

Appendix I
Transportation Analysis



Transportation Analysis

for the:

Perris Travel Center Case No. P22-05002

In the City of Perris



October 2022

Kimley»»Horn

**TRANSPORTATION ANALYSIS
FOR THE PROPOSED
PERRIS TRAVEL CENTER PROJECT
IN THE CITY OF PERRIS**

Prepared by:

Kimley-Horn and Associates, Inc.
1100 Town and Country Road, Suite 700
Orange, California 92868

October 2022

TABLE OF CONTENTS

| | Page |
|--|-------------|
| INTRODUCTION..... | 1 |
| Purpose and Study Objectives | 1 |
| Project Overview..... | 1 |
| ANALYSIS SCENARIOS AND METHODOLOGY | 4 |
| Analysis Scenarios | 4 |
| Intersection Analysis – HCM Methodology..... | 4 |
| Level of Service Standards..... | 6 |
| Thresholds of Significance..... | 6 |
| STUDY AREA..... | 7 |
| AREA CONDITIONS..... | 7 |
| Existing Street System | 7 |
| Existing Traffic Volumes..... | 8 |
| Intersection Operating Conditions | 8 |
| PROJECT TRAFFIC..... | 13 |
| Project Trip Generation | 13 |
| Trip Distribution and Assignment..... | 14 |
| EXISTING PLUS PROJECT..... | 19 |
| Peak Hour Operating Conditions | 19 |
| at an acceptable Level of Service under Existing Plus Project conditions. | 19 |
| OPENING YEAR 2024 CUMULATIVE CONDITIONS..... | 22 |
| Cumulative Projects | 22 |
| <u>Trip Generation</u> | 22 |
| <u>Trip Distribution and Assignment</u> | 22 |
| Peak Hour Operating Conditions..... | 23 |
| OPENING YEAR 2024 CUMULATIVE PLUS PROJECT CONDITIONS..... | 29 |
| Intersection Operating Conditions | 29 |
| RECOMMENDED IMPROVEMENTS | 32 |
| SITE ACCESS ANALYSIS..... | 37 |
| STORAGE CAPACITY AT RAMPS..... | 37 |
| DRIVE-THROUGH QUEUING ANALYSIS..... | 37 |
| Drive-through Queue Length Calculation..... | 38 |
| SUMMARY OF FINDINGS AND CONCLUSIONS | 40 |

LIST OF FIGURES

| | Page |
|---|-------------|
| Figure 1 – Vicinity Map | 2 |
| Figure 2 – Site Plan..... | 3 |
| Figure 3 – Existing Lane Configuration and Traffic Control | 9 |
| Figure 4 – City of Perris Circulation Plan | 10 |
| Figure 5 – Existing Traffic Volumes | 11 |
| Figure 6 – Non Pass-By Project-Related Trip Distribution | 16 |
| Figure 7 – Pass-By Project-Related Trip Distribution | 17 |
| Figure 8 –Project-Related Total Trip Volumes..... | 18 |
| Figure 9 – Existing Plus Project Traffic Volumes | 20 |
| Figure 10 – Location of Cumulative Projects..... | 25 |
| Figure 11 –Cumulative Projects Traffic Volumes..... | 26 |
| Figure 12 – Opening Year 2024 Cumulative Traffic Volumes..... | 27 |
| Figure 13 – Opening Year 2024 Cumulative Plus Project Traffic Volumes | 30 |
| Figure 14 – Recommended Lane Configuration and Traffic Control | 35 |

LIST OF TABLES

| | Page |
|--|-------------|
| Table 1 – Summary of Intersection Operation – Existing Conditions..... | 12 |
| Table 2– Summary of Project Trip Generation..... | 15 |
| Table 3 – Summary of Intersection Operation – Existing Plus Project | 21 |
| Table 4 – Summary of Cumulative Projects | 24 |
| Table 5 – Summary of Intersection Operation – Opening Year 2024 Cumulative | 28 |
| Table 6 – Summary of Intersection Operation – Opening Year 2024 Cumulative Plus Project | 31 |
| Table 7 - Summary of Intersection Operations - Opening Year 2024 Cumulative Plus Project With Recommended Improvements..... | 34 |
| Table 8 - Summary of Project Fair-Share | 36 |
| Table 9 - Summary of Ramp Storage Capacity..... | 39 |

APPENDICES

- APPENDIX A: APPROVED SCOPING AGREEMENT
- APPENDIX B: TRAFFIC COUNT DATA SHEETS
- APPENDIX C: TRIP GENERATION DATA COLLECTION WORKSHEETS
- APPENDIX D: INTERSECTION ANALYSIS WORKSHEETS
- APPENDIX E: CUMULATIVE PROJECTS INFORMATION
- APPENDIX F: DRIVE-THROUGH QUEUING ANALYSIS
- APPENDIX G: TUMF REGIONAL PROGRAM

**TRANSPORTATION ANALYSIS
FOR THE PROPOSED
PERRIS TRAVEL CENTER PROJECT
IN THE CITY OF PERRIS**

INTRODUCTION

Purpose and Study Objectives

This transportation impact analysis has been prepared to address the traffic-related effects of the proposed Perris Travel Center project in the City of Perris. This analysis has been conducted in accordance with the City of Perris traffic requirements and the Riverside County *Transportation Analysis Guidelines* (TA Guidelines, December 2020).

This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, and an assessment of project-related effects on the transportation system. Where necessary, circulation system improvements have been identified to address project-related deficiencies at the study locations.

Project Overview

The project is located on the northwest corner of the intersection of Trumble Road and Ethanac Road. The project site is shown in its regional setting on **Figure 1**. The project site (approximately 14.4 acres) is currently vacant and bounded by vacant land to the north, Ethanac Road to the south, the SR-215 to the west, and Trumble Road to the east.

The project consists of the construction of a truck stop with 7 truck fueling positions, a gas station with 16 fueling positions and a convenience market, and an approximately 2,228 square-foot fast-food restaurant with a drive-through. A copy of the project site plan is provided on **Figure 2**.

Vehicular access for the project site would be via one passenger car unsignalized right-in-right-out (RIRO) only driveway on Ethanac Road, one passenger car full-access unsignalized driveway on Trumble Road, and one truck accessible driveways on Trumble Road.


Based on discussion with City Staff, the Project Applicant will be installing a raised median along Ethanac Road between Trumble Road and just west of Encanto Drive. As a result, the intersection of Encanto Drive at Ethanac Road would change from a full access to a right-in-right-out (RIRO) only unsignalized intersection. This modification has been applied to “Plus Project” conditions.



NOT TO SCALE



FIGURE 1
VICINITY MAP

LEGEND:
 = Project Site



ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

Based on the Riverside County *TA Guidelines*, the project will be evaluated in the morning and evening peak hours for the following conditions:

- Existing Conditions
- Existing Plus Project
- Opening Year 2024 Cumulative (Opening Year 2024 Plus Cumulative Projects)
- Opening Year 2024 Cumulative Plus Project

Intersection Analysis – HCM Methodology

This study includes evaluation of morning and evening peak hour operations at 4 study intersections and 3 proposed driveways located in the City of Perris.

Peak hour intersection operations at the study intersections and driveways were evaluated using the methods prescribed in the Highway Capacity Manual 6th Edition (HCM), consistent with the Riverside County *TA Guidelines*.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including the number of lanes, volume of traffic, and the signal timing phasing.

For unsignalized intersections, the HCM methodology analysis determines the worst-case delay per lane for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made.

The HCM delay forecast translates to a Level of Service designation, ranging from LOS A to LOS F. A summary of each Level of Service and the corresponding delay is provided in the following chart.

| LEVEL OF SERVICE DEFINITIONS | |
|-------------------------------------|---|
| Level of Service | Description |
| A | No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation. |
| B | This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles. |
| C | This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so. |
| D | This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups. |
| E | Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand. |
| F | This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero. |

| LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS | | |
|--|---|--|
| Level of Service | Signalized Intersection (Average delay per vehicle, in seconds) ¹ | Unsignalized Intersections (Average delay per vehicle, in seconds) ² |
| A | ≤ 10 | 0 – 10 |
| B | > 10 – 20 | > 10 – 15 |
| C | > 20 – 35 | > 15 – 25 |
| D | > 35 – 55 | > 25 – 35 |
| E | > 55 – 80 | > 35 – 50 |
| F | > 80 | > 50 |

¹ Source: Highway Capacity Manual (HCM 6th Edition), Exhibit 18-4.

² Source: Highway Capacity Manual (HCM 6th Edition), Exhibits 19-1 and 20-2.

Level of Service Standards

The City of Perris Circulation Element has established the following standards regarding minimum acceptable level of service (LOS):

- LOS “D” along all City maintained roads (including intersections) and LOS “D” along I-215 and SR-74 (including intersections with local streets and roads). 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.
- LOS “E” may be allowed within the boundaries of the Downtown Specific Plan Area to the extent that it would support transit-oriented development and walkable communities. Increased congestion in this area will facilitate an increase in transit ridership and encourage development of a complementary mix of land uses within a comfortable walking distance from light rail stations.

Thresholds of Significance

Traffic effects at study intersections are considered locally significant when any of the following occurs between the “without project” and the “plus project” conditions:

- A project-related impact is considered direct and significant when a study intersection operates at an acceptable Level of Service for existing conditions (without the project) and the addition of 50 or more a.m. or p.m. peak hour project trips causes the intersection to operate at an unacceptable Level of Service for existing plus project conditions.
- A project-related impact is considered direct and significant when a study intersection operates at an unacceptable Level of Service for existing conditions (without the project) and the addition of 50 or more a.m. or p.m. peak hour project trips causes the intersection delay to increase by 2 seconds or more.
- A cumulative impact is considered significant when a study intersection is forecast to operate at an unacceptable Level of Service with the addition of cumulative/background traffic and 50 or more a.m. or p.m. peak hour project trips.

STUDY AREA

This Traffic Impact Analysis includes documentation of existing conditions, future conditions, and identification of project-related deficiencies at the following study locations:

Existing Intersections

1. SR-215 SB Ramps at Ethanac Road
2. SR-215 NB Ramps at Ethanac Road
3. Encanto Drive at Ethanac Road
4. Trumble Road at Ethanac Road

Future Project Driveways

- D1. Ethanac Road at Project Driveway
- D2. Trumble Road at North Driveway
- D3. Trumble Road at South Driveway

The study locations were established in consultation with City of Perris staff through the Scoping Letter Agreement process. A copy of the approved Scoping Letter Agreement is provided in **Appendix A**.

AREA CONDITIONS

Existing Street System

Regional access to the site is provided primarily by the Escondido Freeway (I-215). Direct access to the project site is provided via Ethanac Road and Trumble Road.

Existing lane configurations and intersection controls at the study intersections are shown on **Figure 3**. A copy of the City of Perris Circulation Plan is provided on **Figure 4**. The following provides a description of the roadways surrounding the project site.

Ethanac Road– Ethanac Road is a four-lane divided roadway with two lanes in each direction. The posted speed limit is 40 miles per hour (mph) and on-street parking is prohibited along the roadway. Ethanac Road is designated as an Expressway in the City of Perris Circulation Element.

Trumble Road – Trumble Road is a two-lane undivided roadway with one lane in each direction. On-street parking is prohibited along the roadway and the posted speed limit is 35 mph. Trumble Road is designated as a Collector in the City of Perris Circulation Element.

Existing Traffic Volumes

Existing morning peak hour and evening peak hour counts were conducted at the study intersections. Traffic count data included vehicle classifications for passenger vehicles and trucks. Vehicle classifications are necessary to compute Passenger Car Equivalent (PCE) volumes, which are used in the traffic analysis to address the effects of truck traffic on intersection operations. The counts were completed in September 2021. Peak hour intersection traffic count worksheets are provided in **Appendix B**.

The PCE volumes were developed by applying a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. PCE volumes worksheets are provided in **Appendix B**. Existing morning and evening peak hour volumes are presented on **Figure 5**.

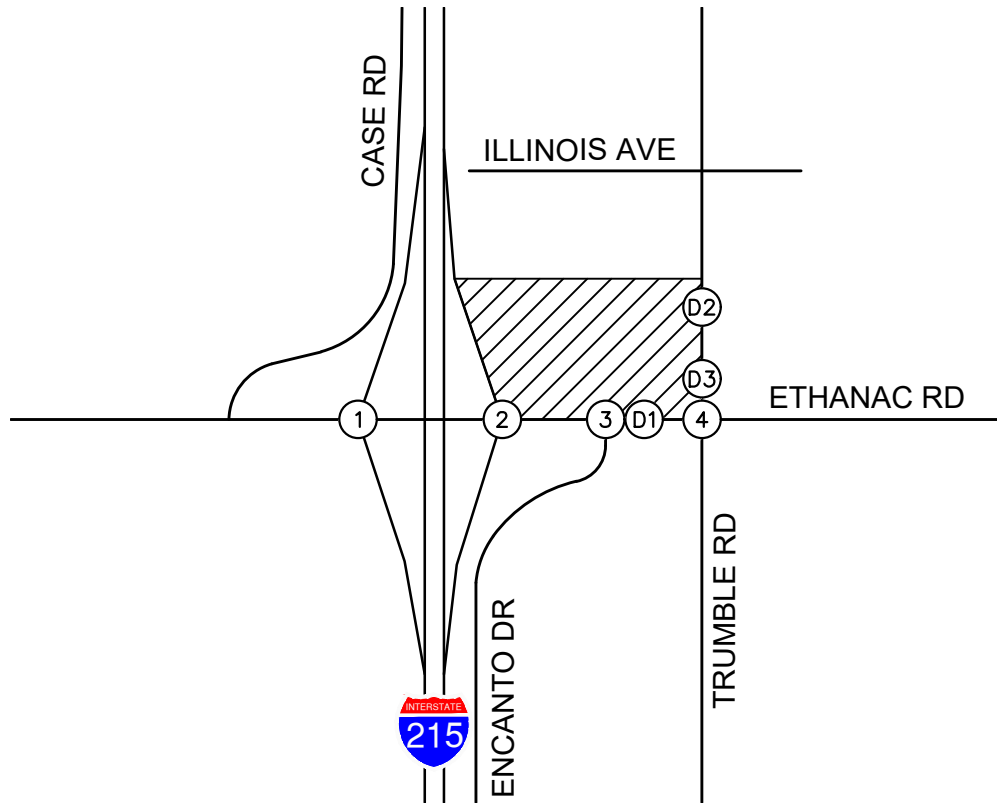
Intersection Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on **Table 1**. Copies of Existing Conditions intersection analysis worksheets are provided in **Appendix D**.

