycle Length: 130  
 Actuated Cycle Length: 129.9  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.39  
 Intersection Signal Delay: 132.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 82.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	208	1526	80	39	1871	40	121	38	34	48	13	128
Future Volume (veh/h)	208	1526	80	39	1871	40	121	38	34	48	13	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	219	1606	77	41	1969	39	127	40	20	51	14	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	253	2742	131	63	2261	702	158	461	391	0	21	154
Arrive On Green	0.14	0.54	0.54	0.04	0.44	0.44	0.09	0.24	0.24	0.00	0.11	0.11
Sat Flow, veh/h	1810	5071	243	1810	5187	1610	1810	1900	1608	0	198	1442
Grp Volume(v), veh/h	219	1095	588	41	1969	39	127	40	20	0	0	116
Grp Sat Flow(s),veh/h/ln	1810	1729	1856	1810	1729	1610	1810	1900	1608	0	0	1640
Q Serve(g_s), s	11.1	19.9	19.9	2.1	32.3	1.3	6.5	1.5	0.9	0.0	0.0	6.4
Cycle Q Clear(g_c), s	11.1	19.9	19.9	2.1	32.3	1.3	6.5	1.5	0.9	0.0	0.0	6.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	0.00		0.88
Lane Grp Cap(c), veh/h	253	1869	1003	63	2261	702	158	461	391	0	0	175
V/C Ratio(X)	0.87	0.59	0.59	0.65	0.87	0.06	0.80	0.09	0.05	0.00	0.00	0.66
Avail Cap(c_a), veh/h	278	1869	1003	120	2349	729	201	990	838	0	0	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	39.4	14.5	14.5	44.6	24.0	15.3	42.0	27.4	27.2	0.0	0.0	40.2
Incr Delay (d2), s/veh	20.8	0.5	0.9	4.1	3.8	0.0	13.2	0.1	0.1	0.0	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.7	7.3	1.0	12.3	0.4	3.4	0.7	0.3	0.0	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	14.9	15.4	48.7	27.8	15.3	55.1	27.5	27.2	0.0	0.0	44.5
LnGrp LOS	E	B	B	D	C	B	E	C	C	A	A	D
Approach Vol, veh/h		1902			2049			187				116
Approach Delay, s/veh		20.3			28.0			46.2				44.5
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	28.9	7.9	56.8	12.8	16.2	17.7	47.0				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	48.8	6.2	49.5	10.4	* 43	14.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	3.5	4.1	21.9	8.5	8.4	13.1	34.3				
Green Ext Time (p_c), s	0.0	0.3	0.0	12.7	0.0	0.7	0.0	6.5				

Intersection Summary												
HCM 6th Ctrl Delay											25.8	
HCM 6th LOS											C	

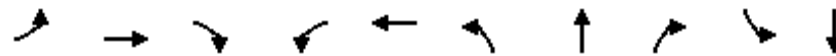
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

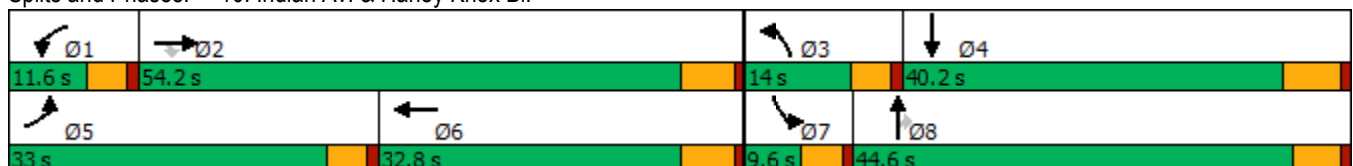


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	565	395	116	63	777	148	305	44	13	81
Future Volume (vph)	565	395	116	63	777	148	305	44	13	81
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.9	47.0	47.0	6.7	22.6	8.3	26.3	26.3	5.1	14.0
Actuated g/C Ratio	0.30	0.49	0.49	0.07	0.24	0.09	0.28	0.28	0.05	0.15
v/c Ratio	1.14	0.17	0.15	0.54	0.74	0.53	0.34	0.09	0.15	0.50
Control Delay	115.0	15.5	4.0	62.9	38.3	50.7	29.0	0.3	52.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.0	15.5	4.0	62.9	38.3	50.7	29.0	0.3	52.4	12.9
LOS	F	B	A	E	D	D	C	A	D	B
Approach Delay		66.6			40.0		33.0			14.5
Approach LOS		E			D		C			B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 46.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	565	395	116	63	777	46	148	305	44	13	81	232
Future Volume (veh/h)	565	395	116	63	777	46	148	305	44	13	81	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	621	434	113	69	854	36	163	335	40	14	89	225
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	558	2489	773	89	1126	47	235	810	361	30	314	280
Arrive On Green	0.31	0.48	0.48	0.05	0.22	0.22	0.07	0.22	0.22	0.02	0.17	0.17
Sat Flow, veh/h	1810	5187	1610	1810	5105	215	3510	3610	1610	1810	1805	1610
Grp Volume(v), veh/h	621	434	113	69	578	312	163	335	40	14	89	225
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1861	1755	1805	1610	1810	1805	1610
Q Serve(g_s), s	28.4	4.4	3.6	3.5	14.4	14.5	4.2	7.3	1.8	0.7	3.9	12.4
Cycle Q Clear(g_c), s	28.4	4.4	3.6	3.5	14.4	14.5	4.2	7.3	1.8	0.7	3.9	12.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	558	2489	773	89	763	411	235	810	361	30	314	280
V/C Ratio(X)	1.11	0.17	0.15	0.77	0.76	0.76	0.69	0.41	0.11	0.47	0.28	0.80
Avail Cap(c_a), veh/h	558	2727	847	138	1014	546	358	1537	686	98	667	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	13.6	13.4	43.3	33.6	33.6	42.0	30.5	28.4	44.9	33.1	36.5
Incr Delay (d2), s/veh	72.8	0.0	0.1	5.4	2.4	4.4	1.4	0.3	0.1	4.3	0.5	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.5	1.5	1.2	1.6	5.9	6.6	1.8	3.0	0.7	0.3	1.7	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.6	13.6	13.5	48.7	35.9	38.0	43.4	30.9	28.5	49.2	33.5	41.9
LnGrp LOS	F	B	B	D	D	D	D	C	C	D	C	D
Approach Vol, veh/h		1168			959			538			328	
Approach Delay, s/veh		62.0			37.5			34.5			40.0	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	50.0	10.8	22.2	33.0	26.1	6.1	26.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	5.5	6.4	6.2	14.4	30.4	16.5	2.7	9.3				
Green Ext Time (p_c), s	0.0	3.1	0.1	1.6	0.0	3.9	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

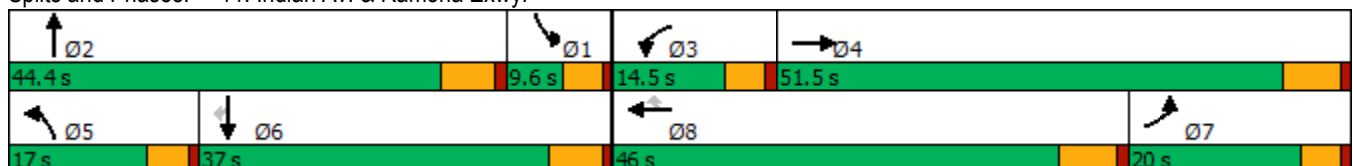


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	313	1190	68	1786	156	100	150	72	71	144
Future Volume (vph)	313	1190	68	1786	156	100	150	72	71	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	51.5	14.5	46.0	46.0	17.0	44.4	9.6	37.0	37.0
Total Split (%)	16.7%	42.9%	12.1%	38.3%	38.3%	14.2%	37.0%	8.0%	30.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.5	49.9	7.9	40.2	40.2	9.7	15.1	8.1	13.5	13.5
Actuated g/C Ratio	0.15	0.50	0.08	0.40	0.40	0.10	0.15	0.08	0.13	0.13
v/c Ratio	1.19	0.53	0.51	0.92	0.22	0.61	0.38	0.53	0.16	0.42
Control Delay	155.0	20.3	59.0	37.5	4.1	60.2	32.1	60.8	38.4	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	155.0	20.3	59.0	37.5	4.1	60.2	32.1	60.8	38.4	8.0
LOS	F	C	E	D	A	E	C	E	D	A
Approach Delay		46.9		35.6			41.5		28.9	
Approach LOS		D		D			D		C	

Intersection Summary























Cycle Length: 120  
 Actuated Cycle Length: 100.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.19  
 Intersection Signal Delay: 39.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 83.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	1190	78	68	1786	156	100	150	48	72	71	144
Future Volume (veh/h)	313	1190	78	68	1786	156	100	150	48	72	71	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	333	1266	71	72	1900	136	106	160	28	77	76	144
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	297	2724	153	93	2141	665	135	328	56	111	384	171
Arrive On Green	0.16	0.54	0.54	0.05	0.41	0.41	0.07	0.11	0.11	0.06	0.11	0.11
Sat Flow, veh/h	1810	5025	282	1810	5187	1610	1810	3081	529	1810	3610	1610
Grp Volume(v), veh/h	333	871	466	72	1900	136	106	92	96	77	76	144
Grp Sat Flow(s),veh/h/ln	1810	1729	1849	1810	1729	1610	1810	1805	1805	1810	1805	1610
Q Serve(g_s), s	15.4	14.5	14.5	3.7	31.9	5.1	5.4	4.5	4.7	3.9	1.8	5.6
Cycle Q Clear(g_c), s	15.4	14.5	14.5	3.7	31.9	5.1	5.4	4.5	4.7	3.9	1.8	5.6
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	297	1875	1002	93	2141	665	135	192	192	111	384	171
V/C Ratio(X)	1.12	0.46	0.46	0.77	0.89	0.20	0.79	0.48	0.50	0.69	0.20	0.84
Avail Cap(c_a), veh/h	297	1875	1002	191	2197	682	239	741	741	111	1199	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	13.2	13.2	44.0	25.6	17.7	42.8	39.5	39.6	43.2	38.3	18.7
Incr Delay (d2), s/veh	89.6	0.2	0.3	5.0	4.8	0.2	3.8	1.9	2.0	14.1	0.2	10.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	4.8	5.2	1.7	12.5	1.7	2.5	2.0	2.1	2.1	0.8	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.8	13.3	13.5	49.0	30.4	17.9	46.6	41.4	41.6	57.3	38.6	29.1
LnGrp LOS	F	B	B	D	C	B	D	D	D	E	D	C
Approach Vol, veh/h		1670			2108			294			297	
Approach Delay, s/veh		36.4			30.2			43.3			38.9	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	15.8	9.4	57.1	11.6	15.8	21.6	45.0				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	5.0	* 39	9.9	45.3	12.4	31.2	15.4	* 40				
Max Q Clear Time (g_c+I1), s	5.9	6.7	5.7	16.5	7.4	7.6	17.4	33.9				
Green Ext Time (p_c), s	0.0	1.0	0.0	9.4	0.0	0.8	0.0	4.9				

Intersection Summary

HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

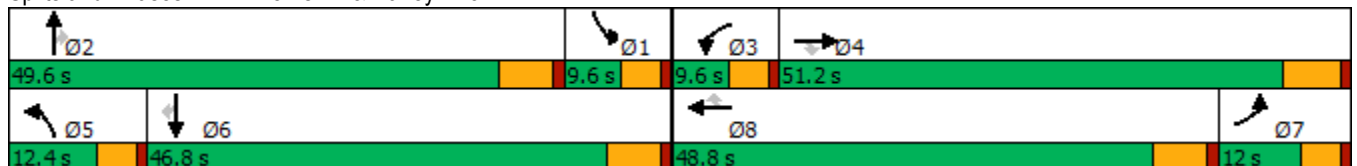
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	142	38	2	260	169	181	1276	10	56	670	406
Future Volume (vph)	273	142	38	2	260	169	181	1276	10	56	670	406
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	12.4	49.6	49.6	9.6	46.8	46.8
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	10.3%	41.3%	41.3%	8.0%	39.0%	39.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	26.1	26.1	5.3	15.0	15.0	8.0	30.1	30.1	5.3	24.8	24.8
Actuated g/C Ratio	0.10	0.34	0.34	0.07	0.19	0.19	0.10	0.39	0.39	0.07	0.32	0.32
v/c Ratio	1.54	0.12	0.06	0.01	0.27	0.38	0.52	0.66	0.01	0.24	0.42	0.52
Control Delay	298.4	20.2	0.2	45.0	27.3	6.9	43.4	22.8	0.0	43.8	22.0	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	298.4	20.2	0.2	45.0	27.3	6.9	43.4	22.8	0.0	43.8	22.0	5.1
LOS	F	C	A	D	C	A	D	C	A	D	C	A
Approach Delay		186.3			19.4			25.2			17.0	
Approach LOS		F			B			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.54  
 Intersection Signal Delay: 42.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 69.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	273	142	38	2	260	169	181	1276	10	56	670	406
Future Volume (veh/h)	273	142	38	2	260	169	181	1276	10	56	670	406
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	281	146	26	2	268	84	187	1315	9	58	691	314
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	929	414	10	725	225	276	1965	610	168	1892	587
Arrive On Green	0.10	0.26	0.26	0.00	0.14	0.14	0.08	0.38	0.38	0.05	0.36	0.36
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	281	146	26	2	268	84	187	1315	9	58	691	314
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.4	2.2	0.9	0.0	3.4	3.4	3.7	15.1	0.2	1.1	7.0	6.3
Cycle Q Clear(g_c), s	7.4	2.2	0.9	0.0	3.4	3.4	3.7	15.1	0.2	1.1	7.0	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	929	414	10	725	225	276	1965	610	168	1892	587
V/C Ratio(X)	1.50	0.16	0.06	0.21	0.37	0.37	0.68	0.67	0.01	0.35	0.37	0.53
Avail Cap(c_a), veh/h	187	2271	1013	245	3119	968	383	3177	986	245	2974	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	20.6	20.0	35.6	27.9	27.9	32.1	18.5	8.0	33.0	16.6	5.9
Incr Delay (d2), s/veh	251.2	0.1	0.1	4.0	0.3	1.0	1.1	0.4	0.0	0.5	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	0.8	0.3	0.0	1.3	1.3	1.5	5.2	0.1	0.5	2.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	283.3	20.6	20.1	39.5	28.2	28.9	33.1	18.9	8.1	33.4	16.8	6.6
LnGrp LOS	F	C	C	D	C	C	C	B	A	C	B	A
Approach Vol, veh/h		453			354			1511			1063	
Approach Delay, s/veh		183.5			28.5			20.6			14.7	
Approach LOS		F			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	32.9	4.8	24.6	10.2	31.9	13.6	15.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	* 44	5.0	45.0	7.8	41.0	7.4	* 43				
Max Q Clear Time (g_c+I1), s	3.1	17.1	2.0	4.2	5.7	9.0	9.4	5.4				
Green Ext Time (p_c), s	0.0	10.0	0.0	0.9	0.1	6.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
13: Perris Bl. & Ramona Exwy.

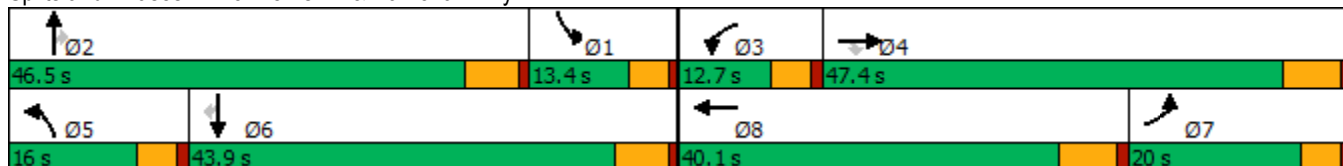
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	404	756	157	135	1536	346	824	74	139	412	148	
Future Volume (vph)	404	756	157	135	1536	346	824	74	139	412	148	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	47.4	47.4	12.7	40.1	16.0	46.5	46.5	13.4	43.9	43.9	
Total Split (%)	16.7%	39.5%	39.5%	10.6%	33.4%	13.3%	38.8%	38.8%	11.2%	36.6%	36.6%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	15.2	41.7	41.7	7.6	34.1	11.5	32.9	32.9	8.0	29.5	29.5	
Actuated g/C Ratio	0.14	0.37	0.37	0.07	0.31	0.10	0.30	0.30	0.07	0.26	0.26	
v/c Ratio	0.88	0.41	0.23	0.59	1.17	1.00	0.81	0.13	0.58	0.45	0.28	
Control Delay	68.8	27.5	5.0	62.5	119.7	99.3	42.8	0.4	60.9	35.3	4.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	68.8	27.5	5.0	62.5	119.7	99.3	42.8	0.4	60.9	35.3	4.9	
LOS	E	C	A	E	F	F	D	A	E	D	A	
Approach Delay		37.5			115.7		56.0			34.0		
Approach LOS		D			F		E			C		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 111.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 70.2	Intersection LOS: E
Intersection Capacity Utilization 91.3%	ICU Level of Service F
Analysis Period (min) 15	


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	404	756	157	135	1536	227	346	824	74	139	412	148
Future Volume (veh/h)	404	756	157	135	1536	227	346	824	74	139	412	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	421	788	138	141	1600	209	360	858	47	145	429	124
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	478	2067	642	200	1417	185	360	1027	457	205	907	404
Arrive On Green	0.14	0.40	0.40	0.06	0.31	0.31	0.10	0.28	0.28	0.06	0.25	0.25
Sat Flow, veh/h	3510	5187	1610	3510	4643	605	3510	3610	1605	3510	3610	1608
Grp Volume(v), veh/h	421	788	138	141	1191	618	360	858	47	145	429	124
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1729	1790	1755	1805	1605	1755	1805	1608
Q Serve(g_s), s	13.1	12.0	6.3	4.4	33.9	33.9	11.4	24.8	1.9	4.5	11.2	4.7
Cycle Q Clear(g_c), s	13.1	12.0	6.3	4.4	33.9	33.9	11.4	24.8	1.9	4.5	11.2	4.7
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	478	2067	642	200	1055	546	360	1027	457	205	907	404
V/C Ratio(X)	0.88	0.38	0.22	0.70	1.13	1.13	1.00	0.84	0.10	0.71	0.47	0.31
Avail Cap(c_a), veh/h	486	2067	642	256	1055	546	360	1322	588	278	1238	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	23.7	22.0	51.5	38.6	38.6	49.9	37.3	18.3	51.4	35.4	15.3
Incr Delay (d2), s/veh	16.2	0.1	0.2	3.6	70.2	80.4	47.3	3.8	0.1	2.5	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	4.6	2.3	2.0	23.7	26.1	7.2	11.0	0.9	2.0	4.8	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	23.8	22.2	55.1	108.8	119.0	97.2	41.1	18.4	53.9	35.7	15.8
LnGrp LOS	E	C	C	E	F	F	F	D	B	D	D	B
Approach Vol, veh/h		1347			1950			1265			698	
Approach Delay, s/veh		36.0			108.2			56.2			36.0	
Approach LOS		D			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	37.4	10.9	50.5	16.0	33.7	21.3	40.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	8.8	* 41	8.1	41.2	11.4	38.1	15.4	* 34				
Max Q Clear Time (g_c+I1), s	6.5	26.8	6.4	14.0	13.4	13.2	15.1	35.9				
Green Ext Time (p_c), s	0.0	4.7	0.0	5.7	0.0	3.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

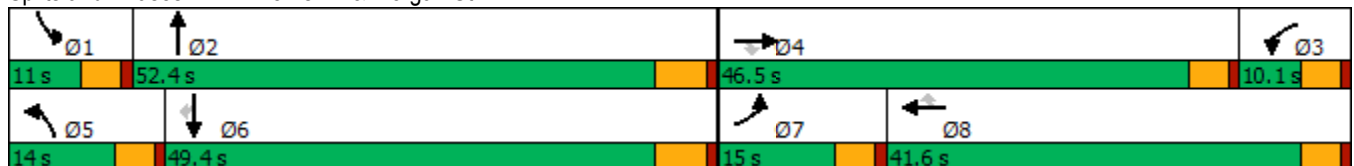
Timings  
14: Perris Bl. & Morgan St.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	38	16	21	17	27	6	36	1139	15	615	105
Future Volume (vph)	38	16	21	17	27	6	36	1139	15	615	105
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	15.0	46.5	46.5	10.1	41.6	41.6	14.0	52.4	11.0	49.4	49.4
Total Split (%)	12.5%	38.8%	38.8%	8.4%	34.7%	34.7%	11.7%	43.7%	9.2%	41.2%	41.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.4	22.5	22.5	9.4	19.0	19.0	9.2	38.7	8.5	34.4	34.4
Actuated g/C Ratio	0.16	0.39	0.39	0.16	0.33	0.33	0.16	0.68	0.15	0.60	0.60
v/c Ratio	0.15	0.01	0.03	0.06	0.05	0.01	0.14	0.38	0.06	0.32	0.12
Control Delay	37.5	23.4	0.1	36.6	25.9	0.0	38.0	13.0	40.9	17.2	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	23.4	0.1	36.6	25.9	0.0	38.0	13.0	40.9	17.2	3.4
LOS	D	C	A	D	C	A	D	B	D	B	A
Approach Delay		24.0			26.3			13.8		15.8	
Approach LOS		C			C			B		B	

Intersection Summary




























Cycle Length: 120  
 Actuated Cycle Length: 57.2  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.38  
 Intersection Signal Delay: 15.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 47.4%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	38	16	21	17	27	6	36	1139	19	15	615	105
Future Volume (veh/h)	38	16	21	17	27	6	36	1139	19	15	615	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	18	8	19	31	5	41	1294	20	17	699	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	81	544	243	49	253	214	78	2219	34	38	1443	630
Arrive On Green	0.04	0.15	0.15	0.03	0.13	0.13	0.04	0.42	0.42	0.02	0.40	0.40
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5262	81	1810	3610	1576
Grp Volume(v), veh/h	43	18	8	19	31	5	41	850	464	17	699	108
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1576
Q Serve(g_s), s	1.2	0.2	0.2	0.5	0.7	0.1	1.1	9.7	9.7	0.5	7.4	2.3
Cycle Q Clear(g_c), s	1.2	0.2	0.2	0.5	0.7	0.1	1.1	9.7	9.7	0.5	7.4	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	81	544	243	49	253	214	78	1459	795	38	1443	630
V/C Ratio(X)	0.53	0.03	0.03	0.39	0.12	0.02	0.53	0.58	0.58	0.45	0.48	0.17
Avail Cap(c_a), veh/h	364	2930	1307	193	1362	1154	329	3121	1702	224	3048	1331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	18.7	10.2	24.7	19.7	19.5	24.2	11.4	11.4	25.0	11.5	10.0
Incr Delay (d2), s/veh	2.0	0.0	0.1	1.9	0.2	0.0	2.0	0.4	0.7	3.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	0.2	0.3	0.1	0.5	2.7	3.0	0.2	2.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	18.7	10.3	26.6	19.9	19.5	26.2	11.8	12.1	28.0	11.8	10.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		69			55			1355			824	
Approach Delay, s/veh		22.4			22.2			12.4			11.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	27.6	6.0	12.4	6.8	26.4	6.9	11.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	46.6	5.5	41.9	9.4	43.6	10.4	37.0				
Max Q Clear Time (g_c+I1), s	2.5	11.7	2.5	2.2	3.1	9.4	3.2	2.7				
Green Ext Time (p_c), s	0.0	10.0	0.0	0.1	0.0	5.2	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				12.7								
HCM 6th LOS				B								

Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

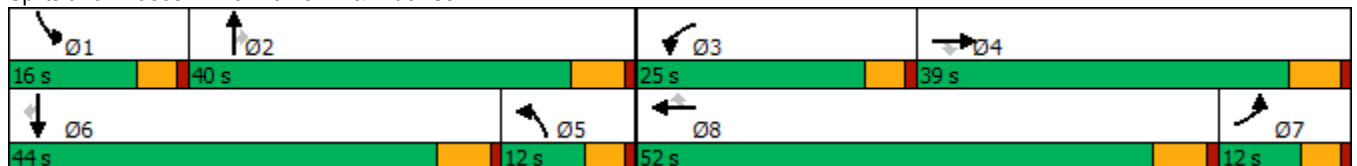
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	159	19	181	323	341	49	874	114	140	450	47
Future Volume (vph)	41	159	19	181	323	341	49	874	114	140	450	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	12.0	39.0	39.0	25.0	52.0	52.0	12.0	40.0	40.0	16.0	44.0	44.0
Total Split (%)	10.0%	32.5%	32.5%	20.8%	43.3%	43.3%	10.0%	33.3%	33.3%	13.3%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	13.7	13.7	12.9	23.1	23.1	13.2	22.0	22.0	10.8	24.5	24.5
Actuated g/C Ratio	0.10	0.17	0.17	0.16	0.28	0.28	0.16	0.27	0.27	0.13	0.30	0.30
v/c Ratio	0.22	0.26	0.05	0.64	0.32	0.49	0.17	0.63	0.21	0.59	0.29	0.08
Control Delay	40.7	32.0	0.2	45.7	26.9	6.1	34.5	29.2	2.5	49.1	27.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	32.0	0.2	45.7	26.9	6.1	34.5	29.2	2.5	49.1	27.1	0.3
LOS	D	C	A	D	C	A	C	C	A	D	C	A
Approach Delay		30.9			22.5			26.5			30.0	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 81.3  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 26.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 60.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	159	19	181	323	341	49	874	114	140	450	47
Future Volume (veh/h)	41	159	19	181	323	341	49	874	114	140	450	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	161	7	183	326	209	49	883	83	141	455	32
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	194	578	258	231	581	259	356	1451	444	180	849	264
Arrive On Green	0.11	0.16	0.16	0.13	0.16	0.16	0.20	0.28	0.28	0.10	0.16	0.16
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	5187	1588	1810	5187	1610
Grp Volume(v), veh/h	41	161	7	183	326	209	49	883	83	141	455	32
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1729	1588	1810	1729	1610
Q Serve(g_s), s	1.3	2.4	0.1	6.1	5.2	5.3	1.4	9.2	2.5	4.8	5.0	1.1
Cycle Q Clear(g_c), s	1.3	2.4	0.1	6.1	5.2	5.3	1.4	9.2	2.5	4.8	5.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	578	258	231	581	259	356	1451	444	180	849	264
V/C Ratio(X)	0.21	0.28	0.03	0.79	0.56	0.81	0.14	0.61	0.19	0.78	0.54	0.12
Avail Cap(c_a), veh/h	214	1919	856	591	2670	1191	356	2840	869	330	3172	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	23.1	6.6	26.5	24.2	11.8	20.7	19.5	17.1	27.5	23.9	22.3
Incr Delay (d2), s/veh	0.2	0.3	0.0	2.3	0.8	5.8	0.1	0.4	0.2	2.8	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.1	2.5	2.0	2.9	0.5	3.2	0.8	2.0	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	23.3	6.6	28.8	25.0	17.6	20.8	19.9	17.3	30.2	24.5	22.5
LnGrp LOS	C	C	A	C	C	B	C	B	B	C	C	C
Approach Vol, veh/h		209			718			1015			628	
Approach Delay, s/veh		23.2			23.8			19.8			25.7	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	23.3	12.6	15.8	18.1	16.0	12.5	15.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	11.4	34.2	20.4	33.2	7.4	* 38	7.4	* 46				
Max Q Clear Time (g_c+I1), s	6.8	11.2	8.1	4.4	3.4	7.0	3.3	7.3				
Green Ext Time (p_c), s	0.1	6.1	0.2	0.9	0.0	3.0	0.0	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.6									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	44	239	407	6	2		
Future Volume (vph)	44	239	407	6	2		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	9.6	31.8	36.0	78.6	42.6	9.6	31.8
Total Split (%)	8.0%	26.5%	30.0%	65.5%	35.5%	8%	27%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	9.3	14.3	26.5	29.7	14.5		
Actuated g/C Ratio	0.16	0.25	0.46	0.52	0.25		
v/c Ratio	0.17	0.23	0.57	0.00	0.01		
Control Delay	31.8	0.4	20.8	7.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	31.8	0.4	20.8	7.0	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.6			
Approach LOS				C			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 57.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 46.9%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	0	239	0	0	0	407	6	0	0	2	11
Future Volume (veh/h)	44	0	239	0	0	0	407	6	0	0	2	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	51	0	261	0	0	0	473	7	0	0	2	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	98	460	390	5	139	0	559	1727	0	0	98	87
Arrive On Green	0.05	0.00	0.24	0.00	0.00	0.00	0.31	0.48	0.00	0.00	0.05	0.05
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	51	0	261	0	0	0	473	7	0	0	2	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	1.1	0.0	5.9	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	1.1	0.0	5.9	0.0	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	98	460	390	5	139	0	559	1727	0	0	98	87
V/C Ratio(X)	0.52	0.00	0.67	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.02	0.15
Avail Cap(c_a), veh/h	226	1234	1046	226	1291	0	1419	6600	0	0	1677	1496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	13.7	0.0	0.0	0.0	12.9	5.5	0.0	0.0	17.9	18.1
Incr Delay (d2), s/veh	1.6	0.0	2.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	0.0	15.7	0.0	0.0	0.0	14.3	5.5	0.0	0.0	18.0	18.8
LnGrp LOS	C	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		312			0			480			15	
Approach Delay, s/veh		16.4			0.0			14.2			18.7	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		24.5	0.0	15.5	17.0	7.6	6.8	8.7				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		73.2	5.0	26.0	31.4	37.2	5.0	* 27				
Max Q Clear Time (g_c+I1), s		2.0	0.0	7.9	11.8	2.3	3.1	0.0				
Green Ext Time (p_c), s		0.0	0.0	0.8	0.7	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	38	106	366	69	78
Future Vol, veh/h	21	38	106	366	69	78
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	44	122	421	79	90
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	8.9	8.7	8.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	23%
Vol Right, %	0%	0%	0%	0%	100%	0%	77%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	106	183	183	21	38	46	101
LT Vol	106	0	0	21	0	0	0
Through Vol	0	183	183	0	0	46	23
RT Vol	0	0	0	0	38	0	78
Lane Flow Rate	122	210	210	24	44	53	116
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.188	0.296	0.196	0.044	0.065	0.082	0.163
Departure Headway (Hd)	5.561	5.059	3.354	6.568	5.365	5.599	5.056
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	645	709	1064	543	664	638	707
Service Time	3.298	2.797	1.091	4.333	3.129	3.35	2.807
HCM Lane V/C Ratio	0.189	0.296	0.197	0.044	0.066	0.083	0.164
HCM Control Delay	9.6	9.9	6.9	9.6	8.5	8.9	8.8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.7	1.2	0.7	0.1	0.2	0.3	0.6

Timings  
18: Redlands Av. & Ramona Exwy.

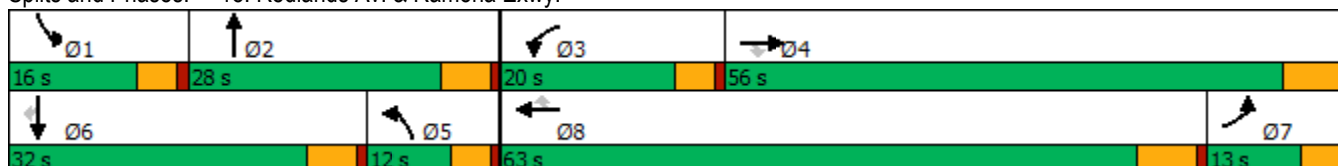


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↗	↘	↑	↗
Traffic Volume (vph)	77	893	54	104	1841	396	58	12	71	20	50
Future Volume (vph)	77	893	54	104	1841	396	58	12	71	20	50
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	13.0	56.0	56.0	20.0	63.0	63.0	12.0	28.0	16.0	32.0	32.0
Total Split (%)	10.8%	46.7%	46.7%	16.7%	52.5%	52.5%	10.0%	23.3%	13.3%	26.7%	26.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	48.1	48.1	10.5	50.6	50.6	8.5	12.2	8.5	12.2	12.2
Actuated g/C Ratio	0.08	0.51	0.51	0.11	0.53	0.53	0.09	0.13	0.09	0.13	0.13
v/c Ratio	0.53	0.35	0.06	0.54	0.69	0.40	0.37	0.40	0.46	0.09	0.14
Control Delay	61.8	16.4	0.1	55.7	19.4	3.5	53.2	15.5	56.2	43.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	16.4	0.1	55.7	19.4	3.5	53.2	15.5	56.2	43.6	0.8
LOS	E	B	A	E	B	A	D	B	E	D	A
Approach Delay		18.9			18.3			27.8		34.8	
Approach LOS		B			B			C		C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.7  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 19.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.9%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	893	54	104	1841	396	58	12	107	71	20	50
Future Volume (veh/h)	77	893	54	104	1841	396	58	12	107	71	20	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	80	930	53	108	1918	346	60	12	47	74	21	49
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	103	2685	834	138	2690	835	80	39	151	96	217	184
Arrive On Green	0.06	0.52	0.52	0.08	0.52	0.52	0.04	0.11	0.11	0.05	0.11	0.11
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	338	1324	1810	1900	1610
Grp Volume(v), veh/h	80	930	53	108	1918	346	60	0	59	74	21	49
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	0	1662	1810	1900	1610
Q Serve(g_s), s	3.8	9.2	0.9	5.1	24.6	7.3	2.9	0.0	2.8	3.5	0.9	2.4
Cycle Q Clear(g_c), s	3.8	9.2	0.9	5.1	24.6	7.3	2.9	0.0	2.8	3.5	0.9	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.80	1.00		1.00
Lane Grp Cap(c), veh/h	103	2685	834	138	2690	835	80	0	190	96	217	184
V/C Ratio(X)	0.77	0.35	0.06	0.78	0.71	0.41	0.75	0.00	0.31	0.77	0.10	0.27
Avail Cap(c_a), veh/h	175	2966	921	320	3383	1050	154	0	431	237	580	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	12.3	4.2	39.5	16.0	5.1	41.2	0.0	35.4	40.7	34.6	35.3
Incr Delay (d2), s/veh	4.6	0.1	0.0	3.6	0.5	0.3	5.3	0.0	0.9	4.8	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.0	0.4	2.3	8.1	3.1	1.3	0.0	1.2	1.6	0.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	12.4	4.2	43.1	16.5	5.5	46.5	0.0	36.4	45.5	34.8	36.0
LnGrp LOS	D	B	A	D	B	A	D	A	D	D	C	D
Approach Vol, veh/h		1063			2372			119			144	
Approach Delay, s/veh		14.5			16.1			41.5			40.7	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	15.3	11.2	51.3	9.2	15.3	11.2	51.4				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	5.4	* 5.4	6.2	* 6.2				
Max Green Setting (Gmax), s	11.4	22.6	15.4	49.8	7.4	* 27	8.4	* 57				
Max Q Clear Time (g_c+I1), s	5.5	4.8	7.1	11.2	4.9	4.4	5.8	26.6				
Green Ext Time (p_c), s	0.0	0.2	0.1	6.9	0.0	0.2	0.0	18.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.4								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕			↖	↗
Traffic Vol, veh/h	34	0	10	0	0	0	3	41	0	0	71	49
Future Vol, veh/h	34	0	10	0	0	0	3	41	0	0	71	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	0	11	0	0	0	3	45	0	0	77	53

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	128	128	77	160	181	45	130	0	0	45	0	0
Stage 1	77	77	-	51	51	-	-	-	-	-	-	-
Stage 2	51	51	-	109	130	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	850	766	990	810	717	1031	1468	-	-	1576	-	-
Stage 1	937	835	-	967	856	-	-	-	-	-	-	-
Stage 2	967	856	-	901	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	848	764	990	800	716	1031	1468	-	-	1576	-	-
Mov Cap-2 Maneuver	848	764	-	800	716	-	-	-	-	-	-	-
Stage 1	935	835	-	965	854	-	-	-	-	-	-	-
Stage 2	965	854	-	891	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	0	0.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1468	-	-	848	990	-	1576	-	-
HCM Lane V/C Ratio	0.002	-	-	0.044	0.011	-	-	-	-
HCM Control Delay (s)	7.5	0	-	9.4	8.7	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	-	0	-	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	10	0	0	0	0	38	0	0	62	19
Future Vol, veh/h	6	0	10	0	0	0	0	38	0	0	62	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	7	0	11	0	0	0	0	41	0	0	67	21

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	119	119	78	124	129	41	88	0	0	41	0	0
Stage 1	78	78	-	41	41	-	-	-	-	-	-	-
Stage 2	41	41	-	83	88	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	861	775	988	855	765	1036	1520	-	-	1581	-	-
Stage 1	936	834	-	979	865	-	-	-	-	-	-	-
Stage 2	979	865	-	930	826	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	861	775	988	846	765	1036	1520	-	-	1581	-	-
Mov Cap-2 Maneuver	861	775	-	846	765	-	-	-	-	-	-	-
Stage 1	936	834	-	979	865	-	-	-	-	-	-	-
Stage 2	979	865	-	920	826	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	0	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1520	-	-	936	-	1581	-
HCM Lane V/C Ratio	-	-	-	0.019	-	-	-
HCM Control Delay (s)	0	-	-	8.9	0	0	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑↑	
Traffic Vol, veh/h	2	0	10	36	66	6
Future Vol, veh/h	2	0	10	36	66	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	11	39	72	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	137	40	79	0	0
Stage 1	76	-	-	-	-
Stage 2	61	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	855	1029	1532	-	-
Stage 1	944	-	-	-	-
Stage 2	967	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	849	1029	1532	-	-
Mov Cap-2 Maneuver	849	-	-	-	-
Stage 1	937	-	-	-	-
Stage 2	967	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1532	-	849	-	-
HCM Lane V/C Ratio	0.007	-	0.003	-	-
HCM Control Delay (s)	7.4	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↗↘	
Traffic Vol, veh/h	0	1	0	45	62	4
Future Vol, veh/h	0	1	0	45	62	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	0	49	67	4

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	36	-	0	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	1035	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	1035	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 1035	-	-
HCM Lane V/C Ratio	- 0.001	-	-
HCM Control Delay (s)	- 8.5	-	-
HCM Lane LOS	- A	-	-
HCM 95th %tile Q(veh)	- 0	-	-

Intersection												
Int Delay, s/veh	10.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑	↗	↙	↑↑		↙	↗		↙	↑↗	
Traffic Vol, veh/h	25	444	11	171	790	4	49	16	204	15	0	48
Future Vol, veh/h	25	444	11	171	790	4	49	16	204	15	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	120	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	27	483	12	186	859	4	53	17	222	16	0	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	863	0	0	495	0	0	1339	1772	483	1896	1782	432
Stage 1	-	-	-	-	-	-	537	537	-	1233	1233	-
Stage 2	-	-	-	-	-	-	802	1235	-	663	549	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	788	-	-	1079	-	-	122	84	588	48	83	577
Stage 1	-	-	-	-	-	-	532	526	-	191	251	-
Stage 2	-	-	-	-	-	-	348	251	-	454	520	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	788	-	-	1079	-	-	94	67	588	20	66	577
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	67	-	20	66	-
Stage 1	-	-	-	-	-	-	514	508	-	185	208	-
Stage 2	-	-	-	-	-	-	262	208	-	264	502	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			1.6			39.9			105.2		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	94	376	788	-	-	1079	-	-	20	-	577
HCM Lane V/C Ratio	0.567	0.636	0.034	-	-	0.172	-	-	0.815	-	0.09
HCM Control Delay (s)	84.6	29.9	9.7	-	-	9	-	-	403.7	0	11.9
HCM Lane LOS	F	D	A	-	-	A	-	-	F	A	B
HCM 95th %tile Q(veh)	2.6	4.2	0.1	-	-	0.6	-	-	2.3	-	0.3



Intersection						
Int Delay, s/veh	5.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑	↘	
Traffic Vol, veh/h	632	19	220	914	33	181
Future Vol, veh/h	632	19	220	914	33	181
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	185	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	744	22	259	1075	39	213

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	766	0	1800
Stage 1	-	-	-	-	744
Stage 2	-	-	-	-	1056
Critical Hdwy	-	-	4.1	-	6.6
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	856	-	80
Stage 1	-	-	-	-	473
Stage 2	-	-	-	-	300
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	856	-	56
Mov Cap-2 Maneuver	-	-	-	-	153
Stage 1	-	-	-	-	473
Stage 2	-	-	-	-	209

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	43.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	330	-	-	856	-
HCM Lane V/C Ratio	0.763	-	-	0.302	-
HCM Control Delay (s)	43.8	-	-	11	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	6	-	-	1.3	-

Timings

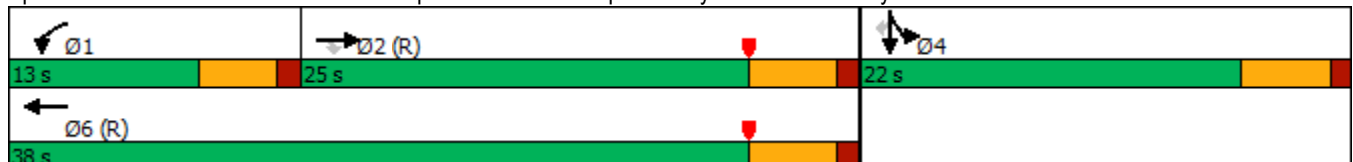


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	557	71	491	225	7	245
Future Volume (vph)	557	71	491	225	7	245
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	8.5	33.0	17.0	17.0
Actuated g/C Ratio	0.33	0.33	0.14	0.55	0.28	0.28
v/c Ratio	0.51	0.13	2.14	0.13	1.32	0.42
Control Delay	18.0	2.1	541.8	7.7	181.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.1	541.8	7.7	181.1	4.9
LOS	B	A	F	A	F	A
Approach Delay	16.2			374.1	130.6	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.14  
 Intersection Signal Delay: 177.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 142.3%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

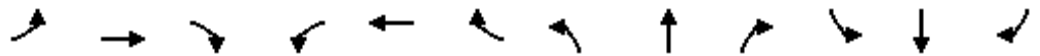


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox Blvd.

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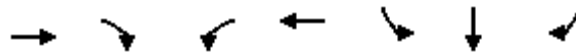


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	557	71	491	225	0	0	0	0	602	7	245
Future Volume (veh/h)	0	557	71	491	225	0	0	0	0	602	7	245
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	619	76	546	250	0				669	8	194
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1203	537	256	1986	0				507	6	456
Arrive On Green	0.00	0.33	0.33	0.24	0.92	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1789	21	1610
Grp Volume(v), veh/h	0	619	76	546	250	0				677	0	194
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1811	0	1610
Q Serve(g_s), s	0.0	8.3	2.0	8.5	0.4	0.0				17.0	0.0	5.9
Cycle Q Clear(g_c), s	0.0	8.3	2.0	8.5	0.4	0.0				17.0	0.0	5.9
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1203	537	256	1986	0				513	0	456
V/C Ratio(X)	0.00	0.51	0.14	2.13	0.13	0.00				1.32	0.00	0.43
Avail Cap(c_a), veh/h	0	1203	537	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.1	14.0	22.9	1.1	0.0				21.5	0.0	17.5
Incr Delay (d2), s/veh	0.0	1.6	0.6	518.8	0.1	0.0				157.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	0.7	39.7	0.1	0.0				28.4	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.7	14.5	541.7	1.2	0.0				178.6	0.0	18.1
LnGrp LOS	A	B	B	F	A	A				F	A	B
Approach Vol, veh/h		695			796						871	
Approach Delay, s/veh		17.3			372.0						142.9	
Approach LOS		B			F						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.0		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	10.5	10.3		19.0		2.4						
Green Ext Time (p_c), s	0.0	1.9		0.0		0.9						

Intersection Summary

HCM 6th Ctrl Delay	183.1
HCM 6th LOS	F

Timings  
2: I-215 SB Ramps & Ramona Exwy.

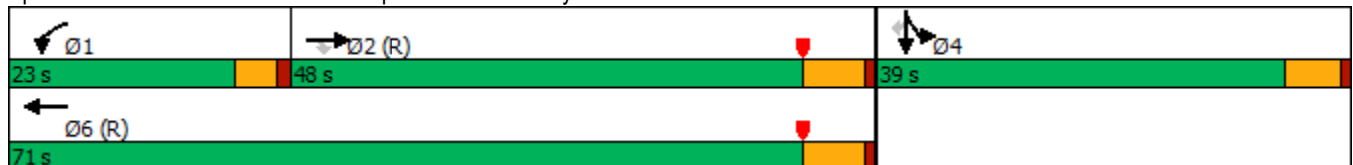


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑	↓
Traffic Volume (vph)	1617	575	508	1151	1003	3	410
Future Volume (vph)	1617	575	508	1151	1003	3	410
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	48.0	48.0	23.0	71.0	39.0	39.0	39.0
Total Split (%)	43.6%	43.6%	20.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	18.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.38	0.38	0.17	0.59	0.30	0.30	0.30
v/c Ratio	1.20	0.68	1.71	0.55	0.98	0.98	0.77
Control Delay	128.1	13.3	352.0	3.3	73.4	74.7	38.8
Queue Delay	0.1	0.0	0.0	0.4	66.1	65.3	0.0
Total Delay	128.2	13.3	352.0	3.7	139.5	140.0	38.8
LOS	F	B	F	A	F	F	D
Approach Delay	98.1			110.3		110.5	
Approach LOS	F			F		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 140  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.71  
 Intersection Signal Delay: 105.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 168.9%  
 ICU Level of Service H  
 Analysis Period (min) 15













Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



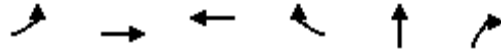
HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘	↙	↗
Traffic Volume (veh/h)	0	1617	575	508	1151	0	0	0	0	1003	3	410
Future Volume (veh/h)	0	1617	575	508	1151	0	0	0	0	1003	3	410
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1650	522	518	1174	0				1025	0	339
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1378	615	304	2133	0				1102	0	490
Arrive On Green	0.00	0.38	0.38	0.11	0.40	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	1650	522	518	1174	0				1025	0	339
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	42.0	32.6	18.5	27.6	0.0				30.2	0.0	20.4
Cycle Q Clear(g_c), s	0.0	42.0	32.6	18.5	27.6	0.0				30.2	0.0	20.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1378	615	304	2133	0				1102	0	490
V/C Ratio(X)	0.00	1.20	0.85	1.70	0.55	0.00				0.93	0.00	0.69
Avail Cap(c_a), veh/h	0	1378	615	304	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.50	0.50	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	34.0	31.1	48.8	21.9	0.0				37.1	0.0	33.7
Incr Delay (d2), s/veh	0.0	96.0	13.7	323.0	0.5	0.0				14.8	0.0	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	35.2	14.0	35.7	12.1	0.0				14.9	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	130.0	44.8	371.8	22.5	0.0				51.9	0.0	41.5
LnGrp LOS	A	F	D	F	C	A				D	A	D
Approach Vol, veh/h		2172			1692						1364	
Approach Delay, s/veh		109.5			129.4						49.3	
Approach LOS		F			F						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.0	48.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	18.5	42.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	20.5	44.0		32.2		29.6						
Green Ext Time (p_c), s	0.0	0.0		0.8		5.5						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			100.2									
HCM 6th LOS			F									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings

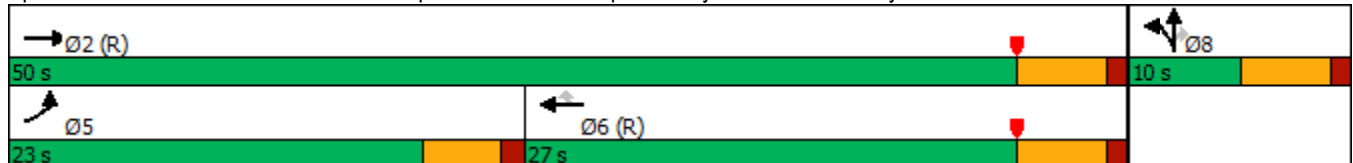


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	400	758	669	1058	4	320
Future Volume (vph)	400	758	669	1058	4	320
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	17.6	45.0	22.9	22.9	5.0	5.0
Actuated g/C Ratio	0.29	0.75	0.38	0.38	0.08	0.08
v/c Ratio	0.89	0.33	0.57	1.52	0.40	1.09
Control Delay	25.2	0.1	17.0	257.9	34.3	89.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	25.2	0.3	17.0	257.9	34.3	89.7
LOS	C	A	B	F	C	F
Approach Delay		8.9	164.6		82.1	
Approach LOS		A	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.52  
 Intersection Signal Delay: 99.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 142.3%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↗	↗			
Traffic Volume (veh/h)	400	758	0	0	669	1058	47	4	320	0	0	0
Future Volume (veh/h)	400	758	0	0	669	1058	47	4	320	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	471	892	0	0	787	1194	55	5	182			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	524	2708	0	0	1392	621	139	13	134			
Arrive On Green	0.19	0.50	0.00	0.00	0.39	0.39	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1665	151	1610			
Grp Volume(v), veh/h	471	892	0	0	787	1194	60	0	182			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1817	0	1610			
Q Serve(g_s), s	15.2	8.8	0.0	0.0	10.3	23.1	1.9	0.0	5.0			
Cycle Q Clear(g_c), s	15.2	8.8	0.0	0.0	10.3	23.1	1.9	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	524	2708	0	0	1392	621	151	0	134			
V/C Ratio(X)	0.90	0.33	0.00	0.00	0.57	1.92	0.40	0.00	1.36			
Avail Cap(c_a), veh/h	558	2708	0	0	1392	621	151	0	134			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.00	0.00	0.62	0.62	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.3	5.9	0.0	0.0	14.5	18.4	26.1	0.0	27.5			
Incr Delay (d2), s/veh	14.1	0.3	0.0	0.0	1.0	419.4	7.6	0.0	201.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.3	1.2	0.0	0.0	3.6	79.1	1.0	0.0	9.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	6.2	0.0	0.0	15.5	437.8	33.7	0.0	228.6			
LnGrp LOS	D	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1363			1981			242				
Approach Delay, s/veh		17.0			270.0			180.3				
Approach LOS		B			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			21.9	28.1		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		10.8			17.2	25.1		7.0				
Green Ext Time (p_c), s		4.0			0.1	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					167.8							
HCM 6th LOS					F							

Timings  
4: I-215 NB Ramps & Ramona Exwy.