Review of this table indicates that the following study intersection currently operates at an unacceptable LOS:

- #3 – Encanto Drive at Ethanac Road: PM - LOS E

The Level of Service for an unsignalized intersection is reported based on the single approach movement with the highest delay, which in this case, would be the northbound approach for intersection #3. The side street traffic at this intersection experiences delay during the peak hours while waiting for an acceptable gap in traffic on Ethanac Road. While the side street approach operates at a deficient Level of Service based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the side street is contained on the minor intersection approach and does not impact the progression of traffic on the main arterial.



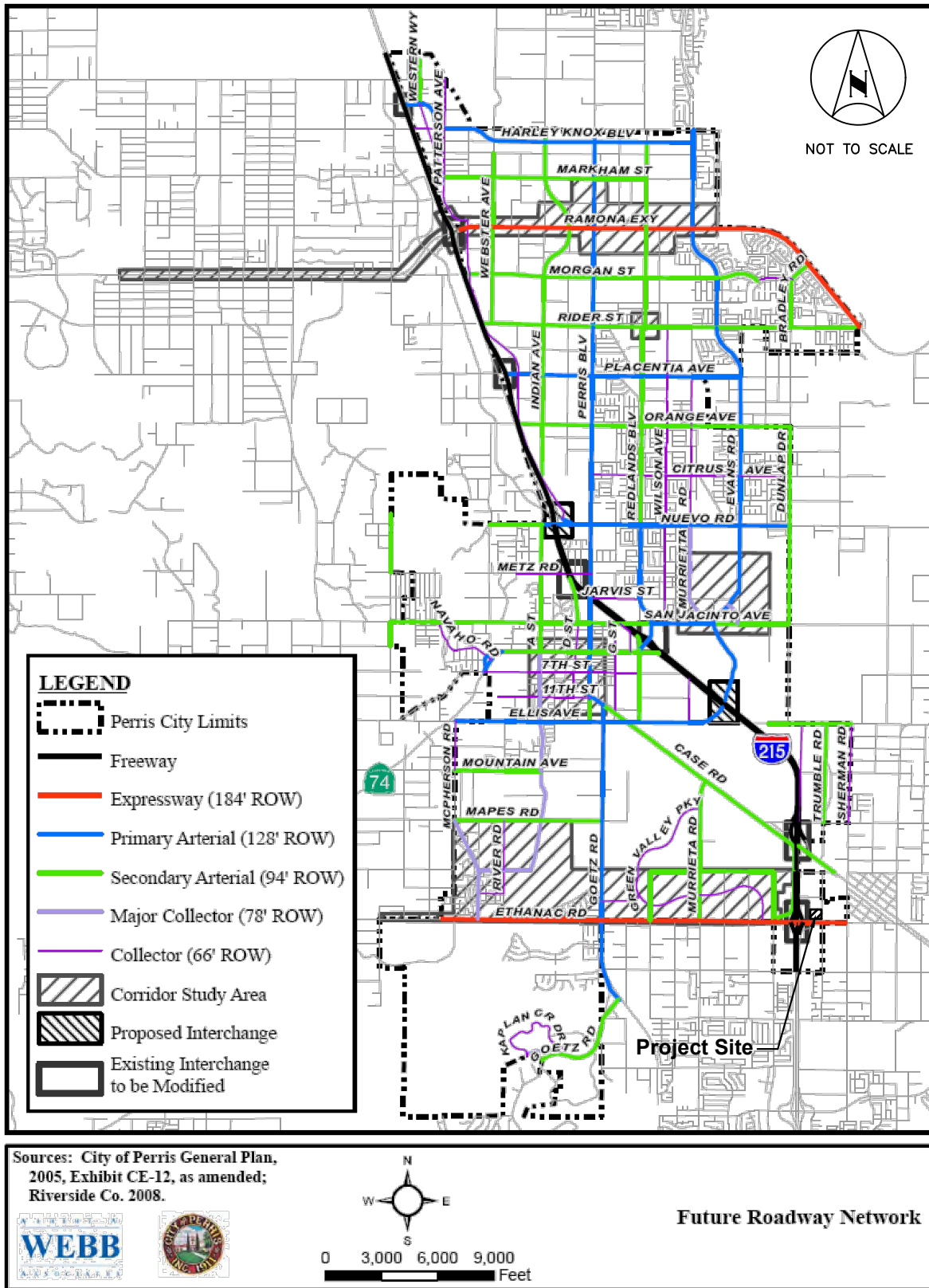
| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| FUTURE INTERSECTION | FUTURE INTERSECTION | FUTURE INTERSECTION | |

LEGEND:

- = Project Site
- = Study Intersection
- = Turn or Through Lane
- = Signal

**FIGURE 3
EXISTING LANE CONFIGURATION
AND TRAFFIC CONTROL**

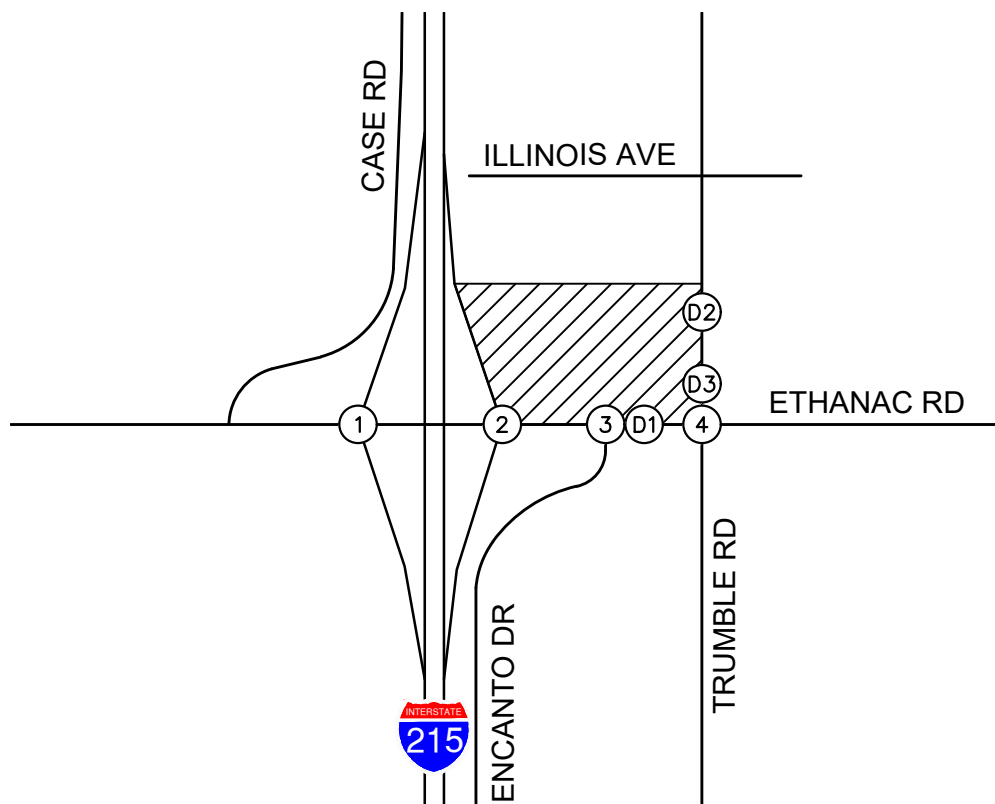




**FIGURE 4
CITY OF PERRIS CIRCULATION PLAN**



NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| FUTURE INTERSECTION | FUTURE INTERSECTION | FUTURE INTERSECTION | |

Note: Volumes reflect PCE adjustments.

LEGEND:

- = Project Site
- = Study Intersection
- xx/yy = AM/PM Volumes

**FIGURE 5
EXISTING TRAFFIC VOLUMES**



**TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS**

| Int. # | Intersection | Traffic Control | AM Peak Hour | | PM Peak Hour | |
|--------|----------------------------------|-----------------|---------------------|-----|--------------|-----|
| | | | Delay | LOS | Delay | LOS |
| 1 | SR-215 SB Ramps at Ethanac Road | S | 16.2 | B | 22.0 | C |
| 2 | SR-215 NB Ramps at Ethanac Road | S | 26.8 | C | 34.0 | C |
| 3 | Encanto Drive at Ethanac Road | U | 26.7 | D | 45.7 | E |
| 4 | Trumble Road at Ethanac Road | S | 24.0 | C | 23.3 | C |
| 5 | Ethanac Road at Project Driveway | U | Future Intersection | | | |
| 6 | Trumble Road at North Driveway | U | Future Intersection | | | |
| 7 | Trumble Road at South Driveway | U | Future Intersection | | | |

Notes:

- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
 - At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
 - Delay values are based on the methodology outlined in the Highway Capacity Manual, (6th Edition).
- S = Signalized
U = Unsignalized

PROJECT TRAFFIC

Project Trip Generation

The number of trips anticipated to be generated by the project was approximated using site-specific, local trip generation data collected at similar travel center sites in California. Due to the unique characteristics of the proposed project, it was determined that the use of local data would most appropriately estimate the trip generation anticipated to be experienced at the project site. The methodology as outlined in the Trip Generation Handbook (3rd Edition), published by the Institute of Transportation Engineers (ITE), was followed in the development of the site-specific trip generation rate.

Detailed trip generation data was collected at the following travel center sites in June and July of 2021:

- City of Orland (4444 Commerce Lane)
- City of Patterson (2275 Sperry Avenue)
- City of Lost Hills (14808 Warren Street)

Each of these sites were confirmed to have similar uses (gas station with convenience market, fast-food drive through restaurant, and a truck stop), and to be located in similar proximity to a major freeway. The data collection included record of all driveways' ingress and egress trips, noted by vehicles classification (passenger vehicles, recreational vehicles, and heavy vehicles).

It is important to note that two distinct trip generation rates were developed to estimate the site's trip generation potential. One rate estimates the passenger vehicles/RVs per automobile fueling position, and the other estimates heavy vehicles per truck fueling position.

The truck stop land use was estimated to generate only truck trips and as such, a passenger car equivalent (PCE) factor was applied to the truck stop trips (3.0 PCE for 4+-axle trucks) to determine the total PCE trips to be generated by the truck stop land use.

It should be noted that the data at the three comparable sites was not collected during a 24-hour period (5AM to 8PM). Therefore, a daily trip rate per land use was developed by applying an adjustment factor based on the hourly percentage breakdown of daily trips for each respective land use based on Appendix A of the ITE Trip Generation Manual (10th Edition).

Trip rates and the estimated project trip generation are shown on **Table 2**. Copies of collected site-specific trips worksheets and summary of average trip rates are provided in **Appendix C**.

After applying pass-by and PCE factors, the project is estimated to generate 7,834 net new PCE trips on a daily basis, with 365 net new PCE trips in the morning peak hour, and 404 net new PCE trips in the evening peak hour.

Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed taking into account the proposed site uses, existing travel patterns, and routes to and from the freeway system. Separate distribution patterns were assumed for passenger car trips and truck trips. Primary trips are new vehicle trips that are assumed to be added to the network as a result of development of the project site. Separate project trip distributions were developed for pass-by trips for passenger cars.

Trip distribution assumptions for non-pass-by and pass-by trips are shown on **Figures 6** and **7**, respectively. Based on the trip distribution and assignment assumptions, the project trips to be added to the street system by the proposed project were calculated and are shown on **Figure 8**.

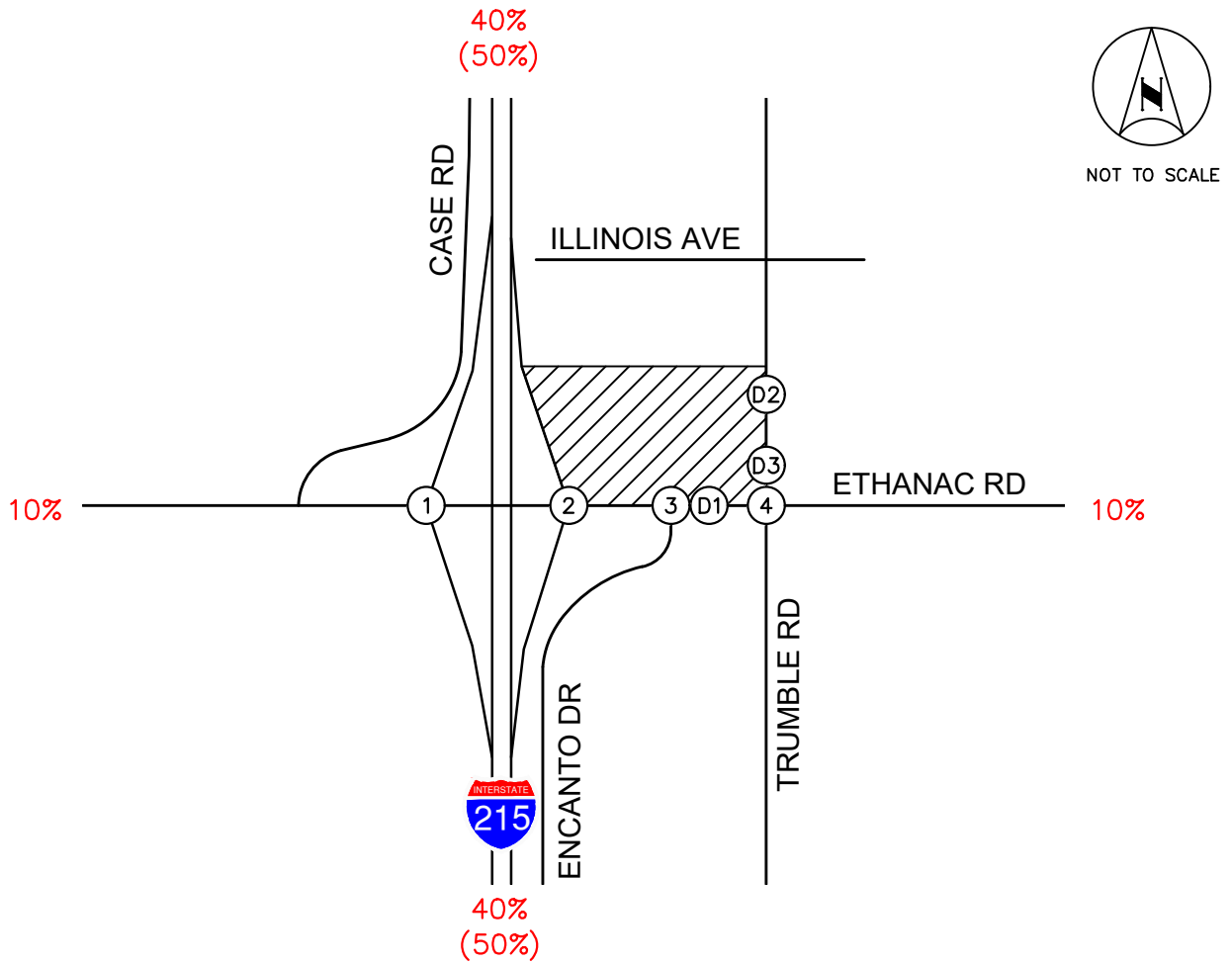
Based on discussion with City Staff, the Project Applicant will be installing a raised median along Ethanac Road between Trumble Road and just west of Encanto Drive. As a result, the intersection of Encanto Drive at Ethanac Road would change from a full access to a right-in-right-out (RIRO) only unsignalized intersection. This modification has been applied to “Plus Project” conditions.

**TABLE 2
SUMMARY OF PROJECT TRIP GENERATION
PERRIS TRAVEL CENTER**

| Trip Generation Rates | | | | | | | | | |
|---|----------|----------|------------------|--------------|------------|------------------|--------------|------------|------------|
| Land Use | Unit | Daily(a) | AM Peak Hour (a) | | | PM Peak Hour (a) | | | |
| | | | In | Out | Total | In | Out | Total | |
| Convenience Store/Gas Station/Fast-Food Restaurant with Drive-Through | FP | 268.110 | 50% | 50% | 13.02 | 50% | 50% | 18.29 | |
| Truck Stop | FP | 219.860 | 49% | 51% | 12.40 | 53% | 47% | 13.00 | |
| Project Trip Generation | | | | | | | | | |
| Land Use | Quantity | Unit | Daily | AM Peak Hour | | | PM Peak Hour | | |
| | | | | In | Out | Total | In | Out | Total |
| Passenger Car Trips | | | | | | | | | |
| Convenience Store/Gas Station/Fast-Food Restaurant with Drive-Through | 16 | FP | 4,290 | 104 | 104 | 208 | 146 | 146 | 292 |
| <i>Pass-By Trips (b) (Daily: 25%, AM: 50%, PM: 55%)</i> | | | -1,072 | -52 | -52 | -104 | -80 | -80 | -161 |
| Truck Trips | | | | | | | | | |
| Truck Stop | 7 | FP | 1,539 | 43 | 44 | 87 | 48 | 43 | 91 |
| PCE Truck Stop (PCE Factor = 3) | | | 4,617 | 128 | 133 | 260 | 145 | 128 | 273 |
| Total Driveway Trips | | | 8,907 | 232 | 237 | 469 | 291 | 274 | 565 |
| Passenger Car | | | 4,290 | 104 | 104 | 208 | 146 | 146 | 292 |
| Truck PCE | | | 4,617 | 128 | 133 | 260 | 145 | 128 | 273 |
| Total Primary (Net New) Trips | | | 7,834 | 180 | 185 | 365 | 210 | 194 | 404 |
| Passenger Car | | | 3,217 | 52 | 52 | 104 | 66 | 66 | 131 |
| Truck PCE | | | 4,617 | 128 | 133 | 260 | 145 | 128 | 273 |

Notes:
KSF = thousand square feet, FP = Fueling Position
AM and/or PM rates correspond to peak of adjacent street traffic

(a) Based on Trip Generation data at three comparable Travel Center sites (Orland, Patterson, and Lost Hills). Data collection worksheets are provided in Appendix C.
(b) Pass-by rates from ITE Trip Generation Manual, 11th Edition



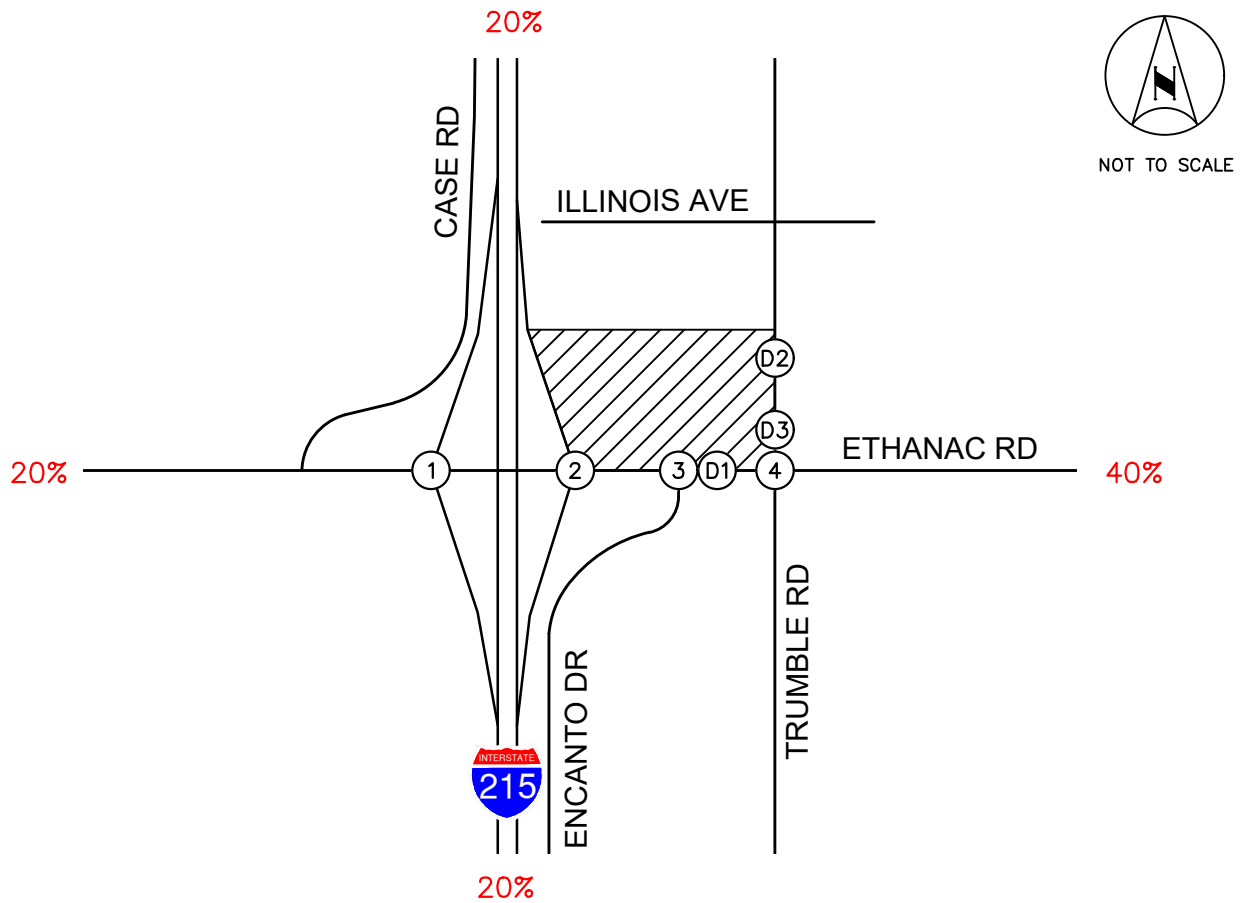
| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

Note: Volumes reflect PCE adjustments.

LEGEND:

- = Project Site
- = Study Intersection
- XX%** = Passenger Car/(Truck) Trip Distribution Percentage
- (YY%)** = Passenger Car/(Truck) Trip Distribution Percentage
- XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 6
NON PASS-BY PROJECT-RELATED
TRIP DISTRIBUTION**



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

Note: Volumes reflect PCE adjustments.

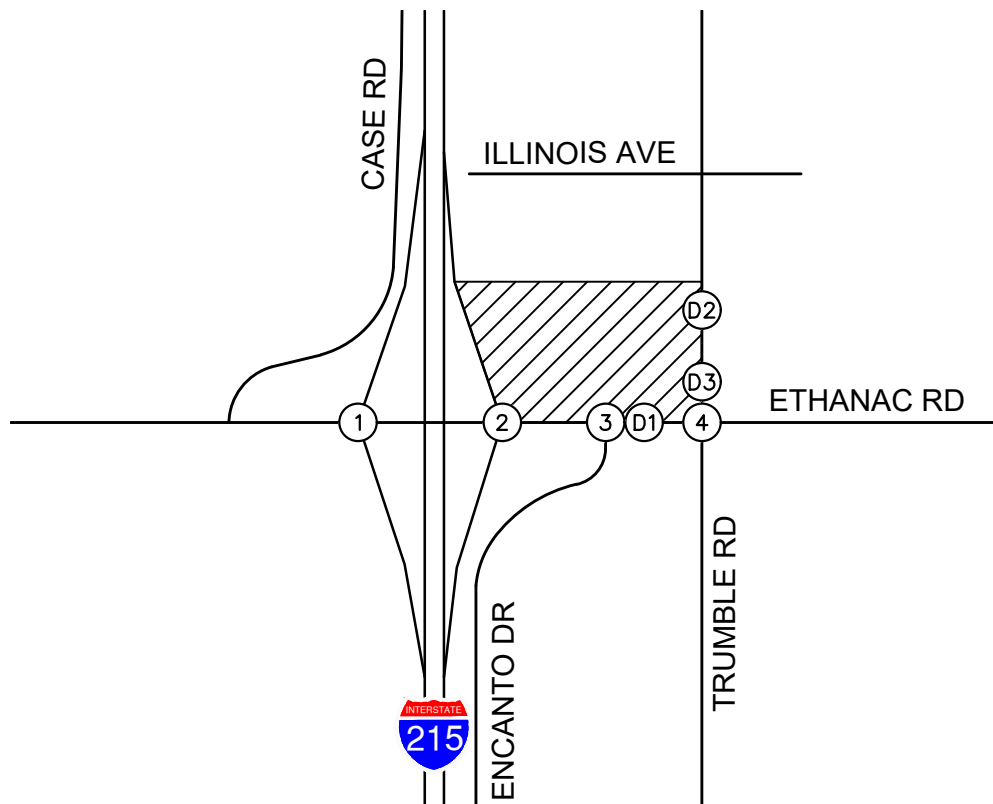
LEGEND:

- = Project Site
- = Study Intersection
- XX%** = Pass-By Distribution Percentage
- XX/YY = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 7
PASS-BY PROJECT-RELATED
TRIP DISTRIBUTION**



NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

Note: Volumes reflect PCE adjustments.

LEGEND:

- = Project Site
- = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 8
PROJECT-RELATED TOTAL
TRAFFIC VOLUMES**



EXISTING PLUS PROJECT

Project-related traffic was added to the existing traffic volumes, and the resulting traffic volumes at the study locations are shown on **Figure 9**.

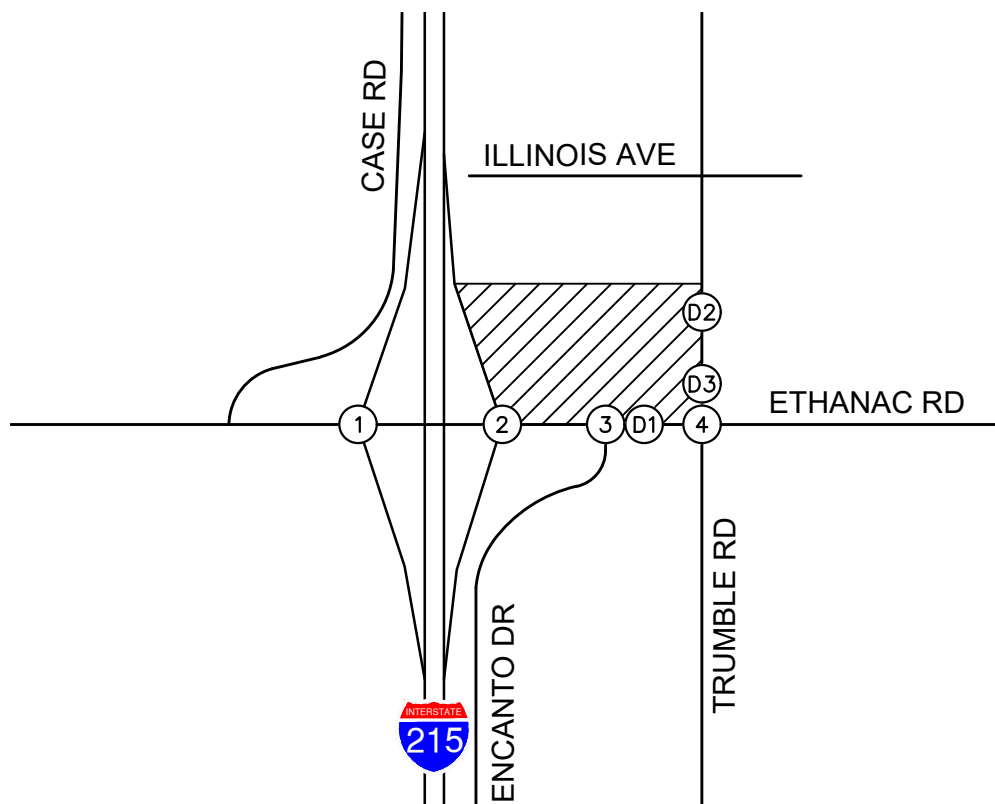
Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Existing Plus Project conditions. The results of the intersection analysis are shown on **Table 3**. Copies of Existing Plus Project conditions intersection analysis worksheets are provided in **Appendix D**.