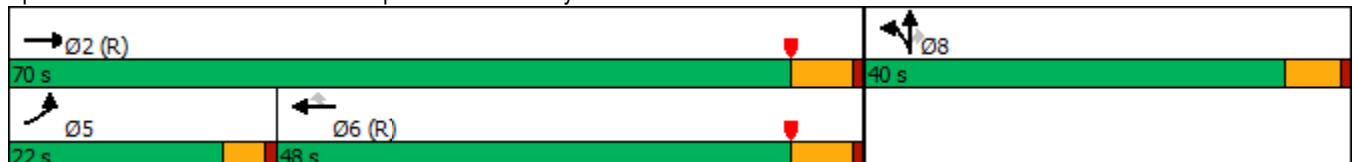


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗	↗
Traffic Volume (vph)	682	1938	1161	936	497	8	477
Future Volume (vph)	682	1938	1161	936	497	8	477
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	22.0	70.0	48.0	48.0	40.0	40.0	40.0
Total Split (%)	20.0%	63.6%	43.6%	43.6%	36.4%	36.4%	36.4%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	19.4	65.9	42.0	42.0	32.6	32.6	32.6
Actuated g/C Ratio	0.18	0.60	0.38	0.38	0.30	0.30	0.30
v/c Ratio	2.19	0.91	0.86	0.92	0.51	0.50	0.92
Control Delay	557.9	32.3	39.0	23.4	35.6	35.4	55.3
Queue Delay	0.0	47.0	0.0	0.0	0.0	0.0	0.0
Total Delay	557.9	79.3	39.0	23.4	35.6	35.4	55.3
LOS	F	E	D	C	D	D	E
Approach Delay		203.9	32.1			45.1	
Approach LOS		F	C			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.19  
 Intersection Signal Delay: 113.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 168.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.
























HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	682	1938	0	0	1161	936	497	8	477	0	0	0
Future Volume (veh/h)	682	1938	0	0	1161	936	497	8	477	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	696	1978	0	0	1185	731	513	0	384			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	288	2270	0	0	1548	689	965	0	429			
Arrive On Green	0.32	1.00	0.00	0.00	0.43	0.43	0.27	0.00	0.27			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	696	1978	0	0	1185	731	513	0	384			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	30.7	47.2	13.3	0.0	25.3			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	30.7	47.2	13.3	0.0	25.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	288	2270	0	0	1548	689	965	0	429			
V/C Ratio(X)	2.42	0.87	0.00	0.00	0.77	1.06	0.53	0.00	0.89			
Avail Cap(c_a), veh/h	288	2270	0	0	1548	689	1135	0	505			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.5	0.0	0.0	0.0	26.7	31.4	34.5	0.0	38.8			
Incr Delay (d2), s/veh	638.9	0.5	0.0	0.0	3.7	51.6	0.5	0.0	16.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	57.0	0.2	0.0	0.0	12.9	26.4	5.7	0.0	11.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	676.4	0.5	0.0	0.0	30.4	83.0	34.9	0.0	55.3			
LnGrp LOS	F	A	A	A	C	F	C	A	E			
Approach Vol, veh/h		2674			1916			897				
Approach Delay, s/veh		176.4			50.5			43.6				
Approach LOS		F			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		75.2			22.0	53.2		34.8				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		64.0			17.5	42.0		34.5				
Max Q Clear Time (g_c+I1), s		2.0			19.5	49.2		27.3				
Green Ext Time (p_c), s		14.6			0.0	0.0		2.1				

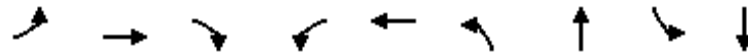
Intersection Summary

HCM 6th Ctrl Delay	110.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
5: Harley Knox Blvd. & Western Way



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	42	1079	1	2	1617	3	0	14	0
Future Volume (vph)	42	1079	1	2	1617	3	0	14	0
Turn Type	Prot	NA	Perm	Prot	NA	Split	NA	Split	NA
Protected Phases	7	4		3	8	2	2	6	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	20.8	20.8	9.6	20.8	34.6	34.6	36.6	36.6
Total Split (s)	11.0	38.8	38.8	9.6	37.4	35.0	35.0	36.6	36.6
Total Split (%)	9.2%	32.3%	32.3%	8.0%	31.2%	29.2%	29.2%	30.5%	30.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.0	36.8	36.8	5.1	32.3	10.2	10.2	10.2	10.2
Actuated g/C Ratio	0.10	0.60	0.60	0.08	0.53	0.17	0.17	0.17	0.17
v/c Ratio	0.29	0.42	0.00	0.01	0.72	0.01	0.01	0.06	0.20
Control Delay	33.8	8.6	0.0	31.0	15.6	26.7	0.0	26.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	8.6	0.0	31.0	15.6	26.7	0.0	26.9	0.6
LOS	C	A	A	C	B	C	A	C	A
Approach Delay		9.6			15.6		11.4		3.3
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 61.5	
Natural Cycle: 135	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

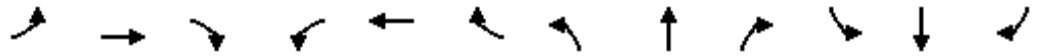
Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑↑	↵	↵	↑↑↑		↵	↵		↵	↵	
Traffic Volume (veh/h)	42	1079	1	2	1617	11	3	0	4	14	0	120
Future Volume (veh/h)	42	1079	1	2	1617	11	3	0	4	14	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1300	1	2	1948	13	3	0	4	17	0	145
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	2656	825	5	2486	17	33	0	29	274	0	243
Arrive On Green	0.05	0.51	0.51	0.00	0.47	0.47	0.02	0.00	0.02	0.15	0.00	0.15
Sat Flow, veh/h	1810	5187	1610	1810	5316	35	1810	0	1610	1810	0	1610
Grp Volume(v), veh/h	51	1300	1	2	1267	694	3	0	4	17	0	145
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1894	1810	0	1610	1810	0	1610
Q Serve(g_s), s	1.7	10.1	0.0	0.1	19.1	19.1	0.1	0.0	0.2	0.5	0.0	5.2
Cycle Q Clear(g_c), s	1.7	10.1	0.0	0.1	19.1	19.1	0.1	0.0	0.2	0.5	0.0	5.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	2656	825	5	1617	886	33	0	29	274	0	243
V/C Ratio(X)	0.60	0.49	0.00	0.40	0.78	0.78	0.09	0.00	0.14	0.06	0.00	0.60
Avail Cap(c_a), veh/h	187	2757	856	146	1760	964	886	0	788	933	0	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	9.9	7.4	30.9	13.9	13.9	30.0	0.0	30.0	22.6	0.0	24.6
Incr Delay (d2), s/veh	2.5	0.1	0.0	18.6	2.2	4.0	1.2	0.0	2.1	0.1	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.8	0.0	0.1	6.1	7.1	0.1	0.0	0.1	0.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	10.0	7.4	49.5	16.1	17.9	31.1	0.0	32.1	22.7	0.0	26.9
LnGrp LOS	C	B	A	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1352			1963			7				162
Approach Delay, s/veh		10.8			16.7			31.7				26.5
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.7	4.8	37.6		14.0	7.5	34.8				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		30.4	5.0	33.0		32.0	6.4	31.6				
Max Q Clear Time (g_c+I1), s		2.2	2.1	12.1		7.2	3.7	21.1				
Green Ext Time (p_c), s		0.0	0.0	8.8		0.9	0.0	7.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.9								
HCM 6th LOS				B								

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

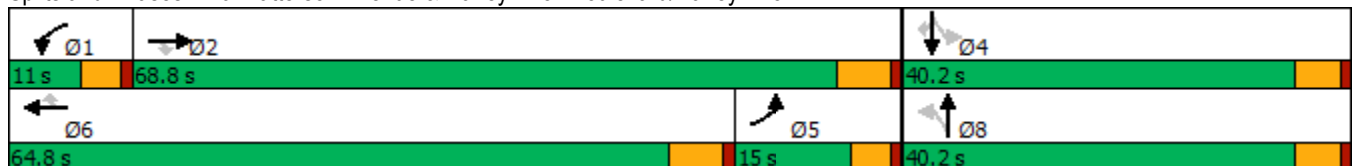


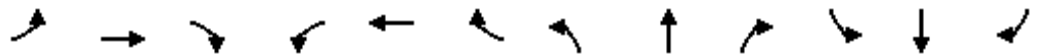
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↙	↗
Traffic Volume (vph)	39	951	42	42	1415	14	109	2	23	4	33
Future Volume (vph)	39	951	42	42	1415	14	109	2	23	4	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	57.6	57.6	6.2	56.5	56.5		18.7		18.7	18.7
Actuated g/C Ratio	0.08	0.60	0.60	0.06	0.59	0.59		0.20		0.20	0.20
v/c Ratio	0.35	0.37	0.05	0.44	0.81	0.02		0.65		0.12	0.10
Control Delay	54.7	11.6	2.7	61.4	22.0	0.0		44.8		34.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	54.7	11.6	2.7	61.4	22.0	0.0		44.8		34.1	0.5
LOS	D	B	A	E	C	A		D		C	A
Approach Delay		12.9			22.9			44.8		15.7	
Approach LOS		B			C			D		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 95.8  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 20.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	39	951	42	42	1415	14	109	2	41	23	4	33
Future Volume (veh/h)	39	951	42	42	1415	14	109	2	41	23	4	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	1160	50	51	1726	17	133	2	49	28	5	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	3177	986	74	2166	946	228	9	60	279	44	271
Arrive On Green	0.04	0.61	0.61	0.04	0.60	0.60	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	5187	1610	1810	3610	1577	931	54	358	1202	261	1610
Grp Volume(v), veh/h	48	1160	50	51	1726	17	184	0	0	33	0	39
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1805	1577	1343	0	0	1463	0	1610
Q Serve(g_s), s	2.3	9.7	1.1	2.4	31.9	0.4	10.2	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	2.3	9.7	1.1	2.4	31.9	0.4	11.7	0.0	0.0	1.6	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.85		1.00
Lane Grp Cap(c), veh/h	71	3177	986	74	2166	946	298	0	0	323	0	271
V/C Ratio(X)	0.67	0.37	0.05	0.69	0.80	0.02	0.62	0.00	0.00	0.10	0.00	0.14
Avail Cap(c_a), veh/h	216	3758	1167	133	2449	1070	637	0	0	660	0	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	8.4	6.7	41.2	13.3	7.0	35.4	0.0	0.0	30.7	0.0	30.8
Incr Delay (d2), s/veh	4.0	0.1	0.0	4.3	1.9	0.0	2.1	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.9	0.3	1.1	10.6	0.1	3.8	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	8.5	6.8	45.4	15.2	7.0	37.5	0.0	0.0	30.8	0.0	31.0
LnGrp LOS	D	A	A	D	B	A	D	A	A	C	A	C
Approach Vol, veh/h		1258			1794			184				72
Approach Delay, s/veh		9.8			16.0			37.5				30.9
Approach LOS		A			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	59.1		19.8	9.2	58.0		19.8				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	4.4	11.7		3.8	4.3	33.9		13.7				
Green Ext Time (p_c), s	0.0	15.3		0.3	0.0	18.3		1.0				

Intersection Summary

HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	2123	292	15	2095	0	38
Future Vol, veh/h	2123	292	15	2095	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2166	298	15	2138	0	39

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	2464	0	1232
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	191	-	172
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	191	-	172
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	31.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	172	-	-	191	-
HCM Lane V/C Ratio	0.225	-	-	0.08	-
HCM Control Delay (s)	31.9	-	-	25.5	-
HCM Lane LOS	D	-	-	D	-
HCM 95th %tile Q(veh)	0.8	-	-	0.3	-

Intersection			
Intersection Delay, s/veh	25.7		
Intersection LOS	D		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1338	126
Demand Flow Rate, veh/h	0	1338	126
Vehicles Circulating, veh/h	11	112	982
Vehicles Exiting, veh/h	1439	996	124
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	27.4	7.6
Approach LOS	-	D	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.889	0.111
Follow-Up Headway, s	2.250	2.250	2.250
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1338	112	14
Cap Entry Lane, veh/h	1439	630	630
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1338	112	14
Cap Entry, veh/h	1439	630	630
V/C Ratio	0.930	0.178	0.022
Control Delay, s/veh	27.4	7.8	6.0
LOS	D	A	A
95th %tile Queue, veh	17	1	0

Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

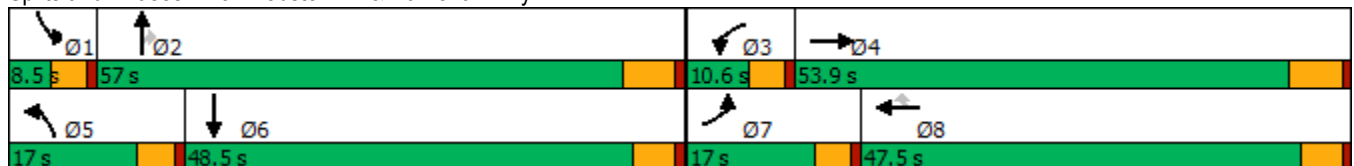


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↗↗↗	↘	↗↗↗	↗	↘	↗	↗	↗↗	
Traffic Volume (vph)	164	1958	30	1757	34	174	30	37	26	
Future Volume (vph)	164	1958	30	1757	34	174	30	37	26	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	17.0	53.9	10.6	47.5	47.5	17.0	57.0	57.0	48.5	8.5
Total Split (%)	13.1%	41.5%	8.2%	36.5%	36.5%	13.1%	43.8%	43.8%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.4	51.9	5.7	42.4	42.4	12.4	59.3	59.3	0.0	
Actuated g/C Ratio	0.10	0.40	0.04	0.33	0.33	0.10	0.46	0.46	0.00	
v/c Ratio	0.98	1.00	0.39	1.07	0.05	1.04	0.04	0.05	7.95	
Control Delay	122.6	58.0	74.9	85.5	0.1	136.0	19.8	0.1	3184.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	122.6	58.0	74.9	85.5	0.1	136.0	19.8	0.1	3184.8	
LOS	F	E	E	F	A	F	B	A	F	
Approach Delay		62.9		83.7			100.6		3184.8	
Approach LOS		E		F			F		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 7.95  
 Intersection Signal Delay: 285.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 81.1%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 9: Webster Av. & Ramona Exwy.





























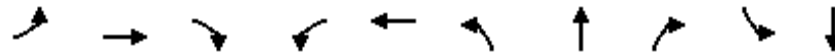
HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	164	1958	39	30	1757	34	174	30	37	103	26	179
Future Volume (veh/h)	164	1958	39	30	1757	34	174	30	37	103	26	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	169	2019	36	31	1811	30	179	31	30	106	27	152
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	2589	46	53	2134	662	212	573	479	0	34	192
Arrive On Green	0.11	0.49	0.49	0.03	0.41	0.41	0.12	0.30	0.30	0.00	0.14	0.14
Sat Flow, veh/h	1810	5246	93	1810	5187	1610	1810	1900	1590	0	249	1399
Grp Volume(v), veh/h	169	1330	725	31	1811	30	179	31	30	0	0	179
Grp Sat Flow(s),veh/h/ln	1810	1729	1882	1810	1729	1610	1810	1900	1590	0	0	1648
Q Serve(g_s), s	8.9	30.6	30.7	1.6	30.6	1.1	9.4	1.1	1.3	0.0	0.0	10.2
Cycle Q Clear(g_c), s	8.9	30.6	30.7	1.6	30.6	1.1	9.4	1.1	1.3	0.0	0.0	10.2
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.00		0.85
Lane Grp Cap(c), veh/h	201	1707	929	53	2134	662	212	573	479	0	0	226
V/C Ratio(X)	0.84	0.78	0.78	0.59	0.85	0.05	0.85	0.05	0.06	0.00	0.00	0.79
Avail Cap(c_a), veh/h	232	1707	929	112	2273	705	232	997	834	0	0	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	20.2	20.2	46.4	25.8	17.1	41.9	24.0	24.1	0.0	0.0	40.4
Incr Delay (d2), s/veh	18.5	2.4	4.3	3.8	3.1	0.0	20.9	0.0	0.1	0.0	0.0	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.2	12.7	0.8	11.8	0.4	5.3	0.5	0.5	0.0	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	22.6	24.5	50.2	28.8	17.1	62.7	24.0	24.1	0.0	0.0	46.6
LnGrp LOS	E	C	C	D	C	B	E	C	C	A	A	D
Approach Vol, veh/h		2224			1872			240				179
Approach Delay, s/veh		26.1			29.0			52.9				46.6
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	35.4	7.4	54.0	15.9	19.5	15.4	46.0				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	50.8	6.0	47.7	12.4	* 43	12.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	3.3	3.6	32.7	11.4	12.2	10.9	32.6				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.7	0.0	1.1	0.0	7.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
10: Indian Av. & Harley Knox Bl.

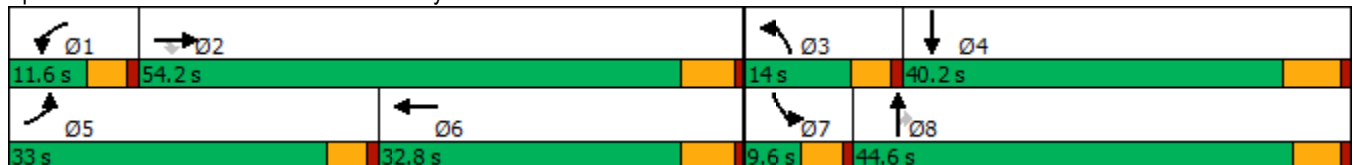


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↑
Traffic Volume (vph)	343	494	89	43	469	125	232	79	49	285
Future Volume (vph)	343	494	89	43	469	125	232	79	49	285
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.6	43.3	43.3	6.5	18.9	8.5	35.5	35.5	5.0	31.3
Actuated g/C Ratio	0.26	0.40	0.40	0.06	0.17	0.08	0.33	0.33	0.05	0.29
v/c Ratio	0.90	0.30	0.16	0.50	0.68	0.57	0.25	0.16	0.73	0.99dr
Control Delay	64.2	24.0	4.7	68.9	46.0	58.6	27.6	1.6	98.5	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	24.0	4.7	68.9	46.0	58.6	27.6	1.6	98.5	33.8
LOS	E	C	A	E	D	E	C	A	F	C
Approach Delay		37.0			47.9		31.7			37.1
Approach LOS		D			D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.6  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 38.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.3%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘↗	↑↑	↗	↘	↑↗	
Traffic Volume (veh/h)	343	494	89	43	469	17	125	232	79	49	285	625
Future Volume (veh/h)	343	494	89	43	469	17	125	232	79	49	285	625
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	429	618	100	54	586	19	156	290	83	61	356	660
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	458	1919	596	70	803	26	220	1245	548	79	588	517
Arrive On Green	0.25	0.37	0.37	0.04	0.16	0.16	0.06	0.34	0.34	0.04	0.33	0.33
Sat Flow, veh/h	1810	5187	1610	1810	5161	167	3510	3610	1590	1810	1805	1588
Grp Volume(v), veh/h	429	618	100	54	392	213	156	290	83	61	356	660
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1870	1755	1805	1590	1810	1805	1588
Q Serve(g_s), s	24.2	8.9	4.4	3.1	11.3	11.3	4.6	6.0	3.8	3.5	17.3	34.0
Cycle Q Clear(g_c), s	24.2	8.9	4.4	3.1	11.3	11.3	4.6	6.0	3.8	3.5	17.3	34.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	1919	596	70	538	291	220	1245	548	79	588	517
V/C Ratio(X)	0.94	0.32	0.17	0.77	0.73	0.73	0.71	0.23	0.15	0.77	0.61	1.28
Avail Cap(c_a), veh/h	492	2405	747	121	894	484	316	1356	597	87	588	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	23.5	22.1	49.7	42.0	42.0	48.0	24.4	23.6	49.4	29.6	35.2
Incr Delay (d2), s/veh	24.1	0.1	0.1	6.6	1.9	3.6	1.6	0.1	0.1	27.9	1.8	138.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	3.4	1.6	1.5	4.8	5.3	2.0	2.4	1.4	2.1	7.4	32.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	23.6	22.2	56.3	43.9	45.6	49.6	24.5	23.8	77.3	31.3	174.0
LnGrp LOS	E	C	C	E	D	D	D	C	C	E	C	F
Approach Vol, veh/h		1147			659			529			1077	
Approach Delay, s/veh		38.0			45.5			31.8			121.4	
Approach LOS		D			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	44.4	11.1	40.2	31.0	22.0	9.1	42.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	*39				
Max Q Clear Time (g_c+I1), s	5.1	10.9	6.6	36.0	26.2	13.3	5.5	8.0				
Green Ext Time (p_c), s	0.0	4.4	0.1	0.0	0.2	2.9	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	64.8
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

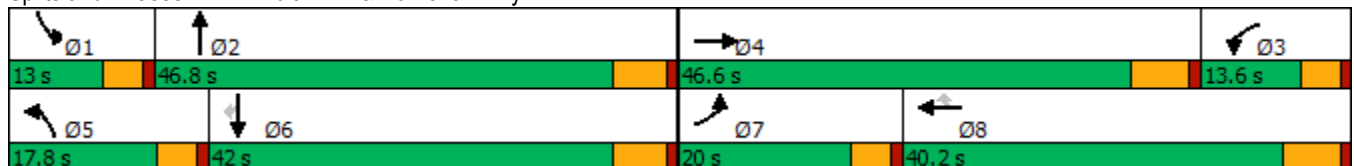
Timings  
11: Indian Av. & Ramona Exwy.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	369	1661	128	1423	131	140	189	170	189	191
Future Volume (vph)	369	1661	128	1423	131	140	189	170	189	191
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	46.6	13.6	40.2	40.2	17.8	46.8	13.0	42.0	42.0
Total Split (%)	16.7%	38.8%	11.3%	33.5%	33.5%	14.8%	39.0%	10.8%	35.0%	35.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	40.8	9.1	34.3	34.3	11.3	17.3	8.5	14.5	14.5
Actuated g/C Ratio	0.16	0.42	0.09	0.35	0.35	0.12	0.18	0.09	0.15	0.15
v/c Ratio	1.31	0.84	0.79	0.80	0.20	0.69	0.35	1.11	0.36	0.47
Control Delay	199.7	30.9	75.7	33.6	4.5	59.8	32.7	148.5	38.5	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	199.7	30.9	75.7	33.6	4.5	59.8	32.7	148.5	38.5	7.8
LOS	F	C	E	C	A	E	C	F	D	A
Approach Delay		60.0		34.5			43.2		61.8	
Approach LOS		E		C			D		E	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 97.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 49.9	Intersection LOS: D
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	1661	106	128	1423	131	140	189	32	170	189	191
Future Volume (veh/h)	369	1661	106	128	1423	131	140	189	32	170	189	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	380	1712	91	132	1467	129	144	195	18	175	195	163
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	315	2091	111	164	1813	555	178	474	43	172	500	223
Arrive On Green	0.17	0.41	0.41	0.09	0.35	0.35	0.10	0.14	0.14	0.09	0.14	0.14
Sat Flow, veh/h	1810	5038	268	1810	5187	1587	1810	3344	306	1810	3610	1610
Grp Volume(v), veh/h	380	1174	629	132	1467	129	144	104	109	175	195	163
Grp Sat Flow(s),veh/h/ln	1810	1729	1848	1810	1729	1587	1810	1805	1845	1810	1805	1610
Q Serve(g_s), s	15.4	26.6	26.7	6.3	22.7	5.1	6.9	4.7	4.7	8.4	4.4	8.6
Cycle Q Clear(g_c), s	15.4	26.6	26.7	6.3	22.7	5.1	6.9	4.7	4.7	8.4	4.4	8.6
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	315	1435	767	164	1813	555	178	256	262	172	500	223
V/C Ratio(X)	1.21	0.82	0.82	0.81	0.81	0.23	0.81	0.41	0.42	1.02	0.39	0.73
Avail Cap(c_a), veh/h	315	1579	844	184	1993	610	270	836	855	172	1477	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	22.9	22.9	39.5	26.1	20.4	39.1	34.6	34.6	40.0	34.7	36.5
Incr Delay (d2), s/veh	119.0	3.3	6.0	18.0	2.4	0.2	5.7	1.0	1.1	73.6	0.5	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	10.1	11.3	3.5	8.7	1.7	3.2	2.0	2.1	7.1	1.9	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.5	26.2	28.9	57.5	28.5	20.6	44.8	35.6	35.7	113.6	35.2	41.1
LnGrp LOS	F	C	C	E	C	C	D	D	D	F	D	D
Approach Vol, veh/h		2183			1728			357			533	
Approach Delay, s/veh		49.5			30.1			39.3			62.8	
Approach LOS		D			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	18.3	14.2	42.9	13.3	18.0	20.0	37.1				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	8.4	41.0	9.0	* 40	13.2	36.2	15.4	34.0				
Max Q Clear Time (g_c+I1), s	10.4	6.7	8.3	28.7	8.9	10.6	17.4	24.7				
Green Ext Time (p_c), s	0.0	1.1	0.0	8.0	0.1	1.7	0.0	6.1				

Intersection Summary

HCM 6th Ctrl Delay	43.2
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

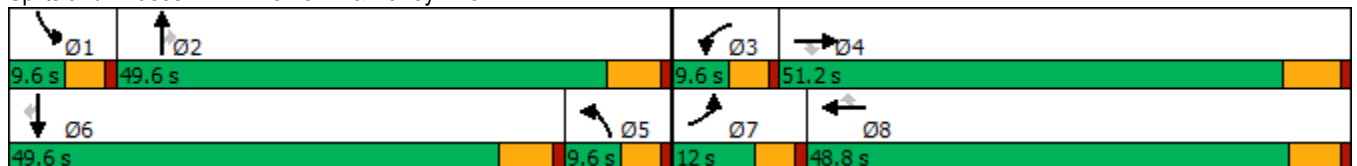
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	186	96	11	172	117	26	918	8	152	1278	323
Future Volume (vph)	285	186	96	11	172	117	26	918	8	152	1278	323
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	12.0	51.2	51.2	9.6	48.8	48.8	9.6	49.6	49.6	9.6	49.6	49.6
Total Split (%)	10.0%	42.7%	42.7%	8.0%	40.7%	40.7%	8.0%	41.3%	41.3%	8.0%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.2	-2.2	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.6	28.5	28.5	6.0	16.9	16.9	6.0	28.8	28.8	6.0	36.0	36.0
Actuated g/C Ratio	0.11	0.37	0.37	0.08	0.22	0.22	0.08	0.37	0.37	0.08	0.47	0.47
v/c Ratio	1.56	0.15	0.15	0.04	0.17	0.27	0.10	0.52	0.01	0.61	0.58	0.38
Control Delay	300.9	19.0	1.1	44.4	25.5	3.4	43.3	20.2	0.0	50.0	18.2	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	300.9	19.0	1.1	44.4	25.5	3.4	43.3	20.2	0.0	50.0	18.2	4.4
LOS	F	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		157.8			17.6			20.7			18.4	
Approach LOS		F			B			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.56  
 Intersection Signal Delay: 41.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 66.5%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	285	186	96	11	172	117	26	918	8	152	1278	323
Future Volume (veh/h)	285	186	96	11	172	117	26	918	8	152	1278	323
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	310	202	54	12	187	82	28	998	9	165	1389	275
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	203	957	426	82	884	271	134	2118	658	276	2240	695
Arrive On Green	0.11	0.27	0.27	0.02	0.17	0.17	0.04	0.41	0.41	0.08	0.43	0.43
Sat Flow, veh/h	1810	3610	1608	3510	5187	1589	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	310	202	54	12	187	82	28	998	9	165	1389	275
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1755	1729	1589	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	8.0	3.1	1.3	0.2	2.2	3.2	0.6	10.0	0.2	3.2	14.8	4.3
Cycle Q Clear(g_c), s	8.0	3.1	1.3	0.2	2.2	3.2	0.6	10.0	0.2	3.2	14.8	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	957	426	82	884	271	134	2118	658	276	2240	695
V/C Ratio(X)	1.52	0.21	0.13	0.15	0.21	0.30	0.21	0.47	0.01	0.60	0.62	0.40
Avail Cap(c_a), veh/h	203	2393	1066	276	3263	1000	276	3321	1031	276	3321	1030
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	20.4	9.4	34.1	25.4	25.8	33.2	15.4	12.5	31.7	15.7	3.7
Incr Delay (d2), s/veh	259.6	0.1	0.1	0.3	0.1	0.6	0.3	0.2	0.0	2.5	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.8	1.2	0.6	0.1	0.8	1.2	0.2	3.4	0.1	1.4	4.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	291.2	20.5	9.6	34.4	25.5	26.5	33.5	15.6	12.5	34.2	16.0	4.1
LnGrp LOS	F	C	A	C	C	C	C	B	B	C	B	A
Approach Vol, veh/h		566			281			1035			1829	
Approach Delay, s/veh		167.7			26.2			16.1			15.8	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	33.1	5.7	22.9	7.9	34.8	12.0	16.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.0	43.8	5.0	45.0	5.0	* 44	7.4	* 43				
Max Q Clear Time (g_c+I1), s	5.2	12.0	2.2	5.1	2.6	16.8	10.0	5.2				
Green Ext Time (p_c), s	0.0	7.4	0.0	1.3	0.0	12.1	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	39.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

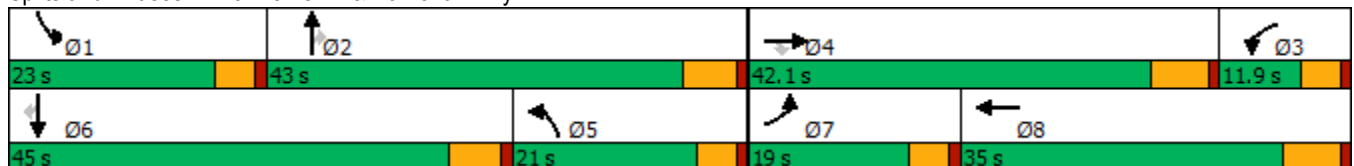
Timings  
13: Perris Bl. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	256	1411	219	117	1051	398	511	127	395	712	280	
Future Volume (vph)	256	1411	219	117	1051	398	511	127	395	712	280	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	19.0	42.1	42.1	11.9	35.0	21.0	43.0	43.0	23.0	45.0	45.0	
Total Split (%)	15.8%	35.1%	35.1%	9.9%	29.2%	17.5%	35.8%	35.8%	19.2%	37.5%	37.5%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.6	-2.2	-2.2	-0.6	-2.2	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	12.6	37.0	37.0	7.5	31.9	15.9	30.5	30.5	16.4	31.1	31.1	
Actuated g/C Ratio	0.12	0.34	0.34	0.07	0.30	0.15	0.28	0.28	0.15	0.29	0.29	
v/c Ratio	0.64	0.81	0.33	0.49	0.79	0.79	0.51	0.23	0.75	0.70	0.46	
Control Delay	54.2	37.4	6.9	57.8	40.1	57.4	34.5	2.7	54.4	38.1	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.2	37.4	6.9	57.8	40.1	57.4	34.5	2.7	54.4	38.1	8.9	
LOS	D	D	A	E	D	E	C	A	D	D	A	
Approach Delay		36.1			41.7		39.4			36.8		
Approach LOS		D			D		D			D		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.7  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 38.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 77.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 13: Perris Bl. & Ramona Exwy.






































HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	256	1411	219	117	1051	123	398	511	127	395	712	280
Future Volume (veh/h)	256	1411	219	117	1051	123	398	511	127	395	712	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	1440	182	119	1072	113	406	521	89	403	727	230
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	349	1783	553	199	1507	159	492	1043	458	492	1003	445
Arrive On Green	0.10	0.34	0.34	0.06	0.32	0.30	0.14	0.29	0.29	0.14	0.28	0.28
Sat Flow, veh/h	3510	5187	1609	3510	4759	501	3510	3610	1585	3510	3610	1601
Grp Volume(v), veh/h	261	1440	182	119	779	406	406	521	89	403	727	230
Grp Sat Flow(s),veh/h/ln	1755	1729	1609	1755	1729	1802	1755	1805	1585	1755	1805	1601
Q Serve(g_s), s	7.5	26.1	8.7	3.4	20.6	20.7	11.6	12.4	3.2	11.5	18.8	8.9
Cycle Q Clear(g_c), s	7.5	26.1	8.7	3.4	20.6	20.7	11.6	12.4	3.2	11.5	18.8	8.9
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	349	1783	553	199	1095	570	492	1043	458	492	1003	445
V/C Ratio(X)	0.75	0.81	0.33	0.60	0.71	0.71	0.83	0.50	0.19	0.82	0.73	0.52
Avail Cap(c_a), veh/h	509	1910	592	268	1095	570	577	1360	597	644	1430	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	30.8	25.1	47.7	31.2	31.5	43.3	30.6	15.2	43.2	33.8	15.8
Incr Delay (d2), s/veh	1.6	2.5	0.3	1.1	2.2	4.2	7.2	0.4	0.2	4.8	1.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	10.5	3.1	1.5	8.3	9.1	5.3	5.2	1.6	5.1	8.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	33.4	25.5	48.7	33.4	35.7	50.5	30.9	15.4	48.0	34.9	16.7
LnGrp LOS	D	C	C	D	C	D	D	C	B	D	C	B
Approach Vol, veh/h		1883			1304			1016			1360	
Approach Delay, s/veh		34.5			35.5			37.4			35.7	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	33.9	11.5	39.6	19.7	32.7	14.3	36.8				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	18.4	37.2	7.3	* 36	16.4	* 39	14.4	28.8				
Max Q Clear Time (g_c+I1), s	13.5	14.4	5.4	28.1	13.6	20.8	9.5	22.7				
Green Ext Time (p_c), s	0.4	3.4	0.0	5.3	0.3	5.1	0.2	3.4				

Intersection Summary

HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Perris Bl. & Morgan St.

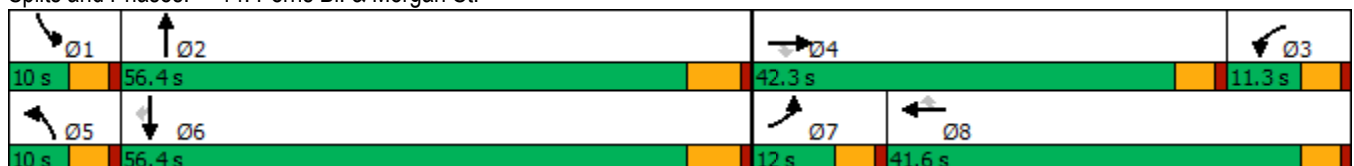
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	38	25	31	35	6	31	14	957	13	1118	16
Future Volume (vph)	38	25	31	35	6	31	14	957	13	1118	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.3	42.3	11.3	41.6	41.6	10.0	56.4	10.0	56.4	56.4
Total Split (%)	10.0%	35.3%	35.3%	9.4%	34.7%	34.7%	8.3%	47.0%	8.3%	47.0%	47.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.8	18.8	18.8	10.4	19.4	19.4	9.0	41.1	9.0	41.1	41.1
Actuated g/C Ratio	0.17	0.32	0.32	0.18	0.33	0.33	0.15	0.70	0.15	0.70	0.70
v/c Ratio	0.14	0.02	0.06	0.12	0.01	0.06	0.05	0.29	0.05	0.49	0.02
Control Delay	38.8	27.8	0.2	36.4	26.3	0.2	41.6	10.5	41.7	13.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	27.8	0.2	36.4	26.3	0.2	41.6	10.5	41.7	13.4	0.0
LOS	D	C	A	D	C	A	D	B	D	B	A
Approach Delay		23.2			19.9			10.9		13.6	
Approach LOS		C			B			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 58.6  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 13.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.4%  
 ICU Level of Service A  
 Analysis Period (min) 15




























Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	38	25	31	35	6	31	14	957	12	13	1118	16
Future Volume (veh/h)	38	25	31	35	6	31	14	957	12	13	1118	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	27	18	38	7	31	15	1052	13	14	1229	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	94	566	252	92	295	250	52	2623	32	50	1789	798
Arrive On Green	0.05	0.16	0.16	0.05	0.16	0.16	0.03	0.50	0.47	0.03	0.50	0.50
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5280	65	1810	3610	1610
Grp Volume(v), veh/h	42	27	18	38	7	31	15	689	376	14	1229	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1887	1810	1805	1610
Q Serve(g_s), s	1.3	0.4	0.4	1.2	0.2	1.0	0.5	7.5	7.5	0.5	15.5	0.3
Cycle Q Clear(g_c), s	1.3	0.4	0.4	1.2	0.2	1.0	0.5	7.5	7.5	0.5	15.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	94	566	252	92	295	250	52	1718	937	50	1789	798
V/C Ratio(X)	0.45	0.05	0.07	0.41	0.02	0.12	0.29	0.40	0.40	0.28	0.69	0.02
Avail Cap(c_a), veh/h	243	2320	1035	222	1199	1016	182	3041	1660	182	3174	1416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	21.3	13.1	27.4	21.3	21.7	28.4	9.4	9.4	28.4	11.5	7.7
Incr Delay (d2), s/veh	1.2	0.0	0.1	1.1	0.0	0.2	1.1	0.2	0.3	1.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.2	0.5	0.1	0.4	0.2	2.1	2.3	0.2	4.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	21.4	13.3	28.5	21.4	21.9	29.5	9.6	9.7	29.5	12.0	7.7
LnGrp LOS	C	C	B	C	C	C	C	A	A	C	B	A
Approach Vol, veh/h		87			76			1080			1260	
Approach Delay, s/veh		23.2			25.2			9.9			12.1	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	33.6	7.0	13.3	5.7	33.5	7.1	13.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.7	37.7	5.4	50.6	7.4	37.0				
Max Q Clear Time (g_c+I1), s	2.5	9.5	3.2	2.4	2.5	17.5	3.3	3.0				
Green Ext Time (p_c), s	0.0	7.7	0.0	0.2	0.0	10.2	0.0	0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.9								
HCM 6th LOS				B								

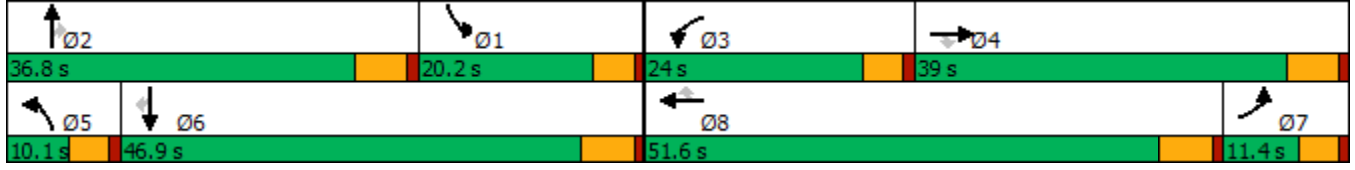
Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	205	59	212	73	228	22	702	234	212	964	19
Future Volume (vph)	47	205	59	212	73	228	22	702	234	212	964	19
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.4	39.0	39.0	24.0	51.6	51.6	10.1	36.8	36.8	20.2	46.9	46.9
Total Split (%)	9.5%	32.5%	32.5%	20.0%	43.0%	43.0%	8.4%	30.7%	30.7%	16.8%	39.1%	39.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.5	16.1	16.1	15.4	23.8	23.8	6.1	22.0	22.0	15.5	38.3	38.3
Actuated g/C Ratio	0.15	0.19	0.19	0.18	0.28	0.28	0.07	0.26	0.26	0.18	0.45	0.45
v/c Ratio	0.18	0.31	0.14	0.68	0.07	0.38	0.18	0.54	0.41	0.67	0.43	0.02
Control Delay	37.1	32.4	0.7	47.0	28.8	6.1	48.5	30.2	6.5	47.5	19.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	32.4	0.7	47.0	28.8	6.1	48.5	30.2	6.5	47.5	19.3	0.1
LOS	D	C	A	D	C	A	D	C	A	D	B	A
Approach Delay		27.0			26.2			24.8			24.0	
Approach LOS		C			C			C			C	

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 85.6  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 25.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 59.7%  
 ICU Level of Service B  
 Analysis Period (min) 15































Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
 15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  			  	
Traffic Volume (veh/h)	47	205	59	212	73	228	22	702	234	212	964	19
Future Volume (veh/h)	47	205	59	212	73	228	22	702	234	212	964	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	211	27	219	75	151	23	724	181	219	994	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	248	643	286	281	645	288	63	1334	407	280	2047	635
Arrive On Green	0.14	0.18	0.18	0.16	0.18	0.18	0.03	0.26	0.26	0.15	0.39	0.39
Sat Flow, veh/h	1810	3610	1607	1810	3610	1610	1810	5187	1585	1810	5187	1609
Grp Volume(v), veh/h	48	211	27	219	75	151	23	724	181	219	994	11
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1610	1810	1729	1585	1810	1729	1609
Q Serve(g_s), s	1.6	3.4	0.9	7.8	1.2	5.7	0.8	8.1	3.6	7.9	9.7	0.1
Cycle Q Clear(g_c), s	1.6	3.4	0.9	7.8	1.2	5.7	0.8	8.1	3.6	7.9	9.7	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	643	286	281	645	288	63	1334	407	280	2047	635
V/C Ratio(X)	0.19	0.33	0.09	0.78	0.12	0.52	0.36	0.54	0.44	0.78	0.49	0.02
Avail Cap(c_a), veh/h	248	1872	834	536	2546	1136	164	2521	770	434	3297	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	24.2	23.2	27.4	23.2	25.1	31.8	21.6	6.6	27.4	15.3	2.6
Incr Delay (d2), s/veh	0.1	0.3	0.1	1.8	0.1	1.5	1.3	0.3	0.8	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.4	0.3	3.2	0.5	2.1	0.4	3.0	2.1	3.2	3.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	24.5	23.3	29.2	23.3	26.6	33.1	22.0	7.3	29.4	15.5	2.6
LnGrp LOS	C	C	C	C	C	C	C	C	A	C	B	A
Approach Vol, veh/h		286			445			928			1224	
Approach Delay, s/veh		24.6			27.3			19.4			17.9	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	21.4	14.5	16.0	6.4	30.6	14.4	16.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	15.6	* 31	19.4	33.2	5.5	41.1	6.8	* 46				
Max Q Clear Time (g_c+I1), s	9.9	10.1	9.8	5.4	2.8	11.7	3.6	7.7				
Green Ext Time (p_c), s	0.1	5.2	0.2	1.3	0.0	7.3	0.0	0.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			20.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.

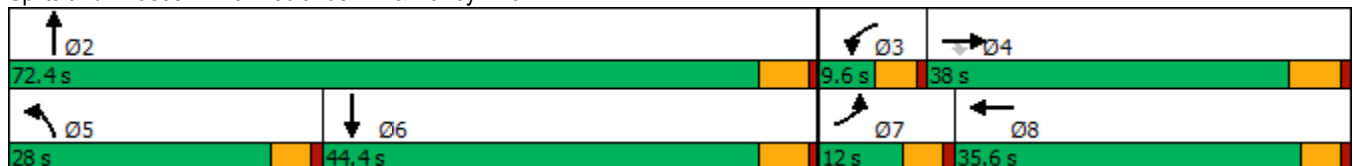


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	31	304	267	3	5		
Future Volume (vph)	31	304	267	3	5		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	12.0	38.0	28.0	72.4	44.4	9.6	35.6
Total Split (%)	10.0%	31.7%	23.3%	60.3%	37.0%	8%	30%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-1.8	-0.6	-1.4	-1.4		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	17.5	17.1	24.1	17.0		
Actuated g/C Ratio	0.15	0.34	0.33	0.47	0.33		
v/c Ratio	0.13	0.27	0.49	0.00	0.03		
Control Delay	32.4	0.5	23.9	7.3	10.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.4	0.5	23.9	7.3	10.5		
LOS	C	A	C	A	B		
Approach Delay				23.8	10.5		
Approach LOS				C	B		

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 51.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 36.5%	ICU Level of Service A
Analysis Period (min) 15	






















Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	0	304	0	0	0	267	3	0	0	5	21
Future Volume (veh/h)	31	0	304	0	0	0	267	3	0	0	5	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	34	0	329	0	0	0	293	3	0	0	5	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	103	620	525	5	231	0	401	1614	0	0	202	180
Arrive On Green	0.06	0.00	0.33	0.00	0.00	0.00	0.22	0.45	0.00	0.00	0.11	0.07
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	34	0	329	0	0	0	293	3	0	0	5	22
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.6	0.0	6.1	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.1	0.5
Cycle Q Clear(g_c), s	0.6	0.0	6.1	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.1	0.5
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	103	620	525	5	231	0	401	1614	0	0	202	180
V/C Ratio(X)	0.33	0.00	0.63	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.02	0.12
Avail Cap(c_a), veh/h	410	1830	1551	287	1701	0	1231	6996	0	0	2066	1843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	10.1	0.0	0.0	0.0	12.7	5.4	0.0	0.0	14.0	14.8
Incr Delay (d2), s/veh	0.7	0.0	1.2	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.8	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	11.3	0.0	0.0	0.0	13.7	5.4	0.0	0.0	14.0	15.1
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		363			0			296			27	
Approach Delay, s/veh		11.8			0.0			13.6			14.9	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		19.8	0.0	15.5	11.8	7.9	6.0	9.5				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		67.0	5.0	32.2	23.4	39.0	7.4	* 31				
Max Q Clear Time (g_c+I1), s		2.0	0.0	8.1	7.3	2.5	2.6	0.0				
Green Ext Time (p_c), s		0.0	0.0	1.1	0.4	0.1	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.7									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	87	86	18	120	256	23
Future Vol, veh/h	87	86	18	120	256	23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	97	96	20	133	284	26
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	9.4	8.3	9.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	79%
Vol Right, %	0%	0%	0%	0%	100%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	60	60	87	86	171	108
LT Vol	18	0	0	87	0	0	0
Through Vol	0	60	60	0	0	171	85
RT Vol	0	0	0	0	86	0	23
Lane Flow Rate	20	67	67	97	96	190	120
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.106	0.074	0.166	0.132	0.283	0.175
Departure Headway (Hd)	6.208	5.704	3.99	6.178	4.976	5.373	5.223
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	573	624	887	577	714	666	682
Service Time	3.985	3.481	1.766	3.955	2.753	3.138	2.989
HCM Lane V/C Ratio	0.035	0.107	0.076	0.168	0.134	0.285	0.176
HCM Control Delay	9.2	9.2	7.1	10.2	8.5	10.3	9.1
HCM Lane LOS	A	A	A	B	A	B	A
HCM 95th-tile Q	0.1	0.4	0.2	0.6	0.5	1.2	0.6



Timings  
18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

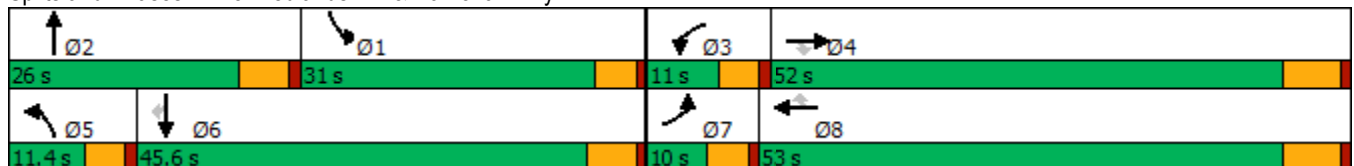


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	62	1807	83	35	1199	113	86	29	266	34	69
Future Volume (vph)	62	1807	83	35	1199	113	86	29	266	34	69
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	10.0	52.0	52.0	11.0	53.0	53.0	11.4	26.0	31.0	45.6	45.6
Total Split (%)	8.3%	43.3%	43.3%	9.2%	44.2%	44.2%	9.5%	21.7%	25.8%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.2	-2.2	-0.6	-2.2	-2.2	-0.6	-1.4	-0.6	-1.4	-1.4
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.2	45.9	45.9	6.6	44.1	44.1	13.1	13.1	19.7	23.8	23.8
Actuated g/C Ratio	0.06	0.47	0.47	0.07	0.46	0.46	0.14	0.14	0.20	0.25	0.25
v/c Ratio	0.57	0.77	0.11	0.30	0.53	0.15	0.37	0.36	0.77	0.08	0.15
Control Delay	69.2	25.8	0.3	55.5	21.1	1.9	53.6	20.4	52.4	28.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	25.8	0.3	55.5	21.1	1.9	53.6	20.4	52.4	28.8	2.3
LOS	E	C	A	E	C	A	D	C	D	C	A
Approach Delay		26.1			20.4			35.8		40.8	
Approach LOS		C			C			D		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 96.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 26.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 70.5%  
 ICU Level of Service C  
 Analysis Period (min) 15






























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	62	1807	83	35	1199	113	86	29	71	266	34	69
Future Volume (veh/h)	62	1807	83	35	1199	113	86	29	71	266	34	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	1902	79	37	1262	91	91	31	56	280	36	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	95	2441	738	72	2374	726	128	76	138	328	466	395
Arrive On Green	0.05	0.47	0.47	0.04	0.46	0.46	0.07	0.13	0.11	0.18	0.25	0.25
Sat Flow, veh/h	1810	5187	1567	1810	5187	1587	1810	604	1092	1810	1900	1610
Grp Volume(v), veh/h	65	1902	79	37	1262	91	91	0	87	280	36	69
Grp Sat Flow(s),veh/h/ln	1810	1729	1567	1810	1729	1587	1810	0	1696	1810	1900	1610
Q Serve(g_s), s	3.3	28.2	2.6	1.8	16.1	1.2	4.5	0.0	4.4	13.8	1.3	3.1
Cycle Q Clear(g_c), s	3.3	28.2	2.6	1.8	16.1	1.2	4.5	0.0	4.4	13.8	1.3	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	95	2441	738	72	2374	726	128	0	214	328	466	395
V/C Ratio(X)	0.68	0.78	0.11	0.51	0.53	0.13	0.71	0.00	0.41	0.85	0.08	0.17
Avail Cap(c_a), veh/h	118	2704	817	138	2760	845	145	0	405	531	858	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	20.4	13.6	43.3	17.9	2.3	41.9	0.0	37.5	36.5	26.7	27.4
Incr Delay (d2), s/veh	6.7	1.4	0.1	2.1	0.2	0.1	10.1	0.0	1.2	4.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.1	0.8	0.8	5.7	0.9	2.3	0.0	1.8	6.2	0.6	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	21.7	13.6	45.5	18.1	2.4	52.0	0.0	38.7	40.5	26.8	27.6
LnGrp LOS	D	C	B	D	B	A	D	A	D	D	C	C
Approach Vol, veh/h		2046			1390			178			385	
Approach Delay, s/veh		22.3			17.8			45.5			36.9	
Approach LOS		C			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	15.6	7.7	47.3	10.5	26.6	8.9	46.1				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	26.4	* 21	6.4	45.8	6.8	40.2	5.4	46.8				
Max Q Clear Time (g_c+I1), s	15.8	6.4	3.8	30.2	6.5	5.1	5.3	18.1				
Green Ext Time (p_c), s	0.3	0.3	0.0	10.9	0.0	0.4	0.0	9.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											23.2	
HCM 6th LOS											C	
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕			↖	↗
Traffic Vol, veh/h	44	0	5	0	0	0	13	82	0	0	49	34
Future Vol, veh/h	44	0	5	0	0	0	13	82	0	0	49	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	0	5	0	0	0	14	89	0	0	53	37