Review of this Table indicates that, with the addition of project traffic, all intersections would operate at an acceptable Level of Service under Existing Plus Project conditions.



NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

Note: Volumes reflect PCE adjustments.

LEGEND:

- = Project Site
- = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 9
EXISTING PLUS PROJECT
TRAFFIC VOLUMES**



**TABLE 3
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT**

| Int. # | Intersection | Traffic Control | AM Peak Hour | | | | | | PM Peak Hour | | | | | |
|--------|----------------------------------|-----------------|-----------------|-----|--------------|-----|-----------------|-------------|-----------------|----------|--------------|-----|-----------------|-------------|
| | | | Without Project | | With Project | | Change in Delay | Sig Effect? | Without Project | | With Project | | Change in Delay | Sig Effect? |
| | | | Delay | LOS | Delay | LOS | | | Delay | LOS | Delay | LOS | | |
| 1 | SR-215 SB Ramps at Ethanac Road | S | 16.2 | B | 20.2 | C | 4.0 | No | 22.0 | C | 25.8 | C | 3.8 | No |
| 2 | SR-215 NB Ramps at Ethanac Road | S | 26.8 | C | 34.7 | C | 7.9 | No | 34.0 | C | 44.2 | D | 10.2 | No |
| 3 | Encanto Drive at Ethanac Road | U | 26.7 | D | 18.9 | C | -7.8 | No | 45.7 | E | 26.7 | D | - | No |
| 4 | Trumble Road at Ethanac Road | S | 24.0 | C | 36.3 | D | 12.3 | No | 23.3 | C | 39.4 | D | 16.1 | No |
| 5 | Ethanac Road at Project Driveway | U | - | - | 14.8 | B | - | No | - | - | 15.5 | C | - | No |
| 6 | Trumble Road at North Driveway | U | - | - | 9.6 | A | - | No | - | - | 10.0 | A | - | No |
| 7 | Trumble Road at South Driveway | U | - | - | 9.9 | A | - | No | - | - | 10.4 | B | - | No |

Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service or significant impact to intersection per City standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (6th Edition).

OPENING YEAR 2024 CUMULATIVE CONDITIONS

The Project Opening Year (the year the project would be constructed and occupied) is anticipated to be Year 2024. Based on consultation with City staff, an ambient growth rate of 3.0% per year (9% total) to Opening Year 2024 was applied to existing traffic volumes. Cumulative Project traffic was also added to Opening Year 2024 volumes and is explained below.

Cumulative Projects

Information about Cumulative Projects in the area was provided by the City of Perris and City of Menifee. Cumulative Projects consist of any project that has been approved but is not yet constructed/occupied, and projects that are in various stages of the application and approval process but have not yet been approved. A summary of Cumulative Projects in the project vicinity and the trip generation associated with each is provided on **Table 4**. The locations of the Cumulative Projects are shown on **Figure 10**.

Trip Generation

Trip generation information for Cumulative Projects was derived either from approved traffic studies, where available; or developed by Kimley-Horn if approved traffic studies were not available.

Trip Distribution and Assignment

Likewise, trip distribution and assignment for the Cumulative Projects were either derived from approved traffic studies, where available; or were developed by Kimley-Horn if approved traffic studies were not available. Project information and trip distribution assumptions for Cumulative Projects are provided in **Appendix E**. Traffic volumes associated with the Cumulative Projects were compiled for each of the study intersections and are shown on **Figure 11**.

Ambient growth and Cumulative Project trips were added to existing traffic to develop Opening Year 2024 Cumulative forecasts. The resulting peak hour turning movement volumes at the study locations are shown in **Figure 12**.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2024 Cumulative conditions. The results are shown on **Table 5**. Intersection analysis worksheets are provided in **Appendix D**.

Review of this table indicates that, with the addition of ambient growth and cumulative projects traffic, the following intersections would operate at an unacceptable Level of Service under Opening Year 2024 conditions:

- #1 - I-215 SB Ramps at Ethanac Road: AM & PM - LOS F
- #2 - I-215 NB Ramps at Ethanac Road: AM & PM - LOS F
- #3 - Encanto Drive at Ethanac Road: AM & PM - LOS F
- #4 - Trumble Road at Ethanac Road: PM - LOS E

**TABLE 4
SUMMARY OF CUMULATIVE PROJECTS**

| Proj # | Location | Land Use | Quantity | Units | Trip Generation Estimates | | | | | | | |
|--|----------------------------|--|-----------|-------|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|------|
| | | | | | AM Peak Hour | | | | PM Peak Hour | | | |
| | | | | | Daily | In | Out | Total | In | Out | Total | |
| 1 | Green Valley | Single-Family Detached Housing | 623 | DU | 5,881 | 115 | 346 | 461 | 389 | 228 | 617 | |
| | | Multifamily Housing (Mid-Rise) | 842 | DU | 4,580 | 79 | 224 | 303 | 226 | 145 | 371 | |
| 2 | On-Deck Hotel | Hotel | 120 | Room | 1,003 | 33 | 23 | 56 | 37 | 35 | 72 | |
| 3 | Paragon Framing | High-Cube Transload and Short-Term Storage | 5.000 | KSF | 7 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | General Office Building | 5.454 | KSF | 53 | 5 | 1 | 6 | 1 | 5 | 6 | |
| 4 | MR-27 LLC | Single-Family Detached Housing | 172 | DU | 1,624 | 32 | 95 | 127 | 107 | 63 | 170 | |
| 5 | Motte Country Plaza | Shopping Center | 4.888 | KSF | 185 | 3 | 2 | 5 | 9 | 10 | 19 | |
| | | Pass-by Trips (PM:34%) | | | | | | | | -3 | -3 | -6 |
| | | Sub Total | | | | 185 | 3 | 2 | 5 | 6 | 7 | 13 |
| 6 | Capstone Warehouse | High-Cube Fulfillment Center Warehouse | 700.037 | KSF | 4,716 | 517 | 122 | 639 | 343 | 536 | 879 | |
| 7 | Ethanac Square | Automated Car Wash | 2.080 | KSF | 339 | 12 | 7 | 19 | 15 | 15 | 30 | |
| 8 | Menifee Commerce Center | Warehousing | 1,640.130 | KSF | 2,854 | 215 | 64 | 279 | 84 | 228 | 312 | |
| 9 | Forterra Pipe | General Office Building | 4.200 | KSF | 41 | 4 | 1 | 5 | 1 | 4 | 5 | |
| 10 | Cimarron Ridge | Single-Family Detached Housing | 756 | DU | 7,137 | 140 | 420 | 560 | 472 | 277 | 749 | |
| 11 | Valley Blvd Tract Map | Single-Family Detached Housing | 68 | DU | 642 | 13 | 38 | 51 | 42 | 25 | 67 | |
| 12 | Sagewood (DR Horton) | Single-Family Detached Housing | 174 | DU | 1,643 | 32 | 97 | 129 | 109 | 64 | 173 | |
| 13 | McLaughlin Village | Single-Family Detached Housing | 126 | DU | 1,189 | 23 | 70 | 93 | 79 | 46 | 125 | |
| 14 | RV SuperCenter | Recreational Vehicle Sales | 17.600 | KSF | 88 | 7 | 1 | 8 | 4 | 9 | 13 | |
| 15 | Talavera (KB Homes) | Single-Family Detached Housing | 173 | DU | 1,633 | 32 | 96 | 128 | 108 | 63 | 171 | |
| 16 | Legado | Single-Family Detached Housing | 1,022 | DU | 9,648 | 189 | 567 | 756 | 638 | 374 | 1,012 | |
| 17 | Underwood (KB Homes) | Single-Family Detached Housing | 543 | DU | 5,126 | 100 | 301 | 401 | 339 | 199 | 538 | |
| 18 | Remington/McCall Mesa | Single-Family Detached Housing | 264 | DU | 2,492 | 49 | 147 | 196 | 165 | 97 | 262 | |
| 19 | McCall-Encanto Gas Station | Gasoline Station w/ Conv. Mkt. | 12 | FP | 2,464 | 76 | 73 | 149 | 86 | 82 | 168 | |
| 20 | McCall Square | Convenience Market w/ Gasoline Pumps | 2 | FP | 645 | 21 | 21 | 42 | 23 | 23 | 46 | |
| | | Pass-by Trips (AM: 63%, PM:66%) | | | | | -13 | -13 | -26 | -15 | -15 | -30 |
| | | Shopping Center | 1 | KSF | 38 | 1 | 0 | 1 | 2 | 2 | 4 | |
| | | Quality Restaurant | 3.100 | KSF | 260 | 2 | 0 | 2 | 16 | 8 | 24 | |
| | | Pass-by Trips (PM:44%) | | | | | | | | -7 | -4 | -11 |
| | | Fast-Food Restaurant w/o Drive-thru | 3.2 | KSF | 1,108 | 48 | 32 | 80 | 45 | 45 | 90 | |
| | | Automated Car Wash | 2.080 | KSF | 339 | 12 | 7 | 19 | 15 | 15 | 30 | |
| Sub Total | | | | 2,390 | 71 | 47 | 118 | 79 | 74 | 153 | | |
| 21 | Goetz/Ethanac Commercial | Convenience Market w/ Gasoline Pumps | 8 | FP | 2,580 | 83 | 83 | 166 | 92 | 92 | 184 | |
| | | Pass-by Trips (AM: 63%, PM:66%) | | | | | -52 | -52 | -105 | -61 | -61 | -121 |
| | | Bed and Linen Superstore | 3 | KSF | 471 | 16 | 10 | 26 | 21 | 21 | 42 | |
| | | Shopping Center | 7.040 | KSF | 266 | 4 | 3 | 7 | 13 | 14 | 27 | |
| | | Pass-by Trips (PM:34%) Retail Only | | | | | | | | -4 | -5 | -9 |
| Sub Total | | | | 3,317 | 51 | 44 | 94 | 61 | 62 | 122 | | |
| 22 | Barnett Warehouse | Warehousing | 251.780 | KSF | 438 | 33 | 10 | 43 | 13 | 35 | 48 | |
| 23 | Planning Area 9 | Single-Family Detached Housing | 173 | DU | 1,633 | 32 | 96 | 128 | 108 | 63 | 171 | |
| 24 | Vista Ridge Aparments | Multifamily Housing (Mid-Rise) | 30 | DU | 163 | 3 | 8 | 11 | 8 | 5 | 13 | |
| 25 | NGCC I & II | Warehousing | 1,316.754 | Ksf | 3,229 | 243 | 71 | 314 | 95 | 258 | 353 | |
| Total Project Trips | | | | | 64,515 | 2,108 | 2,970 | 5,079 | 3,615 | 2,998 | 6,613 | |
| DU = Dwelling Unit, KSF = 1,000 square feet, FP = Fueling Position | | | | | | | | | | | | |