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	170	170	53	191	207	89	90	0	0	89	0	0
Stage 1	53	53	-	117	117	-	-	-	-	-	-	-
Stage 2	117	117	-	74	90	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	798	727	1020	773	693	975	1518	-	-	1519	-	-
Stage 1	965	855	-	892	803	-	-	-	-	-	-	-
Stage 2	892	803	-	940	824	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	792	720	1020	763	686	975	1518	-	-	1519	-	-
Mov Cap-2 Maneuver	792	720	-	763	686	-	-	-	-	-	-	-
Stage 1	955	855	-	883	795	-	-	-	-	-	-	-
Stage 2	883	795	-	935	824	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	0	1	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1518	-	-	792	1020	-	1519	-	-
HCM Lane V/C Ratio	0.009	-	-	0.06	0.005	-	-	-	-
HCM Control Delay (s)	7.4	0	-	9.8	8.5	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	-	0	-	-

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	0	10	0	0	0	0	61	0	0	44	10
Future Vol, veh/h	21	0	10	0	0	0	0	61	0	0	44	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	23	0	11	0	0	0	0	66	0	0	48	11

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	120	120	54	125	125	66	59	0	0	66	0	0
Stage 1	54	54	-	66	66	-	-	-	-	-	-	-
Stage 2	66	66	-	59	59	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	860	774	1019	854	769	1003	1558	-	-	1549	-	-
Stage 1	963	854	-	950	844	-	-	-	-	-	-	-
Stage 2	950	844	-	958	850	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	860	774	1019	845	769	1003	1558	-	-	1549	-	-
Mov Cap-2 Maneuver	860	774	-	845	769	-	-	-	-	-	-	-
Stage 1	963	854	-	950	844	-	-	-	-	-	-	-
Stage 2	950	844	-	948	850	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	0	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1558	-	-	906	-	1549	-
HCM Lane V/C Ratio	-	-	-	0.037	-	-	-
HCM Control Delay (s)	0	-	-	9.1	0	0	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑↑	
Traffic Vol, veh/h	7	0	10	54	51	3
Future Vol, veh/h	7	0	10	54	51	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	8	0	11	59	55	3

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	138	29	58	0	0
Stage 1	57	-	-	-	-
Stage 2	81	-	-	-	-
Critical Hdwy	6.6	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	853	1046	1559	-	-
Stage 1	965	-	-	-	-
Stage 2	947	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	847	1046	1559	-	-
Mov Cap-2 Maneuver	847	-	-	-	-
Stage 1	958	-	-	-	-
Stage 2	947	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	847	-	-
HCM Lane V/C Ratio	0.007	-	0.009	-	-
HCM Control Delay (s)	7.3	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↑↑	
Traffic Vol, veh/h	0	6	0	58	49	2
Future Vol, veh/h	0	6	0	58	49	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	0	63	53	2

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	28	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	1047	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	1047	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 1047	-	-
HCM Lane V/C Ratio	- 0.006	-	-
HCM Control Delay (s)	- 8.5	-	-
HCM Lane LOS	- A	-	-
HCM 95th %tile Q(veh)	- 0	-	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑↑		↖	↗		↖	↑↗	
Traffic Vol, veh/h	41	600	38	91	511	16	28	1	121	6	14	35
Future Vol, veh/h	41	600	38	91	511	16	28	1	121	6	14	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	0	120	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	45	652	41	99	555	17	30	1	132	7	15	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	572	0	0	693	0	0	1225	1512	652	1591	1545	286
Stage 1	-	-	-	-	-	-	742	742	-	762	762	-
Stage 2	-	-	-	-	-	-	483	770	-	829	783	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1011	-	-	912	-	-	147	121	471	80	116	717
Stage 1	-	-	-	-	-	-	411	425	-	368	416	-
Stage 2	-	-	-	-	-	-	539	413	-	368	407	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1011	-	-	912	-	-	109	103	471	51	99	717
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	103	-	51	99	-
Stage 1	-	-	-	-	-	-	393	406	-	351	371	-
Stage 2	-	-	-	-	-	-	436	368	-	253	389	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			1.4			22.4			27.8		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	109	458	1011	-	-	912	-	-	51	99	351
HCM Lane V/C Ratio	0.279	0.29	0.044	-	-	0.108	-	-	0.128	0.077	0.13
HCM Control Delay (s)	50.4	16	8.7	-	-	9.4	-	-	85.7	44.4	16.8
HCM Lane LOS	F	C	A	-	-	A	-	-	F	E	C
HCM 95th %tile Q(veh)	1.1	1.2	0.1	-	-	0.4	-	-	0.4	0.2	0.4

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑	↘	
Traffic Vol, veh/h	663	51	110	570	38	107
Future Vol, veh/h	663	51	110	570	38	107
Conflicting Peds, #/hr	0	1	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	185	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	721	55	120	620	41	116

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	777	0	1272 722
Stage 1	-	-	-	-	722 -
Stage 2	-	-	-	-	550 -
Critical Hdwy	-	-	4.1	-	6.6 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	848	-	174 430
Stage 1	-	-	-	-	485 -
Stage 2	-	-	-	-	547 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	847	-	149 430
Mov Cap-2 Maneuver	-	-	-	-	286 -
Stage 1	-	-	-	-	485 -
Stage 2	-	-	-	-	469 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	380	-	-	847	-
HCM Lane V/C Ratio	0.415	-	-	0.141	-
HCM Control Delay (s)	21	-	-	9.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2	-	-	0.5	-



**APPENDIX 8.2:**

**EAPC (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings

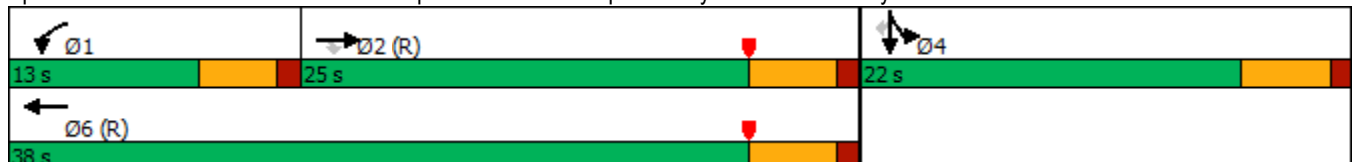


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	542	29	216	258	2	303
Future Volume (vph)	542	29	216	258	2	303
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	8.5	33.0	17.0	17.0
Actuated g/C Ratio	0.33	0.33	0.14	0.55	0.28	0.28
v/c Ratio	0.49	0.05	0.92	0.14	2.07	0.49
Control Delay	17.6	0.2	58.8	9.4	509.2	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	0.2	58.8	9.4	509.2	6.1
LOS	B	A	E	A	F	A
Approach Delay	16.7			31.9	390.1	
Approach LOS	B			C	F	

Intersection Summary

Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 2.07	
Intersection Signal Delay: 225.3	Intersection LOS: F
Intersection Capacity Utilization 154.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

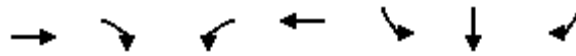
1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑						↖	↗
Traffic Volume (veh/h)	0	542	29	216	258	0	0	0	0	974	2	303
Future Volume (veh/h)	0	542	29	216	258	0	0	0	0	974	2	303
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	589	31	235	280	0				1059	2	272
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1203	536	256	1986	0				512	1	456
Arrive On Green	0.00	0.33	0.33	0.28	1.00	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1609	1810	3705	0				1806	3	1610
Grp Volume(v), veh/h	0	589	31	235	280	0				1061	0	272
Grp Sat Flow(s),veh/h/ln	0	1805	1609	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	7.8	0.8	7.5	0.0	0.0				17.0	0.0	8.7
Cycle Q Clear(g_c), s	0.0	7.8	0.8	7.5	0.0	0.0				17.0	0.0	8.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1203	536	256	1986	0				513	0	456
V/C Ratio(X)	0.00	0.49	0.06	0.92	0.14	0.00				2.07	0.00	0.60
Avail Cap(c_a), veh/h	0	1203	536	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.9	13.6	21.2	0.0	0.0				21.5	0.0	18.5
Incr Delay (d2), s/veh	0.0	1.4	0.2	33.3	0.1	0.0				487.9	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.9	0.3	4.7	0.0	0.0				75.5	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.4	13.8	54.4	0.1	0.0				509.4	0.0	20.7
LnGrp LOS	A	B	B	D	A	A				F	A	C
Approach Vol, veh/h		620			515						1333	
Approach Delay, s/veh		17.2			24.9						409.6	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.0		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	9.5	9.8		19.0		2.0						
Green Ext Time (p_c), s	0.0	1.8		0.0		1.0						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				230.8								
HCM 6th LOS				F								

Timings  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	1037	457	383	1458	843	1	670
Future Volume (vph)	1037	457	383	1458	843	1	670
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	48.0	48.0	23.0	71.0	39.0	39.0	39.0
Total Split (%)	43.6%	43.6%	20.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	18.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.38	0.38	0.17	0.59	0.30	0.30	0.30
v/c Ratio	0.79	0.53	1.33	0.72	0.85	0.85	1.30
Control Delay	35.3	4.4	189.9	5.5	52.6	52.8	177.6
Queue Delay	0.0	0.0	0.0	1.2	60.0	60.0	0.0
Total Delay	35.3	4.4	189.9	6.7	112.6	112.8	177.6
LOS	D	A	F	A	F	F	F
Approach Delay	25.9			44.8		141.4	
Approach LOS	C			D		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 69.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 164.3%  
 ICU Level of Service H  
 Analysis Period (min) 15













Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.



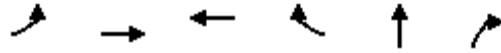
HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	1037	457	383	1458	0	0	0	0	843	1	670
Future Volume (veh/h)	0	1037	457	383	1458	0	0	0	0	843	1	670
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1092	420	403	1535	0				888	0	622
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1378	615	304	2133	0				1102	0	490
Arrive On Green	0.00	0.38	0.38	0.17	0.59	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	1092	420	403	1535	0				888	0	622
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	29.5	24.0	18.5	33.3	0.0				24.9	0.0	33.5
Cycle Q Clear(g_c), s	0.0	29.5	24.0	18.5	33.3	0.0				24.9	0.0	33.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1378	615	304	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.79	0.68	1.32	0.72	0.00				0.81	0.00	1.27
Avail Cap(c_a), veh/h	0	1378	615	304	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.36	0.36	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	30.1	28.4	45.8	16.0	0.0				35.3	0.0	38.3
Incr Delay (d2), s/veh	0.0	4.7	6.1	154.1	0.8	0.0				6.3	0.0	136.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.7	9.6	20.9	11.9	0.0				11.4	0.0	31.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.9	34.5	199.9	16.8	0.0				41.6	0.0	174.4
LnGrp LOS	A	C	C	F	B	A				D	A	F
Approach Vol, veh/h		1512			1938						1510	
Approach Delay, s/veh		34.8			54.9						96.3	
Approach LOS		C			D						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.0	48.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	18.5	42.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	20.5	31.5		35.5		35.3						
Green Ext Time (p_c), s	0.0	4.1		0.0		8.1						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				61.3								
HCM 6th LOS				E								
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings

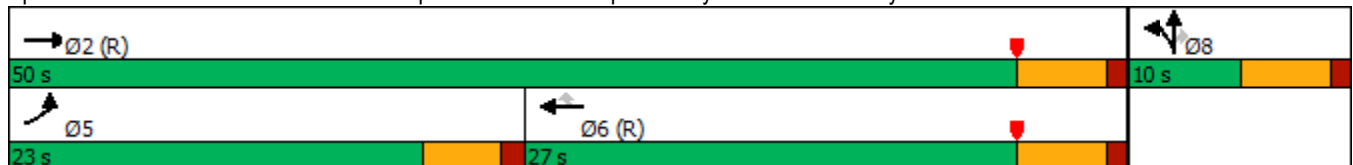


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	347	1055	414	912	0	310
Future Volume (vph)	347	1055	414	912	0	310
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	15.7	45.0	24.8	24.8	5.0	5.0
Actuated g/C Ratio	0.26	0.75	0.41	0.41	0.08	0.08
v/c Ratio	0.79	0.42	0.30	1.08	0.43	1.23
Control Delay	16.2	0.7	13.2	69.7	35.6	150.3
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	16.2	1.2	13.2	69.7	35.6	150.3
LOS	B	A	B	E	D	F
Approach Delay		4.9	52.1		131.6	
Approach LOS		A	D		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.23  
 Intersection Signal Delay: 40.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 154.2%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

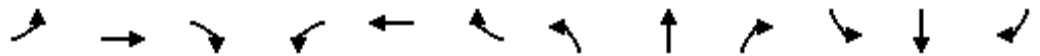


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↘	↗			
Traffic Volume (veh/h)	347	1055	0	0	414	912	60	0	310	0	0	0
Future Volume (veh/h)	347	1055	0	0	414	912	60	0	310	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	373	1134	0	0	445	981	65	0	268			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	427	2708	0	0	1586	707	151	0	134			
Arrive On Green	0.24	0.75	0.00	0.00	0.44	0.44	0.08	0.00	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	373	1134	0	0	445	981	65	0	268			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	11.9	6.9	0.0	0.0	4.7	26.4	2.0	0.0	5.0			
Cycle Q Clear(g_c), s	11.9	6.9	0.0	0.0	4.7	26.4	2.0	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	427	2708	0	0	1586	707	151	0	134			
V/C Ratio(X)	0.87	0.42	0.00	0.00	0.28	1.39	0.43	0.00	2.00			
Avail Cap(c_a), veh/h	558	2708	0	0	1586	707	151	0	134			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.87	0.87	0.00	0.00	0.82	0.82	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.1	2.7	0.0	0.0	10.8	16.8	26.1	0.0	27.5			
Incr Delay (d2), s/veh	8.7	0.4	0.0	0.0	0.4	181.3	8.7	0.0	474.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.3	0.6	0.0	0.0	1.5	42.9	1.2	0.0	19.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	3.1	0.0	0.0	11.1	198.1	34.9	0.0	501.7			
LnGrp LOS	C	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1507			1426			333				
Approach Delay, s/veh		10.0			139.8			410.6				
Approach LOS		A			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			18.6	31.4		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		8.9			13.9	28.4		7.0				
Green Ext Time (p_c), s		5.5			0.3	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					107.5							
HCM 6th LOS					F							



Timings  
4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	369	1511	1253	867	589	5	517
Future Volume (vph)	369	1511	1253	867	589	5	517
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	22.0	70.0	48.0	48.0	40.0	40.0	40.0
Total Split (%)	20.0%	63.6%	43.6%	43.6%	36.4%	36.4%	36.4%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	17.6	64.1	42.0	42.0	34.4	34.4	34.4
Actuated g/C Ratio	0.16	0.58	0.38	0.38	0.31	0.31	0.31
v/c Ratio	1.33	0.75	0.95	0.85	0.57	0.58	0.97
Control Delay	194.7	28.8	48.0	15.1	36.7	36.9	64.9
Queue Delay	0.0	49.0	2.4	0.0	0.0	0.0	0.0
Total Delay	194.7	77.7	50.4	15.1	36.7	36.9	64.9
LOS	F	E	D	B	D	D	E
Approach Delay		100.7	35.9			49.9	
Approach LOS		F	D			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.33  
 Intersection Signal Delay: 62.8  
 Intersection Capacity Utilization 164.3%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service H






















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

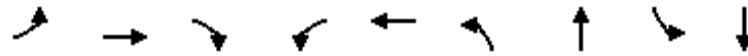
Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	369	1511	0	0	1253	867	589	5	517	0	0	0
Future Volume (veh/h)	369	1511	0	0	1253	867	589	5	517	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	384	1574	0	0	1305	746	618	0	356			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	288	2317	0	0	1595	711	918	0	408			
Arrive On Green	0.32	1.00	0.00	0.00	0.44	0.44	0.25	0.00	0.25			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	384	1574	0	0	1305	746	618	0	356			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	34.8	48.6	16.9	0.0	23.3			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	34.8	48.6	16.9	0.0	23.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	288	2317	0	0	1595	711	918	0	408			
V/C Ratio(X)	1.33	0.68	0.00	0.00	0.82	1.05	0.67	0.00	0.87			
Avail Cap(c_a), veh/h	288	2317	0	0	1595	711	1135	0	505			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.48	0.48	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.5	0.0	0.0	0.0	26.8	30.7	36.9	0.0	39.3			
Incr Delay (d2), s/veh	161.4	0.8	0.0	0.0	4.8	47.2	1.1	0.0	13.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	18.8	0.3	0.0	0.0	14.6	26.2	7.3	0.0	10.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	198.9	0.8	0.0	0.0	31.6	77.9	38.1	0.0	52.5			
LnGrp LOS	F	A	A	A	C	F	D	A	D			
Approach Vol, veh/h		1958			2051			974				
Approach Delay, s/veh		39.6			48.5			43.3				
Approach LOS		D			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		76.6			22.0	54.6		33.4				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		64.0			17.5	42.0		34.5				
Max Q Clear Time (g_c+I1), s		2.0			19.5	50.6		25.3				
Green Ext Time (p_c), s		9.1			0.0	0.0		2.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			44.0									
HCM 6th LOS			D									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												

Timings  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

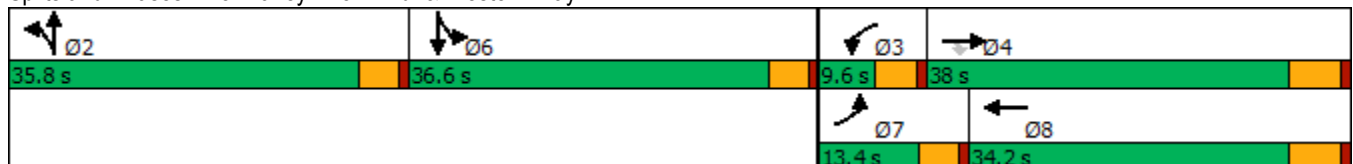


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	103	1380	9	12	1288	1	0	9	0
Future Volume (vph)	103	1380	9	12	1288	1	0	9	0
Turn Type	Prot	NA	Perm	Prot	NA	Split	NA	Split	NA
Protected Phases	7	4		3	8	2	2	6	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	20.8	20.8	9.6	20.8	34.6	34.6	36.6	36.6
Total Split (s)	13.4	38.0	38.0	9.6	34.2	35.8	35.8	36.6	36.6
Total Split (%)	11.2%	31.7%	31.7%	8.0%	28.5%	29.8%	29.8%	30.5%	30.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	44.3	44.3	5.2	29.5	10.4	10.4	10.4	10.4
Actuated g/C Ratio	0.14	0.75	0.75	0.09	0.50	0.18	0.18	0.18	0.18
v/c Ratio	0.43	0.38	0.01	0.08	0.55	0.00	0.00	0.03	0.08
Control Delay	32.3	7.3	0.0	31.8	13.6	27.0	0.0	26.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	7.3	0.0	31.8	13.6	27.0	0.0	26.3	0.2
LOS	C	A	A	C	B	C	A	C	A
Approach Delay		9.0			13.8		9.0		3.9
Approach LOS		A			B		A		A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 58.8  
 Natural Cycle: 125  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 11.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.3%  
 ICU Level of Service A  
 Analysis Period (min) 15


























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	103	1380	9	12	1288	41	1	0	2	9	0	56
Future Volume (veh/h)	103	1380	9	12	1288	41	1	0	2	9	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	111	1484	10	13	1385	44	1	0	2	10	0	60
Peak Hour Factor	0.93	0.93	0.92	0.92	0.93	0.93	0.92	0.92	0.92	0.93	0.92	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	144	2443	759	30	2108	67	15	0	13	222	0	198
Arrive On Green	0.08	0.47	0.47	0.02	0.41	0.41	0.01	0.00	0.01	0.12	0.00	0.12
Sat Flow, veh/h	1810	5187	1610	1810	5164	164	1810	0	1610	1810	0	1610
Grp Volume(v), veh/h	111	1484	10	13	927	502	1	0	2	10	0	60
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1870	1810	0	1610	1810	0	1610
Q Serve(g_s), s	3.1	10.9	0.2	0.4	11.1	11.1	0.0	0.0	0.1	0.3	0.0	1.7
Cycle Q Clear(g_c), s	3.1	10.9	0.2	0.4	11.1	11.1	0.0	0.0	0.1	0.3	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	2443	759	30	1412	764	15	0	13	222	0	198
V/C Ratio(X)	0.77	0.61	0.01	0.44	0.66	0.66	0.07	0.00	0.15	0.04	0.00	0.30
Avail Cap(c_a), veh/h	310	3250	1009	176	1911	1034	1098	0	977	1127	0	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.2	10.1	7.2	25.0	12.3	12.3	25.3	0.0	25.3	19.9	0.0	20.5
Incr Delay (d2), s/veh	3.3	0.2	0.0	3.7	0.5	1.0	1.9	0.0	5.2	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.8	0.0	0.2	3.2	3.6	0.0	0.0	0.0	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	10.3	7.2	28.7	12.8	13.3	27.2	0.0	30.6	20.0	0.0	21.4
LnGrp LOS	C	B	A	C	B	B	C	A	C	B	A	C
Approach Vol, veh/h		1605			1442			3				70
Approach Delay, s/veh		11.4			13.1			29.4				21.2
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.0	5.4	30.0		10.9	8.7	26.8				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		31.2	5.0	32.2		32.0	8.8	28.4				
Max Q Clear Time (g_c+I1), s		2.1	2.4	12.9		3.7	5.1	13.1				
Green Ext Time (p_c), s		0.0	0.0	9.9		0.3	0.0	7.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

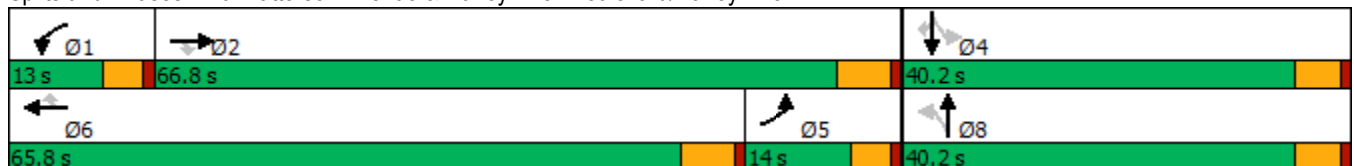


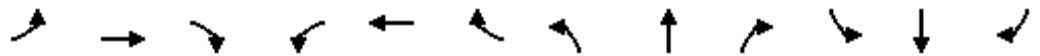
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↕	↗
Traffic Volume (vph)	28	1248	76	52	1149	31	80	9	28	4	23
Future Volume (vph)	28	1248	76	52	1149	31	80	9	28	4	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	14.0	66.8	66.8	13.0	65.8	65.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	11.7%	55.7%	55.7%	10.8%	54.8%	54.8%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.7	36.5	36.5	7.4	39.1	39.1		16.1		16.1	16.1
Actuated g/C Ratio	0.09	0.51	0.51	0.10	0.55	0.55		0.23		0.23	0.23
v/c Ratio	0.18	0.51	0.10	0.31	0.63	0.04		0.45		0.10	0.05
Control Delay	43.6	13.5	3.6	44.1	14.5	0.3		28.6		28.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	43.6	13.5	3.6	44.1	14.5	0.3		28.6		28.3	0.2
LOS	D	B	A	D	B	A		C		C	A
Approach Delay		13.6			15.4			28.6		16.4	
Approach LOS		B			B			C		B	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 71.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 63.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	28	1248	76	52	1149	31	80	9	52	28	4	23
Future Volume (veh/h)	28	1248	76	52	1149	31	80	9	52	28	4	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	1357	82	57	1249	34	87	10	55	30	4	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	2825	876	91	1961	875	209	35	87	308	35	251
Arrive On Green	0.03	0.54	0.54	0.05	0.54	0.54	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	5187	1609	1810	3610	1610	753	227	556	1275	222	1610
Grp Volume(v), veh/h	30	1357	82	57	1249	34	152	0	0	34	0	22
Grp Sat Flow(s),veh/h/ln	1810	1729	1609	1810	1805	1610	1536	0	0	1497	0	1610
Q Serve(g_s), s	1.0	10.0	1.5	1.9	15.1	0.6	4.5	0.0	0.0	0.0	0.0	0.7
Cycle Q Clear(g_c), s	1.0	10.0	1.5	1.9	15.1	0.6	5.7	0.0	0.0	1.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	0.57		0.36	0.88		1.00
Lane Grp Cap(c), veh/h	59	2825	876	91	1961	875	331	0	0	343	0	251
V/C Ratio(X)	0.51	0.48	0.09	0.63	0.64	0.04	0.46	0.00	0.00	0.10	0.00	0.09
Avail Cap(c_a), veh/h	273	5081	1576	244	3478	1551	942	0	0	915	0	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	8.7	6.8	29.0	9.9	6.6	24.5	0.0	0.0	22.6	0.0	22.5
Incr Delay (d2), s/veh	2.5	0.2	0.1	2.6	0.5	0.0	1.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.4	0.8	4.3	0.2	2.0	0.0	0.0	0.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	8.9	6.9	31.6	10.4	6.7	25.5	0.0	0.0	22.7	0.0	22.6
LnGrp LOS	C	A	A	C	B	A	C	A	A	C	A	C
Approach Vol, veh/h		1469			1340			152				56
Approach Delay, s/veh		9.3			11.2			25.5				22.7
Approach LOS		A			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	39.7		14.8	7.8	39.6		14.8				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	8.4	61.0		35.1	9.4	* 60		35.1				
Max Q Clear Time (g_c+I1), s	3.9	12.0		3.1	3.0	17.1		7.7				
Green Ext Time (p_c), s	0.0	19.4		0.2	0.0	16.8		0.8				

Intersection Summary

HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	1776	252	18	2111	0	68
Future Vol, veh/h	1776	252	18	2111	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1869	265	19	2222	0	72

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	2134	0	1067
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	3.3
Pot Cap-1 Maneuver	-	-	258	-	221
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	258	-	221
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	28.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	221	-	-	258	-
HCM Lane V/C Ratio	0.324	-	-	0.073	-
HCM Control Delay (s)	28.9	-	-	20.1	-
HCM Lane LOS	D	-	-	C	-
HCM 95th %tile Q(veh)	1.3	-	-	0.2	-

Intersection			
Intersection Delay, s/veh	29.1		
Intersection LOS	D		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1250	87
Demand Flow Rate, veh/h	0	1250	87
Vehicles Circulating, veh/h	14	73	1251
Vehicles Exiting, veh/h	1309	1265	196
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	30.5	9.9
Approach LOS	-	D	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.839	0.161
Follow-Up Headway, s	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1250	73	14
Cap Entry Lane, veh/h	1329	455	455
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1250	73	14
Cap Entry, veh/h	1329	455	455
V/C Ratio	0.941	0.161	0.031
Control Delay, s/veh	30.5	10.2	8.3
LOS	D	B	A
95th %tile Queue, veh	17	1	0



Timings  
9: Webster Av. & Ramona Exwy.

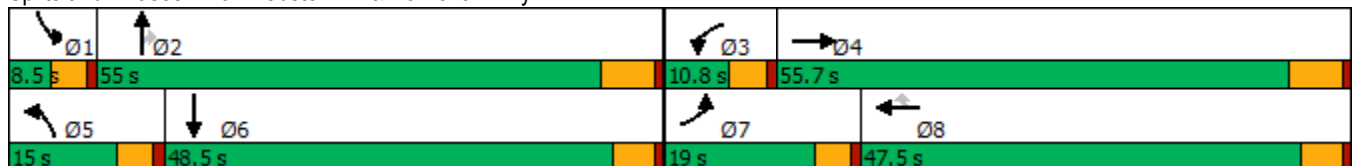


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	208	1556	39	1880	40	121	38	34	13	
Future Volume (vph)	208	1556	39	1880	40	121	38	34	13	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	19.0	55.7	10.8	47.5	47.5	15.0	55.0	55.0	48.5	8.5
Total Split (%)	14.6%	42.8%	8.3%	36.5%	36.5%	11.5%	42.3%	42.3%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.4	51.7	5.9	42.4	42.4	10.3	57.2	57.2	0.0	
Actuated g/C Ratio	0.11	0.40	0.05	0.33	0.33	0.08	0.44	0.44	0.00	
v/c Ratio	1.10	0.84	0.50	1.17	0.06	0.89	0.05	0.05	3.39	
Control Delay	145.4	40.4	81.0	122.5	0.2	109.0	21.1	0.1	1129.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	145.4	40.4	81.0	122.5	0.2	109.0	21.1	0.1	1129.6	
LOS	F	D	F	F	A	F	C	A	F	
Approach Delay		52.2		119.2			72.4		1129.6	
Approach LOS		D		F			E		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 129.9  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 3.39  
 Intersection Signal Delay: 133.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 82.4%  
 ICU Level of Service E  
 Analysis Period (min) 15























Splits and Phases: 9: Webster Av. & Ramona Exwy.



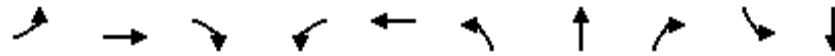
HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	1556	80	39	1880	40	121	38	34	48	13	128
Future Volume (veh/h)	208	1556	80	39	1880	40	121	38	34	48	13	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	219	1638	77	41	1979	39	127	40	20	51	14	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	253	2747	129	63	2263	703	158	461	390	0	21	153
Arrive On Green	0.14	0.54	0.54	0.03	0.44	0.44	0.09	0.24	0.24	0.00	0.11	0.11
Sat Flow, veh/h	1810	5077	239	1810	5187	1610	1810	1900	1608	0	198	1442
Grp Volume(v), veh/h	219	1116	599	41	1979	39	127	40	20	0	0	116
Grp Sat Flow(s),veh/h/ln	1810	1729	1857	1810	1729	1610	1810	1900	1608	0	0	1640
Q Serve(g_s), s	11.1	20.5	20.5	2.1	32.6	1.3	6.5	1.5	0.9	0.0	0.0	6.4
Cycle Q Clear(g_c), s	11.1	20.5	20.5	2.1	32.6	1.3	6.5	1.5	0.9	0.0	0.0	6.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	0.00		0.88
Lane Grp Cap(c), veh/h	253	1871	1005	63	2263	703	158	461	390	0	0	174
V/C Ratio(X)	0.87	0.60	0.60	0.65	0.87	0.06	0.80	0.09	0.05	0.00	0.00	0.66
Avail Cap(c_a), veh/h	278	1871	1005	120	2345	728	201	989	837	0	0	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	14.6	14.6	44.7	24.1	15.3	42.0	27.5	27.2	0.0	0.0	40.3
Incr Delay (d2), s/veh	20.9	0.5	1.0	4.1	3.9	0.0	13.3	0.1	0.1	0.0	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.9	7.5	1.0	12.4	0.4	3.4	0.7	0.3	0.0	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	15.1	15.5	48.8	28.0	15.3	55.3	27.6	27.3	0.0	0.0	44.6
LnGrp LOS	E	B	B	D	C	B	E	C	C	A	A	D
Approach Vol, veh/h		1934			2059			187				116
Approach Delay, s/veh		20.4			28.2			46.3				44.6
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	29.0	7.9	56.9	12.8	16.2	17.7	47.1				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	48.8	6.2	49.5	10.4	* 43	14.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	3.5	4.1	22.5	8.5	8.4	13.1	34.6				
Green Ext Time (p_c), s	0.0	0.3	0.0	12.8	0.0	0.7	0.0	6.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				25.9								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
10: Indian Av. & Harley Knox Bl.

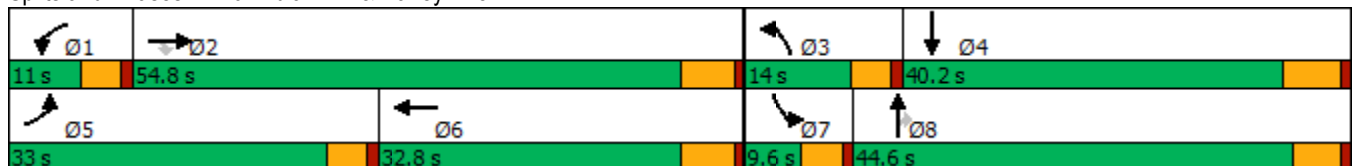


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↗
Traffic Volume (vph)	565	463	116	63	796	148	305	44	13	81
Future Volume (vph)	565	463	116	63	796	148	305	44	13	81
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.8	54.8	11.0	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.7%	45.7%	9.2%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.9	48.0	48.0	6.3	23.1	8.3	26.3	26.3	5.1	14.0
Actuated g/C Ratio	0.30	0.50	0.50	0.07	0.24	0.09	0.27	0.27	0.05	0.15
v/c Ratio	1.14	0.20	0.15	0.58	0.74	0.54	0.34	0.09	0.15	0.50
Control Delay	117.7	15.3	3.9	67.1	38.3	51.0	29.3	0.3	52.6	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	117.7	15.3	3.9	67.1	38.3	51.0	29.3	0.3	52.6	13.0
LOS	F	B	A	E	D	D	C	A	D	B
Approach Delay		64.8			40.3		33.2			14.5
Approach LOS		E			D		C			B

Intersection Summary































Cycle Length: 120  
 Actuated Cycle Length: 95.8  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 45.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.3%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	565	463	116	63	796	46	148	305	44	13	81	232
Future Volume (veh/h)	565	463	116	63	796	46	148	305	44	13	81	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	621	509	113	69	875	36	163	335	40	14	89	225
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	555	2497	775	89	1144	47	235	809	361	30	313	279
Arrive On Green	0.31	0.48	0.48	0.05	0.22	0.22	0.07	0.22	0.22	0.02	0.17	0.17
Sat Flow, veh/h	1810	5187	1610	1810	5110	210	3510	3610	1610	1810	1805	1610
Grp Volume(v), veh/h	621	509	113	69	592	319	163	335	40	14	89	225
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1862	1755	1805	1610	1810	1805	1610
Q Serve(g_s), s	28.4	5.2	3.6	3.5	14.8	14.9	4.2	7.3	1.8	0.7	4.0	12.4
Cycle Q Clear(g_c), s	28.4	5.2	3.6	3.5	14.8	14.9	4.2	7.3	1.8	0.7	4.0	12.4
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	555	2497	775	89	774	417	235	809	361	30	313	279
V/C Ratio(X)	1.12	0.20	0.15	0.77	0.76	0.77	0.69	0.41	0.11	0.47	0.28	0.81
Avail Cap(c_a), veh/h	555	2745	852	125	1009	543	356	1529	682	98	663	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	13.8	13.4	43.5	33.6	33.7	42.3	30.7	28.6	45.1	33.3	36.8
Incr Delay (d2), s/veh	75.1	0.0	0.1	10.9	2.6	4.8	1.4	0.3	0.1	4.3	0.5	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.8	1.8	1.2	1.8	6.1	6.9	1.8	3.1	0.7	0.3	1.7	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.2	13.8	13.5	54.4	36.2	38.4	43.7	31.1	28.7	49.5	33.8	42.2
LnGrp LOS	F	B	B	D	D	D	D	C	C	D	C	D
Approach Vol, veh/h		1243			980			538			328	
Approach Delay, s/veh		60.5			38.2			34.7			40.2	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	50.4	10.8	22.3	33.0	26.5	6.1	26.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	6.4	49.0	9.4	34.0	28.4	27.0	5.0	* 39				
Max Q Clear Time (g_c+I1), s	5.5	7.2	6.2	14.4	30.4	16.9	2.7	9.3				
Green Ext Time (p_c), s	0.0	3.7	0.1	1.6	0.0	3.9	0.0	2.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			46.8									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
11: Indian Av. & Ramona Exwy.

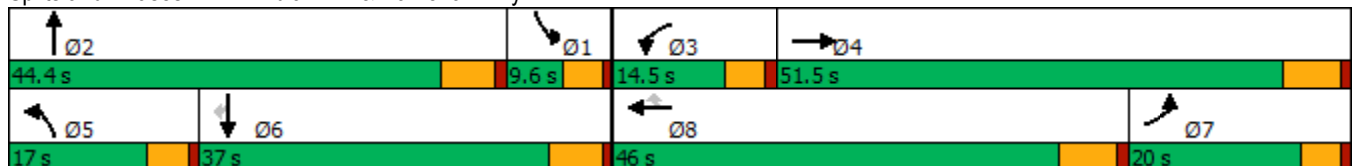


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕	↖	↕↕↕	↖	↖	↕↕	↖	↕↕	↖
Traffic Volume (vph)	313	1220	68	1795	156	100	150	72	71	144
Future Volume (vph)	313	1220	68	1795	156	100	150	72	71	144
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	51.5	14.5	46.0	46.0	17.0	44.4	9.6	37.0	37.0
Total Split (%)	16.7%	42.9%	12.1%	38.3%	38.3%	14.2%	37.0%	8.0%	30.8%	30.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.5	49.9	7.9	40.2	40.2	9.7	15.1	8.1	13.5	13.5
Actuated g/C Ratio	0.15	0.50	0.08	0.40	0.40	0.10	0.15	0.08	0.13	0.13
v/c Ratio	1.19	0.54	0.51	0.92	0.22	0.61	0.38	0.53	0.16	0.42
Control Delay	155.0	20.5	59.0	37.9	4.1	60.2	32.1	60.8	38.4	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	155.0	20.5	59.0	37.9	4.1	60.2	32.1	60.8	38.4	8.0
LOS	F	C	E	D	A	E	C	E	D	A
Approach Delay		46.6		36.0			41.5		28.9	
Approach LOS		D		D			D		C	

Intersection Summary



























Cycle Length: 120  
 Actuated Cycle Length: 100.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.19  
 Intersection Signal Delay: 40.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 83.6%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 11: Indian Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	313	1220	78	68	1795	156	100	150	48	72	71	144
Future Volume (veh/h)	313	1220	78	68	1795	156	100	150	48	72	71	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	333	1298	71	72	1910	136	106	160	28	77	76	144
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	296	2730	149	93	2143	665	135	328	56	111	384	171
Arrive On Green	0.16	0.54	0.54	0.05	0.41	0.41	0.07	0.11	0.11	0.06	0.11	0.11
Sat Flow, veh/h	1810	5033	275	1810	5187	1610	1810	3081	529	1810	3610	1610
Grp Volume(v), veh/h	333	892	477	72	1910	136	106	92	96	77	76	144
Grp Sat Flow(s),veh/h/ln	1810	1729	1850	1810	1729	1610	1810	1805	1805	1810	1805	1610
Q Serve(g_s), s	15.4	15.0	15.0	3.7	32.2	5.1	5.4	4.5	4.7	3.9	1.8	5.6
Cycle Q Clear(g_c), s	15.4	15.0	15.0	3.7	32.2	5.1	5.4	4.5	4.7	3.9	1.8	5.6
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	296	1876	1004	93	2143	665	135	192	192	111	384	171
V/C Ratio(X)	1.12	0.48	0.48	0.77	0.89	0.20	0.79	0.48	0.50	0.69	0.20	0.84
Avail Cap(c_a), veh/h	296	1876	1004	190	2195	681	239	741	741	111	1198	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	13.3	13.3	44.1	25.6	17.7	42.8	39.6	39.7	43.3	38.4	18.7
Incr Delay (d2), s/veh	89.9	0.2	0.4	5.0	5.0	0.2	3.8	1.9	2.0	14.1	0.3	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	5.0	5.3	1.7	12.6	1.7	2.5	2.0	2.1	2.1	0.8	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	129.3	13.5	13.6	49.1	30.6	17.8	46.6	41.5	41.7	57.4	38.6	29.2
LnGrp LOS	F	B	B	D	C	B	D	D	D	E	D	C
Approach Vol, veh/h		1702			2118			294			297	
Approach Delay, s/veh		36.2			30.4			43.4			38.9	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	15.8	9.4	57.2	11.6	15.8	21.6	45.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	5.0	* 39	9.9	45.3	12.4	31.2	15.4	* 40				
Max Q Clear Time (g_c+I1), s	5.9	6.7	5.7	17.0	7.4	7.6	17.4	34.2				
Green Ext Time (p_c), s	0.0	1.0	0.0	9.7	0.0	0.8	0.0	4.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings  
12: Perris Bl. & Harley Knox Bl.

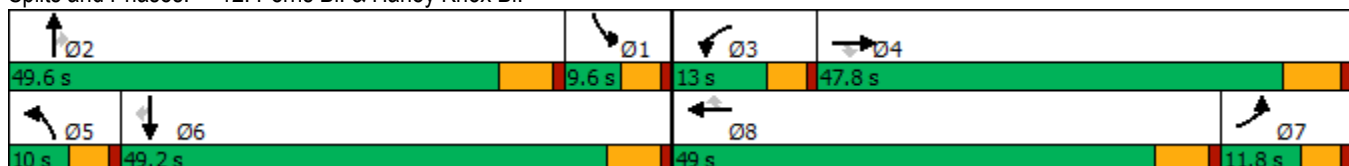
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	210	38	2	279	169	181	1279	10	56	679	406
Future Volume (vph)	273	210	38	2	279	169	181	1279	10	56	679	406
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	11.8	47.8	47.8	13.0	49.0	49.0	10.0	49.6	49.6	9.6	49.2	49.2
Total Split (%)	9.8%	39.8%	39.8%	10.8%	40.8%	40.8%	8.3%	41.3%	41.3%	8.0%	41.0%	41.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	26.0	26.0	5.3	15.1	15.1	5.8	29.8	29.8	5.3	26.7	26.7
Actuated g/C Ratio	0.10	0.34	0.34	0.07	0.20	0.20	0.07	0.39	0.39	0.07	0.34	0.34
v/c Ratio	1.57	0.18	0.06	0.01	0.28	0.38	0.72	0.66	0.01	0.24	0.39	0.50
Control Delay	311.8	20.4	0.2	45.0	27.2	6.9	55.7	22.8	0.0	43.8	20.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	311.8	20.4	0.2	45.0	27.2	6.9	55.7	22.8	0.0	43.8	20.2	4.7
LOS	F	C	A	D	C	A	E	C	A	D	C	A
Approach Delay		171.7			19.7			26.7			15.8	
Approach LOS		F			B			C			B	

Intersection Summary

































Cycle Length: 120  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.57  
 Intersection Signal Delay: 43.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 69.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	  		 	  		  	  	
Traffic Volume (veh/h)	273	210	38	2	279	169	181	1279	10	56	679	406
Future Volume (veh/h)	273	210	38	2	279	169	181	1279	10	56	679	406
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	281	216	26	2	288	84	187	1319	9	58	700	314
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	183	921	411	10	727	226	266	1972	612	168	1915	595
Arrive On Green	0.10	0.26	0.26	0.00	0.14	0.14	0.08	0.38	0.38	0.05	0.37	0.37
Sat Flow, veh/h	1810	3610	1610	3510	5187	1610	3510	5187	1610	3510	5187	1610
Grp Volume(v), veh/h	281	216	26	2	288	84	187	1319	9	58	700	314
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1729	1610	1755	1729	1610	1755	1729	1610
Q Serve(g_s), s	7.2	3.4	0.9	0.0	3.6	3.4	3.7	15.1	0.2	1.1	7.0	6.3
Cycle Q Clear(g_c), s	7.2	3.4	0.9	0.0	3.6	3.4	3.7	15.1	0.2	1.1	7.0	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	921	411	10	727	226	266	1972	612	168	1915	595
V/C Ratio(X)	1.54	0.23	0.06	0.21	0.40	0.37	0.70	0.67	0.01	0.35	0.37	0.53
Avail Cap(c_a), veh/h	183	2105	939	413	3141	975	266	3184	988	246	3155	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	21.1	20.1	35.5	27.9	27.8	32.2	18.4	8.0	32.9	16.4	5.8
Incr Delay (d2), s/veh	267.9	0.1	0.1	4.0	0.4	1.0	7.0	0.4	0.0	0.5	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	1.3	0.3	0.0	1.4	1.3	1.7	5.2	0.1	0.5	2.4	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	300.0	21.2	20.2	39.5	28.3	28.8	39.2	18.8	8.0	33.3	16.5	6.5
LnGrp LOS	F	C	C	D	C	C	D	B	A	C	B	A
Approach Vol, veh/h		523			374			1515			1072	
Approach Delay, s/veh		170.9			28.5			21.2			14.5	
Approach LOS		F			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	32.9	4.8	24.4	10.0	32.1	13.4	15.8				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 5.8				
Max Green Setting (Gmax), s	5.0	* 44	8.4	41.6	5.4	43.4	7.2	* 43				
Max Q Clear Time (g_c+I1), s	3.1	17.1	2.0	5.4	5.7	9.0	9.2	5.6				
Green Ext Time (p_c), s	0.0	10.1	0.0	1.3	0.0	6.2	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Timings  
13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

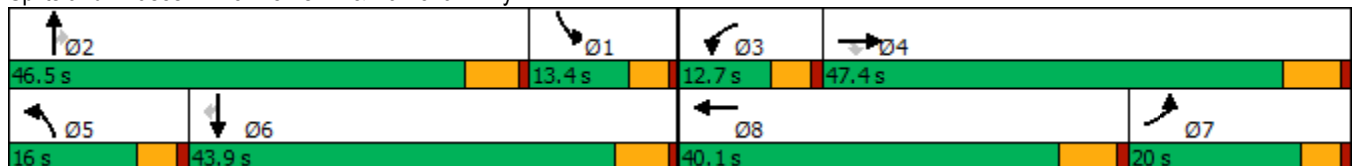
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	404	762	181	135	1538	353	827	74	139	421	148	
Future Volume (vph)	404	762	181	135	1538	353	827	74	139	421	148	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	20.0	47.4	47.4	12.7	40.1	16.0	46.5	46.5	13.4	43.9	43.9	
Total Split (%)	16.7%	39.5%	39.5%	10.6%	33.4%	13.3%	38.8%	38.8%	11.2%	36.6%	36.6%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	4.6	5.8	5.8	4.6	5.8	5.8	
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	15.2	41.7	41.7	7.6	34.1	11.5	33.0	33.0	8.1	29.6	29.6	
Actuated g/C Ratio	0.14	0.37	0.37	0.07	0.31	0.10	0.30	0.30	0.07	0.27	0.27	
v/c Ratio	0.88	0.41	0.26	0.59	1.17	1.03	0.81	0.13	0.58	0.46	0.28	
Control Delay	69.0	27.6	4.8	62.5	120.7	104.4	42.9	0.4	60.9	35.5	4.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.0	27.6	4.8	62.5	120.7	104.4	42.9	0.4	60.9	35.5	4.9	
LOS	E	C	A	E	F	F	D	A	E	D	A	
Approach Delay		37.0			116.6		57.7			34.1		
Approach LOS		D			F		E			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 111.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.17  
 Intersection Signal Delay: 70.6  
 Intersection LOS: E  
 Intersection Capacity Utilization 91.4%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	762	181	135	1538	227	353	827	74	139	421	148
Future Volume (veh/h)	404	762	181	135	1538	227	353	827	74	139	421	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	421	794	163	141	1602	209	368	861	47	145	439	124
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	477	2065	641	200	1415	184	360	1030	458	205	909	405
Arrive On Green	0.14	0.40	0.40	0.06	0.30	0.30	0.10	0.29	0.29	0.06	0.25	0.25
Sat Flow, veh/h	3510	5187	1610	3510	4644	604	3510	3610	1605	3510	3610	1608
Grp Volume(v), veh/h	421	794	163	141	1192	619	368	861	47	145	439	124
Grp Sat Flow(s),veh/h/ln	1755	1729	1610	1755	1729	1791	1755	1805	1605	1755	1805	1608
Q Serve(g_s), s	13.1	12.1	7.5	4.4	33.9	33.9	11.4	24.9	1.9	4.5	11.5	4.7
Cycle Q Clear(g_c), s	13.1	12.1	7.5	4.4	33.9	33.9	11.4	24.9	1.9	4.5	11.5	4.7
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	2065	641	200	1054	546	360	1030	458	205	909	405
V/C Ratio(X)	0.88	0.38	0.25	0.70	1.13	1.13	1.02	0.84	0.10	0.71	0.48	0.31
Avail Cap(c_a), veh/h	486	2065	641	256	1054	546	360	1321	587	278	1236	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	23.8	22.4	51.5	38.7	38.7	49.9	37.3	18.2	51.5	35.4	15.3
Incr Delay (d2), s/veh	16.2	0.1	0.2	3.7	71.2	81.4	53.5	3.9	0.1	2.5	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	4.6	2.7	2.0	23.8	26.2	7.5	11.0	0.9	2.0	4.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	23.9	22.6	55.2	109.9	120.1	103.4	41.2	18.3	54.0	35.8	15.7
LnGrp LOS	E	C	C	E	F	F	F	D	B	D	D	B
Approach Vol, veh/h		1378			1952			1276			708	
Approach Delay, s/veh		35.8			109.2			58.3			36.0	
Approach LOS		D			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	37.5	10.9	50.5	16.0	33.8	21.3	40.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	6.2	4.6	5.8	6.2	* 6.2				
Max Green Setting (Gmax), s	8.8	* 41	8.1	41.2	11.4	38.1	15.4	* 34				
Max Q Clear Time (g_c+I1), s	6.5	26.9	6.4	14.1	13.4	13.5	15.1	35.9				
Green Ext Time (p_c), s	0.0	4.7	0.0	5.8	0.0	3.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				68.2								
HCM 6th LOS				E								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

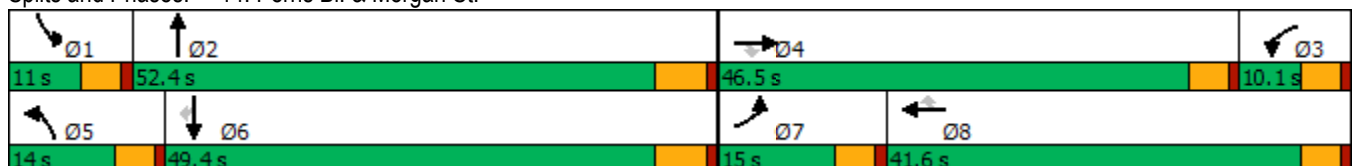
Timings  
14: Perris Bl. & Morgan St.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	38	16	21	17	27	10	36	1144	30	633	105	
Future Volume (vph)	38	16	21	17	27	10	36	1144	30	633	105	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	
Protected Phases	7	4		3	8		5	2	1	6		
Permitted Phases			4			8					6	
Detector Phase	7	4	4	3	8	8	5	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8	
Total Split (s)	15.0	46.5	46.5	10.1	41.6	41.6	14.0	52.4	11.0	49.4	49.4	
Total Split (%)	12.5%	38.8%	38.8%	8.4%	34.7%	34.7%	11.7%	43.7%	9.2%	41.2%	41.2%	
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.6	5.8	4.6	5.8	5.8	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	9.4	20.5	20.5	9.8	19.2	19.2	9.3	38.8	8.8	38.3	38.3	
Actuated g/C Ratio	0.15	0.34	0.34	0.16	0.32	0.32	0.15	0.64	0.14	0.63	0.63	
v/c Ratio	0.15	0.01	0.04	0.07	0.05	0.02	0.15	0.40	0.13	0.32	0.11	
Control Delay	39.8	28.5	0.1	38.2	28.0	0.1	40.3	15.9	42.3	16.4	3.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	39.8	28.5	0.1	38.2	28.0	0.1	40.3	15.9	42.3	16.4	3.3	
LOS	D	C	A	D	C	A	D	B	D	B	A	
Approach Delay		26.2			26.2			16.6		15.6		
Approach LOS		C			C			B		B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 60.7  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.40  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 47.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	16	21	17	27	10	36	1144	19	30	633	105
Future Volume (veh/h)	38	16	21	17	27	10	36	1144	19	30	633	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	43	18	8	19	31	9	41	1300	20	34	719	108
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	542	242	51	255	216	77	2196	34	67	1486	649
Arrive On Green	0.04	0.15	0.15	0.03	0.13	0.13	0.04	0.42	0.42	0.04	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5262	81	1810	3610	1577
Grp Volume(v), veh/h	43	18	8	19	31	9	41	854	466	34	719	108
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1885	1810	1805	1577
Q Serve(g_s), s	1.2	0.2	0.2	0.6	0.8	0.3	1.2	10.2	10.2	1.0	7.8	2.3
Cycle Q Clear(g_c), s	1.2	0.2	0.2	0.6	0.8	0.3	1.2	10.2	10.2	1.0	7.8	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	80	542	242	51	255	216	77	1443	787	67	1486	649
V/C Ratio(X)	0.54	0.03	0.03	0.37	0.12	0.04	0.53	0.59	0.59	0.51	0.48	0.17
Avail Cap(c_a), veh/h	353	2834	1264	186	1317	1116	319	3019	1646	217	2949	1288
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	19.4	10.8	25.5	20.3	20.1	25.0	12.0	12.0	25.2	11.5	9.9
Incr Delay (d2), s/veh	2.1	0.0	0.1	1.7	0.2	0.1	2.1	0.4	0.7	2.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.1	0.2	0.3	0.1	0.5	3.0	3.3	0.4	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	19.4	10.9	27.1	20.5	20.2	27.1	12.4	12.7	27.4	11.8	10.0
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		69			59			1361			861	
Approach Delay, s/veh		23.2			22.6			13.0			12.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	28.1	6.1	12.6	6.9	27.8	7.0	11.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	6.4	46.6	5.5	41.9	9.4	43.6	10.4	37.0				
Max Q Clear Time (g_c+I1), s	3.0	12.2	2.6	2.2	3.2	9.8	3.2	2.8				
Green Ext Time (p_c), s	0.0	10.1	0.0	0.1	0.0	5.4	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.2								
HCM 6th LOS				B								

Timings  
15: Perris Bl. & Rider St.

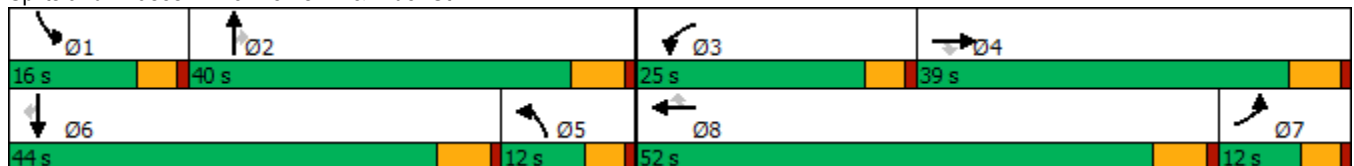
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	159	19	184	323	346	49	874	123	158	450	47
Future Volume (vph)	41	159	19	184	323	346	49	874	123	158	450	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	12.0	39.0	39.0	25.0	52.0	52.0	12.0	40.0	40.0	16.0	44.0	44.0
Total Split (%)	10.0%	32.5%	32.5%	20.8%	43.3%	43.3%	10.0%	33.3%	33.3%	13.3%	36.7%	36.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	13.7	13.7	13.0	23.0	23.0	13.2	22.0	22.0	11.6	25.3	25.3
Actuated g/C Ratio	0.10	0.17	0.17	0.16	0.28	0.28	0.16	0.27	0.27	0.14	0.31	0.31
v/c Ratio	0.22	0.27	0.05	0.65	0.32	0.50	0.17	0.64	0.23	0.63	0.29	0.08
Control Delay	40.8	32.3	0.2	46.4	27.1	6.4	34.6	29.6	3.2	49.8	27.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	32.3	0.2	46.4	27.1	6.4	34.6	29.6	3.2	49.8	27.0	0.2
LOS	D	C	A	D	C	A	C	C	A	D	C	A
Approach Delay		31.1			22.9			26.7			30.6	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 82.2  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 26.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 61.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

























Splits and Phases: 15: Perris Bl. & Rider St.



HCM 6th Signalized Intersection Summary  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	159	19	184	323	346	49	874	123	158	450	47
Future Volume (veh/h)	41	159	19	184	323	346	49	874	123	158	450	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	161	7	186	326	214	49	883	92	160	455	32
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	192	565	252	233	580	259	377	1439	441	202	841	261
Arrive On Green	0.11	0.16	0.16	0.13	0.16	0.16	0.21	0.28	0.28	0.11	0.16	0.16
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	5187	1588	1810	5187	1610
Grp Volume(v), veh/h	41	161	7	186	326	214	49	883	92	160	455	32
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1729	1588	1810	1729	1610
Q Serve(g_s), s	1.3	2.5	0.1	6.4	5.3	5.5	1.4	9.5	2.8	5.5	5.1	1.1
Cycle Q Clear(g_c), s	1.3	2.5	0.1	6.4	5.3	5.5	1.4	9.5	2.8	5.5	5.1	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	565	252	233	580	259	377	1439	441	202	841	261
V/C Ratio(X)	0.21	0.28	0.03	0.80	0.56	0.83	0.13	0.61	0.21	0.79	0.54	0.12
Avail Cap(c_a), veh/h	210	1876	837	578	2610	1164	377	2776	850	323	3101	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	23.8	6.6	27.0	24.7	11.8	20.6	20.1	17.7	27.7	24.6	22.9
Incr Delay (d2), s/veh	0.2	0.3	0.0	2.4	0.9	6.6	0.1	0.4	0.2	2.7	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.1	2.6	2.1	3.1	0.5	3.3	0.9	2.3	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	24.1	6.7	29.4	25.6	18.4	20.6	20.5	17.9	30.3	25.1	23.1
LnGrp LOS	C	C	A	C	C	B	C	C	B	C	C	C
Approach Vol, veh/h		209			726			1024			647	
Approach Delay, s/veh		23.9			24.4			20.3			26.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	23.5	12.8	15.8	19.1	16.2	12.6	16.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	11.4	34.2	20.4	33.2	7.4	* 38	7.4	* 46				
Max Q Clear Time (g_c+I1), s	7.5	11.5	8.4	4.5	3.4	7.1	3.3	7.5				
Green Ext Time (p_c), s	0.1	6.2	0.2	0.9	0.0	3.0	0.0	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.



Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	44	307	426	6	2		
Future Volume (vph)	44	307	426	6	2		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	9.6	31.8	36.0	78.6	42.6	9.6	31.8
Total Split (%)	8.0%	26.5%	30.0%	65.5%	35.5%	8%	27%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.8	4.6	5.4	5.4		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effect Green (s)	9.2	14.1	29.8	33.2	14.4		
Actuated g/C Ratio	0.15	0.23	0.49	0.55	0.24		
v/c Ratio	0.19	0.30	0.55	0.00	0.01		
Control Delay	32.6	0.6	20.2	7.0	0.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.6	0.6	20.2	7.0	0.0		
LOS	C	A	C	A	A		
Approach Delay				20.0			
Approach LOS				B			

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 60.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 47.9%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	0	307	0	0	0	426	6	0	0	2	11
Future Volume (veh/h)	44	0	307	0	0	0	426	6	0	0	2	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	51	0	340	0	0	0	495	7	0	0	2	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	96	501	425	4	199	0	575	1725	0	0	97	86
Arrive On Green	0.05	0.00	0.26	0.00	0.00	0.00	0.32	0.48	0.00	0.00	0.05	0.05
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	51	0	340	0	0	0	495	7	0	0	2	13
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	1.2	0.0	8.5	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	1.2	0.0	8.5	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	96	501	425	4	199	0	575	1725	0	0	97	86
V/C Ratio(X)	0.53	0.00	0.80	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.02	0.15
Avail Cap(c_a), veh/h	209	1140	966	209	1193	0	1311	6099	0	0	1550	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	0.0	14.9	0.0	0.0	0.0	13.9	5.9	0.0	0.0	19.4	19.6
Incr Delay (d2), s/veh	1.7	0.0	3.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.1	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	18.4	0.0	0.0	0.0	15.4	5.9	0.0	0.0	19.5	20.4
LnGrp LOS	C	A	B	A	A	A	B	A	A	A	B	C
Approach Vol, veh/h		391			0			502			15	
Approach Delay, s/veh		18.9			0.0			15.3			20.2	
Approach LOS		B						B			C	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		26.1	0.0	17.2	18.4	7.7	6.9	10.3				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		73.2	5.0	26.0	31.4	37.2	5.0	* 27				
Max Q Clear Time (g_c+I1), s		2.0	0.0	10.5	13.1	2.3	3.2	0.0				
Green Ext Time (p_c), s		0.0	0.0	1.0	0.7	0.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.9									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	38	106	385	137	78
Future Vol, veh/h	21	38	106	385	137	78
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	24	44	122	443	157	90
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	2	2	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	9.2	9.1	9.4
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	37%
Vol Right, %	0%	0%	0%	0%	100%	0%	63%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	106	193	193	21	38	91	124
LT Vol	106	0	0	21	0	0	0
Through Vol	0	193	193	0	0	91	46
RT Vol	0	0	0	0	38	0	78
Lane Flow Rate	122	221	221	24	44	105	142
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.194	0.322	0.217	0.046	0.069	0.165	0.205
Departure Headway (Hd)	5.733	5.231	3.524	6.915	5.709	5.647	5.204
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	624	684	1009	521	631	630	684
Service Time	3.487	2.985	1.277	4.615	3.409	3.426	2.983
HCM Lane V/C Ratio	0.196	0.323	0.219	0.046	0.07	0.167	0.208
HCM Control Delay	9.9	10.5	7.3	9.9	8.8	9.6	9.3
HCM Lane LOS	A	B	A	A	A	A	A
HCM 95th-tile Q	0.7	1.4	0.8	0.1	0.2	0.6	0.8

Timings  
18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

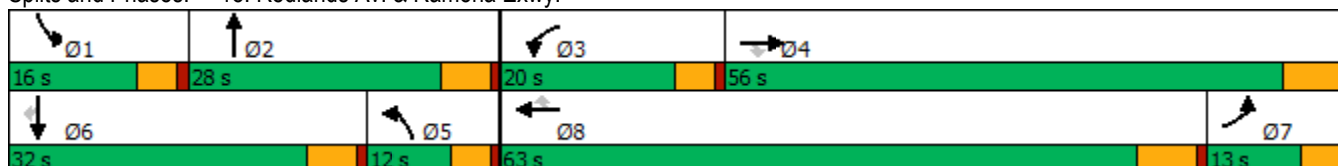


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↗	↘	↗	↘	↑	↗
Traffic Volume (vph)	77	893	60	113	1841	396	60	31	71	88	50
Future Volume (vph)	77	893	60	113	1841	396	60	31	71	88	50
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	13.0	56.0	56.0	20.0	63.0	63.0	12.0	28.0	16.0	32.0	32.0
Total Split (%)	10.8%	46.7%	46.7%	16.7%	52.5%	52.5%	10.0%	23.3%	13.3%	26.7%	26.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.9	43.8	43.8	10.9	50.6	50.6	8.1	12.2	8.5	12.7	12.7
Actuated g/C Ratio	0.08	0.46	0.46	0.12	0.53	0.53	0.09	0.13	0.09	0.13	0.13
v/c Ratio	0.53	0.39	0.08	0.57	0.69	0.40	0.41	0.46	0.46	0.36	0.14
Control Delay	61.8	17.5	0.2	56.2	19.4	3.5	55.4	19.1	56.2	48.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	17.5	0.2	56.2	19.4	3.5	55.4	19.1	56.2	48.0	0.8
LOS	E	B	A	E	B	A	E	B	E	D	A
Approach Delay		19.8			18.5			30.0		39.5	
Approach LOS		B			B			C		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.7  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 20.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	893	60	113	1841	396	60	31	110	71	88	50
Future Volume (veh/h)	77	893	60	113	1841	396	60	31	110	71	88	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	80	930	59	118	1918	346	62	32	51	74	92	49
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	103	2649	822	150	2687	834	81	76	121	96	218	184
Arrive On Green	0.06	0.51	0.51	0.08	0.52	0.52	0.04	0.12	0.12	0.05	0.11	0.11
Sat Flow, veh/h	1810	5187	1610	1810	5187	1610	1810	660	1051	1810	1900	1610
Grp Volume(v), veh/h	80	930	59	118	1918	346	62	0	83	74	92	49
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1610	1810	0	1711	1810	1900	1610
Q Serve(g_s), s	3.8	9.3	1.0	5.6	24.7	7.3	3.0	0.0	3.9	3.5	3.9	2.4
Cycle Q Clear(g_c), s	3.8	9.3	1.0	5.6	24.7	7.3	3.0	0.0	3.9	3.5	3.9	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	103	2649	822	150	2687	834	81	0	197	96	218	184
V/C Ratio(X)	0.77	0.35	0.07	0.79	0.71	0.41	0.77	0.00	0.42	0.77	0.42	0.27
Avail Cap(c_a), veh/h	174	2960	919	319	3376	1048	153	0	443	236	579	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	12.7	4.4	39.3	16.1	5.2	41.2	0.0	35.9	40.8	36.0	35.3
Incr Delay (d2), s/veh	4.6	0.1	0.0	3.5	0.5	0.3	5.7	0.0	1.4	4.8	1.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.1	0.5	2.5	8.1	3.1	1.4	0.0	1.7	1.6	1.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	12.8	4.4	42.7	16.6	5.5	46.9	0.0	37.3	45.6	37.3	36.1
LnGrp LOS	D	B	A	D	B	A	D	A	D	D	D	D
Approach Vol, veh/h		1069			2382			145			215	
Approach Delay, s/veh		14.8			16.3			41.4			39.9	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	15.5	11.8	50.8	9.3	15.4	11.2	51.4				
Change Period (Y+Rc), s	4.6	5.4	4.6	6.2	5.4	* 5.4	6.2	* 6.2				
Max Green Setting (Gmax), s	11.4	22.6	15.4	49.8	7.4	* 27	8.4	* 57				
Max Q Clear Time (g_c+I1), s	5.5	5.9	7.6	11.3	5.0	5.9	5.8	26.7				
Green Ext Time (p_c), s	0.0	0.3	0.1	6.9	0.0	0.5	0.0	18.5				

Intersection Summary

HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	15	10	1	4	2	3	63	0	20	134	49
Future Vol, veh/h	34	15	10	1	4	2	3	63	0	20	134	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	37	16	11	1	4	2	3	68	0	22	146	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	294	291	173	304	317	68	199	0	0	68	0	0
Stage 1	217	217	-	74	74	-	-	-	-	-	-	-
Stage 2	77	74	-	230	243	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	662	623	876	652	602	1001	1385	-	-	1546	-	-
Stage 1	790	727	-	940	837	-	-	-	-	-	-	-
Stage 2	937	837	-	777	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	649	613	876	623	592	1001	1385	-	-	1546	-	-
Mov Cap-2 Maneuver	649	613	-	623	592	-	-	-	-	-	-	-
Stage 1	788	717	-	938	835	-	-	-	-	-	-	-
Stage 2	928	835	-	739	698	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.7		10.4		0.3		0.7	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1385	-	-	649	697	676	1546	-	-
HCM Lane V/C Ratio	0.002	-	-	0.057	0.039	0.011	0.014	-	-
HCM Control Delay (s)	7.6	-	-	10.9	10.4	10.4	7.4	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	0	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗			↖
Traffic Vol, veh/h	0	3	63	0	0	145
Future Vol, veh/h	0	3	63	0	0	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	68	0	0	158

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	34	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	1038	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	1038	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 1038	-
HCM Lane V/C Ratio	-	- 0.003	-
HCM Control Delay (s)	-	- 8.5	-
HCM Lane LOS	-	- A	-
HCM 95th %tile Q(veh)	-	- 0	-

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	6	0	10	0	0	6	0	51	3	16	110	19
Future Vol, veh/h	6	0	10	0	0	6	0	51	3	16	110	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	7	0	11	0	0	7	0	55	3	17	120	21

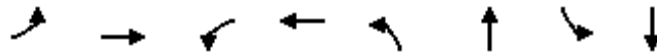
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	193	223	131	227	232	29	-	0	0	58	0	0
Stage 1	165	165	-	57	57	-	-	-	-	-	-	-
Stage 2	28	58	-	170	175	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.2	7.3	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	763	679	924	723	672	1046	0	-	-	1559	-	-
Stage 1	842	766	-	954	851	-	0	-	-	-	-	-
Stage 2	991	851	-	837	758	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	752	672	924	709	665	1046	-	-	-	1559	-	-
Mov Cap-2 Maneuver	752	672	-	709	665	-	-	-	-	-	-	-
Stage 1	842	758	-	954	851	-	-	-	-	-	-	-
Stage 2	985	851	-	818	750	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	9.3		8.5			0			0.8		
HCM LOS	A		A								

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	851	1046	1559	-	-
HCM Lane V/C Ratio	-	-	0.02	0.006	0.011	-	-
HCM Control Delay (s)	-	-	9.3	8.5	7.3	-	-
HCM Lane LOS	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-	-

Timings  
22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)  
12/10/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↖	↗	↖	↗
Traffic Volume (vph)	2	0	2	0	10	40	47	67
Future Volume (vph)	2	0	2	0	10	40	47	67
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	21.6	21.6	21.6	21.6	9.6	22.4	9.6	22.4
Total Split (s)	27.0	27.0	27.0	27.0	9.6	32.0	31.0	53.4
Total Split (%)	30.0%	30.0%	30.0%	30.0%	10.7%	35.6%	34.4%	59.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6		4.6	4.6	5.4	4.6	5.4
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		10.1		10.1	5.1	54.8	6.5	62.7
Actuated g/C Ratio		0.15		0.15	0.08	0.81	0.10	0.92
v/c Ratio		0.01		0.04	0.08	0.02	0.30	0.02
Control Delay		26.0		0.2	31.6	4.2	33.0	2.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		26.0		0.2	31.6	4.2	33.0	2.2
LOS		C		A	C	A	C	A
Approach Delay		26.0		0.2		9.5		14.2
Approach LOS		C		A		A		B

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 67.9  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.30  
 Intersection Signal Delay: 12.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 25.9%  
 ICU Level of Service A  
 Analysis Period (min) 15



















Splits and Phases: 22: Redlands Av. & Driveway 2



HCM 6th Signalized Intersection Summary  
 22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	2	0	12	10	40	3	47	67	6
Future Volume (veh/h)	2	0	0	2	0	12	10	40	3	47	67	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	0	0	2	0	13	11	43	3	51	73	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	170	0	0	69	1	56	25	2374	164	83	2417	229
Arrive On Green	0.04	0.00	0.00	0.04	0.00	0.04	0.01	0.69	0.69	0.05	0.73	0.73
Sat Flow, veh/h	1508	0	0	179	34	1382	1810	3426	236	1810	3333	315
Grp Volume(v), veh/h	2	0	0	15	0	0	11	22	24	51	39	41
Grp Sat Flow(s),veh/h/ln	1508	0	0	1594	0	0	1810	1805	1857	1810	1805	1843
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.3	0.3	1.8	0.4	0.4
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.6	0.0	0.0	0.4	0.3	0.3	1.8	0.4	0.4
Prop In Lane	1.00		0.00	0.13		0.87	1.00		0.13	1.00		0.17
Lane Grp Cap(c), veh/h	170	0	0	126	0	0	25	1251	1287	83	1309	1336
V/C Ratio(X)	0.01	0.00	0.00	0.12	0.00	0.00	0.44	0.02	0.02	0.61	0.03	0.03
Avail Cap(c_a), veh/h	594	0	0	598	0	0	137	1251	1287	722	1309	1336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	0.0	0.0	30.8	0.0	0.0	32.4	3.2	3.2	31.0	2.6	2.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	4.4	0.0	0.0	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.1	0.8	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	0.0	31.2	0.0	0.0	36.8	3.2	3.2	33.7	2.6	2.6
LnGrp LOS	C	A	A	C	A	A	D	A	A	C	A	A
Approach Vol, veh/h		2			15			57			131	
Approach Delay, s/veh		30.5			31.2			9.7			14.7	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	51.3		7.3	5.5	53.4		7.3				
Change Period (Y+Rc), s	4.6	5.4		4.6	4.6	5.4		4.6				
Max Green Setting (Gmax), s	26.4	26.6		22.4	5.0	48.0		22.4				
Max Q Clear Time (g_c+I1), s	3.8	2.3		2.1	2.4	2.4		2.6				
Green Ext Time (p_c), s	0.0	0.1		0.0	0.0	0.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.7								
HCM 6th LOS				B								



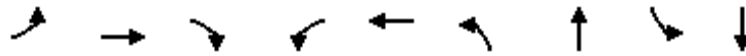
Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	1	0	0	1	0	51	3	0	65	4
Future Vol, veh/h	0	0	1	0	0	1	0	51	3	0	65	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	1	0	0	1	0	55	3	0	71	4

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	-	-	38	-	-	29	-	0
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-
Pot Cap-1 Maneuver	0	0	1032	0	0	1046	0	-
Stage 1	0	0	-	0	0	-	0	-
Stage 2	0	0	-	0	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1032	-	-	1046	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	8.4	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	1032	1046	-
HCM Lane V/C Ratio	-	-	0.001	0.001	-
HCM Control Delay (s)	-	-	8.5	8.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Timings  
24: Redlands Av. & Rider St.

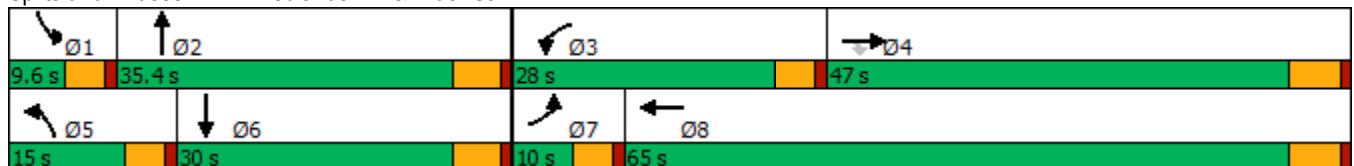


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑↑	↘	↗	↘	↑↑
Traffic Volume (vph)	31	465	11	171	796	49	19	15	1
Future Volume (vph)	31	465	11	171	796	49	19	15	1
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	9.6	27.4	9.6	27.4
Total Split (s)	10.0	47.0	47.0	28.0	65.0	15.0	35.4	9.6	30.0
Total Split (%)	8.3%	39.2%	39.2%	23.3%	54.2%	12.5%	29.5%	8.0%	25.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	5.3	46.7	46.7	14.1	59.9	7.4	16.3	5.1	10.1
Actuated g/C Ratio	0.05	0.48	0.48	0.15	0.62	0.08	0.17	0.05	0.10
v/c Ratio	0.34	0.55	0.01	0.71	0.39	0.38	0.53	0.17	0.11
Control Delay	56.9	22.3	0.0	55.0	11.2	52.9	12.1	51.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	22.3	0.0	55.0	11.2	52.9	12.1	51.8	0.4
LOS	E	C	A	D	B	D	B	D	A
Approach Delay		24.0			18.9		19.4		12.0
Approach LOS		C			B		B		B

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 96.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	465	11	171	796	4	49	19	204	15	1	50
Future Volume (veh/h)	31	465	11	171	796	4	49	19	204	15	1	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	505	12	186	865	4	53	21	222	16	1	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	925	784	219	2130	10	69	25	260	32	279	249
Arrive On Green	0.03	0.49	0.49	0.12	0.58	0.58	0.04	0.17	0.17	0.02	0.15	0.15
Sat Flow, veh/h	1810	1900	1610	1810	3685	17	1810	141	1491	1810	1805	1610
Grp Volume(v), veh/h	34	505	12	186	424	445	53	0	243	16	1	54
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1897	1810	0	1632	1810	1805	1610
Q Serve(g_s), s	1.9	19.0	0.4	10.3	13.3	13.3	3.0	0.0	14.8	0.9	0.0	3.0
Cycle Q Clear(g_c), s	1.9	19.0	0.4	10.3	13.3	13.3	3.0	0.0	14.8	0.9	0.0	3.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.91	1.00		1.00
Lane Grp Cap(c), veh/h	55	925	784	219	1043	1096	69	0	285	32	279	249
V/C Ratio(X)	0.62	0.55	0.02	0.85	0.41	0.41	0.77	0.00	0.85	0.50	0.00	0.22
Avail Cap(c_a), veh/h	95	925	784	413	1043	1096	184	0	478	88	434	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	18.4	13.6	44.1	11.9	11.9	48.8	0.0	41.0	49.8	36.6	37.9
Incr Delay (d2), s/veh	4.2	2.3	0.0	3.5	1.2	1.1	6.6	0.0	7.5	4.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.2	0.1	4.7	5.0	5.3	1.4	0.0	6.3	0.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	20.7	13.6	47.6	13.1	13.0	55.4	0.0	48.5	54.1	36.6	38.3
LnGrp LOS	D	C	B	D	B	B	E	A	D	D	D	D
Approach Vol, veh/h		551			1055			296				71
Approach Delay, s/veh		22.5			19.1			49.7				41.9
Approach LOS		C			B			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	23.3	17.0	55.7	8.5	21.2	7.7	65.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	5.0	30.0	23.4	41.2	10.4	24.6	5.4	59.2				
Max Q Clear Time (g_c+I1), s	2.9	16.8	12.3	21.0	5.0	5.0	3.9	15.3				
Green Ext Time (p_c), s	0.0	1.1	0.2	2.8	0.0	0.2	0.0	5.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				25.5								
HCM 6th LOS				C								

Timings  
25: Wilson Av./Driveway 4 & Rider St.

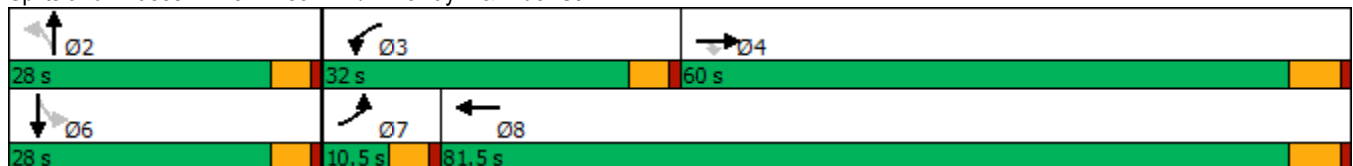


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↑	↗	↖	↕		↕	↕
Traffic Volume (vph)	21	632	19	220	914	33	0	0
Future Volume (vph)	21	632	19	220	914	33	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	26.6	26.6	26.6
Total Split (s)	10.5	60.0	60.0	32.0	81.5	28.0	28.0	28.0
Total Split (%)	8.8%	50.0%	50.0%	26.7%	67.9%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.5	58.4	58.4	19.0	76.1		12.0	12.0
Actuated g/C Ratio	0.05	0.56	0.56	0.18	0.73		0.11	0.11
v/c Ratio	0.26	0.70	0.02	0.79	0.41		0.69	0.02
Control Delay	57.4	23.2	0.1	58.4	6.9		21.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	57.4	23.2	0.1	58.4	6.9		21.7	0.2
LOS	E	C	A	E	A		C	A
Approach Delay		23.6			16.9		21.7	0.2
Approach LOS		C			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 104.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 19.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 77.6%  
 ICU Level of Service D  
 Analysis Period (min) 15






















Splits and Phases: 25: Wilson Av./Driveway 4 & Rider St.



HCM 6th Signalized Intersection Summary  
 25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	632	19	220	914	0	33	0	181	0	0	6
Future Volume (veh/h)	21	632	19	220	914	0	33	0	181	0	0	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	25	744	22	259	1075	0	39	0	213	0	0	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	43	1010	856	290	2410	0	68	12	238	0	0	284
Arrive On Green	0.02	0.53	0.53	0.16	0.67	0.00	0.18	0.00	0.18	0.00	0.00	0.18
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	177	70	1351	0	0	1610
Grp Volume(v), veh/h	25	744	22	259	1075	0	252	0	0	0	0	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1599	0	0	0	0	1610
Q Serve(g_s), s	1.6	34.2	0.7	15.9	16.0	0.0	11.9	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.6	34.2	0.7	15.9	16.0	0.0	17.4	0.0	0.0	0.0	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.00	0.15		0.85	0.00		1.00
Lane Grp Cap(c), veh/h	43	1010	856	290	2410	0	318	0	0	0	0	284
V/C Ratio(X)	0.57	0.74	0.03	0.89	0.45	0.00	0.79	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	94	1010	856	437	2410	0	366	0	0	0	0	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	54.8	20.5	12.6	46.7	8.9	0.0	45.6	0.0	0.0	0.0	0.0	38.6
Incr Delay (d2), s/veh	4.4	4.8	0.1	10.7	0.6	0.0	9.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	15.0	0.3	7.8	5.5	0.0	7.8	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	25.3	12.7	57.4	9.5	0.0	55.5	0.0	0.0	0.0	0.0	38.7
LnGrp LOS	E	C	B	E	A	A	E	A	A	A	A	D
Approach Vol, veh/h		791			1334			252				7
Approach Delay, s/veh		26.0			18.8			55.5				38.7
Approach LOS		C			B			E				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.6	22.8	66.1		24.6	7.3	81.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	5.9	75.7				
Max Q Clear Time (g_c+I1), s		19.4	17.9	36.2		2.4	3.6	18.0				
Green Ext Time (p_c), s		0.5	0.2	4.6		0.0	0.0	9.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.1									
HCM 6th LOS			C									

Timings

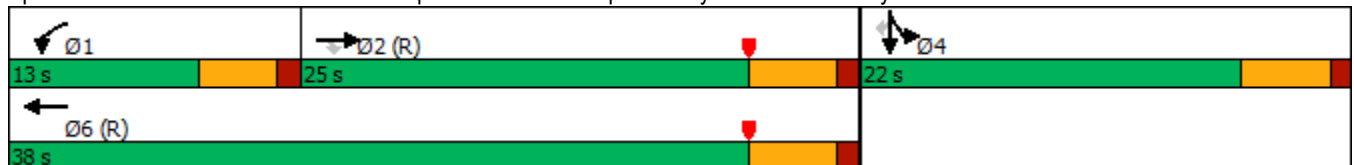


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	557	71	514	225	7	245
Future Volume (vph)	557	71	514	225	7	245
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	10.0	10.0
Total Split (s)	25.0	25.0	13.0	38.0	22.0	22.0
Total Split (%)	41.7%	41.7%	21.7%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	20.0	20.0	8.5	33.0	17.0	17.0
Actuated g/C Ratio	0.33	0.33	0.14	0.55	0.28	0.28
v/c Ratio	0.51	0.13	2.24	0.13	1.35	0.42
Control Delay	18.0	2.1	585.0	7.5	193.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.1	585.0	7.5	193.4	4.9
LOS	B	A	F	A	F	A
Approach Delay	16.2			409.2	140.2	
Approach LOS	B			F	F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.24  
 Intersection Signal Delay: 194.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 145.8%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

1: I-215 SB On Ramp/I-215 SB Off Ramp & Harley Knox Blvd./Harley Knox. Blvd.

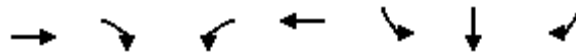
09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑						↖	↗
Traffic Volume (veh/h)	0	557	71	514	225	0	0	0	0	616	7	245
Future Volume (veh/h)	0	557	71	514	225	0	0	0	0	616	7	245
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	619	76	571	250	0				684	8	194
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1203	537	256	1986	0				507	6	456
Arrive On Green	0.00	0.33	0.33	0.24	0.92	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1790	21	1610
Grp Volume(v), veh/h	0	619	76	571	250	0				692	0	194
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1811	0	1610
Q Serve(g_s), s	0.0	8.3	2.0	8.5	0.4	0.0				17.0	0.0	5.9
Cycle Q Clear(g_c), s	0.0	8.3	2.0	8.5	0.4	0.0				17.0	0.0	5.9
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1203	537	256	1986	0				513	0	456
V/C Ratio(X)	0.00	0.51	0.14	2.23	0.13	0.00				1.35	0.00	0.43
Avail Cap(c_a), veh/h	0	1203	537	256	1986	0				513	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.78	0.78	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.1	14.0	22.9	1.1	0.0				21.5	0.0	17.5
Incr Delay (d2), s/veh	0.0	1.6	0.6	562.1	0.1	0.0				169.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	0.7	42.8	0.1	0.0				30.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.7	14.5	585.0	1.2	0.0				191.1	0.0	18.1
LnGrp LOS	A	B	B	F	A	A				F	A	B
Approach Vol, veh/h		695			821						886	
Approach Delay, s/veh		17.3			407.2						153.2	
Approach LOS		B			F						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.0	25.0		22.0		38.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	8.5	20.0		17.0		33.0						
Max Q Clear Time (g_c+I1), s	10.5	10.3		19.0		2.4						
Green Ext Time (p_c), s	0.0	1.9		0.0		0.9						
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				200.7								
HCM 6th LOS				F								

Timings

2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↖	↘
Traffic Volume (vph)	1617	575	523	1151	1012	3	410
Future Volume (vph)	1617	575	523	1151	1012	3	410
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	48.0	48.0	23.0	71.0	39.0	39.0	39.0
Total Split (%)	43.6%	43.6%	20.9%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	42.0	42.0	18.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.38	0.38	0.17	0.59	0.30	0.30	0.30
v/c Ratio	1.20	0.68	1.76	0.55	0.99	0.99	0.77
Control Delay	128.1	13.3	375.0	3.3	75.7	77.1	38.8
Queue Delay	0.1	0.0	0.0	0.4	64.2	63.3	0.0
Total Delay	128.2	13.3	375.0	3.7	139.9	140.4	38.8
LOS	F	B	F	A	F	F	D
Approach Delay	98.1			119.8		111.0	
Approach LOS	F			F		F	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.76  
 Intersection Signal Delay: 108.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 170.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 2: I-215 SB Ramps & Ramona Exwy.

















HCM 6th Signalized Intersection Summary  
 2: I-215 SB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑					↘	↙	↗
Traffic Volume (veh/h)	0	1617	575	523	1151	0	0	0	0	1012	3	410
Future Volume (veh/h)	0	1617	575	523	1151	0	0	0	0	1012	3	410
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1650	522	534	1174	0				1035	0	339
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1378	615	304	2133	0				1102	0	490
Arrive On Green	0.00	0.38	0.38	0.11	0.40	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3705	1610	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	1650	522	534	1174	0				1035	0	339
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	42.0	32.6	18.5	27.6	0.0				30.6	0.0	20.4
Cycle Q Clear(g_c), s	0.0	42.0	32.6	18.5	27.6	0.0				30.6	0.0	20.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1378	615	304	2133	0				1102	0	490
V/C Ratio(X)	0.00	1.20	0.85	1.75	0.55	0.00				0.94	0.00	0.69
Avail Cap(c_a), veh/h	0	1378	615	304	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.49	0.49	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	34.0	31.1	48.8	21.9	0.0				37.3	0.0	33.7
Incr Delay (d2), s/veh	0.0	96.0	13.7	346.2	0.5	0.0				15.9	0.0	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	35.2	14.0	37.7	12.1	0.0				15.2	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	130.0	44.8	395.0	22.4	0.0				53.2	0.0	41.5
LnGrp LOS	A	F	D	F	C	A				D	A	D
Approach Vol, veh/h		2172			1708						1374	
Approach Delay, s/veh		109.5			138.9						50.3	
Approach LOS		F			F						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.0	48.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	18.5	42.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	20.5	44.0		32.6		29.6						
Green Ext Time (p_c), s	0.0	0.0		0.5		5.5						

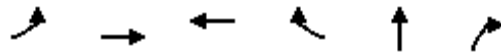
Intersection Summary

HCM 6th Ctrl Delay	103.6
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Timings

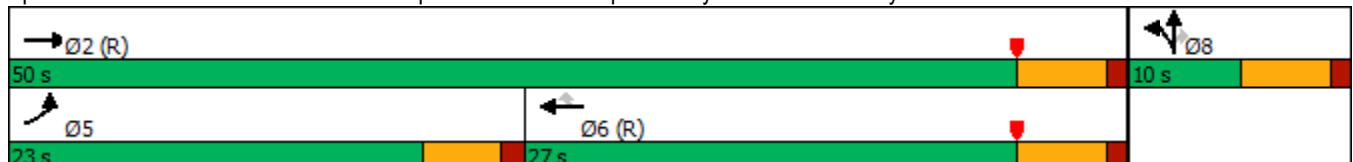


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↖	↗
Traffic Volume (vph)	400	772	692	1093	4	329
Future Volume (vph)	400	772	692	1093	4	329
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	10.0	10.0
Total Split (s)	23.0	50.0	27.0	27.0	10.0	10.0
Total Split (%)	38.3%	83.3%	45.0%	45.0%	16.7%	16.7%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max
Act Effct Green (s)	17.6	45.0	22.9	22.9	5.0	5.0
Actuated g/C Ratio	0.29	0.75	0.38	0.38	0.08	0.08
v/c Ratio	0.89	0.34	0.59	1.57	0.40	1.14
Control Delay	25.2	0.1	17.3	280.2	34.3	109.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	25.2	0.3	17.3	280.2	34.3	109.7
LOS	C	A	B	F	C	F
Approach Delay		8.8	178.3		99.6	
Approach LOS		A	F		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.57  
 Intersection Signal Delay: 109.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 145.8%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

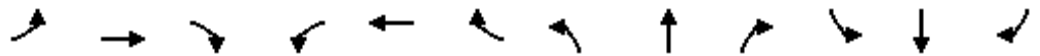


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	400	772	0	0	692	1093	47	4	329	0	0	0
Future Volume (veh/h)	400	772	0	0	692	1093	47	4	329	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	471	908	0	0	814	1235	55	5	193			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	524	2708	0	0	1392	621	139	13	134			
Arrive On Green	0.19	0.50	0.00	0.00	0.39	0.39	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1665	151	1610			
Grp Volume(v), veh/h	471	908	0	0	814	1235	60	0	193			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1817	0	1610			
Q Serve(g_s), s	15.2	9.0	0.0	0.0	10.7	23.1	1.9	0.0	5.0			
Cycle Q Clear(g_c), s	15.2	9.0	0.0	0.0	10.7	23.1	1.9	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	524	2708	0	0	1392	621	151	0	134			
V/C Ratio(X)	0.90	0.34	0.00	0.00	0.58	1.99	0.40	0.00	1.44			
Avail Cap(c_a), veh/h	558	2708	0	0	1392	621	151	0	134			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.00	0.00	0.59	0.59	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.3	6.0	0.0	0.0	14.6	18.4	26.1	0.0	27.5			
Incr Delay (d2), s/veh	14.1	0.3	0.0	0.0	1.1	448.8	7.6	0.0	234.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.3	1.2	0.0	0.0	3.7	84.1	1.0	0.0	10.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	6.3	0.0	0.0	15.7	467.2	33.7	0.0	261.8			
LnGrp LOS	D	A	A	A	B	F	C	A	F			
Approach Vol, veh/h		1379			2049			253				
Approach Delay, s/veh		16.9			287.9			207.7				
Approach LOS		B			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		50.0			21.9	28.1		10.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		45.0			18.5	22.0		5.0				
Max Q Clear Time (g_c+I1), s		11.0			17.2	25.1		7.0				
Green Ext Time (p_c), s		4.1			0.1	0.0		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					180.8							
HCM 6th LOS					F							

Timings  
4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷↷	↷↷	↷	↶	↷	↷
Traffic Volume (vph)	682	1947	1176	959	497	8	483
Future Volume (vph)	682	1947	1176	959	497	8	483
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	22.0	70.0	48.0	48.0	40.0	40.0	40.0
Total Split (%)	20.0%	63.6%	43.6%	43.6%	36.4%	36.4%	36.4%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	19.2	65.7	42.0	42.0	32.8	32.8	32.8
Actuated g/C Ratio	0.17	0.60	0.38	0.38	0.30	0.30	0.30
v/c Ratio	2.22	0.92	0.87	0.94	0.51	0.50	0.92
Control Delay	569.6	32.6	39.8	27.2	35.4	35.2	56.2
Queue Delay	0.0	46.8	0.0	0.0	0.0	0.0	0.0
Total Delay	569.6	79.4	39.8	27.2	35.4	35.2	56.2
LOS	F	E	D	C	D	D	E
Approach Delay		206.6	34.1			45.5	
Approach LOS		F	C			D	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.22  
 Intersection Signal Delay: 114.9  
 Intersection LOS: F  
 Intersection Capacity Utilization 170.9%  
 ICU Level of Service H  
 Analysis Period (min) 15






















Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	682	1947	0	0	1176	959	497	8	483	0	0	0
Future Volume (veh/h)	682	1947	0	0	1176	959	497	8	483	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	696	1987	0	0	1200	755	513	0	390			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	288	2258	0	0	1536	684	977	0	435			
Arrive On Green	0.32	1.00	0.00	0.00	0.43	0.43	0.27	0.00	0.27			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	696	1987	0	0	1200	755	513	0	390			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	17.5	0.0	0.0	0.0	31.5	46.8	13.3	0.0	25.7			
Cycle Q Clear(g_c), s	17.5	0.0	0.0	0.0	31.5	46.8	13.3	0.0	25.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	288	2258	0	0	1536	684	977	0	435			
V/C Ratio(X)	2.42	0.88	0.00	0.00	0.78	1.10	0.53	0.00	0.90			
Avail Cap(c_a), veh/h	288	2258	0	0	1536	684	1135	0	505			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.5	0.0	0.0	0.0	27.2	31.6	34.2	0.0	38.7			
Incr Delay (d2), s/veh	638.9	0.5	0.0	0.0	4.0	66.5	0.4	0.0	17.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	57.0	0.2	0.0	0.0	13.2	29.0	5.7	0.0	11.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	676.4	0.5	0.0	0.0	31.2	98.1	34.6	0.0	55.7			
LnGrp LOS	F	A	A	A	C	F	C	A	E			
Approach Vol, veh/h		2683			1955			903				
Approach Delay, s/veh		175.9			57.0			43.7				
Approach LOS		F			E			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		74.8			22.0	52.8		35.2				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		64.0			17.5	42.0		34.5				
Max Q Clear Time (g_c+I1), s		2.0			19.5	48.8		27.7				
Green Ext Time (p_c), s		14.8			0.0	0.0		2.0				

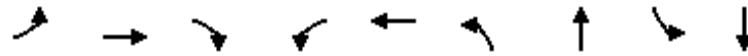
Intersection Summary

HCM 6th Ctrl Delay	112.4
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Timings  
5: Harley Knox Blvd. & Western Way



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖	↗	↖	↗
Traffic Volume (vph)	42	1102	1	2	1675	3	0	14	0
Future Volume (vph)	42	1102	1	2	1675	3	0	14	0
Turn Type	Prot	NA	Perm	Prot	NA	Split	NA	Split	NA
Protected Phases	7	4		3	8	2	2	6	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	20.8	20.8	9.6	20.8	34.6	34.6	36.6	36.6
Total Split (s)	11.0	38.8	38.8	9.6	37.4	35.0	35.0	36.6	36.6
Total Split (%)	9.2%	32.3%	32.3%	8.0%	31.2%	29.2%	29.2%	30.5%	30.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.0	36.8	36.8	5.1	32.3	10.2	10.2	10.2	10.2
Actuated g/C Ratio	0.10	0.60	0.60	0.08	0.53	0.17	0.17	0.17	0.17
v/c Ratio	0.29	0.43	0.00	0.01	0.75	0.01	0.01	0.06	0.20
Control Delay	33.8	8.7	0.0	31.0	16.2	26.7	0.0	26.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	8.7	0.0	31.0	16.2	26.7	0.0	26.9	0.6
LOS	C	A	A	C	B	C	A	C	A
Approach Delay		9.6			16.2		11.4		3.3
Approach LOS		A			B		B		A

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 61.5	
Natural Cycle: 135	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 13.1	Intersection LOS: B
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	


























Splits and Phases: 5: Harley Knox Blvd. & Western Way



HCM 6th Signalized Intersection Summary  
5: Harley Knox Blvd. & Western Way

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	42	1102	1	2	1675	11	3	0	4	14	0	120
Future Volume (veh/h)	42	1102	1	2	1675	11	3	0	4	14	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1328	1	2	2018	13	3	0	4	17	0	145
Peak Hour Factor	0.83	0.83	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.83	0.92	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	85	2679	832	5	2511	16	33	0	29	271	0	241
Arrive On Green	0.05	0.52	0.52	0.00	0.47	0.47	0.02	0.00	0.02	0.15	0.00	0.15
Sat Flow, veh/h	1810	5187	1610	1810	5318	34	1810	0	1610	1810	0	1610
Grp Volume(v), veh/h	51	1328	1	2	1312	719	3	0	4	17	0	145
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1894	1810	0	1610	1810	0	1610
Q Serve(g_s), s	1.7	10.4	0.0	0.1	20.2	20.3	0.1	0.0	0.2	0.5	0.0	5.3
Cycle Q Clear(g_c), s	1.7	10.4	0.0	0.1	20.2	20.3	0.1	0.0	0.2	0.5	0.0	5.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	2679	832	5	1633	894	33	0	29	271	0	241
V/C Ratio(X)	0.60	0.50	0.00	0.40	0.80	0.80	0.09	0.00	0.14	0.06	0.00	0.60
Avail Cap(c_a), veh/h	185	2729	847	144	1742	954	877	0	780	923	0	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	9.9	7.3	31.2	14.1	14.1	30.3	0.0	30.3	22.9	0.0	24.9
Incr Delay (d2), s/veh	2.5	0.1	0.0	18.6	2.7	4.8	1.2	0.0	2.1	0.1	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.9	0.0	0.1	6.5	7.7	0.1	0.0	0.1	0.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	10.0	7.3	49.8	16.8	18.9	31.4	0.0	32.4	23.0	0.0	27.3
LnGrp LOS	C	A	A	D	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1380			2033			7				162
Approach Delay, s/veh		10.8			17.5			32.0				26.8
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.7	4.8	38.2		14.0	7.5	35.4				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		30.4	5.0	33.0		32.0	6.4	31.6				
Max Q Clear Time (g_c+I1), s		2.2	2.1	12.4		7.3	3.7	22.3				
Green Ext Time (p_c), s		0.0	0.0	9.0		0.9	0.0	7.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				15.4								
HCM 6th LOS				B								

Timings

6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.

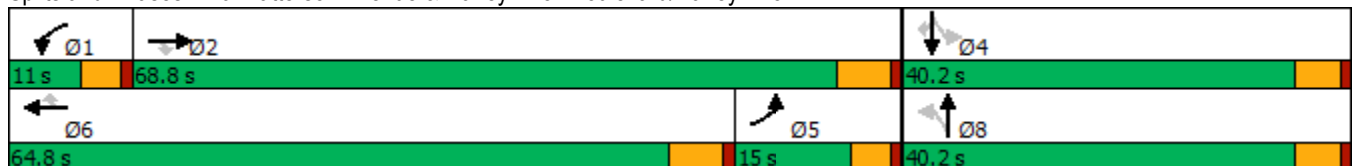


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗		↕		↙	↗
Traffic Volume (vph)	39	974	42	42	1473	14	109	2	23	4	33
Future Volume (vph)	39	974	42	42	1473	14	109	2	23	4	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	5	2		1	6			8		4	
Permitted Phases			2			6	8		4		4
Detector Phase	5	2	2	1	6	6	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	31.8	31.8	37.2	37.2	40.2	40.2	40.2
Total Split (s)	15.0	68.8	68.8	11.0	64.8	64.8	40.2	40.2	40.2	40.2	40.2
Total Split (%)	12.5%	57.3%	57.3%	9.2%	54.0%	54.0%	33.5%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8		5.1		5.1	5.1
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.2	61.0	61.0	6.1	59.9	59.9		18.7		18.7	18.7
Actuated g/C Ratio	0.07	0.62	0.62	0.06	0.60	0.60		0.19		0.19	0.19
v/c Ratio	0.37	0.37	0.05	0.46	0.82	0.02		0.67		0.12	0.10
Control Delay	55.5	11.5	2.7	63.1	22.6	0.0		46.4		34.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0
Total Delay	55.5	11.5	2.7	63.1	22.6	0.0		46.4		34.2	0.5
LOS	E	B	A	E	C	A		D		C	A
Approach Delay		12.8			23.5			46.4		15.7	
Approach LOS		B			C			D		B	

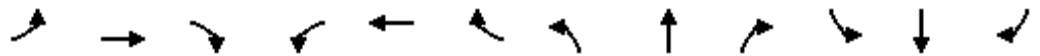
Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Patterson Avenue & Harley Knox Boulevard/Harley Knox Bl.







Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	39	974	42	42	1473	14	109	2	41	23	4	33
Future Volume (veh/h)	39	974	42	42	1473	14	109	2	41	23	4	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	1188	50	51	1796	17	133	2	49	28	5	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	3204	995	73	2186	955	226	9	60	277	44	271
Arrive On Green	0.04	0.62	0.62	0.04	0.61	0.61	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1810	5187	1610	1810	3610	1577	930	52	357	1201	260	1610
Grp Volume(v), veh/h	48	1188	50	51	1796	17	184	0	0	33	0	39
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1805	1577	1339	0	0	1460	0	1610
Q Serve(g_s), s	2.3	10.1	1.1	2.5	34.8	0.4	10.5	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	2.3	10.1	1.1	2.5	34.8	0.4	12.1	0.0	0.0	1.6	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	0.85		1.00
Lane Grp Cap(c), veh/h	71	3204	995	73	2186	955	295	0	0	320	0	271
V/C Ratio(X)	0.68	0.37	0.05	0.70	0.82	0.02	0.62	0.00	0.00	0.10	0.00	0.14
Avail Cap(c_a), veh/h	211	3665	1138	130	2388	1043	620	0	0	644	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	8.5	6.7	42.3	13.8	7.0	36.3	0.0	0.0	31.5	0.0	31.6
Incr Delay (d2), s/veh	4.2	0.1	0.0	4.5	2.4	0.0	2.2	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.1	0.3	1.2	11.8	0.1	3.9	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	8.6	6.8	46.8	16.2	7.0	38.5	0.0	0.0	31.6	0.0	31.9
LnGrp LOS	D	A	A	D	B	A	D	A	A	C	A	C
Approach Vol, veh/h		1286			1864			184				72
Approach Delay, s/veh		9.9			17.0			38.5				31.7
Approach LOS		A			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	60.9		20.1	9.3	59.8		20.1				
Change Period (Y+Rc), s	4.6	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	6.4	63.0		35.1	10.4	* 59		35.1				
Max Q Clear Time (g_c+I1), s	4.5	12.1		3.8	4.3	36.8		14.1				
Green Ext Time (p_c), s	0.0	15.8		0.3	0.0	17.2		1.0				

Intersection Summary

HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Vol, veh/h	2139	292	15	2134	0	38
Future Vol, veh/h	2139	292	15	2134	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	110	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2183	298	15	2178	0	39

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	2481	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.2	-
Pot Cap-1 Maneuver	-	-	188	0
Stage 1	-	-	-	0
Stage 2	-	-	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	188	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	32.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	169	-	-	188	-
HCM Lane V/C Ratio	0.229	-	-	0.081	-
HCM Control Delay (s)	32.5	-	-	25.8	-
HCM Lane LOS	D	-	-	D	-
HCM 95th %tile Q(veh)	0.8	-	-	0.3	-

Intersection			
Intersection Delay, s/veh	32.9		
Intersection LOS	D		
Approach	EB	WB	NB
Entry Lanes	3	2	2
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	1401	126
Demand Flow Rate, veh/h	0	1401	126
Vehicles Circulating, veh/h	11	112	1007
Vehicles Exiting, veh/h	1502	1021	124
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	35.1	7.8
Approach LOS	-	E	A
Lane	Left	Left	Right
Designated Moves	LT	L	TR
Assumed Moves	LT	L	TR
RT Channelized			
Lane Util	1.000	0.889	0.111
Follow-Up Headway, s	2.250	2.250	2.250
Critical Headway, s	4.544	4.544	4.544
Entry Flow, veh/h	1401	112	14
Cap Entry Lane, veh/h	1439	615	615
Entry HV Adj Factor	1.000	1.000	1.000
Flow Entry, veh/h	1401	112	14
Cap Entry, veh/h	1439	615	615
V/C Ratio	0.974	0.182	0.023
Control Delay, s/veh	35.1	8.1	6.1
LOS	E	A	A
95th %tile Queue, veh	21	1	0

Timings  
9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

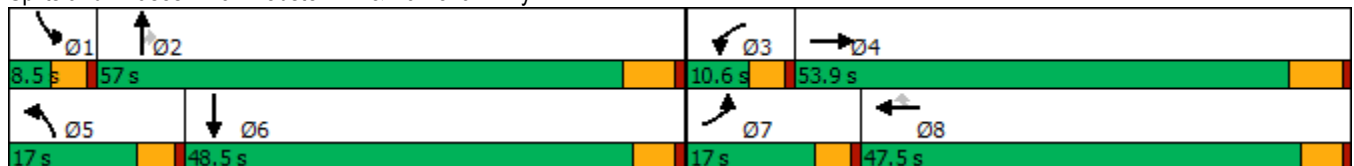


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	Ø1
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕	↗	↕↕	
Traffic Volume (vph)	164	1974	30	1796	34	174	30	37	26	
Future Volume (vph)	164	1974	30	1796	34	174	30	37	26	
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		5	2		6	1
Permitted Phases					8				2	
Detector Phase	7	4	3	8	8	5	2	2	6	
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	10.0	4.0
Minimum Split (s)	9.6	42.5	9.6	47.5	47.5	9.6	47.2	47.2	47.5	8.5
Total Split (s)	17.0	53.9	10.6	47.5	47.5	17.0	57.0	57.0	48.5	8.5
Total Split (%)	13.1%	41.5%	8.2%	36.5%	36.5%	13.1%	43.8%	43.8%	37.3%	7%
Yellow Time (s)	3.6	5.2	3.6	4.1	4.1	3.6	5.2	5.2	4.1	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	5.1	5.1	4.6	6.2	6.2	5.1	
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.4	51.9	5.7	42.4	42.4	12.4	59.3	59.3	0.0	
Actuated g/C Ratio	0.10	0.40	0.04	0.33	0.33	0.10	0.46	0.46	0.00	
v/c Ratio	0.98	1.00	0.39	1.10	0.05	1.04	0.04	0.05	7.95	
Control Delay	122.6	59.8	74.9	94.0	0.1	136.0	19.8	0.1	3184.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	122.6	59.8	74.9	94.0	0.1	136.0	19.8	0.1	3184.8	
LOS	F	E	E	F	A	F	B	A	F	
Approach Delay		64.5		92.0			100.6		3184.8	
Approach LOS		E		F			F		F	

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 7.95  
 Intersection Signal Delay: 287.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 81.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 9: Webster Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 9: Webster Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)  
 09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑		↖	↑↑↑	↖	↖	↑	↖		↕	
Traffic Volume (veh/h)	164	1974	39	30	1796	34	174	30	37	103	26	179
Future Volume (veh/h)	164	1974	39	30	1796	34	174	30	37	103	26	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	169	2035	36	31	1852	30	179	31	30	106	27	152
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	2602	46	53	2146	666	211	572	478	0	34	192
Arrive On Green	0.11	0.50	0.50	0.03	0.41	0.41	0.12	0.30	0.30	0.00	0.14	0.14
Sat Flow, veh/h	1810	5247	93	1810	5187	1610	1810	1900	1590	0	249	1399
Grp Volume(v), veh/h	169	1340	731	31	1852	30	179	31	30	0	0	179
Grp Sat Flow(s),veh/h/ln	1810	1729	1882	1810	1729	1610	1810	1900	1590	0	0	1648
Q Serve(g_s), s	8.9	31.1	31.2	1.7	31.8	1.1	9.5	1.1	1.3	0.0	0.0	10.3
Cycle Q Clear(g_c), s	8.9	31.1	31.2	1.7	31.8	1.1	9.5	1.1	1.3	0.0	0.0	10.3
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.00		0.85
Lane Grp Cap(c), veh/h	201	1715	933	53	2146	666	211	572	478	0	0	226
V/C Ratio(X)	0.84	0.78	0.78	0.59	0.86	0.05	0.85	0.05	0.06	0.00	0.00	0.79
Avail Cap(c_a), veh/h	230	1715	933	111	2254	700	230	989	828	0	0	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.5	20.3	20.3	46.8	26.1	17.1	42.2	24.2	24.3	0.0	0.0	40.8
Incr Delay (d2), s/veh	19.0	2.4	4.4	3.8	3.6	0.0	21.3	0.0	0.1	0.0	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.4	12.9	0.8	12.4	0.4	5.4	0.5	0.5	0.0	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	22.7	24.7	50.6	29.7	17.1	63.6	24.3	24.4	0.0	0.0	47.0
LnGrp LOS	E	C	C	D	C	B	E	C	C	A	A	D
Approach Vol, veh/h		2240			1913			240				179
Approach Delay, s/veh		26.3			29.8			53.6				47.0
Approach LOS		C			C			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	35.6	7.4	54.6	16.0	19.6	15.5	46.6				
Change Period (Y+Rc), s	4.5	6.2	4.6	6.2	4.6	* 6.2	4.6	* 6.2				
Max Green Setting (Gmax), s	4.0	50.8	6.0	47.7	12.4	* 43	12.4	* 42				
Max Q Clear Time (g_c+I1), s	0.0	3.3	3.7	33.2	11.5	12.3	10.9	33.8				
Green Ext Time (p_c), s	0.0	0.2	0.0	10.5	0.0	1.1	0.0	6.6				

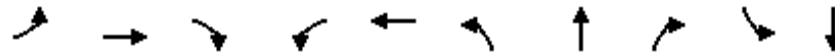
Intersection Summary

HCM 6th Ctrl Delay	30.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
10: Indian Av. & Harley Knox Bl.

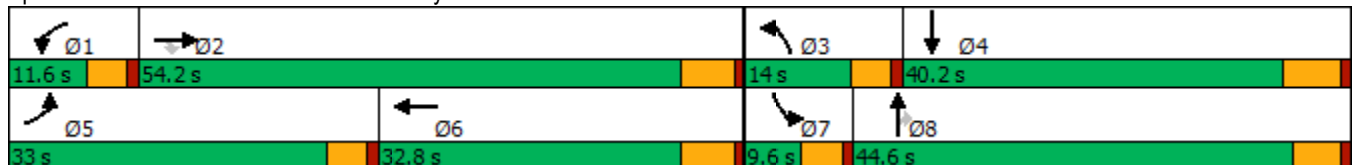


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑↑
Traffic Volume (vph)	343	517	89	43	527	125	232	79	49	285
Future Volume (vph)	343	517	89	43	527	125	232	79	49	285
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	6	3	8		7	4
Permitted Phases			2					8		
Detector Phase	5	2	2	1	6	3	8	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2
Total Split (s)	33.0	54.2	54.2	11.6	32.8	14.0	44.6	44.6	9.6	40.2
Total Split (%)	27.5%	45.2%	45.2%	9.7%	27.3%	11.7%	37.2%	37.2%	8.0%	33.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	28.6	45.1	45.1	6.5	20.7	8.5	35.8	35.8	5.0	31.5
Actuated g/C Ratio	0.26	0.41	0.41	0.06	0.19	0.08	0.32	0.32	0.05	0.28
v/c Ratio	0.92	0.31	0.15	0.51	0.70	0.58	0.25	0.16	0.74	1.00dr
Control Delay	68.1	23.8	4.6	70.6	46.3	60.0	28.4	1.6	102.2	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	23.8	4.6	70.6	46.3	60.0	28.4	1.6	102.2	35.1
LOS	E	C	A	E	D	E	C	A	F	D
Approach Delay		38.0			48.1		32.6			38.5
Approach LOS		D			D		C			D

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 110.7  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 39.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 79.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑		↘↗	↑↑	↗	↘	↑↗	
Traffic Volume (veh/h)	343	517	89	43	527	17	125	232	79	49	285	625
Future Volume (veh/h)	343	517	89	43	527	17	125	232	79	49	285	625
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	429	646	100	54	659	19	156	290	83	61	356	660
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	457	1985	616	70	876	25	219	1216	535	79	574	505
Arrive On Green	0.25	0.38	0.38	0.04	0.17	0.17	0.06	0.34	0.34	0.04	0.32	0.32
Sat Flow, veh/h	1810	5187	1610	1810	5182	149	3510	3610	1590	1810	1805	1587
Grp Volume(v), veh/h	429	646	100	54	439	239	156	290	83	61	356	660
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1873	1755	1805	1590	1810	1805	1587
Q Serve(g_s), s	24.8	9.4	4.4	3.2	12.9	13.0	4.7	6.2	3.9	3.6	17.9	34.0
Cycle Q Clear(g_c), s	24.8	9.4	4.4	3.2	12.9	13.0	4.7	6.2	3.9	3.6	17.9	34.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	457	1985	616	70	585	317	219	1216	535	79	574	505
V/C Ratio(X)	0.94	0.33	0.16	0.77	0.75	0.75	0.71	0.24	0.16	0.77	0.62	1.31
Avail Cap(c_a), veh/h	481	2348	729	118	873	473	309	1324	583	85	574	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	23.3	21.7	50.9	42.3	42.3	49.2	25.6	24.8	50.6	31.0	36.5
Incr Delay (d2), s/veh	25.4	0.1	0.1	6.6	2.0	3.8	1.8	0.1	0.1	29.5	2.0	152.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	3.6	1.6	1.5	5.5	6.1	2.0	2.6	1.4	2.2	7.7	33.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	23.4	21.8	57.5	44.3	46.1	51.0	25.7	24.9	80.1	33.0	188.5
LnGrp LOS	E	C	C	E	D	D	D	C	C	F	C	F
Approach Vol, veh/h		1175			732			529			1077	
Approach Delay, s/veh		38.3			45.9			33.0			131.0	
Approach LOS		D			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	46.7	11.3	40.2	31.6	23.9	9.3	42.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	4.6	5.8	4.6	*6.2				
Max Green Setting (Gmax), s	7.0	48.4	9.4	34.0	28.4	27.0	5.0	*39				
Max Q Clear Time (g_c+I1), s	5.2	11.4	6.7	36.0	26.8	15.0	5.6	8.2				
Green Ext Time (p_c), s	0.0	4.6	0.1	0.0	0.1	3.1	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	67.5
HCM 6th LOS	E

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
11: Indian Av. & Ramona Exwy.

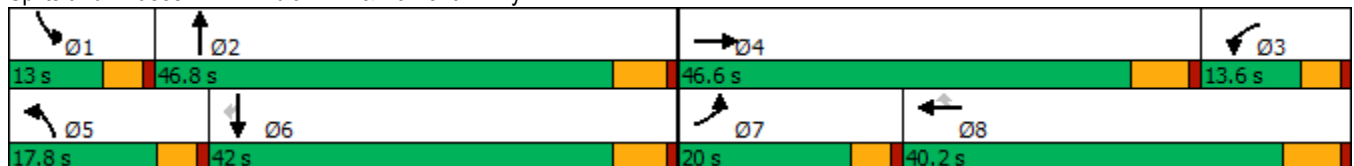


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↕↕↕	↘	↕↕↕	↗	↘	↕↕	↘	↕↕	↗
Traffic Volume (vph)	369	1677	128	1462	131	140	189	170	189	191
Future Volume (vph)	369	1677	128	1462	131	140	189	170	189	191
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8					6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	46.2	9.6	40.2	40.2	9.6	43.8	9.6	34.8	34.8
Total Split (s)	20.0	46.6	13.6	40.2	40.2	17.8	46.8	13.0	42.0	42.0
Total Split (%)	16.7%	38.8%	11.3%	33.5%	33.5%	14.8%	39.0%	10.8%	35.0%	35.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	5.2	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	4.6	6.2	6.2	4.6	5.8	4.6	5.8	5.8
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	40.8	9.1	34.3	34.3	11.3	17.3	8.5	14.5	14.5
Actuated g/C Ratio	0.16	0.42	0.09	0.35	0.35	0.12	0.18	0.09	0.15	0.15
v/c Ratio	1.31	0.85	0.79	0.82	0.20	0.69	0.35	1.11	0.36	0.47
Control Delay	199.7	31.3	75.7	34.4	4.5	59.8	32.7	148.5	38.5	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	199.7	31.3	75.7	34.4	4.5	59.8	32.7	148.5	38.5	7.8
LOS	F	C	E	C	A	E	C	F	D	A
Approach Delay		60.1		35.2			43.2		61.8	
Approach LOS		E		D			D		E	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 97.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.31	
Intersection Signal Delay: 50.1	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Indian Av. & Ramona Exwy.





HCM 6th Signalized Intersection Summary  
 11: Indian Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	369	1677	106	128	1462	131	140	189	32	170	189	191
Future Volume (veh/h)	369	1677	106	128	1462	131	140	189	32	170	189	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	380	1729	91	132	1507	129	144	195	18	175	195	163
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	313	2096	110	166	1827	559	178	475	43	171	499	222
Arrive On Green	0.17	0.42	0.42	0.09	0.35	0.35	0.10	0.14	0.14	0.09	0.14	0.14
Sat Flow, veh/h	1810	5041	265	1810	5187	1587	1810	3344	306	1810	3610	1610
Grp Volume(v), veh/h	380	1185	635	132	1507	129	144	104	109	175	195	163
Grp Sat Flow(s),veh/h/ln	1810	1729	1848	1810	1729	1587	1810	1805	1845	1810	1805	1610
Q Serve(g_s), s	15.4	27.1	27.2	6.4	23.6	5.1	6.9	4.7	4.8	8.4	4.4	8.6
Cycle Q Clear(g_c), s	15.4	27.1	27.2	6.4	23.6	5.1	6.9	4.7	4.8	8.4	4.4	8.6
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	313	1438	769	166	1827	559	178	256	262	171	499	222
V/C Ratio(X)	1.21	0.82	0.83	0.80	0.82	0.23	0.81	0.41	0.41	1.02	0.39	0.73
Avail Cap(c_a), veh/h	313	1570	839	183	1982	607	268	832	850	171	1469	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	23.1	23.1	39.6	26.3	20.3	39.3	34.8	34.8	40.3	34.9	36.8
Incr Delay (d2), s/veh	121.8	3.5	6.3	17.5	2.8	0.2	5.9	1.0	1.0	75.4	0.5	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	10.3	11.6	3.5	9.1	1.7	3.3	2.1	2.1	7.2	1.9	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	158.6	26.6	29.5	57.1	29.1	20.5	45.2	35.8	35.8	115.7	35.4	41.4
LnGrp LOS	F	C	C	E	C	C	D	D	D	F	D	D
Approach Vol, veh/h		2200			1768			357				533
Approach Delay, s/veh		50.2			30.6			39.6				63.6
Approach LOS		D			C			D				E
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	18.4	14.3	43.2	13.3	18.1	20.0	37.5				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	4.6	5.8	4.6	6.2				
Max Green Setting (Gmax), s	8.4	41.0	9.0	* 40	13.2	36.2	15.4	34.0				
Max Q Clear Time (g_c+I1), s	10.4	6.8	8.4	29.2	8.9	10.6	17.4	25.6				
Green Ext Time (p_c), s	0.0	1.1	0.0	7.8	0.1	1.7	0.0	5.7				

Intersection Summary

HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
12: Perris Bl. & Harley Knox Bl.

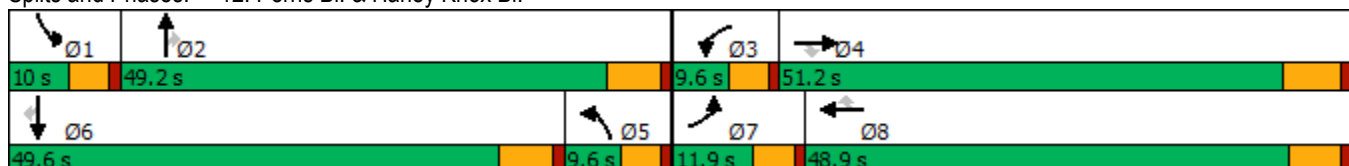
Rider 2 and 4 TIA (JN 11557)  
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	285	209	96	11	230	117	26	930	8	152	1283	323
Future Volume (vph)	285	209	96	11	230	117	26	930	8	152	1283	323
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	47.2	47.2	9.6	48.8	48.8	9.6	48.8	48.8	9.6	43.8	43.8
Total Split (s)	11.9	51.2	51.2	9.6	48.9	48.9	9.6	49.2	49.2	10.0	49.6	49.6
Total Split (%)	9.9%	42.7%	42.7%	8.0%	40.8%	40.8%	8.0%	41.0%	41.0%	8.3%	41.3%	41.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.2	-2.2	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	28.4	28.4	6.0	16.9	16.9	6.0	28.7	28.7	6.4	36.3	36.3
Actuated g/C Ratio	0.11	0.37	0.37	0.08	0.22	0.22	0.08	0.37	0.37	0.08	0.47	0.47
v/c Ratio	1.58	0.17	0.15	0.04	0.22	0.27	0.10	0.53	0.01	0.57	0.58	0.38
Control Delay	312.5	19.1	1.1	44.4	25.8	3.4	43.3	20.5	0.0	47.8	18.2	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	312.5	19.1	1.1	44.4	25.8	3.4	43.3	20.5	0.0	47.8	18.2	4.4
LOS	F	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		158.1			19.0			21.0			18.2	
Approach LOS		F			B			C			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.6  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.58  
 Intersection Signal Delay: 41.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 66.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 12: Perris Bl. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 12: Perris Bl. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑↑	↗
Traffic Volume (veh/h)	285	209	96	11	230	117	26	930	8	152	1283	323
Future Volume (veh/h)	285	209	96	11	230	117	26	930	8	152	1283	323
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	310	227	54	12	250	82	28	1011	9	165	1395	275
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	952	424	82	884	271	134	2123	659	278	2247	697
Arrive On Green	0.11	0.26	0.26	0.02	0.17	0.17	0.04	0.41	0.41	0.08	0.43	0.43
Sat Flow, veh/h	1810	3610	1608	3510	5187	1589	3510	5187	1610	3510	5187	1609
Grp Volume(v), veh/h	310	227	54	12	250	82	28	1011	9	165	1395	275
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1755	1729	1589	1755	1729	1610	1755	1729	1609
Q Serve(g_s), s	7.9	3.5	1.3	0.2	3.0	3.2	0.6	10.2	0.2	3.2	14.8	4.3
Cycle Q Clear(g_c), s	7.9	3.5	1.3	0.2	3.0	3.2	0.6	10.2	0.2	3.2	14.8	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	952	424	82	884	271	134	2123	659	278	2247	697
V/C Ratio(X)	1.54	0.24	0.13	0.15	0.28	0.30	0.21	0.48	0.01	0.59	0.62	0.39
Avail Cap(c_a), veh/h	201	2393	1066	276	3270	1002	276	3292	1022	296	3321	1030
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	20.6	9.5	34.1	25.7	25.8	33.2	15.4	12.5	31.7	15.6	3.7
Incr Delay (d2), s/veh	268.2	0.1	0.1	0.3	0.2	0.6	0.3	0.2	0.0	1.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	1.3	0.6	0.1	1.1	1.2	0.2	3.4	0.1	1.3	4.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	299.8	20.7	9.6	34.4	25.9	26.5	33.5	15.6	12.5	33.4	15.9	4.0
LnGrp LOS	F	C	A	C	C	C	C	B	B	C	B	A
Approach Vol, veh/h		591			344			1048			1835	
Approach Delay, s/veh		166.1			26.3			16.1			15.7	
Approach LOS		F			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	33.1	5.7	22.8	7.9	34.9	11.9	16.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	5.4	43.4	5.0	45.0	5.0	* 44	7.3	* 43				
Max Q Clear Time (g_c+I1), s	5.2	12.2	2.2	5.5	2.6	16.8	9.9	5.2				
Green Ext Time (p_c), s	0.0	7.5	0.0	1.5	0.0	12.1	0.0	1.8				

Intersection Summary

HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

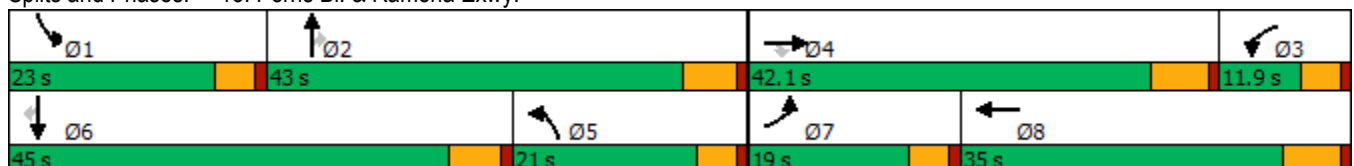
Timings  
13: Perris Bl. & Ramona Exwy.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	256	1414	231	117	1059	429	523	127	395	717	280	
Future Volume (vph)	256	1414	231	117	1059	429	523	127	395	717	280	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	7	4		3	8	5	2		1	6		
Permitted Phases			4					2			6	
Detector Phase	7	4	4	3	8	5	2	2	1	6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	9.6	36.2	36.2	9.6	34.2	9.6	38.8	38.8	9.6	41.8	41.8	
Total Split (s)	19.0	42.1	42.1	11.9	35.0	21.0	43.0	43.0	23.0	45.0	45.0	
Total Split (%)	15.8%	35.1%	35.1%	9.9%	29.2%	17.5%	35.8%	35.8%	19.2%	37.5%	37.5%	
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	3.6	4.8	4.8	3.6	4.8	4.8	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.6	-2.2	-2.2	-0.6	-2.2	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	12.6	37.1	37.1	7.5	32.0	16.4	31.2	31.2	16.5	31.3	31.3	
Actuated g/C Ratio	0.12	0.34	0.34	0.07	0.29	0.15	0.29	0.29	0.15	0.29	0.29	
v/c Ratio	0.64	0.81	0.35	0.49	0.80	0.83	0.51	0.22	0.76	0.70	0.46	
Control Delay	54.7	37.9	7.0	58.1	40.7	59.9	34.5	2.7	54.9	38.5	9.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.7	37.9	7.0	58.1	40.7	59.9	34.5	2.7	54.9	38.5	9.0	
LOS	D	D	A	E	D	E	C	A	D	D	A	
Approach Delay		36.4			42.2		40.9			37.2		
Approach LOS		D			D		D			D		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 108.5  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 38.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.4%  
 ICU Level of Service D  
 Analysis Period (min) 15


































Splits and Phases: 13: Perris Bl. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 13: Perris Bl. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (veh/h)	256	1414	231	117	1059	123	429	523	127	395	717	280
Future Volume (veh/h)	256	1414	231	117	1059	123	429	523	127	395	717	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	261	1443	195	119	1081	113	438	534	89	403	732	230
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	347	1766	548	198	1492	156	519	1071	470	490	1000	444
Arrive On Green	0.10	0.34	0.34	0.06	0.31	0.29	0.15	0.30	0.30	0.14	0.28	0.28
Sat Flow, veh/h	3510	5187	1609	3510	4763	497	3510	3610	1585	3510	3610	1601
Grp Volume(v), veh/h	261	1443	195	119	784	410	438	534	89	403	732	230
Grp Sat Flow(s),veh/h/ln	1755	1729	1609	1755	1729	1802	1755	1805	1585	1755	1805	1601
Q Serve(g_s), s	7.6	26.8	9.6	3.5	21.3	21.4	12.8	12.9	3.3	11.8	19.4	9.1
Cycle Q Clear(g_c), s	7.6	26.8	9.6	3.5	21.3	21.4	12.8	12.9	3.3	11.8	19.4	9.1
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	347	1766	548	198	1083	564	519	1071	470	490	1000	444
V/C Ratio(X)	0.75	0.82	0.36	0.60	0.72	0.73	0.84	0.50	0.19	0.82	0.73	0.52
Avail Cap(c_a), veh/h	499	1873	581	263	1083	564	566	1334	586	632	1403	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	31.8	26.1	48.6	32.2	32.5	43.8	30.6	15.2	44.1	34.6	16.3
Incr Delay (d2), s/veh	1.9	2.8	0.4	1.1	2.4	4.6	9.7	0.4	0.2	5.3	1.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	10.8	3.5	1.5	8.6	9.5	6.1	5.4	1.6	5.3	8.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	34.6	26.5	49.7	34.6	37.1	53.4	31.0	15.4	49.4	35.8	17.2
LnGrp LOS	D	C	C	D	C	D	D	C	B	D	D	B
Approach Vol, veh/h		1899			1313			1061			1365	
Approach Delay, s/veh		35.6			36.8			39.0			36.7	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	35.3	11.6	39.9	20.8	33.2	14.4	37.0				
Change Period (Y+Rc), s	4.6	5.8	6.2	* 6.2	5.8	* 5.8	4.6	6.2				
Max Green Setting (Gmax), s	18.4	37.2	7.3	* 36	16.4	* 39	14.4	28.8				
Max Q Clear Time (g_c+I1), s	13.8	14.9	5.5	28.8	14.8	21.4	9.6	23.4				
Green Ext Time (p_c), s	0.4	3.5	0.0	4.9	0.2	5.1	0.2	3.1				

Intersection Summary

HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

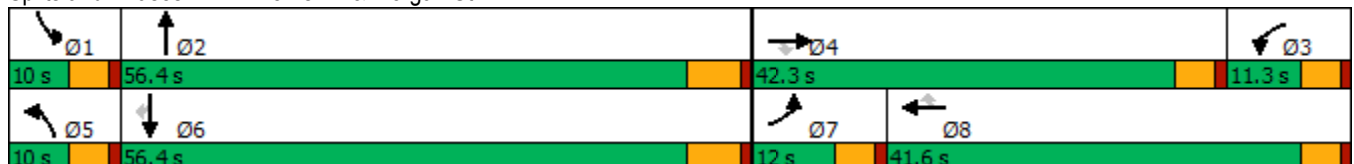


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑	↗	↘	↑↑↑	↘	↑↑	↗
Traffic Volume (vph)	38	25	31	35	6	50	14	980	21	1127	16
Future Volume (vph)	38	25	31	35	6	50	14	980	21	1127	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	35.6	35.6	9.6	41.6	41.6	9.6	27.8	9.6	33.8	33.8
Total Split (s)	12.0	42.3	42.3	11.3	41.6	41.6	10.0	56.4	10.0	56.4	56.4
Total Split (%)	10.0%	35.3%	35.3%	9.4%	34.7%	34.7%	8.3%	47.0%	8.3%	47.0%	47.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.6	18.3	18.3	10.1	18.9	18.9	8.7	40.2	8.8	41.9	41.9
Actuated g/C Ratio	0.16	0.31	0.31	0.17	0.32	0.32	0.15	0.67	0.15	0.70	0.70
v/c Ratio	0.14	0.02	0.06	0.12	0.01	0.09	0.06	0.31	0.09	0.49	0.02
Control Delay	39.1	27.9	0.2	36.6	26.5	0.3	41.7	12.1	41.8	13.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	27.9	0.2	36.6	26.5	0.3	41.7	12.1	41.8	13.5	0.0
LOS	D	C	A	D	C	A	D	B	D	B	A
Approach Delay		23.3			15.9			12.5		13.8	
Approach LOS		C			B			B		B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 59.7  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 13.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.7%  
 ICU Level of Service A  
 Analysis Period (min) 15




























Splits and Phases: 14: Perris Bl. & Morgan St.



HCM 6th Signalized Intersection Summary  
 14: Perris Bl. & Morgan St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  			 	
Traffic Volume (veh/h)	38	25	31	35	6	50	14	980	12	21	1127	16
Future Volume (veh/h)	38	25	31	35	6	50	14	980	12	21	1127	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	42	27	18	38	7	52	15	1077	13	23	1238	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	94	581	259	92	304	257	51	2576	31	66	1790	798
Arrive On Green	0.05	0.16	0.16	0.05	0.16	0.16	0.03	0.49	0.46	0.04	0.50	0.50
Sat Flow, veh/h	1810	3610	1610	1810	1900	1610	1810	5282	64	1810	3610	1610
Grp Volume(v), veh/h	42	27	18	38	7	52	15	705	385	23	1238	17
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1900	1610	1810	1729	1888	1810	1805	1610
Q Serve(g_s), s	1.4	0.4	0.5	1.2	0.2	1.7	0.5	7.9	8.0	0.8	15.9	0.3
Cycle Q Clear(g_c), s	1.4	0.4	0.5	1.2	0.2	1.7	0.5	7.9	8.0	0.8	15.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	94	581	259	92	304	257	51	1687	921	66	1790	798
V/C Ratio(X)	0.45	0.05	0.07	0.41	0.02	0.20	0.29	0.42	0.42	0.35	0.69	0.02
Avail Cap(c_a), veh/h	239	2283	1018	218	1180	1000	179	2992	1633	179	3124	1393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	21.5	13.3	27.9	21.4	22.1	28.8	10.0	10.0	28.5	11.7	7.8
Incr Delay (d2), s/veh	1.2	0.0	0.1	1.1	0.0	0.4	1.2	0.2	0.3	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.2	0.5	0.1	0.6	0.2	2.3	2.5	0.3	4.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	21.5	13.4	29.0	21.5	22.5	30.0	10.1	10.3	29.6	12.2	7.8
LnGrp LOS	C	C	B	C	C	C	C	B	B	C	B	A
Approach Vol, veh/h		87			97			1105			1278	
Approach Delay, s/veh		23.5			24.9			10.5			12.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	33.5	7.1	13.7	5.7	34.0	7.1	13.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	4.6	4.6	5.8	4.6	4.6				
Max Green Setting (Gmax), s	5.4	50.6	6.7	37.7	5.4	50.6	7.4	37.0				
Max Q Clear Time (g_c+1), s	2.8	10.0	3.2	2.5	2.5	17.9	3.4	3.7				
Green Ext Time (p_c), s	0.0	7.9	0.0	0.2	0.0	10.3	0.0	0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				12.4								
HCM 6th LOS				B								

Timings  
15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

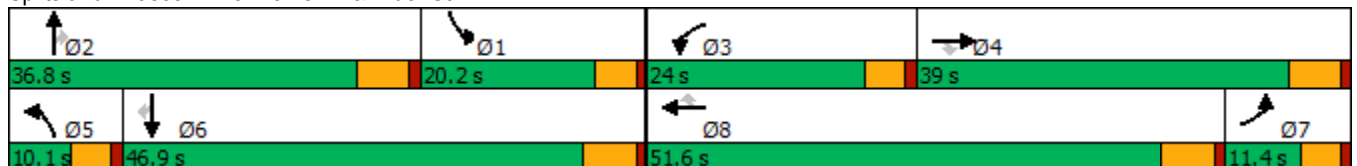
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	205	59	224	73	251	22	702	239	221	964	19
Future Volume (vph)	47	205	59	224	73	251	22	702	239	221	964	19
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	38.8	38.8	9.6	42.8	42.8	9.6	34.8	34.8	9.6	34.8	34.8
Total Split (s)	11.4	39.0	39.0	24.0	51.6	51.6	10.1	36.8	36.8	20.2	46.9	46.9
Total Split (%)	9.5%	32.5%	32.5%	20.0%	43.0%	43.0%	8.4%	30.7%	30.7%	16.8%	39.1%	39.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8	-0.6	-1.8	-1.8
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.9	16.1	16.1	16.1	24.0	24.0	6.1	22.1	22.1	16.1	38.8	38.8
Actuated g/C Ratio	0.15	0.19	0.19	0.19	0.28	0.28	0.07	0.25	0.25	0.19	0.45	0.45
v/c Ratio	0.18	0.32	0.14	0.69	0.08	0.41	0.18	0.55	0.42	0.68	0.43	0.02
Control Delay	37.0	32.9	0.7	47.4	29.1	6.1	48.9	30.7	6.5	48.4	19.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	32.9	0.7	47.4	29.1	6.1	48.9	30.7	6.5	48.4	19.5	0.1
LOS	D	C	A	D	C	A	D	C	A	D	B	A
Approach Delay		27.4			26.0			25.2			24.5	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 86.9  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 25.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 60.9%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 15: Perris Bl. & Rider St.





























HCM 6th Signalized Intersection Summary  
 15: Perris Bl. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	205	59	224	73	251	22	702	239	221	964	19
Future Volume (veh/h)	47	205	59	224	73	251	22	702	239	221	964	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	211	27	231	75	175	23	724	186	228	994	11
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	260	630	281	292	632	282	63	1322	404	288	2059	639
Arrive On Green	0.14	0.17	0.17	0.16	0.18	0.18	0.03	0.25	0.25	0.16	0.40	0.40
Sat Flow, veh/h	1810	3610	1607	1810	3610	1610	1810	5187	1585	1810	5187	1609
Grp Volume(v), veh/h	48	211	27	231	75	175	23	724	186	228	994	11
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1805	1610	1810	1729	1585	1810	1729	1609
Q Serve(g_s), s	1.6	3.5	1.0	8.4	1.2	6.9	0.9	8.3	3.8	8.3	9.8	0.1
Cycle Q Clear(g_c), s	1.6	3.5	1.0	8.4	1.2	6.9	0.9	8.3	3.8	8.3	9.8	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	630	281	292	632	282	63	1322	404	288	2059	639
V/C Ratio(X)	0.18	0.33	0.10	0.79	0.12	0.62	0.37	0.55	0.46	0.79	0.48	0.02
Avail Cap(c_a), veh/h	260	1835	817	526	2496	1113	160	2471	755	426	3232	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	24.9	23.9	27.7	23.9	26.3	32.5	22.2	6.7	27.8	15.5	2.6
Incr Delay (d2), s/veh	0.1	0.3	0.1	1.8	0.1	2.2	1.3	0.4	0.8	3.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.4	0.3	3.4	0.5	2.6	0.4	3.0	2.2	3.5	3.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	25.2	24.0	29.6	24.0	28.5	33.8	22.6	7.5	31.2	15.7	2.6
LnGrp LOS	C	C	C	C	C	C	C	C	A	C	B	A
Approach Vol, veh/h		286			481			933			1233	
Approach Delay, s/veh		25.2			28.3			19.9			18.4	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.2	21.5	15.1	16.0	6.4	31.3	15.1	16.1				
Change Period (Y+Rc), s	5.8	* 5.8	4.6	5.8	4.6	5.8	5.8	* 5.8				
Max Green Setting (Gmax), s	15.6	* 31	19.4	33.2	5.5	41.1	6.8	* 46				
Max Q Clear Time (g_c+I1), s	10.3	10.3	10.4	5.5	2.9	11.8	3.6	8.9				
Green Ext Time (p_c), s	0.1	5.2	0.2	1.3	0.0	7.2	0.0	1.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Timings

16: Redlands Av. & Harley Knox Bl.

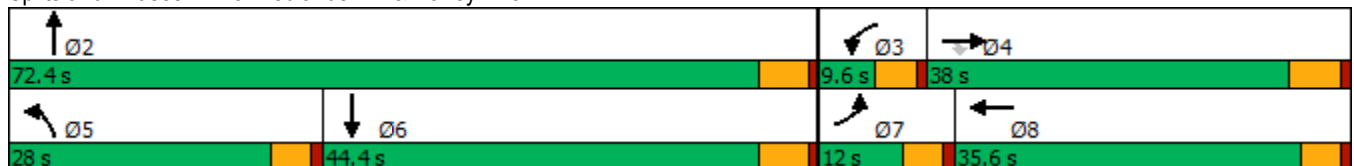


Lane Group	EBL	EBR	NBL	NBT	SBT	Ø3	Ø8
Lane Configurations	↖	↗	↖	↕	↕		
Traffic Volume (vph)	31	327	325	3	5		
Future Volume (vph)	31	327	325	3	5		
Turn Type	Prot	Perm	Prot	NA	NA		
Protected Phases	7		5	2	6	3	8
Permitted Phases		4					
Detector Phase	7	4	5	2	6		
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	31.8	9.6	42.4	42.4	9.6	30.6
Total Split (s)	12.0	38.0	28.0	72.4	44.4	9.6	35.6
Total Split (%)	10.0%	31.7%	23.3%	60.3%	37.0%	8%	30%
Yellow Time (s)	3.6	4.8	3.6	4.4	4.4	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-1.8	-0.6	-1.4	-1.4		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0		
Lead/Lag	Lead	Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	16.8	22.2	29.6	16.4		
Actuated g/C Ratio	0.13	0.30	0.40	0.53	0.29		
v/c Ratio	0.15	0.29	0.50	0.00	0.03		
Control Delay	34.1	0.6	23.2	7.0	11.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	34.1	0.6	23.2	7.0	11.0		
LOS	C	A	C	A	B		
Approach Delay				23.1	11.0		
Approach LOS				C	B		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 56  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.50  
 Intersection Signal Delay: 12.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 39.7%  
 ICU Level of Service A  
 Analysis Period (min) 15























Splits and Phases: 16: Redlands Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 16: Redlands Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	0	327	0	0	0	325	3	0	0	5	21
Future Volume (veh/h)	31	0	327	0	0	0	325	3	0	0	5	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1900	1900
Adj Flow Rate, veh/h	34	0	354	0	0	0	357	3	0	0	5	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	100	604	512	5	238	0	465	1700	0	0	196	174
Arrive On Green	0.06	0.00	0.32	0.00	0.00	0.00	0.26	0.47	0.00	0.00	0.11	0.07
Sat Flow, veh/h	1810	1900	1610	1810	1900	0	1810	3705	0	0	1900	1610
Grp Volume(v), veh/h	34	0	354	0	0	0	357	3	0	0	5	22
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	0	1810	1805	0	0	1805	1610
Q Serve(g_s), s	0.7	0.0	7.3	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.1	0.5
Cycle Q Clear(g_c), s	0.7	0.0	7.3	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.1	0.5
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	100	604	512	5	238	0	465	1700	0	0	196	174
V/C Ratio(X)	0.34	0.00	0.69	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.03	0.13
Avail Cap(c_a), veh/h	382	1703	1444	267	1583	0	1145	6511	0	0	1923	1715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	11.3	0.0	0.0	0.0	13.0	5.3	0.0	0.0	15.1	15.9
Incr Delay (d2), s/veh	0.7	0.0	1.7	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.3	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.0	0.0	13.0	0.0	0.0	0.0	14.1	5.3	0.0	0.0	15.2	16.2
LnGrp LOS	B	A	B	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		388			0			360			27	
Approach Delay, s/veh		13.4			0.0			14.0			16.0	
Approach LOS		B						B			B	
Timer - Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		21.9	0.0	16.1	13.7	8.1	6.1	10.0				
Change Period (Y+Rc), s		5.4	4.6	5.8	4.6	5.4	4.6	* 5.8				
Max Green Setting (Gmax), s		67.0	5.0	32.2	23.4	39.0	7.4	* 31				
Max Q Clear Time (g_c+I1), s		2.0	0.0	9.3	8.9	2.5	2.7	0.0				
Green Ext Time (p_c), s		0.0	0.0	1.2	0.4	0.1	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			13.8									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

**Intersection**

Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	87	86	18	178	279	23
Future Vol, veh/h	87	86	18	178	279	23
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	97	96	20	198	310	26
Number of Lanes	1	1	1	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	9.8	8.6	10.4
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	80%
Vol Right, %	0%	0%	0%	0%	100%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	89	89	87	86	186	116
LT Vol	18	0	0	87	0	0	0
Through Vol	0	89	89	0	0	186	93
RT Vol	0	0	0	0	86	0	23
Lane Flow Rate	20	99	99	97	96	207	129
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.035	0.159	0.112	0.174	0.14	0.316	0.192
Departure Headway (Hd)	6.285	5.781	4.066	6.496	5.293	5.503	5.363
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	564	614	866	556	681	647	661
Service Time	4.085	3.58	1.864	4.196	2.993	3.299	3.159
HCM Lane V/C Ratio	0.035	0.161	0.114	0.174	0.141	0.32	0.195
HCM Control Delay	9.3	9.7	7.4	10.6	8.9	10.9	9.5
HCM Lane LOS	A	A	A	B	A	B	A
HCM 95th-tile Q	0.1	0.6	0.4	0.6	0.5	1.4	0.7

Timings

18: Redlands Av. & Ramona Exwy.

09/10/2019

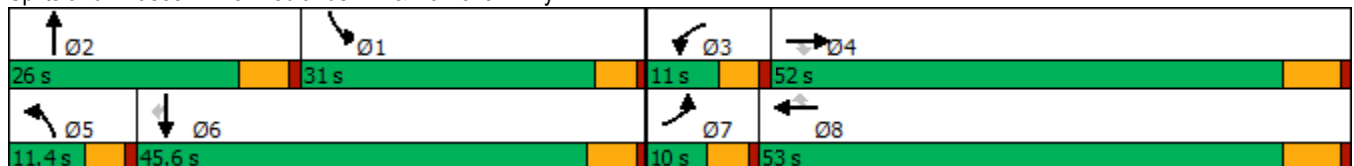


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↗	↖	↗	↖	↑	↗
Traffic Volume (vph)	62	1807	86	40	1199	113	94	87	266	57	69
Future Volume (vph)	62	1807	86	40	1199	113	94	87	266	57	69
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	24.2	24.2	9.6	24.2	24.2	9.6	23.4	9.6	23.4	23.4
Total Split (s)	10.0	52.0	52.0	11.0	53.0	53.0	11.4	26.0	31.0	45.6	45.6
Total Split (%)	8.3%	43.3%	43.3%	9.2%	44.2%	44.2%	9.5%	21.7%	25.8%	38.0%	38.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.6	-2.2	-2.2	-0.6	-2.2	-2.2	-0.6	-1.4	-0.6	-1.4	-1.4
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.2	46.5	46.5	6.7	44.8	44.8	13.4	16.1	20.6	27.6	27.6
Actuated g/C Ratio	0.06	0.46	0.46	0.07	0.44	0.44	0.13	0.16	0.20	0.27	0.27
v/c Ratio	0.59	0.80	0.11	0.35	0.55	0.15	0.42	0.58	0.77	0.12	0.14
Control Delay	74.4	28.9	0.4	60.0	23.5	2.0	57.1	42.3	54.5	28.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.4	28.9	0.4	60.0	23.5	2.0	57.1	42.3	54.5	28.1	2.0
LOS	E	C	A	E	C	A	E	D	D	C	A
Approach Delay		29.1			22.8			47.6		41.4	
Approach LOS		C			C			D		D	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 101.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 29.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 77.2%  
 ICU Level of Service D  
 Analysis Period (min) 15






























Splits and Phases: 18: Redlands Av. & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 18: Redlands Av. & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	62	1807	86	40	1199	113	94	87	83	266	57	69
Future Volume (veh/h)	62	1807	86	40	1199	113	94	87	83	266	57	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	65	1902	83	42	1262	91	99	92	68	280	60	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	95	2421	731	76	2365	724	137	133	98	327	465	394
Arrive On Green	0.05	0.47	0.47	0.04	0.46	0.46	0.08	0.13	0.12	0.18	0.24	0.24
Sat Flow, veh/h	1810	5187	1567	1810	5187	1587	1810	1012	748	1810	1900	1610
Grp Volume(v), veh/h	65	1902	83	42	1262	91	99	0	160	280	60	69
Grp Sat Flow(s),veh/h/ln	1810	1729	1567	1810	1729	1587	1810	0	1761	1810	1900	1610
Q Serve(g_s), s	3.3	28.9	2.8	2.1	16.4	1.3	5.0	0.0	8.1	14.0	2.3	3.2
Cycle Q Clear(g_c), s	3.3	28.9	2.8	2.1	16.4	1.3	5.0	0.0	8.1	14.0	2.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	95	2421	731	76	2365	724	137	0	231	327	465	394
V/C Ratio(X)	0.68	0.79	0.11	0.55	0.53	0.13	0.72	0.00	0.69	0.86	0.13	0.18
Avail Cap(c_a), veh/h	116	2661	804	135	2717	831	143	0	414	522	845	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	21.0	14.0	44.0	18.3	2.4	42.3	0.0	39.1	37.1	27.5	27.9
Incr Delay (d2), s/veh	7.4	1.5	0.1	2.3	0.2	0.1	13.5	0.0	3.7	4.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.4	0.9	1.0	5.8	1.0	2.7	0.0	3.6	6.4	1.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	22.5	14.1	46.3	18.5	2.5	55.8	0.0	42.9	41.6	27.7	28.1
LnGrp LOS	D	C	B	D	B	A	E	A	D	D	C	C
Approach Vol, veh/h		2050			1395			259			409	
Approach Delay, s/veh		23.1			18.3			47.8			37.3	
Approach LOS		C			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.7	16.3	7.9	47.7	11.1	26.9	8.9	46.7				
Change Period (Y+Rc), s	5.4	* 5.4	4.6	6.2	4.6	5.4	4.6	6.2				
Max Green Setting (Gmax), s	26.4	* 21	6.4	45.8	6.8	40.2	5.4	46.8				
Max Q Clear Time (g_c+I1), s	16.0	10.1	4.1	30.9	7.0	5.2	5.3	18.4				
Green Ext Time (p_c), s	0.3	0.5	0.0	10.6	0.0	0.5	0.0	9.8				

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↕		↶	↷		↶	↷	
Traffic Vol, veh/h	44	8	5	4	19	7	13	153	0	7	72	34
Future Vol, veh/h	44	8	5	4	19	7	13	153	0	7	72	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	48	9	5	4	21	8	14	166	0	8	78	37

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	322	307	97	314	325	166	115	0	0	166	0	0
Stage 1	113	113	-	194	194	-	-	-	-	-	-	-
Stage 2	209	194	-	120	131	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	635	610	965	643	596	884	1487	-	-	1424	-	-
Stage 1	897	806	-	812	744	-	-	-	-	-	-	-
Stage 2	798	744	-	889	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	606	601	965	625	587	884	1487	-	-	1424	-	-
Mov Cap-2 Maneuver	606	601	-	625	587	-	-	-	-	-	-	-
Stage 1	889	801	-	805	737	-	-	-	-	-	-	-
Stage 2	762	737	-	869	787	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		10.9		0.6		0.5	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1487	-	-	606	703	643	1424	-	-
HCM Lane V/C Ratio	0.01	-	-	0.079	0.02	0.051	0.005	-	-
HCM Control Delay (s)	7.4	-	-	11.4	10.2	10.9	7.5	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.2	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↖
Traffic Vol, veh/h	0	9	157	0	0	81
Future Vol, veh/h	0	9	157	0	0	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	10	171	0	0	88

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	86	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	962	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	-	962	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	962
HCM Lane V/C Ratio	-	-	0.01
HCM Control Delay (s)	-	-	8.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0



Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	21	0	10	0	0	19	0	104	2	7	65	10
Future Vol, veh/h	21	0	10	0	0	19	0	104	2	7	65	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	23	0	11	0	0	21	0	113	2	8	71	11

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	150	208	77	212	212	58	-	0	0	115	0	0
Stage 1	93	93	-	114	114	-	-	-	-	-	-	-
Stage 2	57	115	-	98	98	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.2	7.3	6.5	6.9	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	815	692	990	740	689	1002	0	-	-	1487	-	-
Stage 1	919	822	-	884	805	-	0	-	-	-	-	-
Stage 2	954	804	-	913	818	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	795	689	990	729	686	1002	-	-	-	1487	-	-
Mov Cap-2 Maneuver	795	689	-	729	686	-	-	-	-	-	-	-
Stage 1	919	818	-	884	805	-	-	-	-	-	-	-
Stage 2	934	804	-	898	814	-	-	-	-	-	-	-

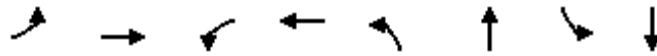
Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.4		8.7		0		0.6	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	849	1002	1487	-	-
HCM Lane V/C Ratio	-	-	0.04	0.021	0.005	-	-
HCM Control Delay (s)	-	-	9.4	8.7	7.4	-	-
HCM Lane LOS	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0	-	-

Timings  
22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)

12/10/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↕	↗	↕
Traffic Volume (vph)	7	0	8	0	10	59	17	55
Future Volume (vph)	7	0	8	0	10	59	17	55
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	21.6	21.6	21.6	21.6	9.6	22.4	9.6	22.4
Total Split (s)	34.0	34.0	34.0	34.0	9.6	35.0	21.0	46.4
Total Split (%)	37.8%	37.8%	37.8%	37.8%	10.7%	38.9%	23.3%	51.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6		4.6	4.6	5.4	4.6	5.4
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		10.1		10.1	5.0	53.6	5.5	53.9
Actuated g/C Ratio		0.15		0.15	0.07	0.80	0.08	0.80
v/c Ratio		0.03		0.14	0.08	0.02	0.12	0.02
Control Delay		26.3		0.9	31.9	4.3	31.8	4.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		26.3		0.9	31.9	4.3	31.8	4.0
LOS		C		A	C	A	C	A
Approach Delay		26.3		0.9		8.3		10.2
Approach LOS		C		A		A		B

Intersection Summary

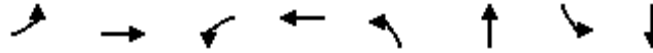
Cycle Length: 90	
Actuated Cycle Length: 67.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.14	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 25.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Redlands Av. & Driveway 2



Timings  
22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)  
12/10/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↕	↗	↕
Traffic Volume (vph)	7	0	8	0	10	59	17	55
Future Volume (vph)	7	0	8	0	10	59	17	55
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	21.6	21.6	21.6	21.6	9.6	22.4	9.6	22.4
Total Split (s)	34.0	34.0	34.0	34.0	9.6	35.0	21.0	46.4
Total Split (%)	37.8%	37.8%	37.8%	37.8%	10.7%	38.9%	23.3%	51.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.6		4.6	4.6	5.4	4.6	5.4
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max
Act Effct Green (s)		10.1		10.1	5.0	53.6	5.5	53.9
Actuated g/C Ratio		0.15		0.15	0.07	0.80	0.08	0.80
v/c Ratio		0.03		0.14	0.08	0.02	0.12	0.02
Control Delay		26.3		0.9	31.9	4.3	31.8	4.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		26.3		0.9	31.9	4.3	31.8	4.0
LOS		C		A	C	A	C	A
Approach Delay		26.3		0.9		8.3		10.2
Approach LOS		C		A		A		B

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 67.1  
 Natural Cycle: 55  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.14  
 Intersection Signal Delay: 7.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 25.0%  
 ICU Level of Service A  
 Analysis Period (min) 15





















Splits and Phases: 22: Redlands Av. & Driveway 2



HCM 6th Signalized Intersection Summary  
 22: Redlands Av. & Driveway 2

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	0	8	0	39	10	59	2	17	55	3
Future Volume (veh/h)	7	0	0	8	0	39	10	59	2	17	55	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	8	0	0	9	0	42	11	64	2	18	60	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	268	0	0	83	14	136	25	2302	72	39	2281	113
Arrive On Green	0.10	0.00	0.00	0.10	0.00	0.10	0.01	0.64	0.64	0.02	0.65	0.65
Sat Flow, veh/h	1504	0	0	152	132	1328	1810	3574	111	1810	3500	174
Grp Volume(v), veh/h	8	0	0	51	0	0	11	32	34	18	31	32
Grp Sat Flow(s),veh/h/ln	1505	0	0	1612	0	0	1810	1805	1880	1810	1805	1869
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.6	0.4	0.4
Cycle Q Clear(g_c), s	0.3	0.0	0.0	1.8	0.0	0.0	0.4	0.4	0.4	0.6	0.4	0.4
Prop In Lane	1.00		0.00	0.18		0.82	1.00		0.06	1.00		0.09
Lane Grp Cap(c), veh/h	268	0	0	232	0	0	25	1163	1211	39	1176	1218
V/C Ratio(X)	0.03	0.00	0.00	0.22	0.00	0.00	0.44	0.03	0.03	0.46	0.03	0.03
Avail Cap(c_a), veh/h	774	0	0	808	0	0	144	1163	1211	472	1176	1218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	0.0	26.2	0.0	0.0	30.8	4.1	4.1	30.4	3.9	3.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.0	4.4	0.0	0.0	3.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.7	0.0	0.0	0.2	0.1	0.1	0.3	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	0.0	26.6	0.0	0.0	35.2	4.1	4.1	33.6	3.9	3.9
LnGrp LOS	C	A	A	C	A	A	D	A	A	C	A	A
Approach Vol, veh/h		8			51			77				81
Approach Delay, s/veh		25.5			26.6			8.5				10.5
Approach LOS		C			C			A				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	45.9		11.0	5.5	46.4		11.0				
Change Period (Y+Rc), s	4.6	5.4		4.6	4.6	5.4		4.6				
Max Green Setting (Gmax), s	16.4	29.6		29.4	5.0	41.0		29.4				
Max Q Clear Time (g_c+1), s	2.6	2.4		2.3	2.4	2.4		3.8				
Green Ext Time (p_c), s	0.0	0.3		0.0	0.0	0.3		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				14.2								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕↔			↕↔	
Traffic Vol, veh/h	0	0	6	0	0	4	0	61	2	0	61	2
Future Vol, veh/h	0	0	6	0	0	4	0	61	2	0	61	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	7	0	0	4	0	66	2	0	66	2

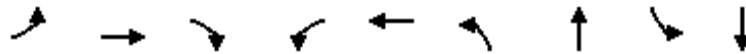
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	34	-	-	34	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	1038	0	0	1038	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %				-			-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1038	-	-	1038	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	8.5		8.5		0		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	1038	1038	-	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-	-
HCM Control Delay (s)	-	-	8.5	8.5	-	-
HCM Lane LOS	-	-	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0	-	-

Timings

24: Redlands Av. & Rider St.