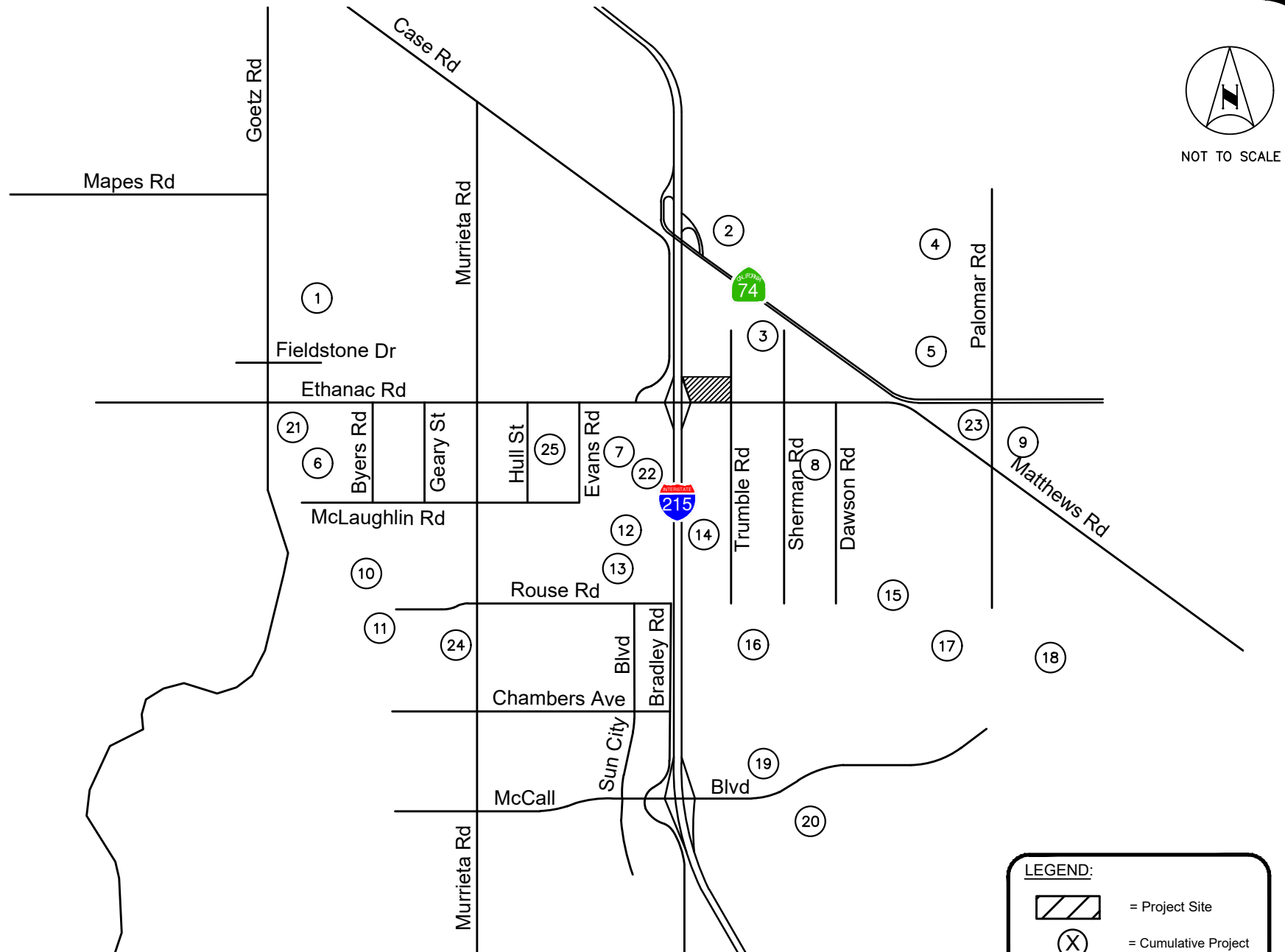
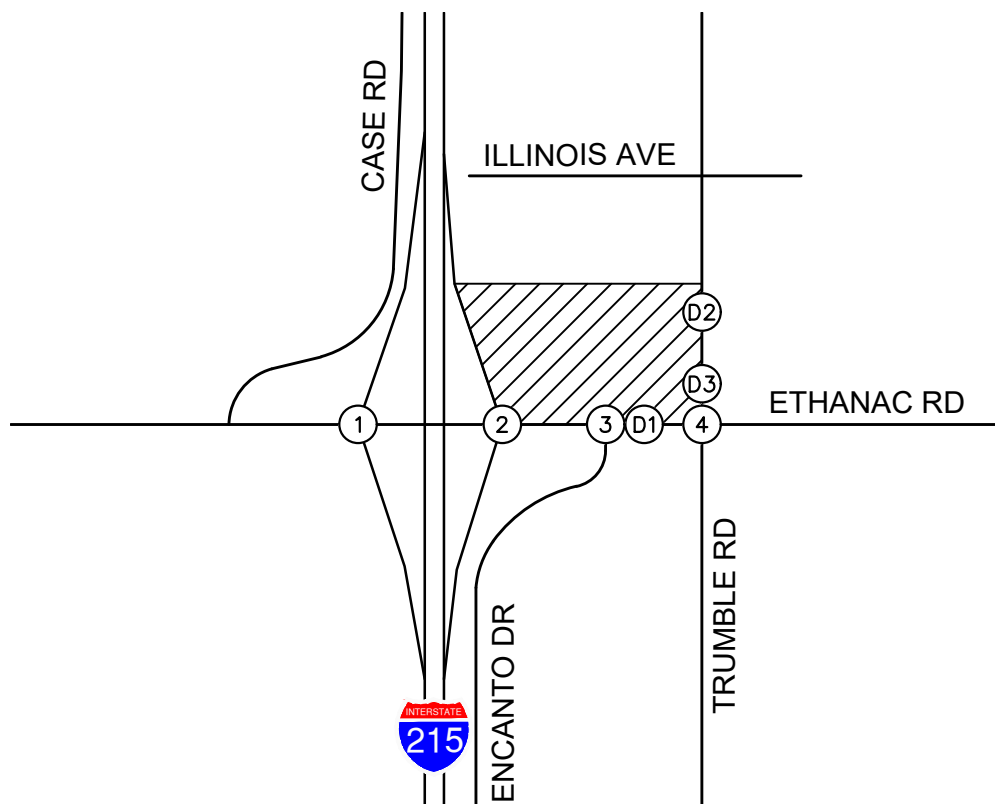


FIGURE 10
LOCATION OF CUMULATIVE PROJECTS



NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

Note: Volumes reflect PCE adjustments.

LEGEND:

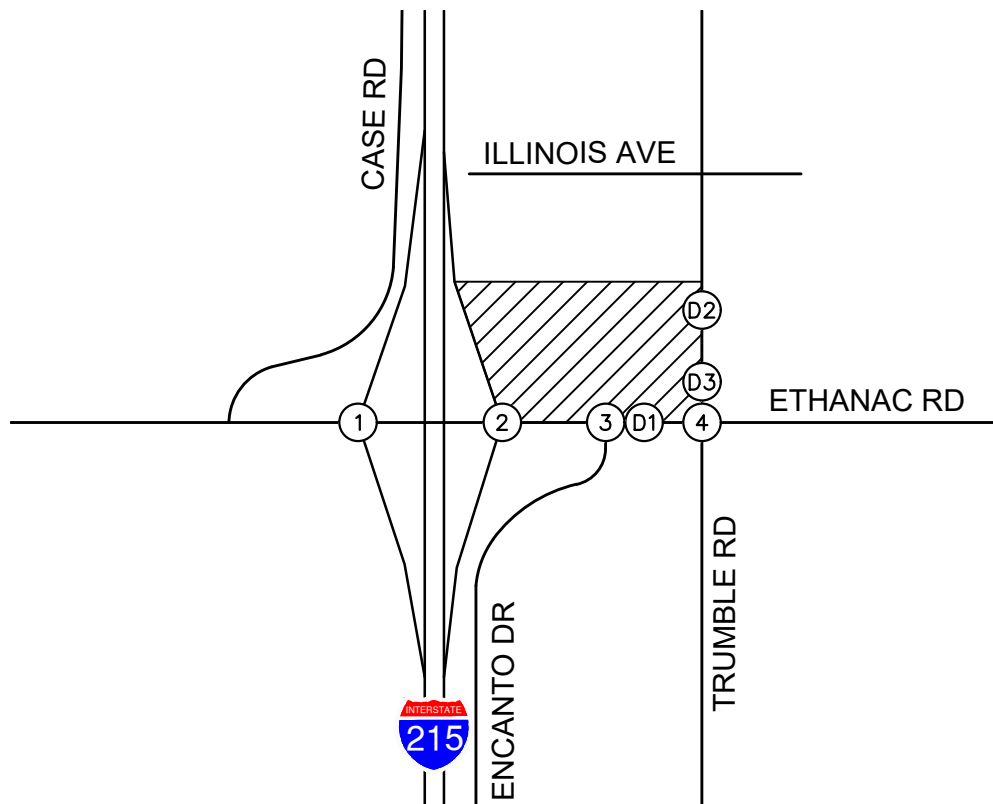
- = Project Site
- = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 11
CUMULATIVE PROJECTS TRAFFIC VOLUMES**





NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| FUTURE INTERSECTION | FUTURE INTERSECTION | FUTURE INTERSECTION | |

Note: Volumes reflect PCE adjustments.

LEGEND:

- = Project Site
- = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 12
OPENING YEAR 2024 CUMULATIVE
TRAFFIC VOLUMES**



**TABLE 5
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CUMULATIVE**

| Int. # | Intersection | Traffic Control | AM Peak Hour | | PM Peak Hour | |
|--------|----------------------------------|-----------------|---------------------|-----|--------------|-----|
| | | | Delay | LOS | Delay | LOS |
| 1 | SR-215 SB Ramps at Ethanac Road | S | 173.0 | F | 242.0 | F |
| 2 | SR-215 NB Ramps at Ethanac Road | S | 254.7 | F | 377.9 | F |
| 3 | Encanto Drive at Ethanac Road | U | >180 | F | >180 | F |
| 4 | Trumble Road at Ethanac Road | S | 35.6 | D | 57.7 | E |
| 5 | Ethanac Road at Project Driveway | U | Future Intersection | | | |
| 6 | Trumble Road at North Driveway | U | Future Intersection | | | |
| 7 | Trumble Road at South Driveway | U | Future Intersection | | | |

Notes:

- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (6th Edition).

OPENING YEAR 2024 CUMULATIVE PLUS PROJECT CONDITIONS

Project-related traffic was added to the Opening Year 2024 Cumulative traffic volumes, and the resulting morning and evening peak hour volumes and daily roadway volumes are presented on **Figure 13**.

Intersection Operating Conditions

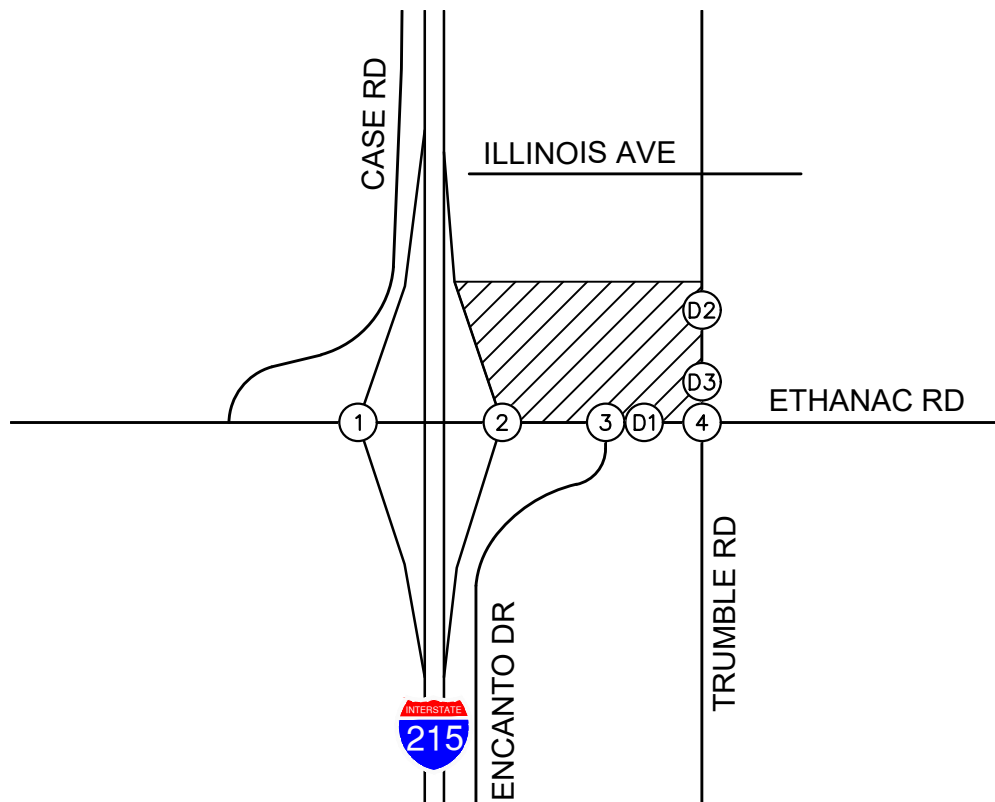
Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2024 Cumulative Plus Project conditions. The results of the intersection analysis are shown on **Table 6**. Copies of intersection analysis worksheets for this scenario are provided in **Appendix D**.

Review of this Table indicates that, with the addition of project traffic, the following intersections would operate at an unacceptable Level of Service under Opening Year 2024 Cumulative Plus Project conditions:

- #1 - I-215 SB Ramps at Ethanac Road: AM & PM - LOS F
- #2 - I-215 NB Ramps at Ethanac Road: AM & PM - LOS F
- #3 - Encanto Drive at Ethanac Road: PM - LOS F
- #4 - Trumble Road at Ethanac Road: AM & PM - LOS F



NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

Note: Volumes reflect PCE adjustments.

LEGEND:

- = Project Site
- = Study Intersection
- xx/yy = AM/PM Peak Hour Turning Movement Volumes

FIGURE 13
OPENING YEAR 2024 CUMULATIVE
PLUS PROJECT TRAFFIC VOLUMES



**TABLE 6
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CUMULATIVE PLUS PROJECT**

| Int. # | Intersection | Traffic Control | AM Peak Hour | | | | | | PM Peak Hour | | | | | |
|--------|----------------------------------|-----------------|-----------------|----------|--------------|----------|-----------------|-------------|-----------------|----------|--------------|----------|-----------------|-------------|
| | | | Without Project | | With Project | | Change in Delay | Sig Effect? | Without Project | | With Project | | Change in Delay | Sig Effect? |
| | | | Delay | LOS | Delay | LOS | | | Delay | LOS | Delay | LOS | | |
| 1 | SR-215 SB Ramps at Ethanac Road | S | 173.0 | F | 211.3 | F | 38.3 | Yes | 242.0 | F | 301.1 | F | 59.1 | Yes |
| 2 | SR-215 NB Ramps at Ethanac Road | S | 254.7 | F | 292.3 | F | 37.6 | Yes | 377.9 | F | 406.1 | F | 28.2 | Yes |
| 3 | Encanto Drive at Ethanac Road | U | >180 | F | 33.3 | D | - | No | >180 | F | >180 | F | - | No |
| 4 | Trumble Road at Ethanac Road | S | 35.6 | D | 125.3 | F | 89.7 | Yes | 57.7 | E | 185.4 | F | 127.7 | Yes |
| 5 | Ethanac Road at Project Driveway | U | - | - | 27.1 | D | - | No | - | - | 27.3 | D | - | No |
| 6 | Trumble Road at North Driveway | U | - | - | 9.7 | A | - | No | - | - | 10.1 | B | - | No |
| 7 | Trumble Road at South Driveway | U | - | - | 9.9 | A | - | No | - | - | 10.5 | B | - | No |

Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service or significant impact to intersection per City standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (6th Edition).

RECOMMENDED IMPROVEMENTS

Based on the Level of Service standards and significant effect criteria discussed previously, under Opening Year 2024 Cumulative Plus Project Conditions, the project would cause a cumulative project-related effect at the following intersections:

- #1 - I-215 SB Ramps at Ethanac Road (Cumulative effect)
- #2 - I-215 NB Ramps at Ethanac Road (Cumulative effect)
- #4 - Trumble Road at Ethanac Road (Cumulative effect)

Implementation of the following improvements under Opening Year 2024 Cumulative Plus Project conditions are recommended to address the project-related effect at the study intersections:

#1 - I-215 SB Ramps at Ethanac Road (Regional TUMF):

- Add 2nd eastbound through lane
- Add 2nd westbound left-turn lane
- Modify southbound approach to provide two left-turn and two right-turn movements.
- Add free eastbound right-turn lane

#2 - I-215 NB Ramps at Ethanac Road (Regional TUMF):

- Add 2nd eastbound through lane
- Add 2nd westbound through lane
- Add a dedicated westbound right-turn lane
- Add 2nd eastbound left-turn lane
- Add 2nd northbound left-turn lane

#4 - Trumble Road at Ethanac Road:

- Add 2nd eastbound through lane
- Add 2nd westbound through lane
- Add a dedicated southbound right-turn lane with right-turn overlap signal phasing

The Project Applicant will be installing a raised median along Ethanac Road between Trumble Road and just west of Encanto Drive. As a result, the intersection of Encanto Drive at Ethanac Road would change from a full access to a right-in-right-out (RIRO) only unsignalized intersection.

A summary of the intersection operation before and after implementation of the recommended improvements is provided on **Table 7**. Recommended lane configurations and intersection controls at the study intersections are shown on **Figure 14**. A copy of the Regional TUMF Program improvements is provided in **Appendix G**.

Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements, or a combination of these approaches. The project fair-share proportion for non-

programmed improvements at deficient study intersections under Opening Year 2024 Cumulative Plus Project conditions is shown on **Table 8**. The proposed project will pay fair share for non-programmed improvements at deficient study intersections. For programmed improvements, the developer will pay into the regional transportation fee program.

**TABLE 7
SUMMARY OF INTERSECTION OPERATION
RECOMMENDED IMPROVEMENTS**

| Int. # | Intersection | Improvements | Peak Hour | Proposed Traffic Control | OPENING YEAR 2024 CUMULATIVE | | | | | |
|--------|---------------------------------|---|-----------|--------------------------|------------------------------|----------|--------------|----------|-------------------|-----|
| | | | | | Without Project | | With Project | | With Improvements | |
| | | | | | Delay | LOS | Delay | LOS | Delay | LOS |
| 1 | SR-215 SB Ramps at Ethanac Road | <ul style="list-style-type: none"> •Add 2nd eastbound through lane •Add 2nd westbound left-turn lane •Modify southbound approach to provide two left-turn movements and two right-turn movements. •Add free eastbound right-turn lane | AM | S | 173.0 | F | 211.3 | F | 44.8 | D |
| | | | PM | S | 242.0 | F | 301.1 | F | 72.4 | E |
| 2 | SR-215 NB Ramps at Ethanac Road | <ul style="list-style-type: none"> •Add 2nd eastbound through lane •Add 2nd westbound through lane •Add a dedicated westbound right-turn lane •Add 2nd eastbound left-turn lane •Add 2nd northbound left-turn lane | AM | S | 254.7 | F | 292.3 | F | 32.1 | C |
| | | | PM | S | 377.9 | F | 406.1 | F | 53.0 | D |
| 4 | Trumble Road at Ethanac Road | <ul style="list-style-type: none"> •Add 2nd eastbound through lane •Add 2nd westbound through lane •Add a dedicated southbound right-turn lane with right-turn overlap signal phasing | AM | S | 35.6 | D | 125.3 | F | 28.3 | C |
| | | | PM | S | 57.7 | E | 185.4 | F | 27.8 | C |

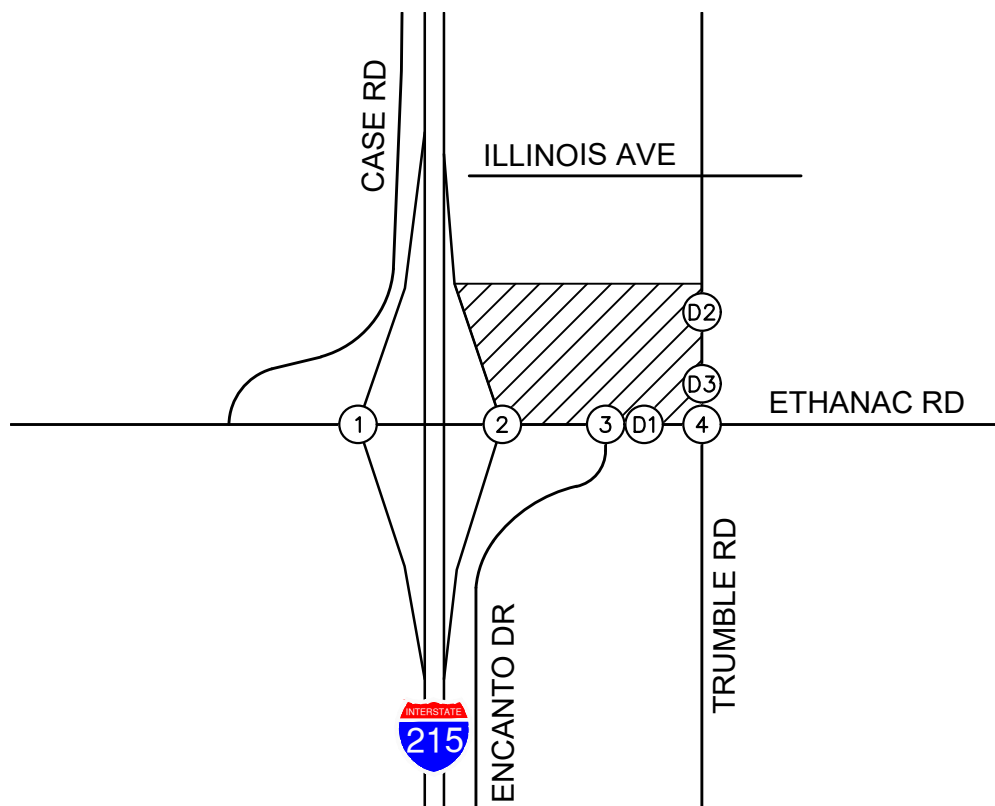
Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

S = Signalized
U = Unsignalized



NOT TO SCALE



| 1. I-215 SB Ramps at Ethanac Rd | 2. I-215 NB Ramps at Ethanac Rd | 3. Encanto Dr at Ethanac Rd | 4. Trumble Rd at Ethanac Rd |
|------------------------------------|----------------------------------|----------------------------------|-----------------------------|
| | | | |
| D1. Ethanac Rd at Project Driveway | D2. Trumble Rd at North Driveway | D3. Trumble Rd at South Driveway | |
| | | | |

LEGEND:

- = Project Site
- = Study Intersection
- = Turn or Through Lane
- = Recommended Turn or Through Lane
- = Overlap
- = Signal

FIGURE 14
RECOMMENDED LANE CONFIGURATION
AND TRAFFIC CONTROL



TABLE 8
SUMMARY OF PROJECT FAIR SHARE
OPENING YEAR 2024 CUMULATIVE PLUS PROJECT

| Int. # | Intersection | AM Peak Hour | | | | | PM Peak Hour | | | | |
|--------|--------------------------------|--------------|-------|--------------|---------------|----------------------|--------------|-------|--------------|---------------|----------------------|
| | | Total Volume | | Total Growth | Project Trips | Percentage of Growth | Total Volume | | Total Growth | Project Trips | Percentage of Growth |
| | | 2021 | 2024 | | | | 2021 | 2024 | | | |
| 1 | I-215 SB Ramps at Ethanac Road | 2,398 | 4,682 | 2,284 | 202 | 8.8% | 2,381 | 5,264 | 2,883 | 235 | 8.2% |
| 2 | I-215 NB Ramps at Ethanac Road | 1,935 | 3,984 | 2,049 | 395 | 19.3% | 2,050 | 4,648 | 2,598 | 456 | 17.6% |
| 4 | Trumble Road at Ethanac Road | 1,360 | 2,628 | 1,268 | 463 | 36.5% | 1,415 | 2,960 | 1,545 | 534 | 34.6% |

Notes:

- Fair Share percentage is to be applied to non-programmed improvements
- The Project applicant will be constructing a median within Ethanac Road to restrict northbound left turns and westbound left turns at Encanto Drive and Ethanac Road

SITE ACCESS ANALYSIS

Vehicular access for the project site would be via one passenger car unsignalized right-in-right-out (RIRO) only driveway on Ethanac Road, one passenger car full-access unsignalized driveway on Trumble Road, and one truck accessible driveways on Trumble Road.

STORAGE CAPACITY AT RAMPS

Queue lengths at ramps were assessed at the following locations:

- SR-215 SB Ramps at Ethanac Road
 - Southbound Ramp
- SR-215 NB Ramps at Ethanac Road
 - Northbound Ramp

A summary of ramp storage capacity, as well as 50th and 95th percentile queue lengths at the locations noted above are shown on **Table 9**. The table shows that the 50th and 95th percentile queues would exceed the available ramp capacity under Opening Year 2024 Cumulative conditions (with and without project) at the studied intersections.

DRIVE-THROUGH QUEUING ANALYSIS

The City has requested that a drive-through (DT) queuing analysis be conducted for the proposed project, to evaluate the adequacy of the drive-through lane queuing capacity.

The opening to the drive-through lane would be located on the west side of the proposed building and would wrap around the west side of the building in a clockwise direction. The proposed drive-through would be single lane with one order board and one pay/pick-up window.

There will be approximately 60 feet of queuing capacity from the drive-through entrance to the order board and approximately 40 feet from the order board to the pay/pick-up window. This would provide a total drive-through queue length of approximately 100 feet, for a drive-through queueing capacity of 5 vehicles, assuming 20 feet per vehicle, from the beginning of the drive-through lane to the pay/pick-up window.

Drive-through Queue Length Calculation

The drive-through queuing capacity was analyzed using queuing analysis formulas published in the Institute of Transportation Engineers (ITE) Transportation Planning Handbook (3rd Edition).

The peak arrival rate assumes that 60% of inbound traffic for the drive-through restaurant will use the drive-through service during the peak hour, resulting in an arrival rate of 30 vehicles using the drive-through during the peak hour.

The typical service time in the drive-through is approximately 4 minutes from the order board to the pick-up window, with subsequent vehicles being processed at the pay/pick-up window every 90 seconds during the peak drive-through periods. As a result, the service rate for the proposed drive-through is estimated to be 38 vehicles per hour.

After applying the ITE queuing formulas, the analysis indicates that the average queue length is estimated to be 3 vehicles, and the probability of the queue exceeding 5 vehicles is estimated to be 24.21% during the peak hour. The queuing calculation worksheet and formulas are provided as **Appendix F** of this report.

It should be noted that the drive-through restaurant plans to implement mobile pick-up order at the proposed location. Also, once the specific type of fast-food restaurant has been determined a site-specific queuing analysis would be submitted to the City for approval.

**TABLE 9
SUMMARY OF RAMP STORAGE CAPACITY
PERRIS TRAVEL CENTER PROJECT**

| Intersection | Ramp | Storage Capacity (ft) | Peak Hour | PM Peak Hour Queue Length (ft) | | | | | | | | | |
|---------------------------------|------|-----------------------|-----------|--------------------------------|-----------------|-----------------------|-----------------|------------------------------|-----------------|---|-----------------|---|-----------------|
| | | | | Existing | | Existing Plus Project | | Opening Year 2024 Cumulative | | Opening Year 2024 Cumulative Plus Project | | OY 2024 Cumulative Plus Project with Improvements | |
| | | | | 50th Percentile | 95th Percentile | 50th Percentile | 95th Percentile | 50th Percentile | 95th Percentile | 50th Percentile | 95th Percentile | 50th Percentile | 95th Percentile |
| SR-215 SB Ramps at Ethanac Road | SB | 1,370 | AM | 147 | 246 | 160 | 263 | 1,152 | 1,817 | 1,152 | 1,817 | 293 | 433 |
| | | | PM | 248 | 378 | 317 | 465 | 1,885 | 2,989 | 1,885 | 2,989 | 555 | 772 |
| SR-215 NB Ramps at Ethanac Road | NB | 1,315 | AM | 219 | 340 | 282 | 419 | 1,272 | 1,986 | 1,272 | 1,986 | 311 | 470 |
| | | | PM | 377 | 491 | 433 | 637 | 1,952 | 3,072 | 1,952 | 3,072 | 657 | 908 |

SUMMARY OF FINDINGS AND CONCLUSIONS

- The project is located on the northwest corner of the intersection of Trumble Road and Ethanac Road.
- The project consists of the construction of a truck stop with 8 truck fueling positions, a gas station with 16 fueling positions and a convenience market, and an approximately 2,228 square-foot fast-food restaurant with a drive-through.
- Vehicular access for the project site would be via three driveways. The driveway on Ethanac Road would provide right-in-right-out (RIRO) only access. The southern driveway on Trumble Road would be full access for passenger vehicle. The northern driveway on Trumble Road would provide truck ingress and egress access to the project site. All project driveways would be unsignalized.
- Morning and evening peak hour operating conditions were evaluated at three study intersections for the following study scenarios:
 - Existing Conditions
 - Existing Plus Project
 - Opening Year 2024 Cumulative
 - Opening Year 2024 Cumulative Plus Project
- Existing peak hour traffic counts were collected in September 2021.
- Under Existing Conditions, the following study intersection would operate at an unacceptable Level of Service:
 - #3 – Encanto Drive at Ethanac Road
- The project is estimated to generate 7,834 net new PCE trips on a daily basis, with 365 net new PCE trips in the morning peak hour, and 405 net new PCE trips in the evening peak hour.
- Project traffic was added to Existing traffic volumes to establish the conditions for Existing Project condition. Under this condition, all study intersections would operate at an acceptable Level of Service.
- The project opening year is anticipated to be Year 2024. The Opening Year 2024 includes a 3% ambient annual growth rate. Cumulative Projects traffic was added to Opening Year 2024 traffic volumes to establish the conditions for Opening Year 2024 Cumulative condition. Under this condition, the following intersections continue to operate at an unacceptable Level of Service:
 - #1 - I-215 SB Ramps at Ethanac Road

- #2 - I-215 NB Ramps at Ethanac Road
 - #3 - Encanto Drive at Ethanac Road
 - #4 - Trumble Road at Ethanac Road
- Project traffic was added to Opening Year 2024 traffic volumes to establish the conditions for Opening Year 2024 Cumulative Plus Project condition. Under this condition, the following intersections continue to operate at an unacceptable Level of Service:
 - #1 - I-215 SB Ramps at Ethanac Road
 - #2 - I-215 NB Ramps at Ethanac Road
 - #3 - Encanto Drive at Ethanac Road
 - #4 - Trumble Road at Ethanac Road
 - Based on the Riverside County *Transportation Analysis Guidelines* (TA Guidelines, December 2020) under Opening Year 2024 Cumulative Plus Project Conditions, the project-would cause a project-related effect at the following intersections:
 - #1 - I-215 SB Ramps at Ethanac Road (Cumulative effect)
 - #2 - I-215 NB Ramps at Ethanac Road (Cumulative effect)
 - #4 - Trumble Road at Ethanac Road (Cumulative effect)
 - Recommended improvements under applicable Opening Year 2024 Cumulative Plus Project condition were provided to address the project's effect at study intersections.