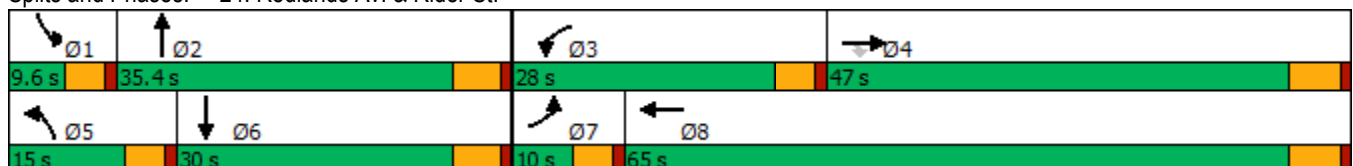


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑	↗	↘	↑↑	↘	↗	↘	↑↑
Traffic Volume (vph)	44	611	38	91	538	28	3	6	18
Future Volume (vph)	44	611	38	91	538	28	3	6	18
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	9.6	27.4	9.6	27.4
Total Split (s)	10.0	47.0	47.0	28.0	65.0	15.0	35.4	9.6	30.0
Total Split (%)	8.3%	39.2%	39.2%	23.3%	54.2%	12.5%	29.5%	8.0%	25.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	5.3	58.2	58.2	9.7	62.4	6.3	15.0	5.0	10.0
Actuated g/C Ratio	0.05	0.59	0.59	0.10	0.63	0.06	0.15	0.05	0.10
v/c Ratio	0.49	0.59	0.04	0.56	0.26	0.26	0.38	0.08	0.18
Control Delay	64.3	18.3	0.1	54.6	9.4	50.6	10.7	48.5	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	18.3	0.1	54.6	9.4	50.6	10.7	48.5	20.1
LOS	E	B	A	D	A	D	B	D	C
Approach Delay		20.2			15.8		18.0		22.8
Approach LOS		C			B		B		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 98.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 18.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.7%  
 ICU Level of Service B  
 Analysis Period (min) 15























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	611	38	91	538	16	28	3	121	6	18	43
Future Volume (veh/h)	44	611	38	91	538	16	28	3	121	6	18	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	664	41	99	585	17	30	3	132	7	20	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1111	941	127	2211	64	52	4	195	16	187	167
Arrive On Green	0.04	0.58	0.58	0.07	0.62	0.62	0.03	0.12	0.12	0.01	0.10	0.10
Sat Flow, veh/h	1810	1900	1610	1810	3582	104	1810	36	1580	1810	1805	1610
Grp Volume(v), veh/h	48	664	41	99	295	307	30	0	135	7	20	47
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1881	1810	0	1616	1810	1805	1610
Q Serve(g_s), s	2.5	21.4	1.0	5.2	7.2	7.2	1.6	0.0	7.7	0.4	1.0	2.6
Cycle Q Clear(g_c), s	2.5	21.4	1.0	5.2	7.2	7.2	1.6	0.0	7.7	0.4	1.0	2.6
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.98	1.00		1.00
Lane Grp Cap(c), veh/h	68	1111	941	127	1114	1161	52	0	200	16	187	167
V/C Ratio(X)	0.71	0.60	0.04	0.78	0.26	0.26	0.58	0.00	0.68	0.44	0.11	0.28
Avail Cap(c_a), veh/h	102	1111	941	441	1114	1161	196	0	505	94	463	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	12.7	8.5	43.9	8.4	8.4	46.0	0.0	40.2	47.3	38.9	39.7
Incr Delay (d2), s/veh	4.9	2.4	0.1	3.9	0.6	0.6	3.7	0.0	3.9	6.8	0.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.4	0.3	2.4	2.5	2.6	0.7	0.0	3.2	0.2	0.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	15.1	8.6	47.7	9.0	9.0	49.7	0.0	44.1	54.1	39.2	40.6
LnGrp LOS	D	B	A	D	A	A	D	A	D	D	D	D
Approach Vol, veh/h		753			701			165			74	
Approach Delay, s/veh		17.0			14.4			45.2			41.5	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	17.3	11.3	61.9	7.4	15.4	8.2	65.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	5.0	30.0	23.4	41.2	10.4	24.6	5.4	59.2				
Max Q Clear Time (g_c+I1), s	2.4	9.7	7.2	23.4	3.6	4.6	4.5	9.2				
Green Ext Time (p_c), s	0.0	0.7	0.1	4.0	0.0	0.2	0.0	3.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.8								
HCM 6th LOS				B								

Timings  
25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)  
12/10/2019

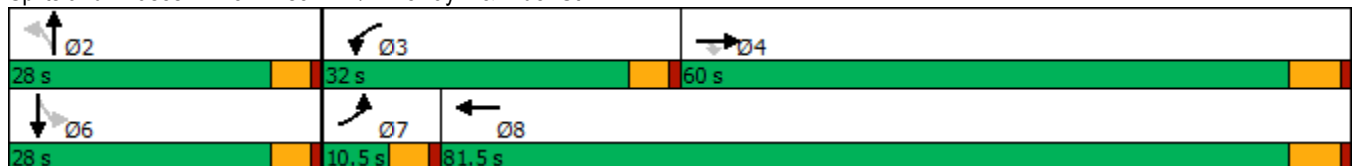


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↑	↗	↖	↕		↕	↕
Traffic Volume (vph)	11	663	51	110	570	38	0	0
Future Volume (vph)	11	663	51	110	570	38	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	26.6	26.6	26.6
Total Split (s)	10.5	60.0	60.0	32.0	81.5	28.0	28.0	28.0
Total Split (%)	8.8%	50.0%	50.0%	26.7%	67.9%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.3	62.4	62.4	11.2	76.3		11.3	11.3
Actuated g/C Ratio	0.05	0.62	0.62	0.11	0.76		0.11	0.11
v/c Ratio	0.12	0.61	0.05	0.60	0.23		0.58	0.06
Control Delay	50.3	15.1	0.5	54.8	4.2		24.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	50.3	15.1	0.5	54.8	4.2		24.4	0.2
LOS	D	B	A	D	A		C	A
Approach Delay		14.6			12.4		24.4	0.2
Approach LOS		B			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 14.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av./Driveway 4 & Rider St.


























HCM 6th Signalized Intersection Summary  
 25: Wilson Av./Driveway 4 & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	663	51	110	570	0	38	0	107	0	0	27
Future Volume (veh/h)	11	663	51	110	570	0	38	0	107	0	0	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	721	55	120	620	0	41	0	116	0	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	25	1241	1051	150	2606	0	81	12	141	0	0	195
Arrive On Green	0.01	0.65	0.65	0.08	0.72	0.00	0.12	0.00	0.12	0.00	0.00	0.12
Sat Flow, veh/h	1810	1900	1609	1810	3705	0	314	98	1166	0	0	1610
Grp Volume(v), veh/h	12	721	55	120	620	0	157	0	0	0	0	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1609	1810	1805	0	1579	0	0	0	0	1610
Q Serve(g_s), s	0.7	22.3	1.3	6.8	6.1	0.0	7.3	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.7	22.3	1.3	6.8	6.1	0.0	10.1	0.0	0.0	0.0	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.00	0.26		0.74	0.00		1.00
Lane Grp Cap(c), veh/h	25	1241	1051	150	2606	0	235	0	0	0	0	195
V/C Ratio(X)	0.47	0.58	0.05	0.80	0.24	0.00	0.67	0.00	0.00	0.00	0.00	0.15
Avail Cap(c_a), veh/h	102	1241	1051	473	2606	0	393	0	0	0	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	51.3	10.2	6.5	47.3	4.9	0.0	44.9	0.0	0.0	0.0	0.0	41.2
Incr Delay (d2), s/veh	5.0	2.0	0.1	3.7	0.2	0.0	3.3	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.3	0.4	3.1	1.8	0.0	4.2	0.0	0.0	0.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	12.2	6.6	51.0	5.1	0.0	48.2	0.0	0.0	0.0	0.0	41.6
LnGrp LOS	E	B	A	D	A	A	D	A	A	A	A	D
Approach Vol, veh/h		788			740			157				29
Approach Delay, s/veh		12.4			12.6			48.2				41.6
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.3	13.3	74.3		17.3	6.1	81.5				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	5.9	75.7				
Max Q Clear Time (g_c+I1), s		12.1	8.8	24.3		3.7	2.7	8.1				
Green Ext Time (p_c), s		0.6	0.1	5.2		0.1	0.0	4.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

**APPENDIX 8.3:**

**EAC (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC (2021) Conditions - Weekday PM Peak Hour**

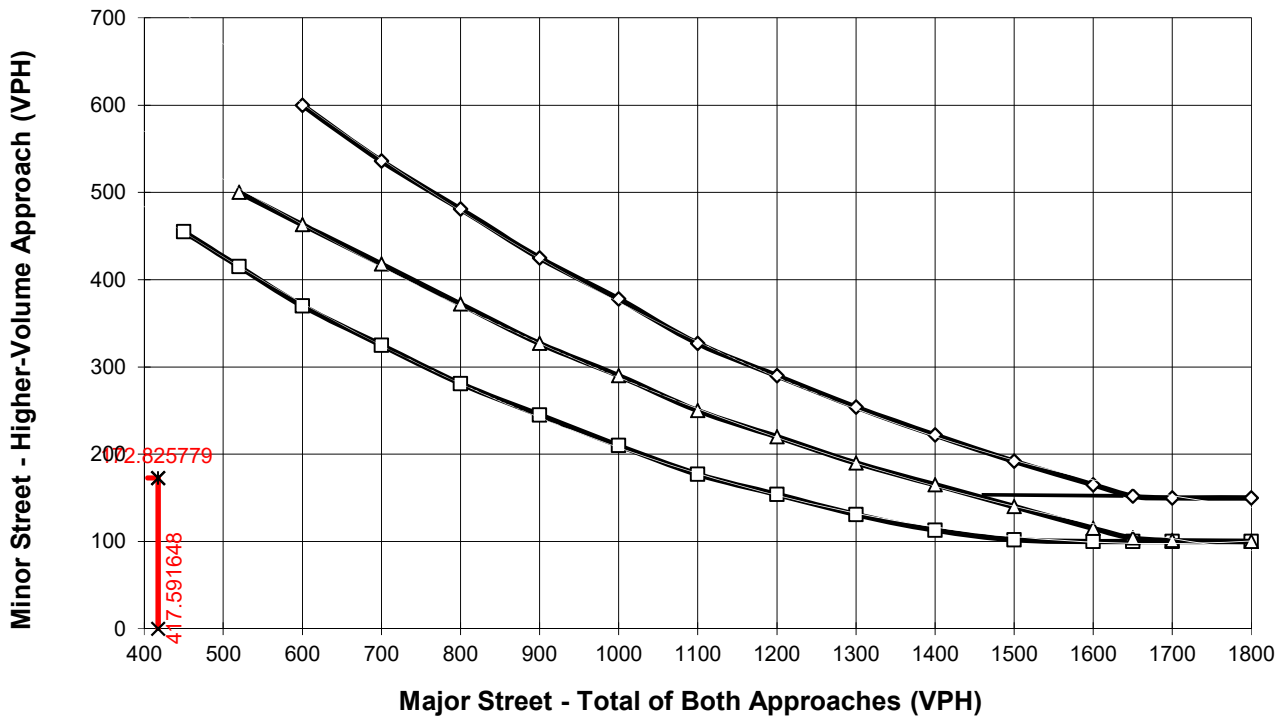
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **418**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Markham St.**

High Volume Approach (VPH) = **173**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC (2021) Conditions - Weekday AM Peak Hour**

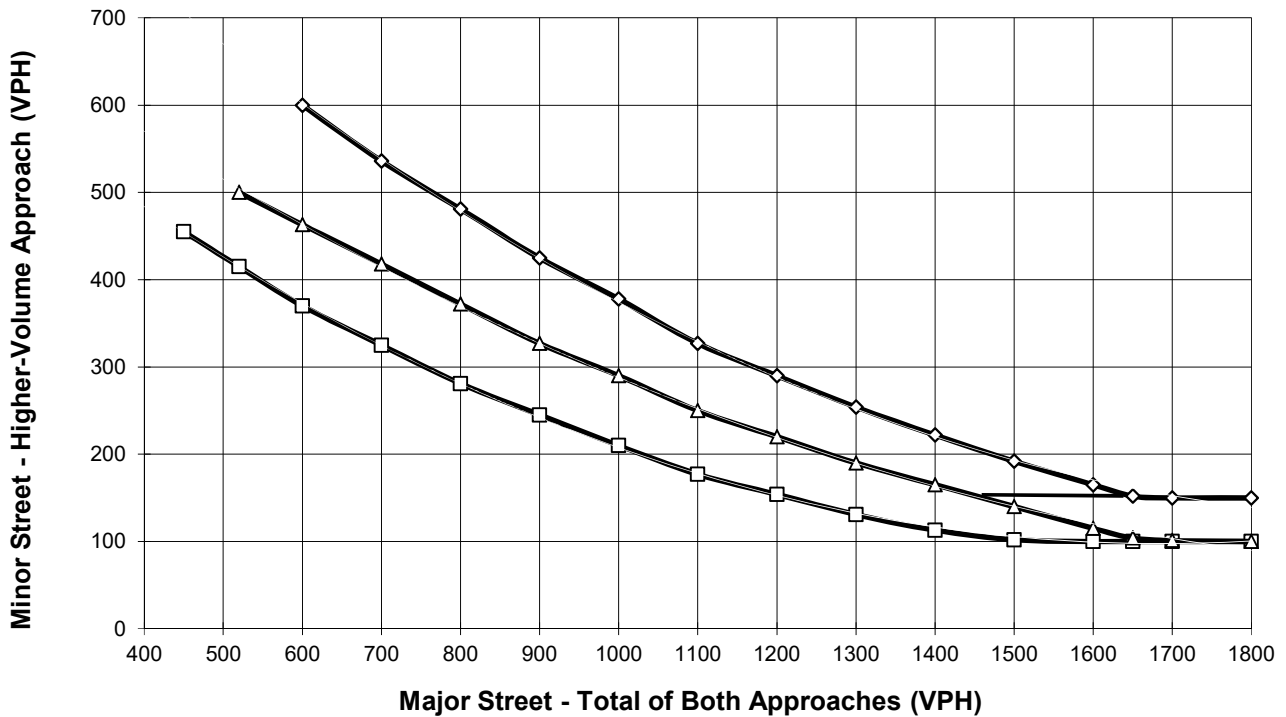
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **178**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **49**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC (2021) Conditions - Weekday PM Peak Hour**

Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **115**

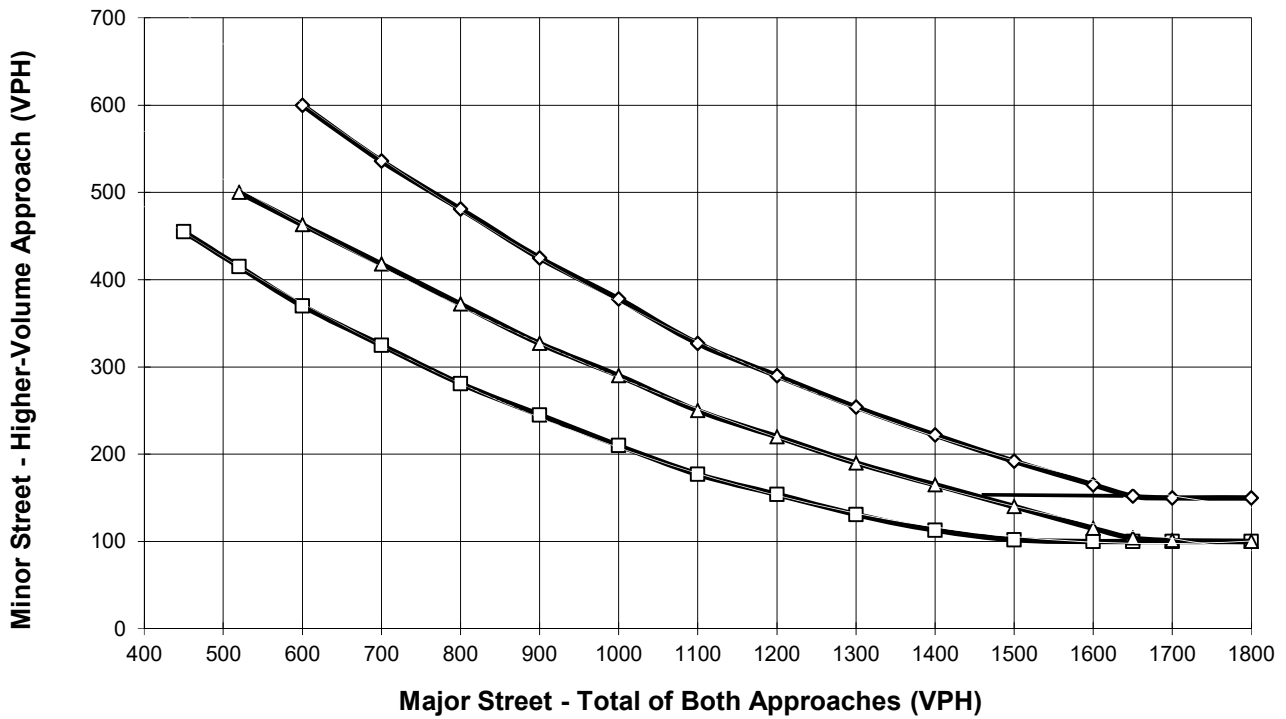
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Sinclair St.**

High Volume Approach (VPH) = **21**

Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

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**APPENDIX 8.4:**

**EAPC (2021) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**



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### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC 2021 Conditions - Weekday PM Peak Hour**

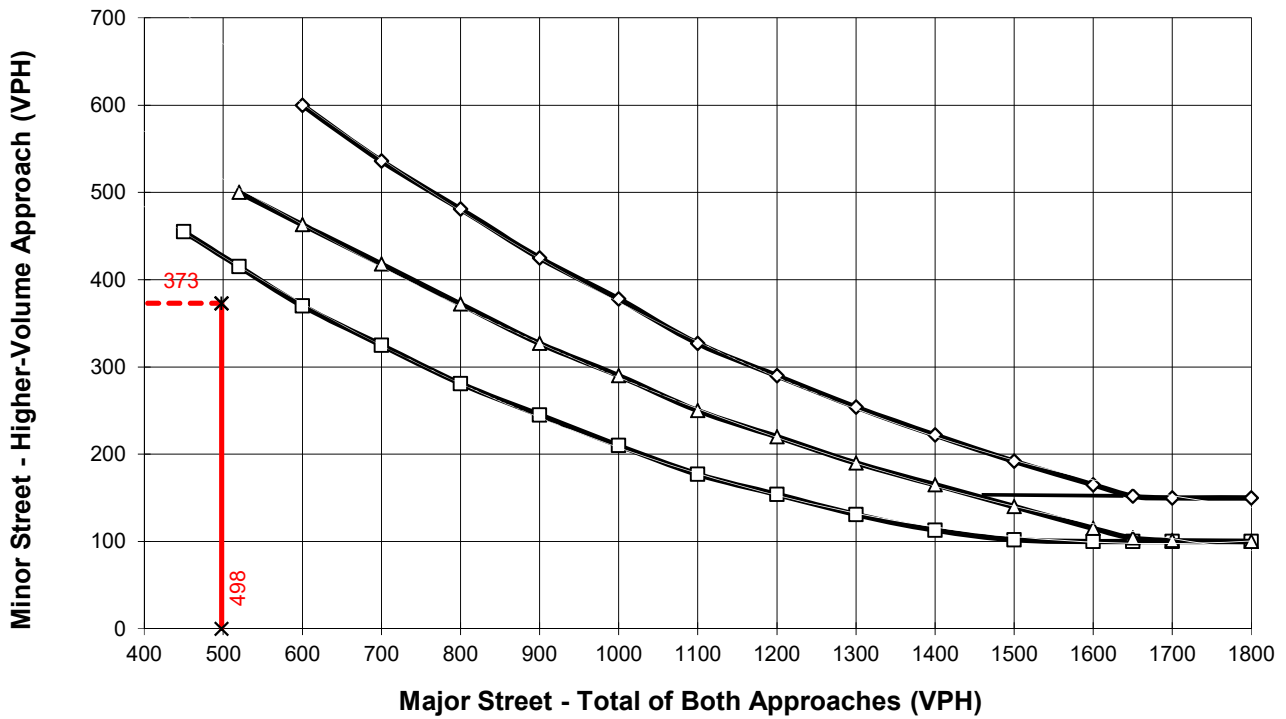
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **498**  
 Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Markham St.**

High Volume Approach (VPH) = **373**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC 2021 Conditions - Weekday AM Peak Hour**

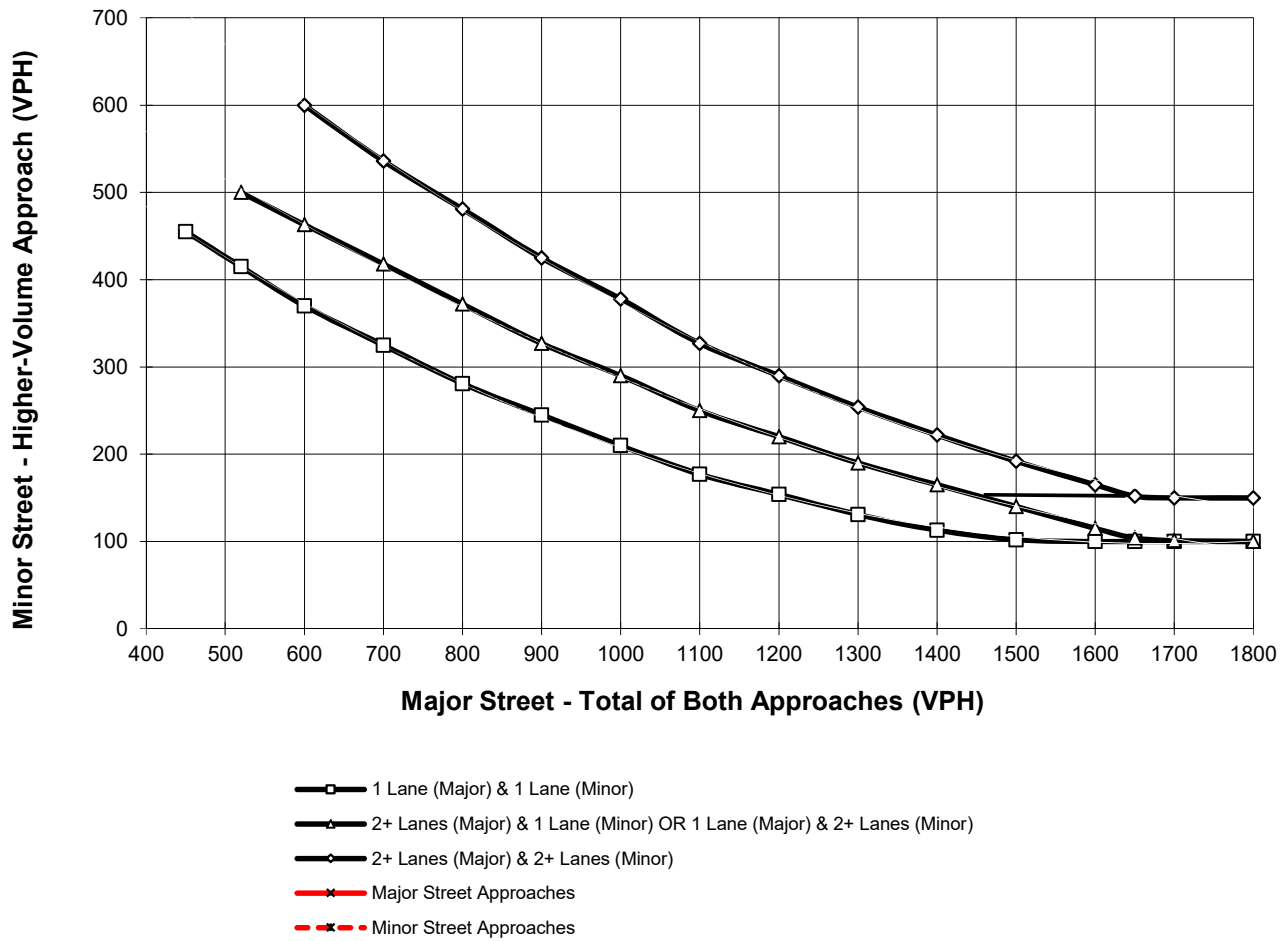
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **269**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Morgan St.**

High Volume Approach (VPH) = **59**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC 2021 Conditions - Weekday PM Peak Hour**

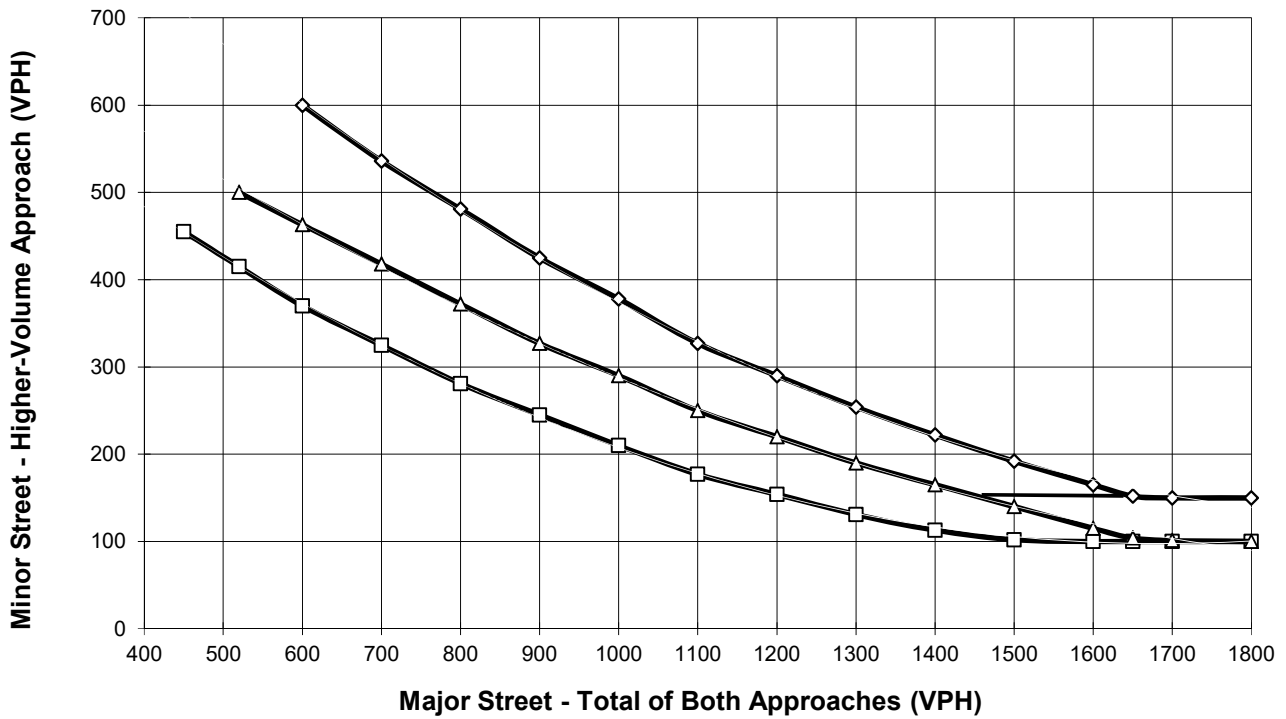
Major Street Name = **Redlands Av.**

Total of Both Approaches (VPH) = **184**  
 Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Sinclair St.**

High Volume Approach (VPH) = **23**  
 Number of Approach Lanes On Minor Street = **1**

**SIGNAL WARRANT NOT SATISFIED**



- 1 Lane (Major) & 1 Lane (Minor)
- △— 2+ Lanes (Major) & 1 Lane (Minor) OR 1 Lane (Major) & 2+ Lanes (Minor)
- ◇— 2+ Lanes (Major) & 2+ Lanes (Minor)
- x— Major Street Approaches
- x— Minor Street Approaches

\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

### Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	CALC <u>RV</u>	TRAFFIC CONDITIONS	<u>EAPC 2021</u>
Jurisdiction: <u>City of Perris</u>				CHK <u>CH</u>		DATE <u>08/02/18</u>
Major Street: <u>Redlands Av.</u>					Critical Approach Speed (Major) <u>40</u> mph	DATE <u>08/02/18</u>
Minor Street: <u>Driveway 2</u>					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane			
Major Street Future ADT = <u>2,786</u>	vpd	Minor Street Future ADT = <u>571</u>	vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph); .....	<input type="checkbox"/>	or	<input type="checkbox"/>			<b>RURAL (R)</b>
In built up area of isolated community of < 10,000 population .....	<input type="checkbox"/>					

**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u> <b>XX</b>	<u>RURAL</u>	Minimum Requirements EADT			
<u>CONDITION A - Minimum Vehicular Volume Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + <b>2,786</b>	1 <b>571</b>	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<u>CONDITION B - Interruption of Continuous Traffic Satisfied</u>	<u>Not Satisfied</u> <b>XX</b>	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + <b>2,786</b>	1 <b>571</b>	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<u>Combination of CONDITIONS A + B Satisfied</u>		2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more .....					
	<b>A</b> <b>24%</b>	<b>B</b> <b>19%</b>			

**Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.**

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

**APPENDIX 8.5:**

**EAC (2021) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues



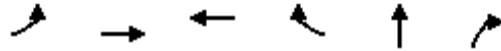
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	589	32	226	280	1016	329
v/c Ratio	0.49	0.05	0.89	0.14	1.98	0.48
Control Delay	17.6	0.2	52.2	9.5	470.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	0.2	52.2	9.5	470.4	5.6
Queue Length 50th (ft)	87	0	82	38	~591	4
Queue Length 95th (ft)	129	0	#189	64	#797	55
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	610	255	1985	512	682
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.05	0.89	0.14	1.98	0.48

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



Queues



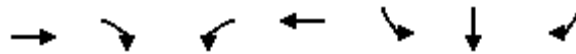
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	373	1090	437	969	65	304
v/c Ratio	0.79	0.40	0.29	1.07	0.43	1.08
Control Delay	16.2	0.4	13.2	65.0	35.6	94.5
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	16.2	0.9	13.2	65.0	35.6	94.5
Queue Length 50th (ft)	12	0	54	~308	23	~66
Queue Length 95th (ft)	33	m0	89	#528	#56	#202
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1493	908	150	282
Starvation Cap Reductn	0	1032	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.65	0.29	1.07	0.43	1.08

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1092	481	399	1535	434	435	705
v/c Ratio	0.79	0.53	1.32	0.72	0.83	0.83	1.30
Control Delay	35.3	4.4	184.5	5.4	50.9	50.9	177.6
Queue Delay	0.0	0.0	0.0	1.2	60.6	60.6	0.0
Total Delay	35.3	4.4	184.5	6.6	111.5	111.5	177.6
Queue Length 50th (ft)	354	0	~339	59	300	300	~603
Queue Length 95th (ft)	440	64	m#368	m172	#474	#474	#836
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1378	913	303	2133	522	523	543
Starvation Cap Reductn	0	0	0	351	0	0	0
Spillback Cap Reductn	0	0	0	0	322	323	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.53	1.32	0.86	2.17	2.17	1.30

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	384	1555	1301	898	307	312	526
v/c Ratio	1.29	0.73	0.94	0.84	0.58	0.59	0.96
Control Delay	179.5	28.4	47.6	14.7	37.2	37.4	62.6
Queue Delay	0.0	49.0	2.2	0.0	0.0	0.0	0.0
Total Delay	179.5	77.3	49.8	14.7	37.2	37.4	62.6
Queue Length 50th (ft)	~365	613	461	102	189	193	319
Queue Length 95th (ft)	m#514	686	#610	338	287	291	#538
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	297	2121	1378	1064	537	539	557
Starvation Cap Reductn	0	968	0	0	0	0	0
Spillback Cap Reductn	0	0	32	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.29	1.35	0.97	0.84	0.57	0.58	0.94

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

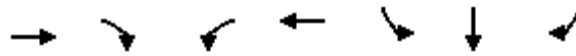


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	619	79	546	250	677	272
v/c Ratio	0.51	0.13	2.14	0.13	1.32	0.42
Control Delay	18.0	2.1	541.8	7.7	181.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.1	541.8	7.7	181.1	4.9
Queue Length 50th (ft)	92	0	~337	36	~327	0
Queue Length 95th (ft)	136	13	#507	52	#507	46
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	617	255	1985	513	652
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	35	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.13	2.14	0.13	1.32	0.42

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
2: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1650	587	518	1174	511	515	418
v/c Ratio	1.20	0.68	1.71	0.55	0.98	0.98	0.77
Control Delay	128.1	13.3	352.0	3.3	73.4	74.7	38.8
Queue Delay	0.1	0.0	0.0	0.4	66.1	65.3	0.0
Total Delay	128.2	13.3	352.0	3.7	139.5	140.0	38.8
Queue Length 50th (ft)	~744	105	~513	32	375	378	221
Queue Length 95th (ft)	#883	239	m#638	39	#606	#610	#350
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1378	860	303	2133	522	523	545
Starvation Cap Reductn	0	0	0	412	0	0	0
Spillback Cap Reductn	37	0	0	0	438	440	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.68	1.71	0.68	6.08	6.20	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

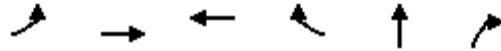
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	471	892	787	1245	60	376
v/c Ratio	0.89	0.33	0.57	1.52	0.40	1.09
Control Delay	25.2	0.1	17.0	257.9	34.3	89.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	25.2	0.3	17.0	257.9	34.3	89.7
Queue Length 50th (ft)	20	1	117	~582	21	~71
Queue Length 95th (ft)	25	m1	155	#740	50	#195
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1376	820	151	346
Starvation Cap Reductn	0	985	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.52	0.57	1.52	0.40	1.09

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	696	1978	1185	955	259	256	487
v/c Ratio	2.19	0.91	0.86	0.92	0.51	0.50	0.92
Control Delay	557.9	32.3	39.0	23.4	35.6	35.4	55.3
Queue Delay	0.0	47.0	0.0	0.0	0.0	0.0	0.0
Total Delay	557.9	79.3	39.0	23.4	35.6	35.4	55.3
Queue Length 50th (ft)	~844	780	400	202	154	152	281
Queue Length 95th (ft)	m#668	m725	493	#557	238	235	#475
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	318	2162	1378	1039	537	540	557
Starvation Cap Reductn	0	970	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	2.19	1.66	0.86	0.92	0.48	0.47	0.87

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 8.6:**

**EAPC (2021) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**



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Queues



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	589	32	235	280	1061	329
v/c Ratio	0.49	0.05	0.92	0.14	2.07	0.49
Control Delay	17.6	0.2	58.8	9.4	509.2	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	0.2	58.8	9.4	509.2	6.1
Queue Length 50th (ft)	87	0	86	38	-627	7
Queue Length 95th (ft)	129	0	#198	63	#834	60
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	610	255	1985	512	673
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.05	0.92	0.14	2.07	0.49

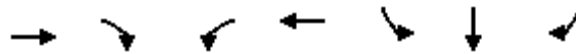
Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1092	481	403	1535	443	445	705
v/c Ratio	0.79	0.53	1.33	0.72	0.85	0.85	1.30
Control Delay	35.3	4.4	189.9	5.5	52.6	52.8	177.6
Queue Delay	0.0	0.0	0.0	1.2	60.0	60.0	0.0
Total Delay	35.3	4.4	189.9	6.7	112.6	112.8	177.6
Queue Length 50th (ft)	354	0	~345	60	307	309	~603
Queue Length 95th (ft)	440	64	m#372	m170	#489	#493	#836
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1378	913	303	2133	522	523	543
Starvation Cap Reductn	0	0	0	352	0	0	0
Spillback Cap Reductn	0	0	0	0	322	323	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.53	1.33	0.86	2.21	2.23	1.30

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

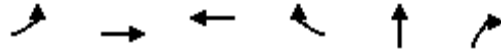
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	373	1134	445	981	65	333
v/c Ratio	0.79	0.42	0.30	1.08	0.43	1.23
Control Delay	16.2	0.7	13.2	69.7	35.6	150.3
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	16.2	1.2	13.2	69.7	35.6	150.3
Queue Length 50th (ft)	12	0	55	~318	23	~99
Queue Length 95th (ft)	32	m0	91	#538	#56	#240
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1493	908	150	271
Starvation Cap Reductn	0	1030	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.68	0.30	1.08	0.43	1.23

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	384	1574	1305	903	307	312	539
v/c Ratio	1.33	0.75	0.95	0.85	0.57	0.58	0.97
Control Delay	194.7	28.8	48.0	15.1	36.7	36.9	64.9
Queue Delay	0.0	49.0	2.4	0.0	0.0	0.0	0.0
Total Delay	194.7	77.7	50.4	15.1	36.7	36.9	64.9
Queue Length 50th (ft)	~365	620	463	107	189	193	332
Queue Length 95th (ft)	m#514	694	#613	#354	287	291	#557
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	289	2105	1378	1064	537	539	557
Starvation Cap Reductn	0	968	0	0	0	0	0
Spillback Cap Reductn	0	0	32	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.33	1.38	0.97	0.85	0.57	0.58	0.97

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

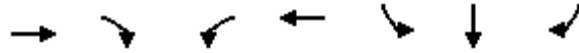


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	619	79	571	250	692	272
v/c Ratio	0.51	0.13	2.24	0.13	1.35	0.42
Control Delay	18.0	2.1	585.0	7.5	193.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.1	585.0	7.5	193.4	4.9
Queue Length 50th (ft)	92	0	~357	36	~339	0
Queue Length 95th (ft)	136	13	#531	50	#520	46
Internal Link Dist (ft)	844			267	1109	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1203	617	255	1985	513	652
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	33	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.13	2.24	0.13	1.35	0.42

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

## 2: I-215 SB Ramps &amp; Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1650	587	534	1174	516	520	418
v/c Ratio	1.20	0.68	1.76	0.55	0.99	0.99	0.77
Control Delay	128.1	13.3	375.0	3.3	75.7	77.1	38.8
Queue Delay	0.1	0.0	0.0	0.4	64.2	63.3	0.0
Total Delay	128.2	13.3	375.0	3.7	139.9	140.4	38.8
Queue Length 50th (ft)	~744	105	~537	32	380	384	221
Queue Length 95th (ft)	#883	239	m#655	40	#613	#620	#350
Internal Link Dist (ft)	1353			390		1096	
Turn Bay Length (ft)			100		510		510
Base Capacity (vph)	1378	860	303	2133	522	523	545
Starvation Cap Reductn	0	0	0	414	0	0	0
Spillback Cap Reductn	37	0	0	0	438	440	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.68	1.76	0.68	6.14	6.27	0.77

## Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

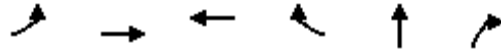
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	471	908	814	1286	60	387
v/c Ratio	0.89	0.34	0.59	1.57	0.40	1.14
Control Delay	25.2	0.1	17.3	280.2	34.3	109.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	25.2	0.3	17.3	280.2	34.3	109.7
Queue Length 50th (ft)	20	1	123	~616	21	~85
Queue Length 95th (ft)	25	m1	162	#773	50	#210
Internal Link Dist (ft)		267	594		929	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	556	2707	1376	820	151	339
Starvation Cap Reductn	0	985	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.53	0.59	1.57	0.40	1.14

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.