The Project Applicant will be installing a raised median along Ethanac Road between Trumble Road and just west of Encanto Drive. As a result, the intersection of Encanto Drive at Ethanac Road would change from a full access to a right-in-right-out (RIRO) only unsignalized intersection.

- Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements, or a combination of these approaches.

APPENDIX A

APPROVED SCOPING AGREEMENT

May 18, 2022

Ms. Lupita Garcia
CITY OF PERRIS (Planning Division)
135 North "D" Street
Perris, CA 92570

**Subject: Perris Travel Center Project (CUP22-05002 & 22-05003)
Traffic Study Scoping Agreement and VMT Screening Assessment
Review #3, City of Perris**

Introduction

RK ENGINEERING GROUP, INC. (RK) has reviewed the traffic study scoping agreement and VMT screening assessment #3 for the Perris Travel Center Project (CUP22-05002 & 22-05003). The project is located on the northwest corner of Trumble Road and Ethanac Road in the City of Perris, CA, and proposes to construct a 2,228 square-foot (SF) fast-food restaurant with drive-through, a 16-vehicle fueling position (VFP) super convenience market & gas station, and an 8 VFP truck stop. The project proposes to have three (3) access points including one (1) driveway located along Ethanac Road and two (2) driveways located along Trumble Road.

RK has reviewed the traffic study scoping agreement and VMT screening assessment #3 for the Perris Travel Center Project (CUP22-05002 & 22-05003), prepared by Kimley-Horn & Associates, dated May 13, 2022. RK has reviewed both the traffic study scoping agreement and VMT screening assessment based upon our previous May 9, 2022 comment letter. The scoping agreement and VMT Analysis followed the requirements of the City of Perris and traffic engineering criteria. RK has reviewed the traffic study scoping agreement and VMT screening assessment #3 and it is acceptable as currently written.

Comments

RK has the following comments on the traffic study scoping agreement and VMT screening assessment #3:

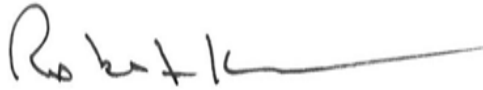
1. The Scoping Agreement and VMT Analysis #3 are acceptable as currently written. **The final traffic study must include the following:**
 - **Detailed exhibits that show actual turning movement volumes at all study intersections and project driveways.**
 - **The traffic study will need to provide a drive-through queuing analysis for the proposed drive-through facility.**
 - **Please include the VMT Scoping Form as an appendix to the final traffic study. The “Net Project Daily Trips” volume should be based on actual vehicles (non-PCE trips). This will not change the results of the VMT analysis.**

Conclusions

RK has reviewed the traffic study scoping agreement and VMT screening assessment #3 for the Perris Travel Center Project (CUP22-05002 & 22-05003), prepared by Kimley-Horn & Associates, dated May 13, 2022. Based upon this review, RK has determined that it is acceptable from a technical standpoint. Please have the traffic Consultant proceed with preparing the traffic study.

RK engineering group appreciates his opportunity to work with the City of Perris on this project, if you have any questions, please give me a call at area code 949-293-9639

Sincerely,
RK ENGINEERING GROUP, INC.



Robert Kahn, P.E.
Founding Principal



Justin Tucker, P.E.
Principal Engineer

Registered Civil Engineer 20285
Registered Traffic Engineer 0555

XC: Kenneth Phung, City of Perris,
Nathan Perez, City of Perris
Stuart McKibben, City of Peris
John Pourkazemi, Tri-Lake Consultants

RK17399.DOC
JN: 2126-2021-14



Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the Riverside County Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Department Traffic Study Guidelines dated February 2005.

Case No. CUP22-05002 & 22-05003

Related Cases _____

SP No. Provide SP No. and list of other approved or active projects within the SP.

EIR No. _____

GPA No. _____

CZ No. _____

Project Name: Perris Travel Center

Project Address: Northwest corner of Trumble Road and Ethanac Road

Project Description: Travel Center with 2,228 SF Fast-Food w/ Drive-Through, 16 Fueling Positions (FP) Super Convenience Market/Gas Station, and 8 Fueling Positions (FP) Truck Stop

| | <u>Consultant</u> | <u>Developer</u> |
|------------|---|---|
| Name: | <u>Kimley-Horn and Associates, Inc.</u> | <u>Pilot Travel Center</u> |
| Address: | <u>3880 Lemon Street, Suite 420</u> <u>Riverside, CA 92501</u> | <u>5508 Lonas Drive</u> <u>Knoxville, TN 37909</u> |
| Telephone: | <u>(951) 543-9869</u> | <u>(865) 474-2935</u> |
| Fax: | _____ | _____ |

A. Trip Generation Source: ITE Trip Generation Manual, 11th Edition

| | | | |
|---------------------|-----------------------------|-------------------|-----------------------------|
| Current GP Land Use | <u>Vacant</u> | Proposed Land Use | <u>Commercial</u> |
| Current Zoning | <u>Community Commercial</u> | Proposed Zoning | <u>Community Commercial</u> |

| | Current Trip Generation | | | Proposed Trip Generation | | |
|-------------------------|---|----------|---|--------------------------|------------|------------|
| | In | Out | Total | In | Out | Total |
| AM Trips | <u>0</u> | <u>0</u> | <u>0</u> | <u>241</u> | <u>247</u> | <u>488</u> |
| PM Trips | <u>0</u> | <u>0</u> | <u>0</u> | <u>258</u> | <u>238</u> | <u>496</u> |
| Internal Trip Allowance | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | <u>(See Attachment 3 % Trip Discount)</u> | | | |
| Pass-By Trip Allowance | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | <u>(See Attachment 2 % Trip Discount)</u> | | | |

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: (See Attachment 3)

| | | | | | |
|--|---------------|--------------|--------------|--------------|--------------|
| | <u>PC:</u> | <u>N 40%</u> | <u>S 40%</u> | <u>E 10%</u> | <u>W 10%</u> |
| | <u>Truck:</u> | <u>50%</u> | <u>50%</u> | <u>0%</u> | <u>0%</u> |

C. Background Traffic

Project Build-out Year: 2024

Annual Ambient Growth Rate: 3 %

Phase Year(s) N/A

Other area projects to be analyzed: We will request a list of Cumulative Projects from Planning

Model/Forecast methodology Existing + Ambient Growth + Cumulative Projects + Project (Build-Up)

Exhibit B – Scoping Agreement – Page 2

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- | | |
|--|--|
| 1. <u>SR-215 SB Ramps at Ethanac Road</u> | 6. <u>Trumble Road at North Driveway</u> |
| 2. <u>SR-215 NB Ramps at Ethanac Road</u> | 7. <u>Trumble Road at South Driveway</u> |
| 3. <u>Encanto Drive at Ethanac Road</u> | 8. _____ |
| 4. <u>Trumble Road at Ethanac Road</u> | 9. _____ |
| 5. <u>Ethanac Road at Project Driveway</u> | 10. _____ |

E. Study Roadway Segments: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

E. Other Jurisdictional Impacts

Is this project within a City’s Sphere of Influence or one-mile radius of City boundaries? Yes No

If so, name of City Jurisdiction: City of Menifee

F. Site Plan: See Attachment 1

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)

(NOTE: If the traffic study states that “a traffic signal is warranted” (or “a traffic signal appears to be warranted,” or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

- VMT - See Attachment 5
- Include LOS methodology from adjacent jurisdictions (where applicable).
- Off-ramp queueing analysis for all ramp study intersections.
- Peak hour traffic signal warrant will be conducted for the study intersection of Ethanac Road at Encanto Drive.
- Truck turning templates at truck driveways.

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of counts New counts will be collected

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Transportation Department staff will not process the Scoping Agreement prior to receipt of the fee.**

Recommended by:

Trevor Briggs
Consultant's Representative

5/13/2022
Date

Approved Scoping Agreement:

Consultant Traffic Engineer for the
City of Perris

Date

Scoping Agreement Submitted on 10/13/2021

Revised on 5/5/2022
5/13/2022

**ATTACHMENT 2
SUMMARY OF PROJECT TRIP GENERATION
PERRIS TRAVEL CENTER**

Trip Generation Rates

| Land Use | ITE Code (a) | Unit | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|--------------|------|---------|--------------|-----|-------|--------------|-----|-------|
| | | | | In | Out | Total | In | Out | Total |
| Fast-Food Restaurant w Drive-Through Window | 934 | KSF | 467.480 | 51% | 49% | 44.61 | 52% | 48% | 33.03 |
| Convenience Store/Gas Station (GFA 5.5-10k) | 945 | FP | 345.750 | 50% | 50% | 31.60 | 50% | 50% | 26.90 |
| Truck Stop | 950 | FP | 224.000 | 49% | 51% | 13.97 | 53% | 47% | 15.42 |

Project Trip Generation

| Land Use | Quantity | Unit | Daily | AM Peak Hour | | | PM Peak Hour | | |
|--|----------|------|---------------|--------------|------------|------------|--------------|------------|------------|
| | | | | In | Out | Total | In | Out | Total |
| Passenger Car Trips | | | | | | | | | |
| Fast-Food Restaurant with Drive-Through | 2,228 | KSF | 1,042 | 50 | 49 | 99 | 38 | 36 | 74 |
| <i>Internal Capture (b) (Daily: 10%, AM: 11%, PM: 10%)</i> | | | -104 | -6 | -5 | -11 | -4 | -3 | -7 |
| <i>Pass-By Trips (c) (Daily: 25%, AM: 50%, PM: 55%)</i> | | | -235 | -22 | -22 | -44 | -19 | -18 | -37 |
| Convenience Store/Gas Station (GFA 5.5-10k) | 16 | FP | 5,532 | 253 | 253 | 506 | 215 | 215 | 430 |
| <i>Internal Capture (b) (Daily: 10%, AM: 11%, PM: 10%)</i> | | | -553 | -28 | -28 | -56 | -22 | -21 | -43 |
| <i>Pass-By Trips (c) (Daily: 50%, AM: 76%, PM: 75%)</i> | | | -2,490 | -171 | -171 | -342 | -145 | -145 | -290 |
| Truck Trips (d) | | | | | | | | | |
| Truck Stop | 8 | FP | 1,792 | 55 | 57 | 112 | 65 | 58 | 123 |
| PCE Truck Stop (PCE Factor = 3) | | | 5,376 | 165 | 171 | 336 | 195 | 174 | 369 |
| Total Driveway Trips | | | 11,293 | 434 | 440 | 874 | 422 | 401 | 823 |
| Passenger Car | | | 5,917 | 269 | 269 | 538 | 227 | 227 | 454 |
| Truck PCE | | | 5,376 | 165 | 171 | 336 | 195 | 174 | 369 |
| Total Primary (Net New) Trips | | | 8,568 | 241 | 247 | 488 | 258 | 238 | 496 |
| Passenger Car | | | 3,192 | 76 | 76 | 152 | 63 | 64 | 127 |
| Truck PCE | | | 5,376 | 165 | 171 | 336 | 195 | 174 | 369 |

Notes:

KSF = thousand square feet, FP = Fueling Position

AM and/or PM rates correspond to peak of adjacent street traffic

(a) Trip Generation data for ITE Codes from ITE *Trip Generation Manual, 11th Edition*

(b) Internal capture rates from ITE Trip Generation Handbook, 3rd Edition NCHRP 684 Internal Trip Capture Estimation Tool

(c) Pass-by rates from ITE Trip Generation Handbook, 3rd Edition for ITE LU 934 Fast-Food Restaurant With Drive-Through Window and LU 945 Gasoline/Service Station With Convenience Market

(d) No internal capture was assumed for the Truck Stop land use, as a truck stop is assumed to include a variety of services