Queues

4: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	696	1987	1200	979	259	256	493
v/c Ratio	2.22	0.92	0.87	0.94	0.51	0.50	0.92
Control Delay	569.6	32.6	39.8	27.2	35.4	35.2	56.2
Queue Delay	0.0	46.8	0.0	0.0	0.0	0.0	0.0
Total Delay	569.6	79.4	39.8	27.2	35.4	35.2	56.2
Queue Length 50th (ft)	~844	784	407	236	154	152	287
Queue Length 95th (ft)	m#668	m726	502	#594	238	235	#484
Internal Link Dist (ft)		390	532			1120	
Turn Bay Length (ft)	105						500
Base Capacity (vph)	314	2155	1378	1039	537	540	557
Starvation Cap Reductn	0	970	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	2.22	1.68	0.87	0.94	0.48	0.47	0.89

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

**APPENDIX 8.7:**

**EAC (2021) CONDITIONS BASIC FREEWAY SEGMENT ANALYSIS WORKSHEETS**

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# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4806	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1847
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.77
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	65.2
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	28.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4402	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	1675
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	24.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3800	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1418
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	20.4
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5883	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2260
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.94
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	57.0
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	39.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5104	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1943
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.6
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.6
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5013	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1888
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.79
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	64.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	29.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	6385	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2430
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.01
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	-	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	6211	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2318
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.97
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	55.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	41.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5970	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2207
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.92
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	58.3
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	37.9
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	6157	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (V <sub>p</sub> ), pc/h/ln	2343
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.98
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	54.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	42.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5171	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1930
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.8
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4589	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1697
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.71
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.1
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	25.3
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

**APPENDIX 8.8:**

**EAPC (2021) CONDITIONS BASIC FREEWAY SEGMENT ANALYSIS WORKSHEETS**



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# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4841	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1876
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.78
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	64.7
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	29.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4424	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1684
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	67.3
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	25.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	3808	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1421
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	69.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	20.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5893	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2264
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.94
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	56.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	39.8
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5120	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1949
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5036	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1897
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.79
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	64.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	29.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	6400	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2436
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.01
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	-	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		



# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	6230	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2325
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.97
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	55.4
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	42.0
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5995	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2216
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.92
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	58.1
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	38.1
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	6194	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	2357
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.98
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	54.5
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	43.2
Total Ramp Density Adjustment	-	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	5198	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1940
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	63.7
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	30.5
Total Ramp Density Adjustment	-	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

# HCS7 Basic Freeway Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Measured	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	-
Lane Width, ft	-	Free-Flow Speed (FFS), mi/h	70.0
Right-Side Lateral Clearance, ft	-		

## Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

## Demand and Capacity

Demand Volume veh/h	4599	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1716
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c <sub>adj</sub> ), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.72
Passenger Car Equivalent (ET)	2.000		

## Speed and Density

Lane Width Adjustment (fLW)	-	Average Speed (S), mi/h	66.9
Right-Side Lateral Clearance Adj. (fRLC)	-	Density (D), pc/mi/ln	25.7
Total Ramp Density Adjustment	-	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS <sub>adj</sub> ), mi/h	70.0		

**APPENDIX 8.9:**

**EAC (2021) CONDITIONS MERGE/DIVERGE ANALYSIS WORKSHEETS**

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# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4806	1082
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	6.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.943	0.826
Flow Rate (vi),pc/h	5540	1424
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.77	0.68

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	34.4
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.426
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1828
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	58.1
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.556	Outer Lanes Freeway Speed (SO), mi/h	73.6
Flow in Lanes 1 and 2 (v12), pc/h	3712	Ramp Junction Speed (S), mi/h	62.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	29.6
Level of Service (LOS)	D		



# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4266	206
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	17.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.855
Flow Rate (vi),pc/h	4820	262
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.12

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1154.4	Density in Ramp Influence Area (DR), pc/mi/ln	27.8
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.383
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2000
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.3
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	64.6
Flow in Lanes 1 and 2 (v12), pc/h	2820	Ramp Junction Speed (S), mi/h	61.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	3082	Average Density (D), pc/mi/ln	27.6
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4402	1385
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.885
Flow Rate (vi),pc/h	5026	1701
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.70	0.81

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	30.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.451
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1476
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	57.4
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.556	Outer Lanes Freeway Speed (SO), mi/h	74.9
Flow in Lanes 1 and 2 (v12), pc/h	3550	Ramp Junction Speed (S), mi/h	61.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.2
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3017	786
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.926
Flow Rate (vi),pc/h	3312	923
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.59	0.44

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	23.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.324
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1328
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.9
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	67.0
Flow in Lanes 1 and 2 (v12), pc/h	1984	Ramp Junction Speed (S), mi/h	62.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	2907	Average Density (D), pc/mi/ln	22.5
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5001	1184
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.885
Flow Rate (vi),pc/h	5710	1454
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	1.00	0.69

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1617.7	Density in Ramp Influence Area (DR), pc/mi/ln	39.8
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.731
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2444
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	49.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.572	Outer Lanes Freeway Speed (SO), mi/h	62.6
Flow in Lanes 1 and 2 (v12), pc/h	3266	Ramp Junction Speed (S), mi/h	53.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	4720	Average Density (D), pc/mi/ln	44.8
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5104	402
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	11.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.901
Flow Rate (vi),pc/h	5828	485
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.23

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	33.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.342
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2180
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.4
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.592	Outer Lanes Freeway Speed (SO), mi/h	72.2
Flow in Lanes 1 and 2 (v12), pc/h	3648	Ramp Junction Speed (S), mi/h	64.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.2
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3994	1110
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	12.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.893
Flow Rate (vi),pc/h	4471	1351
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.64

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	32.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.479
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1811
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.6
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.3
Flow in Lanes 1 and 2 (v12), pc/h	2660	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	4011	Average Density (D), pc/mi/ln	32.9
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5013	1032
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.962	0.909
Flow Rate (vi),pc/h	5664	1234
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.79	0.59

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	31.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.409
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1940
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	58.5
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.562	Outer Lanes Freeway Speed (SO), mi/h	73.1
Flow in Lanes 1 and 2 (v12), pc/h	3724	Ramp Junction Speed (S), mi/h	62.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.1
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	6385	723
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	20.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.833
Flow Rate (vi),pc/h	7290	943
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	1.01	0.45

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	42.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	-
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2700
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	59.3
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.534	Outer Lanes Freeway Speed (SO), mi/h	70.2
Flow in Lanes 1 and 2 (v12), pc/h	4590	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		



# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5662	549
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.952
Flow Rate (vi),pc/h	6338	627
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.97	0.30

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1557.4	Density in Ramp Influence Area (DR), pc/mi/ln	37.0
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.579
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2687
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	53.8
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.576	Outer Lanes Freeway Speed (SO), mi/h	61.1
Flow in Lanes 1 and 2 (v12), pc/h	3651	Ramp Junction Speed (S), mi/h	56.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	4278	Average Density (D), pc/mi/ln	41.2
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAP (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	6211	1299
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.909
Flow Rate (vi),pc/h	6953	1553
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.97	0.74

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	37.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.438
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2619
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	57.7
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.515	Outer Lanes Freeway Speed (SO), mi/h	70.5
Flow in Lanes 1 and 2 (v12), pc/h	4334	Ramp Junction Speed (S), mi/h	61.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	37.4
Level of Service (LOS)	E		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4912	1057
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.952
Flow Rate (vi),pc/h	5393	1207
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.92	0.57

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	34.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.582
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2163
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	53.7
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	64.0
Flow in Lanes 1 and 2 (v12), pc/h	3230	Ramp Junction Speed (S), mi/h	56.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	4437	Average Density (D), pc/mi/ln	38.8
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4849	1308
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	15.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.870
Flow Rate (vi),pc/h	5378	1634
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.97	0.78

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1585.2	Density in Ramp Influence Area (DR), pc/mi/ln	39.7
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.732
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2291
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	49.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.574	Outer Lanes Freeway Speed (SO), mi/h	63.6
Flow in Lanes 1 and 2 (v12), pc/h	3087	Ramp Junction Speed (S), mi/h	53.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	4721	Average Density (D), pc/mi/ln	43.8
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5171	322
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.826
Flow Rate (vi),pc/h	5789	424
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.80	0.20

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	32.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.336
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2167
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.6
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.596	Outer Lanes Freeway Speed (SO), mi/h	72.2
Flow in Lanes 1 and 2 (v12), pc/h	3622	Ramp Junction Speed (S), mi/h	64.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	29.9
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3573	894
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.926
Flow Rate (vi),pc/h	3923	1049
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.69	0.50

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	27.5
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.379
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1589
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.4
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	66.1
Flow in Lanes 1 and 2 (v12), pc/h	2334	Ramp Junction Speed (S), mi/h	61.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	3383	Average Density (D), pc/mi/ln	27.0
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4589	930
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.971	0.926
Flow Rate (vi),pc/h	5137	1092
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.52

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.396
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1695
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	58.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.581	Outer Lanes Freeway Speed (SO), mi/h	74.1
Flow in Lanes 1 and 2 (v12), pc/h	3442	Ramp Junction Speed (S), mi/h	63.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.1
Level of Service (LOS)	D		

**APPENDIX 8.10:**

**EAPC (2021) CONDITIONS MERGE/DIVERGE ANALYSIS WORKSHEETS**



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# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4841	1099
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	7.00	22.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.935	0.820
Flow Rate (vi),pc/h	5628	1457
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.78	0.69

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	34.8
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.429
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1869
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	58.0
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.552	Outer Lanes Freeway Speed (SO), mi/h	73.4
Flow in Lanes 1 and 2 (v12), pc/h	3759	Ramp Junction Speed (S), mi/h	62.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.1
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4284	210
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	18.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.847
Flow Rate (vi),pc/h	4840	269
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.71	0.13

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1160.2	Density in Ramp Influence Area (DR), pc/mi/ln	28.0
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.384
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2009
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	59.2
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.585	Outer Lanes Freeway Speed (SO), mi/h	64.6
Flow in Lanes 1 and 2 (v12), pc/h	2831	Ramp Junction Speed (S), mi/h	61.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	3100	Average Density (D), pc/mi/ln	27.8
Level of Service (LOS)	C		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4424	1403
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.885
Flow Rate (vi),pc/h	5051	1723
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.70	0.82

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	31.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.453
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1484
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	57.3
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.554	Outer Lanes Freeway Speed (SO), mi/h	74.9
Flow in Lanes 1 and 2 (v12), pc/h	3567	Ramp Junction Speed (S), mi/h	61.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.4
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3021	790
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.990	0.926
Flow Rate (vi),pc/h	3317	927
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.59	0.44

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	23.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.324
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1330
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	60.9
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	67.0
Flow in Lanes 1 and 2 (v12), pc/h	1987	Ramp Junction Speed (S), mi/h	62.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	2914	Average Density (D), pc/mi/ln	22.6
Level of Service (LOS)	C		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5006	1189
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.885
Flow Rate (vi),pc/h	5716	1460
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	1.00	0.70

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1620.3	Density in Ramp Influence Area (DR), pc/mi/ln	39.9
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.736
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2446
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	49.4
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.572	Outer Lanes Freeway Speed (SO), mi/h	62.6
Flow in Lanes 1 and 2 (v12), pc/h	3270	Ramp Junction Speed (S), mi/h	53.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	4730	Average Density (D), pc/mi/ln	45.0
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5120	413
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	13.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.952	0.885
Flow Rate (vi),pc/h	5846	507
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.24

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	33.2
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.344
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2184
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.4
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.591	Outer Lanes Freeway Speed (SO), mi/h	72.2
Flow in Lanes 1 and 2 (v12), pc/h	3662	Ramp Junction Speed (S), mi/h	64.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.3
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4005	1115
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	12.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.893
Flow Rate (vi),pc/h	4483	1357
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.65

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	32.3
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.482
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1816
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.3
Flow in Lanes 1 and 2 (v12), pc/h	2667	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	4024	Average Density (D), pc/mi/ln	33.0
Level of Service (LOS)	D		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5036	1044
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	4.00	9.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.962	0.917
Flow Rate (vi),pc/h	5690	1237
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.79	0.59

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	31.3
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.409
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1955
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	58.5
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.561	Outer Lanes Freeway Speed (SO), mi/h	73.1
Flow in Lanes 1 and 2 (v12), pc/h	3735	Ramp Junction Speed (S), mi/h	62.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.2
Level of Service (LOS)	D		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	195
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	6400	729
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	5.00	21.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.826
Flow Rate (vi),pc/h	7307	959
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	1.01	0.46

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	42.1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	-
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2700
Distance to Downstream Ramp (LDOWN), ft	1420	Off-Ramp Influence Area Speed (SR), mi/h	59.2
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.533	Outer Lanes Freeway Speed (SO), mi/h	70.2
Flow in Lanes 1 and 2 (v12), pc/h	4607	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	260
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5671	559
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	7.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.935
Flow Rate (vi),pc/h	6348	650
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.97	0.31

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1564.4	Density in Ramp Influence Area (DR), pc/mi/ln	37.2
Distance to Upstream Ramp (LUP), ft	1420	Speed Index (M)	0.587
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2692
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	53.6
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.576	Outer Lanes Freeway Speed (SO), mi/h	61.1
Flow in Lanes 1 and 2 (v12), pc/h	3656	Ramp Junction Speed (S), mi/h	56.3
Flow Entering Ramp-Infl. Area (vR12), pc/h	4306	Average Density (D), pc/mi/ln	41.4
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	430
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	6230	1308
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	10.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.909
Flow Rate (vi),pc/h	6974	1564
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.97	0.74

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	37.7
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.439
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2629
Distance to Downstream Ramp (LDOWN), ft	1635	Off-Ramp Influence Area Speed (SR), mi/h	57.7
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.514	Outer Lanes Freeway Speed (SO), mi/h	70.4
Flow in Lanes 1 and 2 (v12), pc/h	4345	Ramp Junction Speed (S), mi/h	61.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	37.6
Level of Service (LOS)	E		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	760
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4922	1072
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.952
Flow Rate (vi),pc/h	5404	1224
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.92	0.58

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	35.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.590
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2167
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	53.5
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.599	Outer Lanes Freeway Speed (SO), mi/h	64.0
Flow in Lanes 1 and 2 (v12), pc/h	3237	Ramp Junction Speed (S), mi/h	56.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	4461	Average Density (D), pc/mi/ln	39.1
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4872	1322
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	15.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.980	0.870
Flow Rate (vi),pc/h	5404	1652
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.98	0.79

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	1594.6	Density in Ramp Influence Area (DR), pc/mi/ln	39.9
Distance to Upstream Ramp (LUP), ft	1395	Speed Index (M)	0.744
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2308
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	49.2
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.573	Outer Lanes Freeway Speed (SO), mi/h	63.4
Flow in Lanes 1 and 2 (v12), pc/h	3096	Ramp Junction Speed (S), mi/h	53.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	4748	Average Density (D), pc/mi/ln	44.3
Level of Service (LOS)	E		

# HCS7 Freeway Diverge Report

## Project Information

Analyst	CP	Date	10/4/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	280
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	5198	326
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	22.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.820
Flow Rate (vi),pc/h	5819	432
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.21

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	33.0
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.337
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	2182
Distance to Downstream Ramp (LDOWN), ft	1395	Off-Ramp Influence Area Speed (SR), mi/h	60.6
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.595	Outer Lanes Freeway Speed (SO), mi/h	72.2
Flow in Lanes 1 and 2 (v12), pc/h	3637	Ramp Junction Speed (S), mi/h	64.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	30.1
Level of Service (LOS)	D		

# HCS7 Freeway Merge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Acceleration Length (LA),ft	1500	635
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	3663	1535
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	1.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fhv)	0.990	0.926
Flow Rate (vi),pc/h	4022	1802
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.81	0.86

## Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	33.5
Distance to Upstream Ramp (LUP), ft	-	Speed Index (M)	0.523
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1629
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.4
Prop. Freeway Vehicles in Lane 1 and 2 (PM)	0.595	Outer Lanes Freeway Speed (SO), mi/h	65.9
Flow in Lanes 1 and 2 (v12), pc/h	2393	Ramp Junction Speed (S), mi/h	58.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	4195	Average Density (D), pc/mi/ln	33.5
Level of Service (LOS)	D		



# HCS7 Freeway Diverge Report

## Project Information

Analyst	CM	Date	7/30/2018
Agency	Urban Crossroads, Inc.	Analysis Year	EAPC (2021)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Rider 2 and 4 TIA (JN 11557)		

## Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	70.0	45.0
Segment Length (L) / Deceleration Length (LA),ft	1500	560
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

## Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

## Demand and Capacity

Demand Volume (Vi)	4599	936
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	3.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.971	0.926
Flow Rate (vi),pc/h	5148	1099
Capacity (c), pc/h	7200	2100
Volume-to-Capacity Ratio (v/c)	0.72	0.52

## Speed and Density

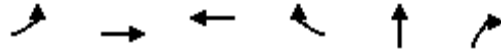
Upstream Equilibrium Distance (LEQ), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln	28.9
Distance to Upstream Ramp (LUP), ft	-	Speed Index (D)	0.397
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (VOA), pc/mi/ln	1697
Distance to Downstream Ramp (LDOWN), ft	1320	Off-Ramp Influence Area Speed (SR), mi/h	58.9
Prop. Freeway Vehicles in Lane 1 and 2 (PD)	0.581	Outer Lanes Freeway Speed (SO), mi/h	74.1
Flow in Lanes 1 and 2 (v12), pc/h	3451	Ramp Junction Speed (S), mi/h	63.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.2
Level of Service (LOS)	D		

**APPENDIX 8.11:**

**EAC (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH  
IMPROVEMENTS**

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Timings

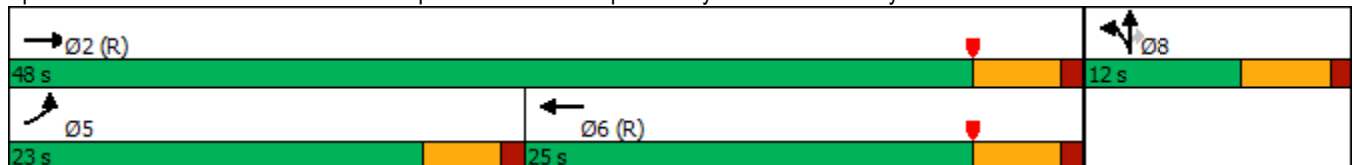


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	347	1014	406	901	0	283
Future Volume (vph)	347	1014	406	901	0	283
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	23.0	48.0	25.0		12.0	12.0
Total Split (%)	38.3%	80.0%	41.7%		20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	10.7	43.0	27.8	60.0	7.0	7.0
Actuated g/C Ratio	0.18	0.72	0.46	1.00	0.12	0.12
v/c Ratio	0.60	0.42	0.26	0.60	0.31	0.96
Control Delay	10.3	0.6	10.9	1.7	28.6	59.0
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	10.3	0.8	10.9	1.7	28.6	59.0
LOS	B	A	B	A	C	E
Approach Delay		3.2	4.5		53.7	
Approach LOS		A	A		D	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 9.5  
 Intersection Capacity Utilization 79.9%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service D

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

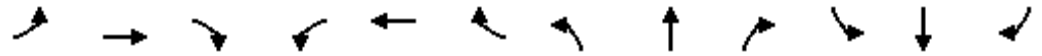


HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑			↑↑	↖		↖	↖			
Traffic Volume (veh/h)	347	1014	0	0	406	901	60	0	283	0	0	0
Future Volume (veh/h)	347	1014	0	0	406	901	60	0	283	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	373	1090	0	0	437	0	65	0	239			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	514	2587	0	0	1788		211	0	188			
Arrive On Green	0.05	0.24	0.00	0.00	0.50	0.00	0.12	0.00	0.12			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	373	1090	0	0	437	0	65	0	239			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	6.3	15.4	0.0	0.0	4.2	0.0	2.0	0.0	7.0			
Cycle Q Clear(g_c), s	6.3	15.4	0.0	0.0	4.2	0.0	2.0	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	514	2587	0	0	1788		211	0	188			
V/C Ratio(X)	0.73	0.42	0.00	0.00	0.24		0.31	0.00	1.27			
Avail Cap(c_a), veh/h	1082	2587	0	0	1788		211	0	188			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.47	0.47	0.00	0.00	0.63	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.4	12.4	0.0	0.0	8.7	0.0	24.3	0.0	26.5			
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.0	0.2	0.0	3.7	0.0	157.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.5	7.1	0.0	0.0	1.3	0.0	1.0	0.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	12.6	0.0	0.0	8.9	0.0	28.0	0.0	183.9			
LnGrp LOS	C	B	A	A	A		C	A	F			
Approach Vol, veh/h		1463			437	A		304				
Approach Delay, s/veh		16.4			8.9			150.6				
Approach LOS		B			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.0			13.3	34.7		12.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		43.0			18.5	20.0		7.0				
Max Q Clear Time (g_c+I1), s		17.4			8.3	6.2		9.0				
Green Ext Time (p_c), s		5.0			0.5	1.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
4: I-215 NB Ramps & Ramona Exwy.

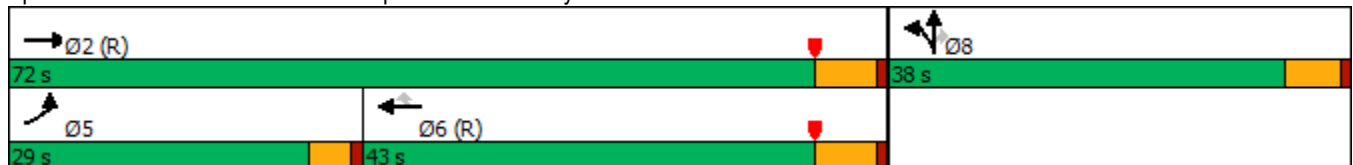


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↘	↑↑↑	↑↑↑	↗	↘	↖	↗
Traffic Volume (vph)	369	1493	1249	862	589	5	505
Future Volume (vph)	369	1493	1249	862	589	5	505
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	29.0	72.0	43.0	43.0	38.0	38.0	38.0
Total Split (%)	26.4%	65.5%	39.1%	39.1%	34.5%	34.5%	34.5%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	24.4	66.0	37.1	37.1	32.5	32.5	32.5
Actuated g/C Ratio	0.22	0.60	0.34	0.34	0.30	0.30	0.30
v/c Ratio	0.96	0.50	0.74	0.92	0.61	0.61	0.99
Control Delay	42.8	8.4	35.5	24.6	39.3	39.5	72.0
Queue Delay	0.0	0.3	0.4	0.0	4.1	4.3	0.0
Total Delay	42.8	8.8	35.8	24.6	43.4	43.8	72.0
LOS	D	A	D	C	D	D	E
Approach Delay		15.5	31.3			56.6	
Approach LOS		B	C			E	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 31.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 103.6%  
 ICU Level of Service G  
 Analysis Period (min) 15
























Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	369	1493	0	0	1249	862	589	5	505	0	0	0
Future Volume (veh/h)	369	1493	0	0	1249	862	589	5	505	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	384	1555	0	0	1301	0	618	0	343			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	403	3378	0	0	2010		884	0	393			
Arrive On Green	0.22	0.65	0.00	0.00	0.39	0.00	0.24	0.00	0.24			
Sat Flow, veh/h	1810	5358	0	0	5358	1610	3619	0	1610			
Grp Volume(v), veh/h	384	1555	0	0	1301	0	618	0	343			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	23.0	16.4	0.0	0.0	22.6	0.0	17.1	0.0	22.5			
Cycle Q Clear(g_c), s	23.0	16.4	0.0	0.0	22.6	0.0	17.1	0.0	22.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	403	3378	0	0	2010		884	0	393			
V/C Ratio(X)	0.95	0.46	0.00	0.00	0.65		0.70	0.00	0.87			
Avail Cap(c_a), veh/h	403	3378	0	0	2010		1069	0	476			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.2	9.6	0.0	0.0	27.5	0.0	37.9	0.0	39.9			
Incr Delay (d2), s/veh	16.1	0.2	0.0	0.0	1.6	0.0	1.6	0.0	14.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.5	5.1	0.0	0.0	8.9	0.0	7.5	0.0	10.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	9.7	0.0	0.0	29.2	0.0	39.5	0.0	54.0			
LnGrp LOS	E	A	A	A	C		D	A	D			
Approach Vol, veh/h		1939			1301	A		961				
Approach Delay, s/veh		19.3			29.2			44.7				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			29.0	48.6		32.4				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		66.0			24.5	37.0		32.5				
Max Q Clear Time (g_c+I1), s		18.4			25.0	24.6		24.5				
Green Ext Time (p_c), s		8.4			0.0	4.6		2.4				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

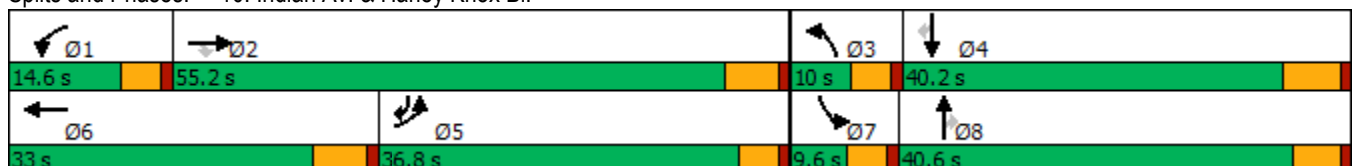


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖↗	↑↑	↗	↖	↑	↗
Traffic Volume (vph)	565	395	116	63	777	148	305	44	13	81	232
Future Volume (vph)	565	395	116	63	777	148	305	44	13	81	232
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	3	8		7	4	5
Permitted Phases			2					8			4
Detector Phase	5	2	2	1	6	3	8	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	9.6
Total Split (s)	36.8	55.2	55.2	14.6	33.0	10.0	40.6	40.6	9.6	40.2	36.8
Total Split (%)	30.7%	46.0%	46.0%	12.2%	27.5%	8.3%	33.8%	33.8%	8.0%	33.5%	30.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	4.6
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	33.0	50.2	50.2	7.8	22.5	6.9	21.1	21.1	5.1	14.3	45.9
Actuated g/C Ratio	0.35	0.53	0.53	0.08	0.24	0.07	0.22	0.22	0.05	0.15	0.49
v/c Ratio	0.98	0.16	0.14	0.47	0.73	0.64	0.42	0.10	0.14	0.31	0.30
Control Delay	65.9	14.2	3.8	55.8	37.8	58.8	33.0	0.4	52.5	39.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.9	14.2	3.8	55.8	37.8	58.8	33.0	0.4	52.5	39.4	5.6
LOS	E	B	A	E	D	E	C	A	D	D	A
Approach Delay		40.3			39.1		37.8			15.8	
Approach LOS		D			D		D			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94.3  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 36.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 72.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.





HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	565	395	116	63	777	46	148	305	44	13	81	232
Future Volume (veh/h)	565	395	116	63	777	46	148	305	44	13	81	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	621	434	113	69	854	36	163	335	40	14	89	225
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	647	2823	876	89	1137	48	210	558	249	30	211	754
Arrive On Green	0.36	0.54	0.54	0.05	0.22	0.22	0.06	0.15	0.15	0.02	0.11	0.11
Sat Flow, veh/h	1810	5187	1610	1810	5105	215	3510	3610	1610	1810	1900	1610
Grp Volume(v), veh/h	621	434	113	69	578	312	163	335	40	14	89	225
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1861	1755	1805	1610	1810	1900	1610
Q Serve(g_s), s	30.2	3.7	3.1	3.4	14.0	14.1	4.1	7.8	1.9	0.7	3.9	1.6
Cycle Q Clear(g_c), s	30.2	3.7	3.1	3.4	14.0	14.1	4.1	7.8	1.9	0.7	3.9	1.6
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	647	2823	876	89	771	415	210	558	249	30	211	754
V/C Ratio(X)	0.96	0.15	0.13	0.77	0.75	0.75	0.77	0.60	0.16	0.47	0.42	0.30
Avail Cap(c_a), veh/h	647	2845	883	201	1044	562	210	1411	629	100	717	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	10.2	10.1	42.3	32.7	32.7	41.7	35.5	33.0	43.9	37.3	5.0
Incr Delay (d2), s/veh	25.6	0.0	0.1	5.2	2.1	3.9	15.0	1.0	0.3	4.3	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.2	1.2	1.0	1.6	5.7	6.4	2.1	3.3	0.7	0.3	1.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	10.2	10.1	47.5	34.7	36.5	56.7	36.5	33.3	48.2	38.7	5.2
LnGrp LOS	D	B	B	D	C	D	E	D	C	D	D	A
Approach Vol, veh/h		1168			959			538			328	
Approach Delay, s/veh		33.4			36.2			42.4			16.1	
Approach LOS		C			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	54.8	10.0	16.2	38.0	25.9	6.1	20.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	10.0	49.4	5.4	34.0	32.2	* 27	5.0	* 35				
Max Q Clear Time (g_c+I1), s	5.4	5.7	6.1	5.9	32.2	16.1	2.7	9.8				
Green Ext Time (p_c), s	0.0	3.1	0.0	1.2	0.0	4.0	0.0	2.1				

Intersection Summary

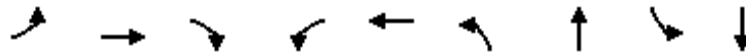
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

24: Redlands Av. & Rider St.

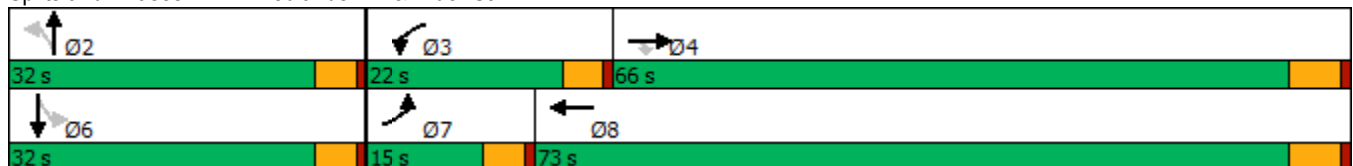


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↑↓	↖	↗	↖	↗
Traffic Volume (vph)	25	444	11	171	790	49	16	15	0
Future Volume (vph)	25	444	11	171	790	49	16	15	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	27.6	27.6	27.6	27.6
Total Split (s)	15.0	66.0	66.0	22.0	73.0	32.0	32.0	32.0	32.0
Total Split (%)	12.5%	55.0%	55.0%	18.3%	60.8%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	6.1	60.3	60.3	14.2	72.5	11.1	11.1	11.1	11.1
Actuated g/C Ratio	0.06	0.60	0.60	0.14	0.72	0.11	0.11	0.11	0.11
v/c Ratio	0.25	0.42	0.01	0.73	0.33	0.35	0.63	0.21	0.12
Control Delay	51.8	13.0	0.0	58.6	6.4	49.2	15.8	49.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	13.0	0.0	58.6	6.4	49.2	15.8	49.0	0.6
LOS	D	B	A	E	A	D	B	D	A
Approach Delay		14.7			15.7		21.8		12.0
Approach LOS		B			B		C		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.7  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 16.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	444	11	171	790	4	49	16	204	15	0	48
Future Volume (veh/h)	25	444	11	171	790	4	49	16	204	15	0	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	483	12	186	859	4	53	17	222	16	0	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	1072	908	217	2425	11	271	20	265	106	0	282
Arrive On Green	0.03	0.56	0.56	0.12	0.66	0.66	0.18	0.18	0.18	0.18	0.00	0.18
Sat Flow, veh/h	1810	1900	1610	1810	3685	17	1374	116	1512	1159	0	1610
Grp Volume(v), veh/h	27	483	12	186	421	442	53	0	239	16	0	52
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1897	1374	0	1628	1159	0	1610
Q Serve(g_s), s	1.6	15.9	0.3	10.8	11.1	11.1	3.6	0.0	15.1	1.4	0.0	2.9
Cycle Q Clear(g_c), s	1.6	15.9	0.3	10.8	11.1	11.1	6.6	0.0	15.1	16.6	0.0	2.9
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.93	1.00		1.00
Lane Grp Cap(c), veh/h	47	1072	908	217	1188	1249	271	0	286	106	0	282
V/C Ratio(X)	0.58	0.45	0.01	0.86	0.35	0.35	0.20	0.00	0.84	0.15	0.00	0.18
Avail Cap(c_a), veh/h	176	1072	908	295	1188	1249	382	0	418	201	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.4	13.6	10.2	46.1	8.1	8.1	40.3	0.0	42.5	50.5	0.0	37.5
Incr Delay (d2), s/veh	4.1	1.4	0.0	13.2	0.8	0.8	0.3	0.0	9.4	0.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.5	0.1	5.5	3.9	4.1	1.2	0.0	6.7	0.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	15.0	10.2	59.2	9.0	8.9	40.7	0.0	52.0	51.2	0.0	37.8
LnGrp LOS	E	B	B	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		522			1049			292				68
Approach Delay, s/veh		17.0			17.9			49.9				41.0
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.3	17.4	66.0		23.3	7.4	76.1				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		27.4	17.4	60.2		27.4	10.4	67.2				
Max Q Clear Time (g_c+I1), s		17.1	12.8	17.9		18.6	3.6	13.1				
Green Ext Time (p_c), s		1.1	0.1	3.0		0.1	0.0	5.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.3									
HCM 6th LOS			C									

Timings  
25: Wilson Av. & Rider St.

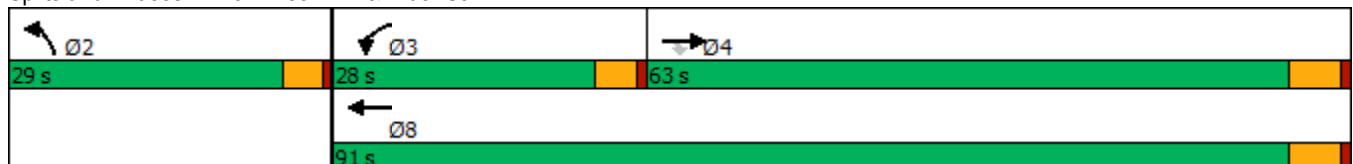


Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↑	↑	↙	↑↑	↘
Traffic Volume (vph)	632	19	220	914	33
Future Volume (vph)	632	19	220	914	33
Turn Type	NA	Perm	Prot	NA	Prot
Protected Phases	4		3	8	2
Permitted Phases		4			
Detector Phase	4	4	3	8	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	27.6
Total Split (s)	63.0	63.0	28.0	91.0	29.0
Total Split (%)	52.5%	52.5%	23.3%	75.8%	24.2%
Yellow Time (s)	4.8	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	4.6
Lead/Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes		
Recall Mode	Max	Max	None	Max	None
Act Effect Green (s)	61.6	61.6	19.0	85.2	11.8
Actuated g/C Ratio	0.57	0.57	0.18	0.79	0.11
v/c Ratio	0.68	0.02	0.81	0.38	0.69
Control Delay	21.6	10.4	62.4	3.9	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	10.4	62.4	3.9	21.0
LOS	C	B	E	A	C
Approach Delay	21.3			15.2	21.0
Approach LOS	C			B	C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 107.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 17.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 25: Wilson Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
 09/17/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	
Traffic Volume (veh/h)	632	19	220	914	33	181
Future Volume (veh/h)	632	19	220	914	33	181
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	744	22	259	1075	39	213
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1024	868	288	2665	43	237
Arrive On Green	0.54	0.54	0.16	0.74	0.17	0.17
Sat Flow, veh/h	1900	1610	1810	3705	253	1380
Grp Volume(v), veh/h	744	22	259	1075	253	0
Grp Sat Flow(s),veh/h/ln	1900	1610	1810	1805	1639	0
Q Serve(g_s), s	34.2	0.7	16.2	12.8	17.5	0.0
Cycle Q Clear(g_c), s	34.2	0.7	16.2	12.8	17.5	0.0
Prop In Lane		1.00	1.00		0.15	0.84
Lane Grp Cap(c), veh/h	1024	868	288	2665	281	0
V/C Ratio(X)	0.73	0.03	0.90	0.40	0.90	0.00
Avail Cap(c_a), veh/h	1024	868	367	2665	347	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	12.4	47.6	5.6	46.8	0.0
Incr Delay (d2), s/veh	4.5	0.1	18.2	0.5	22.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	0.3	8.5	3.9	8.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.6	12.5	65.8	6.1	68.9	0.0
LnGrp LOS	C	B	E	A	E	A
Approach Vol, veh/h	766			1334	253	
Approach Delay, s/veh	24.3			17.7	68.9	
Approach LOS	C			B	E	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		24.4	23.0	68.0		91.0
Change Period (Y+Rc), s		4.6	4.6	5.8		5.8
Max Green Setting (Gmax), s		24.4	23.4	57.2		85.2
Max Q Clear Time (g_c+I1), s		19.5	18.2	36.2		14.8
Green Ext Time (p_c), s		0.4	0.2	4.9		9.1

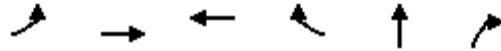
Intersection Summary

HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings

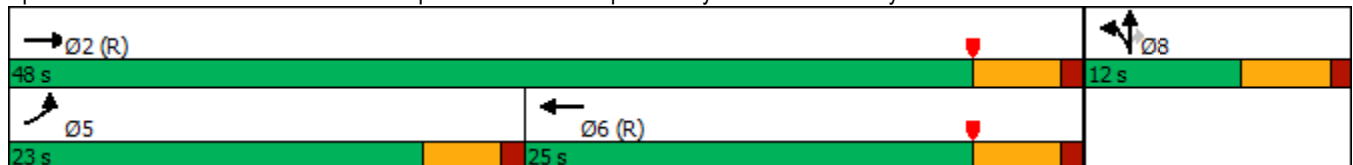


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↖	↑↑	↑↑	↗	↖	↗
Traffic Volume (vph)	400	758	669	1058	4	320
Future Volume (vph)	400	758	669	1058	4	320
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	23.0	48.0	25.0		12.0	12.0
Total Split (%)	38.3%	80.0%	41.7%		20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	12.4	43.0	26.1	60.0	7.0	7.0
Actuated g/C Ratio	0.21	0.72	0.44	1.00	0.12	0.12
v/c Ratio	0.65	0.34	0.50	0.77	0.28	1.00
Control Delay	11.1	0.4	14.3	3.6	28.1	62.3
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	11.1	0.4	14.3	3.6	28.1	62.3
LOS	B	A	B	A	C	E
Approach Delay		4.1	7.7		57.6	
Approach LOS		A	A		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 12.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 78.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	400	758	0	0	669	1058	47	4	320	0	0	0
Future Volume (veh/h)	400	758	0	0	669	1058	47	4	320	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	471	892	0	0	787	0	55	5	182			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	618	2587	0	0	1681		194	18	188			
Arrive On Green	0.06	0.24	0.00	0.00	0.47	0.00	0.12	0.12	0.12			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1665	151	1610			
Grp Volume(v), veh/h	471	892	0	0	787	0	60	0	182			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1817	0	1610			
Q Serve(g_s), s	7.9	12.3	0.0	0.0	8.9	0.0	1.8	0.0	6.8			
Cycle Q Clear(g_c), s	7.9	12.3	0.0	0.0	8.9	0.0	1.8	0.0	6.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	618	2587	0	0	1681		212	0	188			
V/C Ratio(X)	0.76	0.34	0.00	0.00	0.47		0.28	0.00	0.97			
Avail Cap(c_a), veh/h	1082	2587	0	0	1681		212	0	188			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.75	0.75	0.00	0.00	0.46	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	11.2	0.0	0.0	11.0	0.0	24.2	0.0	26.4			
Incr Delay (d2), s/veh	0.6	0.3	0.0	0.0	0.4	0.0	3.3	0.0	58.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	4.3	0.0	0.0	2.8	0.0	0.9	0.0	5.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	11.5	0.0	0.0	11.4	0.0	27.5	0.0	84.4			
LnGrp LOS	C	B	A	A	B		C	A	F			
Approach Vol, veh/h		1363			787	A		242				
Approach Delay, s/veh		17.0			11.4			70.3				
Approach LOS		B			B			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.0			15.1	32.9		12.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		43.0			18.5	20.0		7.0				
Max Q Clear Time (g_c+I1), s		14.3			9.9	10.9		8.8				
Green Ext Time (p_c), s		3.9			0.6	2.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
4: I-215 NB Ramps & Ramona Exwy.

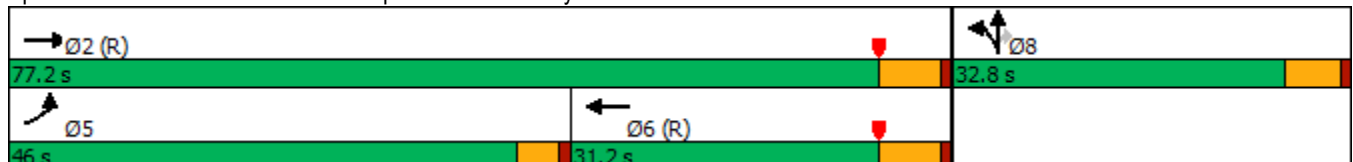


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↑↑↑	↑↑↑	↷	↶	↑	↷
Traffic Volume (vph)	682	1938	1161	936	497	8	477
Future Volume (vph)	682	1938	1161	936	497	8	477
Turn Type	Prot	NA	NA	Free	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				Free			8
Detector Phase	5	2	6		8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0		10.5	10.5	10.5
Total Split (s)	46.0	77.2	31.2		32.8	32.8	32.8
Total Split (%)	41.8%	70.2%	28.4%		29.8%	29.8%	29.8%
Yellow Time (s)	3.5	5.0	5.0		4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0		5.5	5.5	5.5
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	None	C-Max	C-Max		None	None	None
Act Effct Green (s)	41.5	71.2	25.2	110.0	27.3	27.3	27.3
Actuated g/C Ratio	0.38	0.65	0.23	1.00	0.25	0.25	0.25
v/c Ratio	1.02	0.59	1.00	0.60	0.61	0.60	1.07
Control Delay	38.8	4.4	68.3	1.7	43.7	43.3	96.0
Queue Delay	29.7	0.9	0.0	0.0	0.1	0.1	0.0
Total Delay	68.6	5.3	68.3	1.7	43.8	43.4	96.0
LOS	E	A	E	A	D	D	F
Approach Delay		21.8	38.6			69.1	
Approach LOS		C	D			E	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 36.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 99.8%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.





























HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	682	1938	0	0	1161	936	497	8	477	0	0	0
Future Volume (veh/h)	682	1938	0	0	1161	936	497	8	477	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	696	1978	0	0	1185	0	513	0	384			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	683	3357	0	0	1188		898	0	400			
Arrive On Green	0.38	0.65	0.00	0.00	0.23	0.00	0.25	0.00	0.25			
Sat Flow, veh/h	1810	5358	0	0	5358	1610	3619	0	1610			
Grp Volume(v), veh/h	696	1978	0	0	1185	0	513	0	384			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	41.5	23.9	0.0	0.0	25.1	0.0	13.7	0.0	25.9			
Cycle Q Clear(g_c), s	41.5	23.9	0.0	0.0	25.1	0.0	13.7	0.0	25.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	683	3357	0	0	1188		898	0	400			
V/C Ratio(X)	1.02	0.59	0.00	0.00	1.00		0.57	0.00	0.96			
Avail Cap(c_a), veh/h	683	3357	0	0	1188		898	0	400			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.3	11.1	0.0	0.0	42.4	0.0	36.2	0.0	40.8			
Incr Delay (d2), s/veh	15.7	0.1	0.0	0.0	25.5	0.0	0.9	0.0	34.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	19.7	7.5	0.0	0.0	12.9	0.0	5.9	0.0	13.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	11.1	0.0	0.0	67.8	0.0	37.1	0.0	75.7			
LnGrp LOS	F	B	A	A	E		D	A	E			
Approach Vol, veh/h		2674			1185	A		897				
Approach Delay, s/veh		21.2			67.8			53.6				
Approach LOS		C			E			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.2			46.0	31.2		32.8				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		71.2			41.5	25.2		27.3				
Max Q Clear Time (g_c+I1), s		25.9			43.5	27.1		27.9				
Green Ext Time (p_c), s		12.7			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

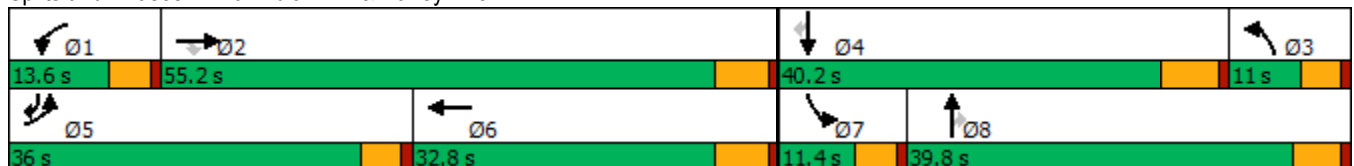
09/10/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	343	494	89	43	469	125	232	79	49	285	625	
Future Volume (vph)	343	494	89	43	469	125	232	79	49	285	625	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	pm+ov	
Protected Phases	5	2		1	6	3	8		7	4	5	
Permitted Phases			2					8			4	
Detector Phase	5	2	2	1	6	3	8	8	7	4	5	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	9.6	
Total Split (s)	36.0	55.2	55.2	13.6	32.8	11.0	39.8	39.8	11.4	40.2	36.0	
Total Split (%)	30.0%	46.0%	46.0%	11.3%	27.3%	9.2%	33.2%	33.2%	9.5%	33.5%	30.0%	
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	3.6	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	4.6	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	
Act Effct Green (s)	27.7	41.0	41.0	7.3	18.0	6.6	27.2	27.2	6.5	23.7	53.1	
Actuated g/C Ratio	0.28	0.42	0.42	0.07	0.18	0.07	0.28	0.28	0.07	0.24	0.54	
v/c Ratio	0.84	0.28	0.14	0.40	0.64	0.66	0.29	0.18	0.51	0.77	0.86	
Control Delay	50.5	20.5	1.3	57.3	40.9	62.7	30.9	1.9	64.7	47.8	21.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.5	20.5	1.3	57.3	40.9	62.7	30.9	1.9	64.7	47.8	21.9	
LOS	D	C	A	E	D	E	C	A	E	D	C	
Approach Delay		29.8			42.2		34.7			31.8		
Approach LOS		C			D		C			C		

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 97.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 33.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.3%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	343	494	89	43	469	17	125	232	79	49	285	625
Future Volume (veh/h)	343	494	89	43	469	17	125	232	79	49	285	625
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	429	618	100	54	586	19	156	290	83	61	356	660
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	469	1992	618	77	863	28	230	1040	458	81	472	812
Arrive On Green	0.26	0.38	0.38	0.04	0.17	0.17	0.07	0.29	0.29	0.04	0.25	0.25
Sat Flow, veh/h	1810	5187	1610	1810	5161	167	3510	3610	1590	1810	1900	1587
Grp Volume(v), veh/h	429	618	100	54	392	213	156	290	83	61	356	660
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1870	1755	1805	1590	1810	1900	1587
Q Serve(g_s), s	19.5	7.1	2.3	2.5	9.0	9.1	3.7	5.3	3.3	2.8	14.7	14.2
Cycle Q Clear(g_c), s	19.5	7.1	2.3	2.5	9.0	9.1	3.7	5.3	3.3	2.8	14.7	14.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	469	1992	618	77	578	313	230	1040	458	81	472	812
V/C Ratio(X)	0.91	0.31	0.16	0.70	0.68	0.68	0.68	0.28	0.18	0.75	0.75	0.81
Avail Cap(c_a), veh/h	670	3022	938	192	1101	595	265	1465	645	145	762	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	18.3	7.9	40.1	33.2	33.2	38.7	23.4	22.7	40.0	29.5	5.2
Incr Delay (d2), s/veh	10.8	0.1	0.1	4.3	1.4	2.6	3.9	0.1	0.2	5.1	2.5	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	2.5	1.2	1.1	3.7	4.1	1.6	2.1	1.2	1.3	6.5	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	18.3	8.0	44.4	34.6	35.8	42.6	23.5	22.9	45.1	31.9	9.1
LnGrp LOS	D	B	A	D	C	D	D	C	C	D	C	A
Approach Vol, veh/h		1147			659			529			1077	
Approach Delay, s/veh		26.0			35.8			29.1			18.7	
Approach LOS		C			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	38.4	11.0	27.3	26.6	20.0	8.4	29.8				
Change Period (Y+Rc), s	4.6	5.8	5.4	* 6.2	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	9.0	49.4	6.4	* 34	31.4	27.0	6.8	34.4				
Max Q Clear Time (g_c+I1), s	4.5	9.1	5.7	16.7	21.5	11.1	4.8	7.3				
Green Ext Time (p_c), s	0.0	4.4	0.0	4.4	0.5	3.1	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

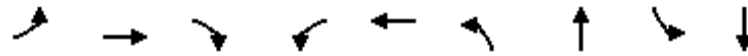
Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

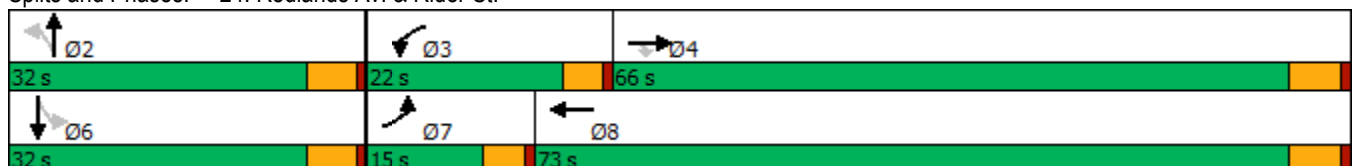


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↑↓	↖	↗	↖	↗
Traffic Volume (vph)	41	600	38	91	511	28	1	6	14
Future Volume (vph)	41	600	38	91	511	28	1	6	14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	28.4	28.4	28.4	28.4
Total Split (s)	15.0	66.0	66.0	22.0	73.0	32.0	32.0	32.0	32.0
Total Split (%)	12.5%	55.0%	55.0%	18.3%	60.8%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.4	5.4	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	7.0	64.2	64.2	9.9	71.1	10.2	10.2	10.2	10.2
Actuated g/C Ratio	0.07	0.64	0.64	0.10	0.71	0.10	0.10	0.10	0.10
v/c Ratio	0.36	0.54	0.04	0.56	0.22	0.22	0.47	0.07	0.26
Control Delay	52.1	12.3	0.1	54.9	5.9	45.9	13.7	43.2	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	12.3	0.1	54.9	5.9	45.9	13.7	43.2	22.6
LOS	D	B	A	D	A	D	B	D	C
Approach Delay		14.1			13.2		19.7		25.0
Approach LOS		B			B		B		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.1  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.1%  
 ICU Level of Service B  
 Analysis Period (min) 15























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	600	38	91	511	16	28	1	121	6	14	35
Future Volume (veh/h)	41	600	38	91	511	16	28	1	121	6	14	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	45	652	41	99	555	17	30	1	132	7	15	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	1253	1062	127	2478	76	182	1	172	109	51	130
Arrive On Green	0.04	0.66	0.66	0.07	0.69	0.69	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	3576	109	1373	12	1600	1277	476	1207
Grp Volume(v), veh/h	45	652	41	99	280	292	30	0	133	7	0	53
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1880	1373	0	1612	1277	0	1683
Q Serve(g_s), s	2.4	17.3	0.9	5.2	5.5	5.5	2.0	0.0	7.8	0.5	0.0	2.8
Cycle Q Clear(g_c), s	2.4	17.3	0.9	5.2	5.5	5.5	4.8	0.0	7.8	8.3	0.0	2.8
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.99	1.00		0.72
Lane Grp Cap(c), veh/h	66	1253	1062	127	1251	1303	182	0	174	109	0	181
V/C Ratio(X)	0.69	0.52	0.04	0.78	0.22	0.22	0.16	0.00	0.77	0.06	0.00	0.29
Avail Cap(c_a), veh/h	194	1253	1062	325	1251	1303	411	0	442	322	0	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	8.6	5.8	44.4	5.4	5.4	42.1	0.0	42.1	46.1	0.0	39.9
Incr Delay (d2), s/veh	4.7	1.5	0.1	3.9	0.4	0.4	0.4	0.0	6.9	0.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.1	0.3	2.4	1.7	1.8	0.7	0.0	3.3	0.2	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	10.1	5.8	48.3	5.8	5.8	42.5	0.0	48.9	46.3	0.0	40.7
LnGrp LOS	D	B	A	D	A	A	D	A	D	D	A	D
Approach Vol, veh/h		738			671			163				60
Approach Delay, s/veh		12.4			12.1			47.7				41.4
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.8	11.4	69.7		15.8	8.1	73.0				
Change Period (Y+Rc), s		5.4	4.6	5.8		5.4	4.6	5.8				
Max Green Setting (Gmax), s		26.6	17.4	60.2		26.6	10.4	67.2				
Max Q Clear Time (g_c+I1), s		9.8	7.2	19.3		10.3	4.4	7.5				
Green Ext Time (p_c), s		0.7	0.1	4.6		0.2	0.0	3.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.8								
HCM 6th LOS				B								

Timings  
25: Wilson Av. & Rider St.

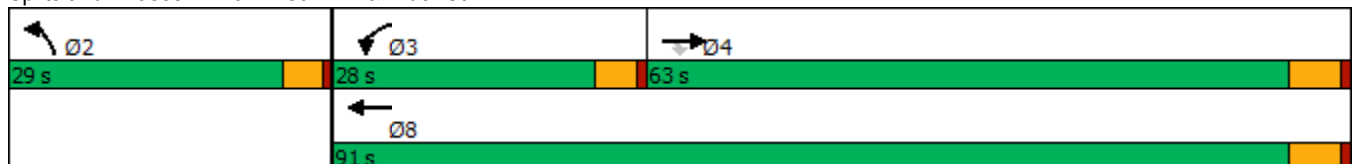


Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↑	↑	↙	↑↑	↘
Traffic Volume (vph)	663	51	110	570	38
Future Volume (vph)	663	51	110	570	38
Turn Type	NA	Perm	Prot	NA	Prot
Protected Phases	4		3	8	2
Permitted Phases		4			
Detector Phase	4	4	3	8	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	27.6
Total Split (s)	63.0	63.0	28.0	91.0	29.0
Total Split (%)	52.5%	52.5%	23.3%	75.8%	24.2%
Yellow Time (s)	4.8	4.8	3.6	4.8	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.6	5.8	4.6
Lead/Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes		
Recall Mode	Max	Max	None	Max	None
Act Effct Green (s)	69.8	69.8	11.4	85.8	11.2
Actuated g/C Ratio	0.65	0.65	0.11	0.80	0.10
v/c Ratio	0.58	0.05	0.62	0.21	0.58
Control Delay	14.0	6.8	59.8	2.9	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.0	6.8	59.8	2.9	25.6
LOS	B	A	E	A	C
Approach Delay	13.5			12.1	25.6
Approach LOS	B			B	C

Intersection Summary

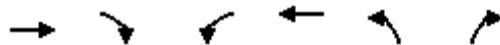
Cycle Length: 120  
 Actuated Cycle Length: 107.4  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 14.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 62.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av. & Rider St.



HCM 6th Signalized Intersection Summary  
25: Wilson Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
09/17/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑↑	↘	↙
Traffic Volume (veh/h)	663	51	110	570	38	107
Future Volume (veh/h)	663	51	110	570	38	107
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	721	55	120	620	41	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1263	1069	149	2850	49	139
Arrive On Green	0.66	0.66	0.08	0.79	0.11	0.11
Sat Flow, veh/h	1900	1609	1810	3705	431	1218
Grp Volume(v), veh/h	721	55	120	620	158	0
Grp Sat Flow(s),veh/h/ln	1900	1609	1810	1805	1659	0
Q Serve(g_s), s	22.1	1.3	7.0	4.7	10.1	0.0
Cycle Q Clear(g_c), s	22.1	1.3	7.0	4.7	10.1	0.0
Prop In Lane		1.00	1.00		0.26	0.73
Lane Grp Cap(c), veh/h	1263	1069	149	2850	189	0
V/C Ratio(X)	0.57	0.05	0.80	0.22	0.84	0.00
Avail Cap(c_a), veh/h	1263	1069	392	2850	375	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.8	6.3	48.7	2.9	46.8	0.0
Incr Delay (d2), s/veh	1.9	0.1	3.8	0.2	9.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.4	3.2	1.1	4.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	6.4	52.5	3.1	56.1	0.0
LnGrp LOS	B	A	D	A	E	A
Approach Vol, veh/h	776			740	158	
Approach Delay, s/veh	11.3			11.1	56.1	
Approach LOS	B			B	E	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		16.9	13.5	77.5		91.0
Change Period (Y+Rc), s		4.6	4.6	5.8		5.8
Max Green Setting (Gmax), s		24.4	23.4	57.2		85.2
Max Q Clear Time (g_c+I1), s		12.1	9.0	24.1		6.7
Green Ext Time (p_c), s		0.4	0.1	5.3		4.3

Intersection Summary

HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

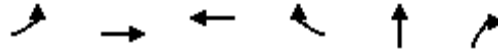
**APPENDIX 8.12:**

**EAPC (2021) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS  
WITH IMPROVEMENTS**



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Timings

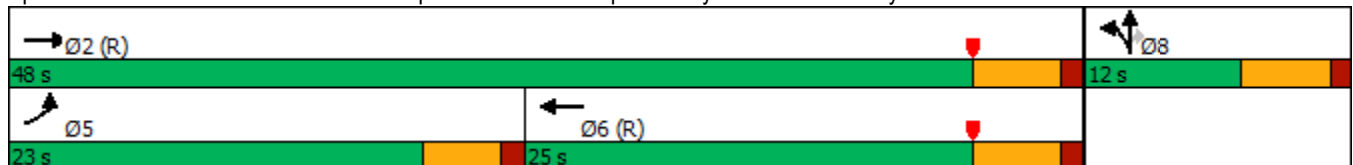


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔	↔
Traffic Volume (vph)	347	1055	414	912	0	310
Future Volume (vph)	347	1055	414	912	0	310
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	23.0	48.0	25.0		12.0	12.0
Total Split (%)	38.3%	80.0%	41.7%		20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	10.7	43.0	27.8	60.0	7.0	7.0
Actuated g/C Ratio	0.18	0.72	0.46	1.00	0.12	0.12
v/c Ratio	0.60	0.44	0.27	0.61	0.31	1.08
Control Delay	10.3	0.9	11.0	1.7	28.6	95.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	10.3	1.1	11.0	1.7	28.6	95.2
LOS	B	A	B	A	C	F
Approach Delay		3.3	4.6		84.3	
Approach LOS		A	A		F	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 13.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 82.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	347	1055	0	0	414	912	60	0	310	0	0	0
Future Volume (veh/h)	347	1055	0	0	414	912	60	0	310	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	373	1134	0	0	445	0	65	0	268			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	509	2587	0	0	1793		211	0	188			
Arrive On Green	0.10	0.48	0.00	0.00	0.50	0.00	0.12	0.00	0.12			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1810	0	1610			
Grp Volume(v), veh/h	373	1134	0	0	445	0	65	0	268			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	6.2	12.4	0.0	0.0	4.2	0.0	2.0	0.0	7.0			
Cycle Q Clear(g_c), s	6.2	12.4	0.0	0.0	4.2	0.0	2.0	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	509	2587	0	0	1793		211	0	188			
V/C Ratio(X)	0.73	0.44	0.00	0.00	0.25		0.31	0.00	1.43			
Avail Cap(c_a), veh/h	1082	2587	0	0	1793		211	0	188			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.40	0.40	0.00	0.00	0.63	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.0	7.6	0.0	0.0	8.7	0.0	24.3	0.0	26.5			
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.0	0.2	0.0	3.7	0.0	220.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.4	2.9	0.0	0.0	1.3	0.0	1.0	0.0	13.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	7.9	0.0	0.0	8.9	0.0	28.0	0.0	246.5			
LnGrp LOS	C	A	A	A	A		C	A	F			
Approach Vol, veh/h		1507			445	A		333				
Approach Delay, s/veh		12.4			8.9			203.8				
Approach LOS		B			A			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.0			13.2	34.8		12.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		43.0			18.5	20.0		7.0				
Max Q Clear Time (g_c+I1), s		14.4			8.2	6.2		9.0				
Green Ext Time (p_c), s		5.4			0.5	1.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
4: I-215 NB Ramps & Ramona Exwy.

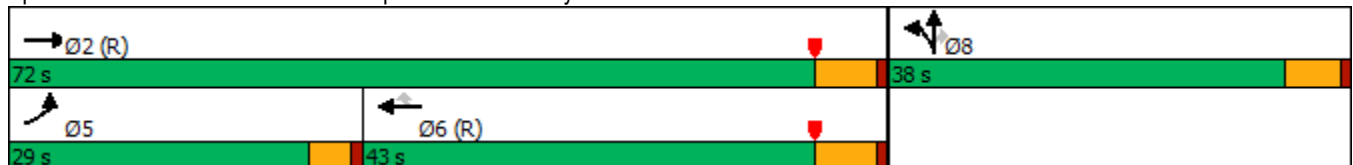


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↙	↑↑↑	↑↑↑	↘	↙	↕	↘
Traffic Volume (vph)	369	1511	1253	867	589	5	517
Future Volume (vph)	369	1511	1253	867	589	5	517
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	29.0	72.0	43.0	43.0	38.0	38.0	38.0
Total Split (%)	26.4%	65.5%	39.1%	39.1%	34.5%	34.5%	34.5%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	24.4	66.0	37.1	37.1	32.5	32.5	32.5
Actuated g/C Ratio	0.22	0.60	0.34	0.34	0.30	0.30	0.30
v/c Ratio	0.96	0.51	0.75	0.92	0.61	0.61	1.02
Control Delay	42.8	8.3	35.6	25.4	39.3	39.5	78.0
Queue Delay	0.0	0.3	0.4	0.0	4.1	4.3	0.0
Total Delay	42.8	8.7	35.9	25.4	43.4	43.8	78.0
LOS	D	A	D	C	D	D	E
Approach Delay		15.4	31.6			59.6	
Approach LOS		B	C			E	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 31.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 103.9%  
 ICU Level of Service G  
 Analysis Period (min) 15

























Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
 4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	369	1511	0	0	1253	867	589	5	517	0	0	0
Future Volume (veh/h)	369	1511	0	0	1253	867	589	5	517	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	384	1574	0	0	1305	0	618	0	356			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	403	3342	0	0	1975		909	0	404			
Arrive On Green	0.22	0.64	0.00	0.00	0.38	0.00	0.25	0.00	0.25			
Sat Flow, veh/h	1810	5358	0	0	5358	1610	3619	0	1610			
Grp Volume(v), veh/h	384	1574	0	0	1305	0	618	0	356			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	23.0	17.0	0.0	0.0	22.9	0.0	17.0	0.0	23.4			
Cycle Q Clear(g_c), s	23.0	17.0	0.0	0.0	22.9	0.0	17.0	0.0	23.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	403	3342	0	0	1975		909	0	404			
V/C Ratio(X)	0.95	0.47	0.00	0.00	0.66		0.68	0.00	0.88			
Avail Cap(c_a), veh/h	403	3342	0	0	1975		1069	0	476			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.33	0.33	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.2	10.0	0.0	0.0	28.2	0.0	37.2	0.0	39.6			
Incr Delay (d2), s/veh	15.8	0.2	0.0	0.0	1.8	0.0	1.4	0.0	15.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.5	5.4	0.0	0.0	9.1	0.0	7.4	0.0	10.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	10.1	0.0	0.0	29.9	0.0	38.6	0.0	55.0			
LnGrp LOS	E	B	A	A	C		D	A	E			
Approach Vol, veh/h		1958			1305	A		974				
Approach Delay, s/veh		19.5			29.9			44.6				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		76.9			29.0	47.9		33.1				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		66.0			24.5	37.0		32.5				
Max Q Clear Time (g_c+I1), s		19.0			25.0	24.9		25.4				
Green Ext Time (p_c), s		8.5			0.0	4.6		2.2				

Intersection Summary

HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.  
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)  
09/10/2019

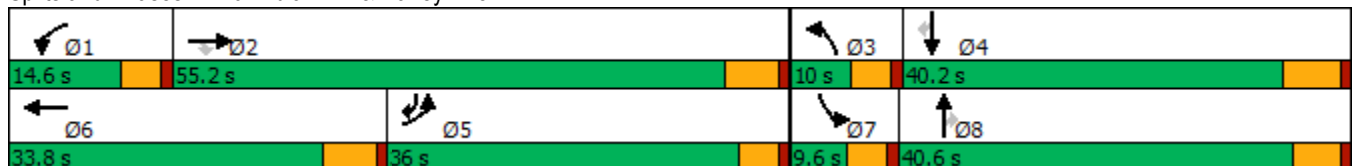


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑↑	↗	↖	↑↑↑	↖↗	↑↑	↗	↖	↑	↗
Traffic Volume (vph)	565	463	116	63	796	148	305	44	13	81	232
Future Volume (vph)	565	463	116	63	796	148	305	44	13	81	232
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	3	8		7	4	5
Permitted Phases			2					8			4
Detector Phase	5	2	2	1	6	3	8	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	9.6
Total Split (s)	36.0	55.2	55.2	14.6	33.8	10.0	40.6	40.6	9.6	40.2	36.0
Total Split (%)	30.0%	46.0%	46.0%	12.2%	28.2%	8.3%	33.8%	33.8%	8.0%	33.5%	30.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	4.6
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	32.2	50.0	50.0	7.8	23.1	6.9	21.0	21.0	5.1	14.2	45.1
Actuated g/C Ratio	0.34	0.53	0.53	0.08	0.25	0.07	0.22	0.22	0.05	0.15	0.48
v/c Ratio	1.00	0.18	0.14	0.46	0.73	0.63	0.42	0.10	0.14	0.31	0.31
Control Delay	71.9	14.4	3.9	55.7	37.2	58.6	32.9	0.4	52.4	39.4	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	14.4	3.9	55.7	37.2	58.6	32.9	0.4	52.4	39.4	5.8
LOS	E	B	A	E	D	E	C	A	D	D	A
Approach Delay		41.7			38.5		37.7			16.0	
Approach LOS		D			D		D			B	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 94  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 37.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 72.3%  
 ICU Level of Service C  
 Analysis Period (min) 15































Splits and Phases: 10: Indian Av. & Harley Knox Bl.



HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	565	463	116	63	796	46	148	305	44	13	81	232
Future Volume (veh/h)	565	463	116	63	796	46	148	305	44	13	81	232
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	621	509	113	69	875	36	163	335	40	14	89	225
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	633	2815	874	89	1169	48	211	560	250	30	212	743
Arrive On Green	0.35	0.54	0.54	0.05	0.23	0.23	0.06	0.16	0.16	0.02	0.11	0.11
Sat Flow, veh/h	1810	5187	1610	1810	5110	210	3510	3610	1610	1810	1900	1610
Grp Volume(v), veh/h	621	509	113	69	592	319	163	335	40	14	89	225
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1862	1755	1805	1610	1810	1900	1610
Q Serve(g_s), s	30.5	4.5	3.1	3.4	14.3	14.3	4.1	7.8	1.9	0.7	3.9	1.6
Cycle Q Clear(g_c), s	30.5	4.5	3.1	3.4	14.3	14.3	4.1	7.8	1.9	0.7	3.9	1.6
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	633	2815	874	89	791	426	211	560	250	30	212	743
V/C Ratio(X)	0.98	0.18	0.13	0.77	0.75	0.75	0.77	0.60	0.16	0.47	0.42	0.30
Avail Cap(c_a), veh/h	633	2856	887	202	1079	581	211	1416	632	101	720	1174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	10.4	10.1	42.1	32.2	32.2	41.6	35.3	32.8	43.7	37.2	5.1
Incr Delay (d2), s/veh	30.7	0.0	0.1	5.2	1.9	3.6	14.6	1.0	0.3	4.3	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	1.4	1.0	1.6	5.8	6.5	2.1	3.3	0.7	0.3	1.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	10.4	10.2	47.3	34.1	35.8	56.1	36.3	33.1	48.0	38.5	5.4
LnGrp LOS	E	B	B	D	C	D	E	D	C	D	D	A
Approach Vol, veh/h		1243			980			538			328	
Approach Delay, s/veh		34.9			35.6			42.1			16.2	
Approach LOS		C			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	54.5	10.0	16.2	37.2	26.3	6.1	20.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	6.2	5.8	* 5.8	4.6	* 6.2				
Max Green Setting (Gmax), s	10.0	49.4	5.4	34.0	31.4	* 28	5.0	* 35				
Max Q Clear Time (g_c+I1), s	5.4	6.5	6.1	5.9	32.5	16.3	2.7	9.8				
Green Ext Time (p_c), s	0.0	3.7	0.0	1.2	0.0	4.2	0.0	2.1				

Intersection Summary

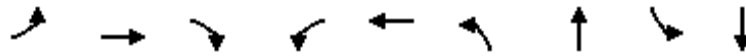
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
12/10/2019

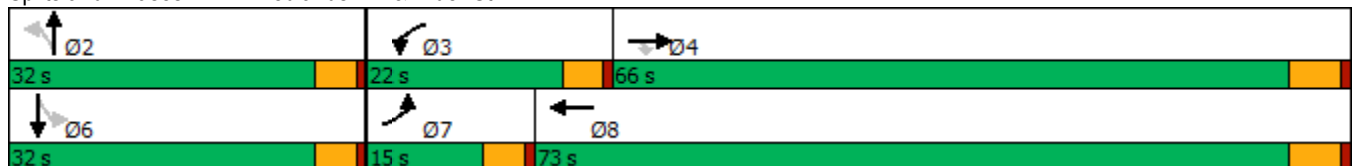


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↑↓	↖	↗	↖	↗
Traffic Volume (vph)	31	465	11	171	796	49	19	15	1
Future Volume (vph)	31	465	11	171	796	49	19	15	1
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	27.6	27.6	27.6	27.6
Total Split (s)	15.0	66.0	66.0	22.0	73.0	32.0	32.0	32.0	32.0
Total Split (%)	12.5%	55.0%	55.0%	18.3%	60.8%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	6.5	60.3	60.3	14.2	72.1	11.1	11.1	11.1	11.1
Actuated g/C Ratio	0.06	0.60	0.60	0.14	0.72	0.11	0.11	0.11	0.11
v/c Ratio	0.29	0.44	0.01	0.73	0.34	0.35	0.64	0.21	0.24
Control Delay	52.5	13.3	0.0	58.7	6.6	49.2	16.4	48.9	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	13.3	0.0	58.7	6.6	49.2	16.4	48.9	14.8
LOS	D	B	A	E	A	D	B	D	B
Approach Delay		15.4			15.8		22.2		22.5
Approach LOS		B			B		C		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.7  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 16.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.1%  
 ICU Level of Service B  
 Analysis Period (min) 15






















Splits and Phases: 24: Redlands Av. & Rider St.





HCM 6th Signalized Intersection Summary  
24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	465	11	171	796	4	49	19	204	15	1	50
Future Volume (veh/h)	31	465	11	171	796	4	49	19	204	15	1	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	505	12	186	865	4	53	21	222	16	1	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	54	1069	906	217	2405	11	271	25	265	106	5	281
Arrive On Green	0.03	0.56	0.56	0.12	0.65	0.65	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1810	1900	1610	1810	3685	17	1370	141	1491	1155	29	1585
Grp Volume(v), veh/h	34	505	12	186	424	445	53	0	243	16	0	55
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1897	1370	0	1632	1155	0	1615
Q Serve(g_s), s	2.0	17.0	0.4	10.8	11.4	11.4	3.7	0.0	15.4	1.5	0.0	3.1
Cycle Q Clear(g_c), s	2.0	17.0	0.4	10.8	11.4	11.4	6.8	0.0	15.4	16.9	0.0	3.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.91	1.00		0.98
Lane Grp Cap(c), veh/h	54	1069	906	217	1178	1238	271	0	290	106	0	287
V/C Ratio(X)	0.63	0.47	0.01	0.86	0.36	0.36	0.20	0.00	0.84	0.15	0.00	0.19
Avail Cap(c_a), veh/h	176	1069	906	294	1178	1238	378	0	418	197	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.3	14.0	10.3	46.2	8.4	8.4	40.4	0.0	42.5	50.7	0.0	37.5
Incr Delay (d2), s/veh	4.5	1.5	0.0	13.3	0.9	0.8	0.3	0.0	9.8	0.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.9	0.1	5.5	4.0	4.2	1.2	0.0	6.8	0.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	15.5	10.3	59.5	9.3	9.3	40.7	0.0	52.4	51.3	0.0	37.8
LnGrp LOS	E	B	B	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		551			1055			296				71
Approach Delay, s/veh		17.8			18.1			50.3				40.9
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.6	17.4	66.0		23.6	7.8	75.7				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		27.4	17.4	60.2		27.4	10.4	67.2				
Max Q Clear Time (g_c+I1), s		17.4	12.8	19.0		18.9	4.0	13.4				
Green Ext Time (p_c), s		1.1	0.1	3.2		0.1	0.0	5.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.7								
HCM 6th LOS				C								

Timings  
25: Wilson Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
09/17/2019

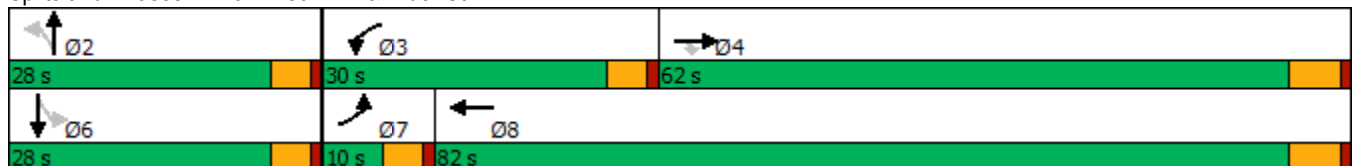


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↗	↘	↖	↗↘		↕	↕
Traffic Volume (vph)	21	632	19	220	914	33	0	0
Future Volume (vph)	21	632	19	220	914	33	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	27.6	27.6	27.6
Total Split (s)	10.0	62.0	62.0	30.0	82.0	28.0	28.0	28.0
Total Split (%)	8.3%	51.7%	51.7%	25.0%	68.3%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.3	57.8	57.8	18.7	77.4		12.0	12.0
Actuated g/C Ratio	0.05	0.56	0.56	0.18	0.75		0.12	0.12
v/c Ratio	0.25	0.70	0.02	0.80	0.40		0.69	0.02
Control Delay	57.1	22.8	0.1	59.1	6.1		21.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	57.1	22.8	0.1	59.1	6.1		21.5	0.2
LOS	E	C	A	E	A		C	A
Approach Delay		23.2			16.4		21.5	0.2
Approach LOS		C			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 103.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 19.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 77.6%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av. & Rider St.



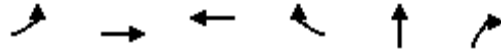
HCM 6th Signalized Intersection Summary  
25: Wilson Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)  
09/17/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	632	19	220	914	0	33	0	181	0	0	6
Future Volume (veh/h)	21	632	19	220	914	0	33	0	181	0	0	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	23	744	22	259	1075	0	39	0	213	0	0	7
Peak Hour Factor	0.92	0.85	0.85	0.85	0.85	0.92	0.85	0.92	0.85	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	41	1011	857	289	2417	0	68	12	238	0	0	284
Arrive On Green	0.02	0.53	0.53	0.16	0.67	0.00	0.18	0.00	0.18	0.00	0.00	0.18
Sat Flow, veh/h	1810	1900	1610	1810	3705	0	177	70	1351	0	0	1610
Grp Volume(v), veh/h	23	744	22	259	1075	0	252	0	0	0	0	7
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	0	1599	0	0	0	0	1610
Q Serve(g_s), s	1.4	34.3	0.7	16.0	16.0	0.0	12.0	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.4	34.3	0.7	16.0	16.0	0.0	17.5	0.0	0.0	0.0	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.00	0.15		0.85	0.00		1.00
Lane Grp Cap(c), veh/h	41	1011	857	289	2417	0	318	0	0	0	0	284
V/C Ratio(X)	0.56	0.74	0.03	0.90	0.44	0.00	0.79	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	86	1011	857	404	2417	0	365	0	0	0	0	331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	55.1	20.5	12.6	46.9	8.9	0.0	45.8	0.0	0.0	0.0	0.0	38.8
Incr Delay (d2), s/veh	4.4	4.8	0.1	14.0	0.6	0.0	10.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	15.1	0.3	8.1	5.5	0.0	7.9	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	25.2	12.7	60.9	9.5	0.0	55.8	0.0	0.0	0.0	0.0	38.8
LnGrp LOS	E	C	B	E	A	A	E	A	A	A	A	D
Approach Vol, veh/h		789			1334			252				7
Approach Delay, s/veh		25.9			19.4			55.8				38.8
Approach LOS		C			B			E				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.6	22.8	66.4		24.6	7.2	82.0				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	25.4	56.2		23.4	5.4	76.2				
Max Q Clear Time (g_c+I1), s		19.5	18.0	36.3		2.4	3.4	18.0				
Green Ext Time (p_c), s		0.5	0.2	4.8		0.0	0.0	9.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

Timings

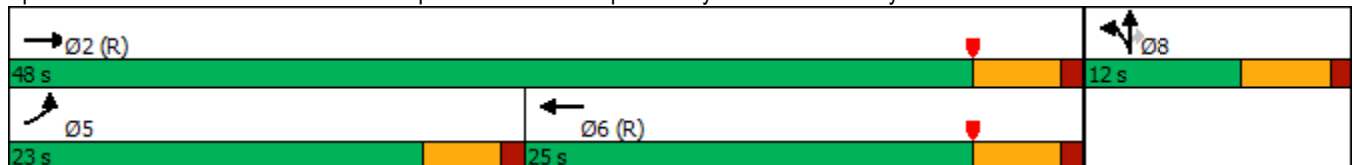


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↖	↑↑	↑↑	↗	↖	↗
Traffic Volume (vph)	400	772	692	1093	4	329
Future Volume (vph)	400	772	692	1093	4	329
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		10.0	10.0
Total Split (s)	23.0	48.0	25.0		12.0	12.0
Total Split (%)	38.3%	80.0%	41.7%		20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		Max	Max
Act Effct Green (s)	12.4	43.0	26.1	60.0	7.0	7.0
Actuated g/C Ratio	0.21	0.72	0.44	1.00	0.12	0.12
v/c Ratio	0.65	0.35	0.52	0.80	0.28	1.04
Control Delay	11.1	0.4	14.5	4.4	28.1	74.8
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	11.1	0.5	14.5	4.4	28.1	74.8
LOS	B	A	B	A	C	E
Approach Delay		4.1	8.3		68.5	
Approach LOS		A	A		E	

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 29 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 13.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 80.3%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox. Blvd./Harley Knox Blvd.



HCM 6th Signalized Intersection Summary

Rider 2 and 4 TIA (JN 11557)

3: I-215 NB Off Ramp/I-215 NB On Ramp & Harley Knox Blvd./Harley Knox Blvd.

09/10/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	400	772	0	0	692	1093	47	4	329	0	0	0
Future Volume (veh/h)	400	772	0	0	692	1093	47	4	329	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	471	908	0	0	814	0	55	5	193			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	618	2587	0	0	1681		194	18	188			
Arrive On Green	0.06	0.24	0.00	0.00	0.47	0.00	0.12	0.12	0.12			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1665	151	1610			
Grp Volume(v), veh/h	471	908	0	0	814	0	60	0	193			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1817	0	1610			
Q Serve(g_s), s	7.9	12.6	0.0	0.0	9.3	0.0	1.8	0.0	7.0			
Cycle Q Clear(g_c), s	7.9	12.6	0.0	0.0	9.3	0.0	1.8	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.92		1.00			
Lane Grp Cap(c), veh/h	618	2587	0	0	1681		212	0	188			
V/C Ratio(X)	0.76	0.35	0.00	0.00	0.48		0.28	0.00	1.03			
Avail Cap(c_a), veh/h	1082	2587	0	0	1681		212	0	188			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.74	0.74	0.00	0.00	0.44	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	11.3	0.0	0.0	11.1	0.0	24.2	0.0	26.5			
Incr Delay (d2), s/veh	0.6	0.3	0.0	0.0	0.4	0.0	3.3	0.0	73.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	4.5	0.0	0.0	2.9	0.0	0.9	0.0	6.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	11.6	0.0	0.0	11.5	0.0	27.5	0.0	99.5			
LnGrp LOS	C	B	A	A	B		C	A	F			
Approach Vol, veh/h		1379			814	A		253				
Approach Delay, s/veh		17.0			11.5			82.4				
Approach LOS		B			B			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		48.0			15.1	32.9		12.0				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		43.0			18.5	20.0		7.0				
Max Q Clear Time (g_c+I1), s		14.6			9.9	11.3		9.0				
Green Ext Time (p_c), s		4.0			0.6	2.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings

4: I-215 NB Ramps & Ramona Exwy.

09/10/2019

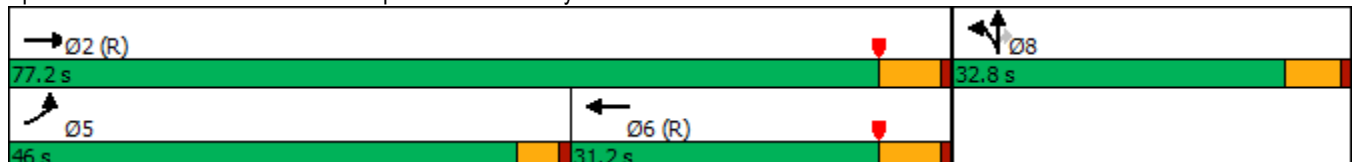


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↑↑↑	↶↶↶	↷	↶	↷	↷
Traffic Volume (vph)	682	1947	1176	959	497	8	483
Future Volume (vph)	682	1947	1176	959	497	8	483
Turn Type	Prot	NA	NA	Free	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				Free			8
Detector Phase	5	2	6		8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0		10.5	10.5	10.5
Total Split (s)	46.0	77.2	31.2		32.8	32.8	32.8
Total Split (%)	41.8%	70.2%	28.4%		29.8%	29.8%	29.8%
Yellow Time (s)	3.5	5.0	5.0		4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0		5.5	5.5	5.5
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	None	C-Max	C-Max		None	None	None
Act Effct Green (s)	41.5	71.2	25.2	110.0	27.3	27.3	27.3
Actuated g/C Ratio	0.38	0.65	0.23	1.00	0.25	0.25	0.25
v/c Ratio	1.02	0.59	1.01	0.61	0.61	0.60	1.08
Control Delay	38.8	4.3	71.2	1.8	43.7	43.3	100.1
Queue Delay	29.7	0.9	0.0	0.0	0.1	0.1	0.0
Total Delay	68.6	5.3	71.2	1.8	43.8	43.4	100.1
LOS	E	A	E	A	D	D	F
Approach Delay		21.7	40.0			71.2	
Approach LOS		C	D			E	

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 37.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 100.5%  
 ICU Level of Service G  
 Analysis Period (min) 15

























Splits and Phases: 4: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary  
4: I-215 NB Ramps & Ramona Exwy.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	682	1947	0	0	1176	959	497	8	483	0	0	0
Future Volume (veh/h)	682	1947	0	0	1176	959	497	8	483	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	696	1987	0	0	1200	0	513	0	390			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	683	3357	0	0	1188		898	0	400			
Arrive On Green	0.38	0.65	0.00	0.00	0.23	0.00	0.25	0.00	0.25			
Sat Flow, veh/h	1810	5358	0	0	5358	1610	3619	0	1610			
Grp Volume(v), veh/h	696	1987	0	0	1200	0	513	0	390			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	41.5	24.1	0.0	0.0	25.2	0.0	13.7	0.0	26.4			
Cycle Q Clear(g_c), s	41.5	24.1	0.0	0.0	25.2	0.0	13.7	0.0	26.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	683	3357	0	0	1188		898	0	400			
V/C Ratio(X)	1.02	0.59	0.00	0.00	1.01		0.57	0.00	0.98			
Avail Cap(c_a), veh/h	683	3357	0	0	1188		898	0	400			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.3	11.1	0.0	0.0	42.4	0.0	36.2	0.0	41.0			
Incr Delay (d2), s/veh	15.7	0.1	0.0	0.0	28.5	0.0	0.9	0.0	38.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	19.7	7.6	0.0	0.0	13.3	0.0	5.9	0.0	14.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	11.2	0.0	0.0	70.9	0.0	37.1	0.0	79.6			
LnGrp LOS	F	B	A	A	F		D	A	E			
Approach Vol, veh/h		2683			1200	A		903				
Approach Delay, s/veh		21.2			70.9			55.4				
Approach LOS		C			E			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.2			46.0	31.2		32.8				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		71.2			41.5	25.2		27.3				
Max Q Clear Time (g_c+I1), s		26.1			43.5	27.2		28.4				
Green Ext Time (p_c), s		12.8			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.  
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

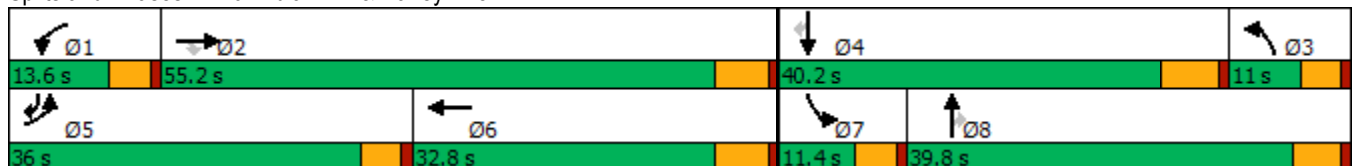


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘	↑↑↑	↘↗	↑↑	↗	↘	↑	↗
Traffic Volume (vph)	343	517	89	43	527	125	232	79	49	285	625
Future Volume (vph)	343	517	89	43	527	125	232	79	49	285	625
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2		1	6	3	8		7	4	5
Permitted Phases				2				8			4
Detector Phase	5	2	2	1	6	3	8	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	35.8	35.8	9.6	31.8	9.6	37.4	37.4	9.6	40.2	9.6
Total Split (s)	36.0	55.2	55.2	13.6	32.8	11.0	39.8	39.8	11.4	40.2	36.0
Total Split (%)	30.0%	46.0%	46.0%	11.3%	27.3%	9.2%	33.2%	33.2%	9.5%	33.5%	30.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	4.4	4.4	3.6	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	4.6	5.4	5.4	4.6	6.2	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	27.9	42.9	42.9	7.3	19.7	6.6	27.5	27.5	6.5	24.1	53.6
Actuated g/C Ratio	0.28	0.43	0.43	0.07	0.20	0.07	0.28	0.28	0.06	0.24	0.54
v/c Ratio	0.85	0.29	0.14	0.41	0.67	0.68	0.29	0.18	0.52	0.78	0.87
Control Delay	53.1	20.4	1.3	58.8	41.3	64.9	31.7	1.9	66.8	49.0	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	20.4	1.3	58.8	41.3	64.9	31.7	1.9	66.8	49.0	23.5
LOS	D	C	A	E	D	E	C	A	E	D	C
Approach Delay		30.5			42.6		35.8			33.3	
Approach LOS		C			D		D			C	

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 34.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 10: Indian Av. & Harley Knox Bl.



































HCM 6th Signalized Intersection Summary  
 10: Indian Av. & Harley Knox Bl.

Rider 2 and 4 TIA (JN 11557)

09/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	343	517	89	43	527	17	125	232	79	49	285	625
Future Volume (veh/h)	343	517	89	43	527	17	125	232	79	49	285	625
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	429	646	100	54	659	19	156	290	83	61	356	660
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	467	2061	640	75	936	27	228	1032	455	80	469	808
Arrive On Green	0.26	0.40	0.40	0.04	0.18	0.18	0.06	0.29	0.29	0.04	0.25	0.25
Sat Flow, veh/h	1810	5187	1610	1810	5182	149	3510	3610	1590	1810	1900	1587
Grp Volume(v), veh/h	429	646	100	54	439	239	156	290	83	61	356	660
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1810	1729	1873	1755	1805	1590	1810	1900	1587
Q Serve(g_s), s	20.3	7.6	2.4	2.6	10.5	10.6	3.8	5.5	3.5	2.9	15.3	15.5
Cycle Q Clear(g_c), s	20.3	7.6	2.4	2.6	10.5	10.6	3.8	5.5	3.5	2.9	15.3	15.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	467	2061	640	75	625	338	228	1032	455	80	469	808
V/C Ratio(X)	0.92	0.31	0.16	0.72	0.70	0.71	0.69	0.28	0.18	0.77	0.76	0.82
Avail Cap(c_a), veh/h	644	2903	901	185	1058	573	255	1407	620	139	732	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	18.3	7.9	41.8	33.9	34.0	40.4	24.5	23.7	41.7	30.8	5.8
Incr Delay (d2), s/veh	12.4	0.1	0.1	4.7	1.5	2.7	4.8	0.1	0.2	5.7	2.5	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	2.7	1.2	1.2	4.3	4.8	1.7	2.2	1.2	1.4	6.8	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	18.4	8.1	46.5	35.4	36.7	45.2	24.6	23.9	47.4	33.3	9.9
LnGrp LOS	D	B	A	D	D	D	D	C	C	D	C	A
Approach Vol, veh/h		1175			732			529			1077	
Approach Delay, s/veh		27.0			36.6			30.6			19.8	
Approach LOS		C			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	40.9	11.1	28.0	27.4	21.7	8.5	30.6				
Change Period (Y+Rc), s	4.6	5.8	5.4	* 6.2	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	9.0	49.4	6.4	* 34	31.4	27.0	6.8	34.4				
Max Q Clear Time (g_c+I1), s	4.6	9.6	5.8	17.5	22.3	12.6	4.9	7.5				
Green Ext Time (p_c), s	0.0	4.7	0.0	4.3	0.5	3.4	0.0	2.0				

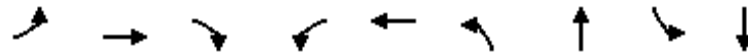
Intersection Summary

HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings  
24: Redlands Av. & Rider St.

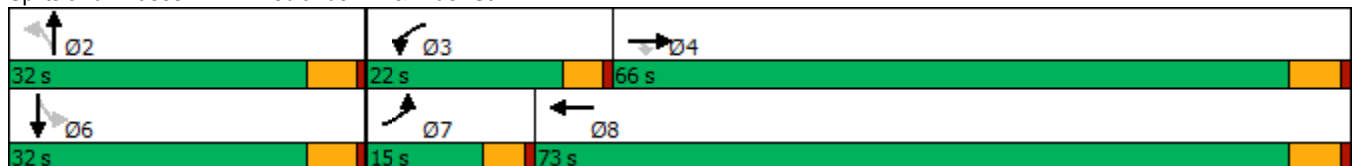


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↑	↗	↖	↑↓	↖	↗	↖	↗
Traffic Volume (vph)	44	611	38	91	538	28	3	6	18
Future Volume (vph)	44	611	38	91	538	28	3	6	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4		3	8		2		6
Permitted Phases			4			2		6	
Detector Phase	7	4	4	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	28.4	28.4	28.4	28.4
Total Split (s)	15.0	66.0	66.0	22.0	73.0	32.0	32.0	32.0	32.0
Total Split (%)	12.5%	55.0%	55.0%	18.3%	60.8%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.4	5.4	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	None	None	None	None
Act Effct Green (s)	7.2	64.7	64.7	9.8	69.3	10.3	10.3	10.3	10.3
Actuated g/C Ratio	0.07	0.64	0.64	0.10	0.69	0.10	0.10	0.10	0.10
v/c Ratio	0.37	0.54	0.04	0.56	0.24	0.22	0.48	0.07	0.31
Control Delay	52.8	12.5	0.1	55.5	6.7	46.3	14.2	43.3	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	12.5	0.1	55.5	6.7	46.3	14.2	43.3	22.8
LOS	D	B	A	E	A	D	B	D	C
Approach Delay		14.4			13.6		20.1		24.7
Approach LOS		B			B		C		C

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 100.6  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 15.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.7%  
 ICU Level of Service B  
 Analysis Period (min) 15























Splits and Phases: 24: Redlands Av. & Rider St.



HCM 6th Signalized Intersection Summary  
24: Redlands Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

12/10/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	611	38	91	538	16	28	3	121	6	18	43
Future Volume (veh/h)	44	611	38	91	538	16	28	3	121	6	18	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	664	41	99	585	17	30	3	132	7	20	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	1251	1060	127	2475	72	172	4	173	110	55	129
Arrive On Green	0.04	0.66	0.66	0.07	0.69	0.69	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1810	1900	1610	1810	3582	104	1355	36	1580	1274	504	1183
Grp Volume(v), veh/h	48	664	41	99	295	307	30	0	135	7	0	67
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1805	1881	1355	0	1616	1274	0	1687
Q Serve(g_s), s	2.6	17.9	0.9	5.2	5.9	5.9	2.0	0.0	7.9	0.5	0.0	3.6
Cycle Q Clear(g_c), s	2.6	17.9	0.9	5.2	5.9	5.9	5.6	0.0	7.9	8.4	0.0	3.6
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.98	1.00		0.70
Lane Grp Cap(c), veh/h	68	1251	1060	127	1247	1300	172	0	177	110	0	185
V/C Ratio(X)	0.71	0.53	0.04	0.78	0.24	0.24	0.17	0.00	0.76	0.06	0.00	0.36
Avail Cap(c_a), veh/h	193	1251	1060	324	1247	1300	395	0	442	319	0	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	8.7	5.8	44.5	5.6	5.6	42.8	0.0	42.1	46.2	0.0	40.2
Incr Delay (d2), s/veh	5.0	1.6	0.1	3.9	0.4	0.4	0.5	0.0	6.7	0.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.4	0.3	2.4	1.8	1.9	0.7	0.0	3.4	0.2	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	10.3	5.9	48.5	6.0	6.0	43.3	0.0	48.8	46.4	0.0	41.4
LnGrp LOS	D	B	A	D	A	A	D	A	D	D	A	D
Approach Vol, veh/h		753			701			165				74
Approach Delay, s/veh		12.7			12.0			47.8				41.8
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.0	11.4	69.8		16.0	8.2	73.0				
Change Period (Y+Rc), s		5.4	4.6	5.8		5.4	4.6	5.8				
Max Green Setting (Gmax), s		26.6	17.4	60.2		26.6	10.4	67.2				
Max Q Clear Time (g_c+I1), s		9.9	7.2	19.9		10.4	4.6	7.9				
Green Ext Time (p_c), s		0.7	0.1	4.7		0.2	0.0	3.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			17.1									
HCM 6th LOS			B									

Timings  
25: Wilson Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/17/2019

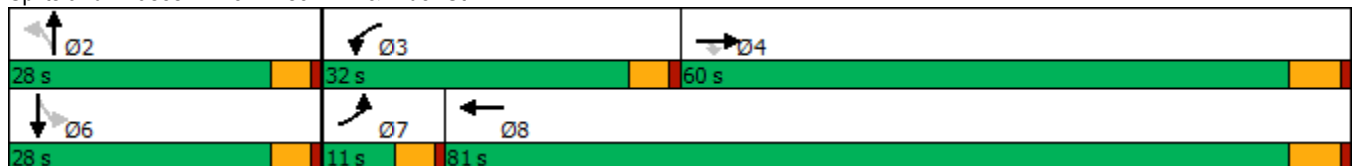


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↖	↑	↗	↖	↕		↕	↕
Traffic Volume (vph)	11	663	51	110	570	38	0	0
Future Volume (vph)	11	663	51	110	570	38	0	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA
Protected Phases	7	4		3	8		2	6
Permitted Phases			4			2		
Detector Phase	7	4	4	3	8	2	2	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	9.6	22.8	27.6	27.6	27.6
Total Split (s)	11.0	60.0	60.0	32.0	81.0	28.0	28.0	28.0
Total Split (%)	9.2%	50.0%	50.0%	26.7%	67.5%	23.3%	23.3%	23.3%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	Max	Max	None	Max	None	None	None
Act Effct Green (s)	5.4	62.1	62.1	11.1	75.9		11.3	11.3
Actuated g/C Ratio	0.05	0.62	0.62	0.11	0.76		0.11	0.11
v/c Ratio	0.12	0.61	0.05	0.60	0.23		0.58	0.06
Control Delay	49.7	15.1	0.5	54.6	4.2		24.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	49.7	15.1	0.5	54.6	4.2		24.3	0.2
LOS	D	B	A	D	A		C	A
Approach Delay		14.7			12.4		24.3	0.2
Approach LOS		B			B		C	A

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 99.6  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 14.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 25: Wilson Av. & Rider St.



HCM 6th Signalized Intersection Summary  
 25: Wilson Av. & Rider St.

Rider 2 and 4 TIA (JN 11557)

09/17/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	663	51	110	570	0	38	0	107	0	0	27
Future Volume (veh/h)	11	663	51	110	570	0	38	0	107	0	0	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	721	55	120	620	0	41	0	116	0	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	25	1239	1049	150	2602	0	82	12	141	0	0	195
Arrive On Green	0.01	0.65	0.65	0.08	0.72	0.00	0.12	0.00	0.12	0.00	0.00	0.12
Sat Flow, veh/h	1810	1900	1609	1810	3705	0	314	99	1167	0	0	1610
Grp Volume(v), veh/h	12	721	55	120	620	0	157	0	0	0	0	29
Grp Sat Flow(s),veh/h/ln	1810	1900	1609	1810	1805	0	1579	0	0	0	0	1610
Q Serve(g_s), s	0.7	22.2	1.3	6.8	6.0	0.0	7.2	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.7	22.2	1.3	6.8	6.0	0.0	10.1	0.0	0.0	0.0	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.00	0.26		0.74	0.00		1.00
Lane Grp Cap(c), veh/h	25	1239	1049	150	2602	0	235	0	0	0	0	195
V/C Ratio(X)	0.47	0.58	0.05	0.80	0.24	0.00	0.67	0.00	0.00	0.00	0.00	0.15
Avail Cap(c_a), veh/h	111	1239	1049	475	2602	0	395	0	0	0	0	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	10.2	6.5	47.0	4.9	0.0	44.6	0.0	0.0	0.0	0.0	41.0
Incr Delay (d2), s/veh	4.9	2.0	0.1	3.7	0.2	0.0	3.3	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.2	0.4	3.1	1.8	0.0	4.2	0.0	0.0	0.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	12.2	6.6	50.7	5.1	0.0	47.9	0.0	0.0	0.0	0.0	41.4
LnGrp LOS	E	B	A	D	A	A	D	A	A	A	A	D
Approach Vol, veh/h		788			740			157				29
Approach Delay, s/veh		12.5			12.5			47.9				41.4
Approach LOS		B			B			D				D
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.3	13.2	73.8		17.3	6.1	81.0				
Change Period (Y+Rc), s		4.6	4.6	5.8		4.6	4.6	5.8				
Max Green Setting (Gmax), s		23.4	27.4	54.2		23.4	6.4	75.2				
Max Q Clear Time (g_c+I1), s		12.1	8.8	24.2		3.7	2.7	8.0				
Green Ext Time (p_c), s		0.6	0.1	5.2		0.1	0.0	4.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

**APPENDIX 9.1:**

**RIDER STREET BRIDGE DETOUR MEMO, APRIL 29, 2020**

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## Memorandum

To: Stuart McKibbin, P.E. – City of Perris  
City Engineer

From: Nicholas Lowe, P.E. – Albert A. Webb Associates  
Senior Engineer

Date: April 29, 2020

Re: Rider Street Bridge Detour Travel Time Analysis

Albert A. Webb Associates (Webb) has prepared this detour analysis to determine any impacts on vehicular travel on Rider Street in the City of Perris (City). Rider Street between Redlands Avenue and Galway Lane is under design to be widened to its ultimate width (Project). The main part of the Project is to remove the existing box culvert over Perris Valley Storm Drain Channel (Channel) and construction of a new bridge. According to the structural engineer, it will take approximately 9 months to construct the bridge in one phase with a full road closure and 16 months if the bridge is constructed in in two phases with partial road closure. The main concern with a potential full closure of Rider Street would be emergency vehicle access and response times. Detours to get to the east or west side of the Channel would be accommodated by routes using Ramona Expressway to the north or Orange Avenue to the south. This travel time analysis was prepared to determine additional travel time needed during a full closure of Rider Street between Redlands Avenue and Evans Road.

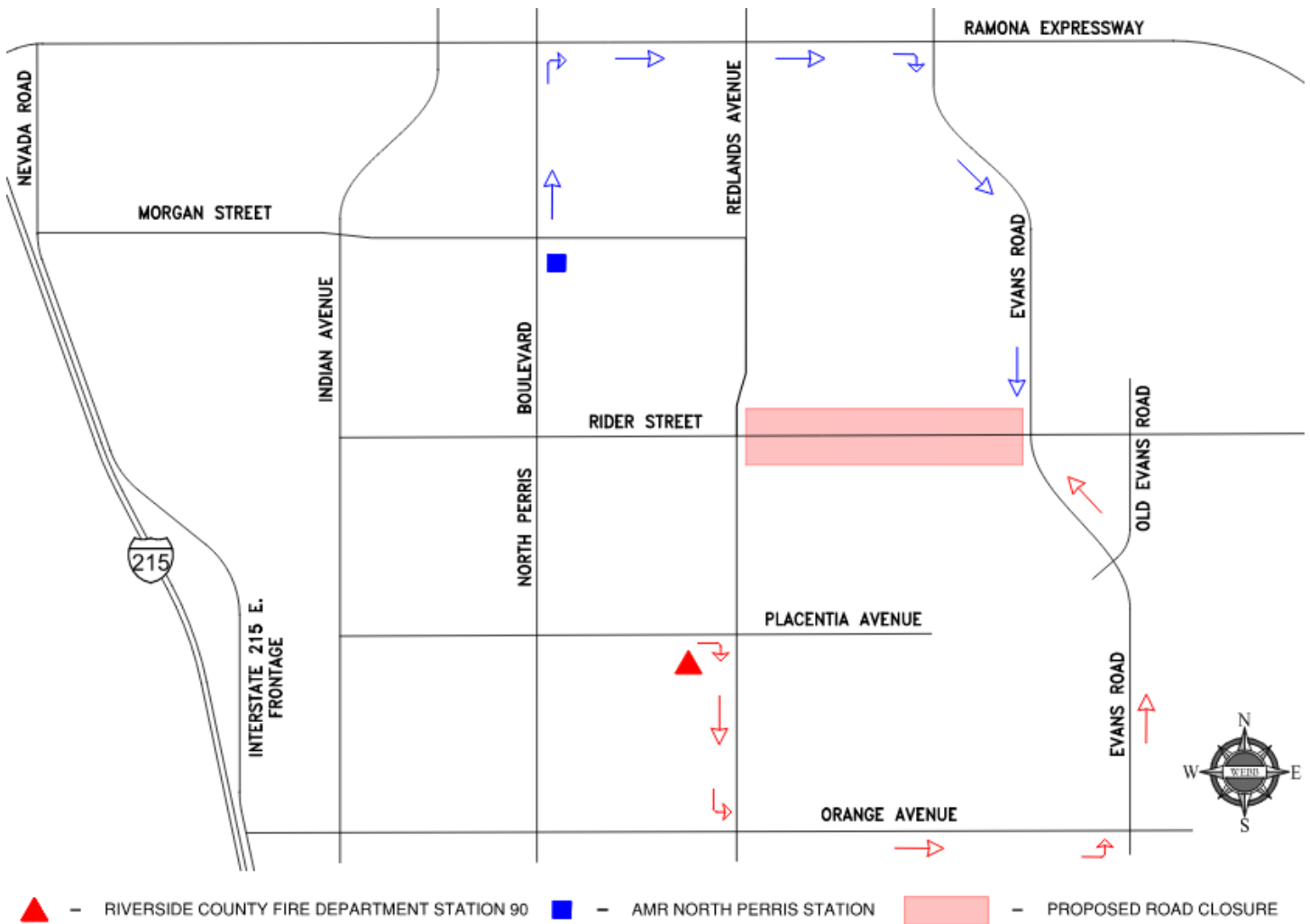
The two emergency vehicles types that this memo is focused on are fire department vehicles and ambulances. The local fire station and American Medical Response (AMR) station are located to the west of the Channel. Riverside County Fire Department Station 90 is located at 333 Placentia Avenue, Perris. AMR North Perris station is located at 3553A North Perris Boulevard, Perris. Both sites are relatively close to the Project closure. **Figure 1** shows the location of the fire station and AMR station as well as the shortest potential detour routes to the eastern side of the road closure at the intersection of Rider Street and Evans Road. **Table 1** shows the approximate distance and estimated driving time from each station to the intersection of Rider Street and Evans Road. Distances and travel times were collected from Google Maps’ navigation tool. Note that the times provided are for normal driving conditions and it is expected that an emergency vehicle would have lower travel times.

**Table 1 – Distance and Driving Time to Rider Street/Evans Road Intersection**

	EXISTING ROUTE		DETOUR ROUTE	
	DISTANCE (MI.)	TIME (MIN.)	DISTANCE (MI.)	TIME (MIN.)
<b>RIVERSIDE COUNTY FIRE STATION 90</b>	<b>1.3</b>	<b>3</b>	<b>2.8</b>	<b>6</b>
<b>AMR NORTH PERRIS</b>	<b>1.8</b>	<b>4</b>	<b>2.8</b>	<b>6</b>



**Figure 1 – Emergency Vehicle Station Locations and Detour Routes**



As shown, the detour route is 1 to 1.5 miles longer and 2 to 3 minutes longer than with Rider Street open when traveling under normal conditions. The detour routes appear to be viable routes to the east side of the Rider Street closure. AMR Riverside was contacted and only requested that notification of construction be given prior to the closure.

If you have any questions about this analysis, feel free to contact us at (951) 248-4289.