ATTACHMENT 3A

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---------------------|---------------|-------------|
| Project Name: | Travel Center | Organization: | Kimley-Horn |
| Project Location: | Rialto | Performed By: | PS |
| Scenario Description: | | Date: | 5/13/2022 |
| Analysis Year: | | Checked By: | |
| Analysis Period: | AM Street Peak Hour | Date: | |

| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) | | | | | | |
|--|---|----------|-------|--------------------------------------|----------|---------|
| Land Use | Development Data (For Information Only) | | | Estimated Vehicle-Trips ³ | | |
| | ITE LUCs ¹ | Quantity | Units | Total | Entering | Exiting |
| Office | | | | 0 | | |
| Retail | | | | 506 | 253 | 253 |
| Restaurant | | | | 99 | 50 | 49 |
| Cinema/Entertainment | | | | 0 | | |
| Residential | | | | 0 | | |
| Hotel | | | | 0 | | |
| All Other Land Uses ² | | | | 0 | | |
| | | | | 605 | 303 | 302 |

| Table 2-A: Mode Split and Vehicle Occupancy Estimates | | | | | | |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use | Entering Trips | | | Exiting Trips | | |
| | Veh. Occ. ⁴ | % Transit | % Non-Motorized | Veh. Occ. ⁴ | % Transit | % Non-Motorized |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |
| All Other Land Uses ² | | | | | | |

| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

| Table 4-A: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | 0 | | 25 | 0 | 0 | 0 |
| Restaurant | 0 | 7 | | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | |

| Table 5-A: Computations Summary | | | |
|---|-------|----------|---------|
| | Total | Entering | Exiting |
| All Person-Trips | 605 | 303 | 302 |
| Internal Capture Percentage | 11% | 11% | 11% |
| External Vehicle-Trips ⁵ | 541 | 271 | 270 |
| External Transit-Trips ⁶ | 0 | 0 | 0 |
| External Non-Motorized Trips ⁶ | 0 | 0 | 0 |

| Table 6-A: Internal Trip Capture Percentages by Land Use | | |
|--|----------------|---------------|
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | 3% | 10% |
| Restaurant | 50% | 14% |
| Cinema/Entertainment | N/A | N/A |
| Residential | N/A | N/A |
| Hotel | N/A | N/A |

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

ATTACHMENT 3B

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---------------------|---------------|-------------|
| Project Name: | Travel Center | Organization: | Kimley-Horn |
| Project Location: | Rialto | Performed By: | PS |
| Scenario Description: | | Date: | 5/13/2022 |
| Analysis Year: | | Checked By: | |
| Analysis Period: | PM Street Peak Hour | Date: | |

| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) | | | | | | |
|--|---|----------|-------|--------------------------------------|----------|---------|
| Land Use | Development Data (For Information Only) | | | Estimated Vehicle-Trips ³ | | |
| | ITE LUCs ¹ | Quantity | Units | Total | Entering | Exiting |
| Office | | | | 0 | | |
| Retail | | | | 430 | 215 | 215 |
| Restaurant | | | | 74 | 38 | 36 |
| Cinema/Entertainment | | | | 0 | | |
| Residential | | | | 0 | | |
| Hotel | | | | 0 | | |
| All Other Land Uses ² | | | | 0 | | |
| | | | | 504 | 253 | 251 |

| Table 2-P: Mode Split and Vehicle Occupancy Estimates | | | | | | |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use | Entering Trips | | | Exiting Trips | | |
| | Veh. Occ. ⁴ | % Transit | % Non-Motorized | Veh. Occ. ⁴ | % Transit | % Non-Motorized |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |
| All Other Land Uses ² | | | | | | |

| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

| Table 4-P: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | 0 | | 11 | 0 | 0 | 0 |
| Restaurant | 0 | 15 | | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | |

| Table 5-P: Computations Summary | | | |
|---|-------|----------|---------|
| | Total | Entering | Exiting |
| All Person-Trips | 504 | 253 | 251 |
| Internal Capture Percentage | 10% | 10% | 10% |
| External Vehicle-Trips ⁵ | 452 | 227 | 225 |
| External Transit-Trips ⁶ | 0 | 0 | 0 |
| External Non-Motorized Trips ⁶ | 0 | 0 | 0 |

| Table 6-P: Internal Trip Capture Percentages by Land Use | | |
|--|----------------|---------------|
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | 7% | 5% |
| Restaurant | 29% | 42% |
| Cinema/Entertainment | N/A | N/A |
| Residential | N/A | N/A |
| Hotel | N/A | N/A |

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

ATTACHMENT 3C

| NCHRP 684 Internal Trip Capture Estimation Tool | | | |
|---|---------------------|---------------|-------------|
| Project Name: | Travel Center | Organization: | Kimley-Horn |
| Project Location: | Rialto | Performed By: | PS |
| Scenario Description: | | Date: | 5/13/2022 |
| Analysis Year: | | Checked By: | |
| Analysis Period: | AM Street Peak Hour | Date: | |

| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) | | | | | | |
|--|---|----------|-------|--------------------------------------|----------|---------|
| Land Use | Development Data (For Information Only) | | | Estimated Vehicle-Trips ³ | | |
| | ITE LUCs ¹ | Quantity | Units | Total | Entering | Exiting |
| Office | | | | 0 | | |
| Retail | | | | 5,532 | 2,766 | 2,766 |
| Restaurant | | | | 1,042 | 521 | 521 |
| Cinema/Entertainment | | | | 0 | | |
| Residential | | | | 0 | | |
| Hotel | | | | 0 | | |
| All Other Land Uses ² | | | | 0 | | |
| | | | | 6,574 | 3,287 | 3,287 |

| Table 2-A: Mode Split and Vehicle Occupancy Estimates | | | | | | |
|---|------------------------|-----------|-----------------|------------------------|-----------|-----------------|
| Land Use | Entering Trips | | | Exiting Trips | | |
| | Veh. Occ. ⁴ | % Transit | % Non-Motorized | Veh. Occ. ⁴ | % Transit | % Non-Motorized |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |
| All Other Land Uses ² | | | | | | |

| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) | | | | | | |
|---|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | | | | | | |
| Restaurant | | | | | | |
| Cinema/Entertainment | | | | | | |
| Residential | | | | | | |
| Hotel | | | | | | |

| Table 4-A: Internal Person-Trip Origin-Destination Matrix* | | | | | | |
|--|------------------|--------|------------|----------------------|-------------|-------|
| Origin (From) | Destination (To) | | | | | |
| | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office | | | | | | |
| Retail | 0 | | 261 | 0 | 0 | 0 |
| Restaurant | 0 | 73 | | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | | 0 | 0 |
| Residential | 0 | 0 | 0 | 0 | | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | |

| Table 5-A: Computations Summary | | | |
|---|-------|----------|---------|
| | Total | Entering | Exiting |
| All Person-Trips | 6,574 | 3,287 | 3,287 |
| Internal Capture Percentage | 10% | 10% | 10% |
| External Vehicle-Trips ⁵ | 5,906 | 2,953 | 2,953 |
| External Transit-Trips ⁶ | 0 | 0 | 0 |
| External Non-Motorized Trips ⁶ | 0 | 0 | 0 |

| Table 6-A: Internal Trip Capture Percentages by Land Use | | |
|--|----------------|---------------|
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | 3% | 9% |
| Restaurant | 50% | 14% |
| Cinema/Entertainment | N/A | N/A |
| Residential | N/A | N/A |
| Hotel | N/A | N/A |

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

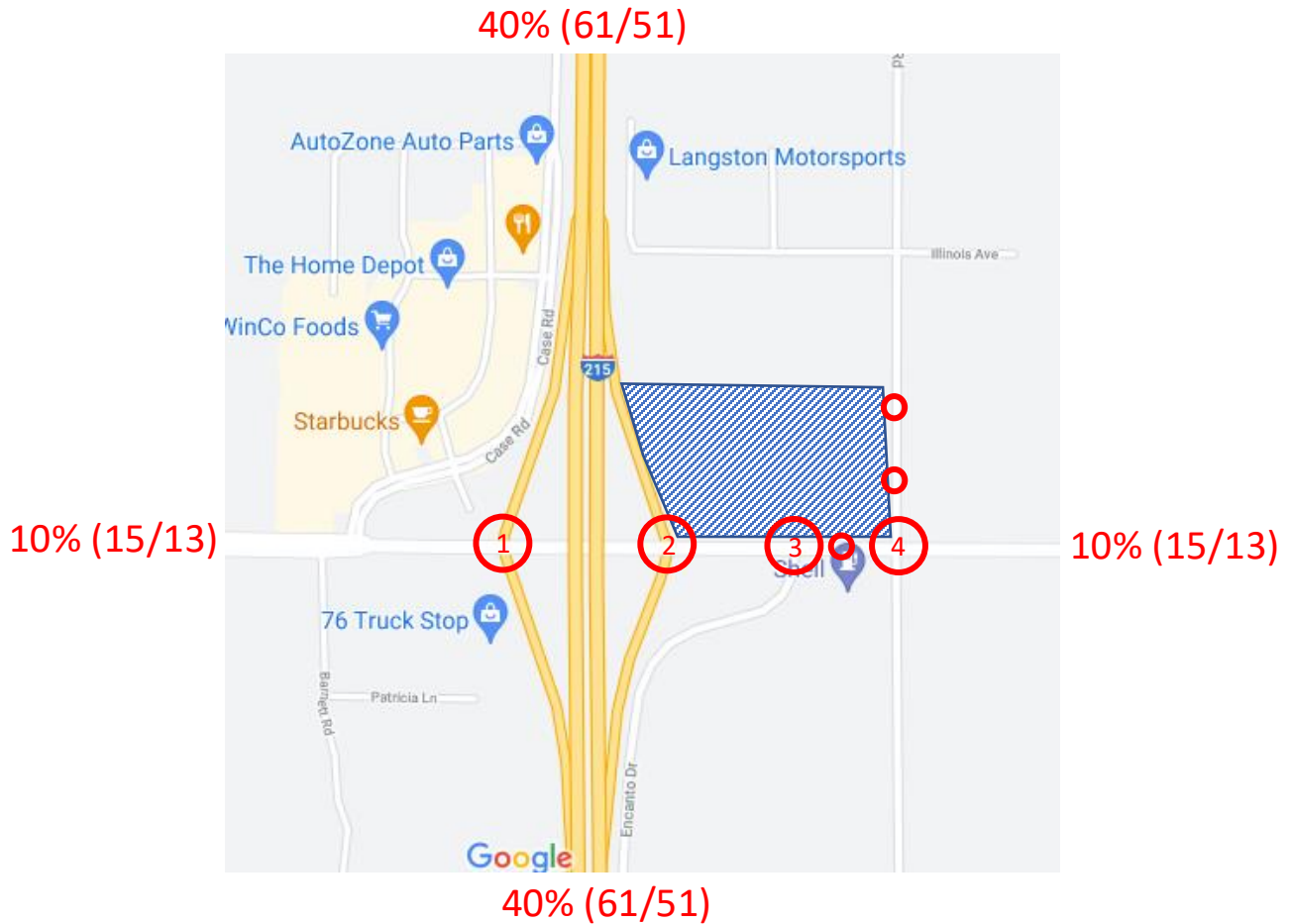
⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

ATTACHMENT 4A – PASSENGER CAR DISTRIBUTION (PRIMARY/NET NEW TRIPS)



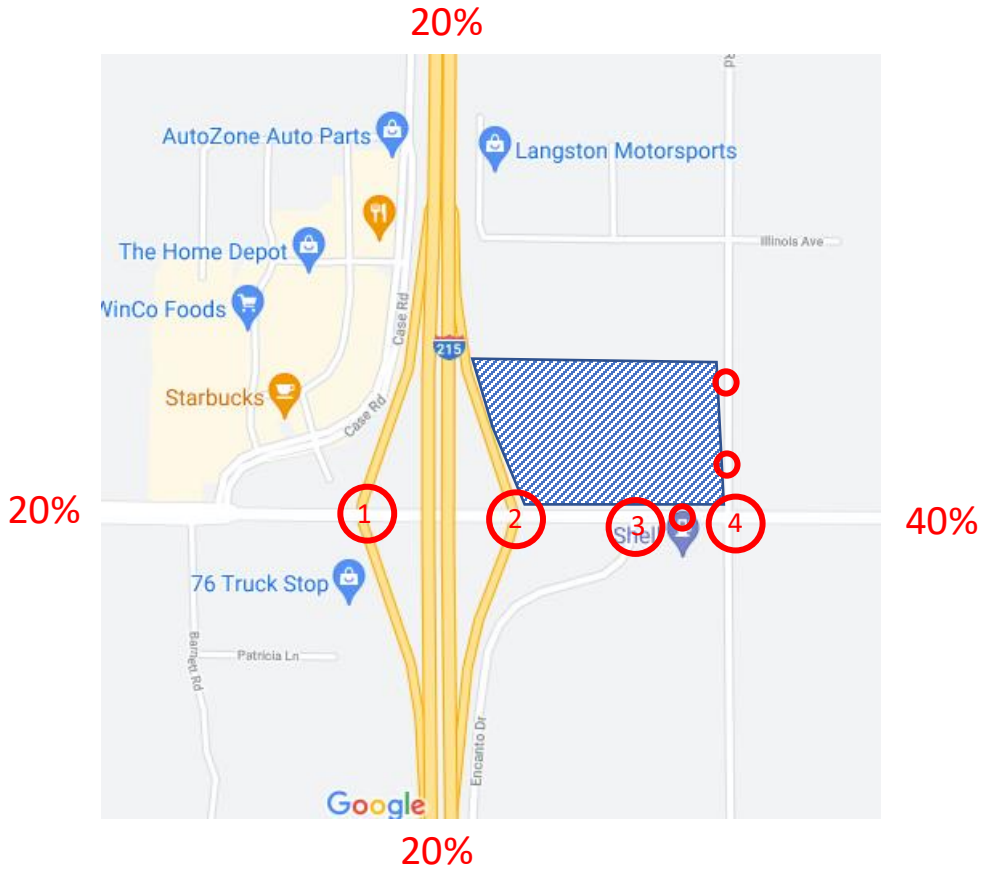
Legend:

- Project Site
- Study Intersection
- Project Driveway
- XX% - Passenger Car Distribution
- (YY/ZZ) - AM/PM Primary (Net New) Trips




Study Intersections:

1. SR-215 SB Ramps at Ethanac Road
2. SR-215 NB Ramps at Ethanac Road
3. Encanto Drive at Ethanac Road
4. Trumble Road at Ethanac Road
- D1. Ethanac Road at Project Driveway (Gas Station)
- D2. Trumble Road at North Driveway (Truck Driveway)
- D3. Trumble Road at South Driveway (Gas Station)

ATTACHMENT 4B – PASSENGER CAR DISTRIBUTION (PASS-BY TRIPS)



Legend:

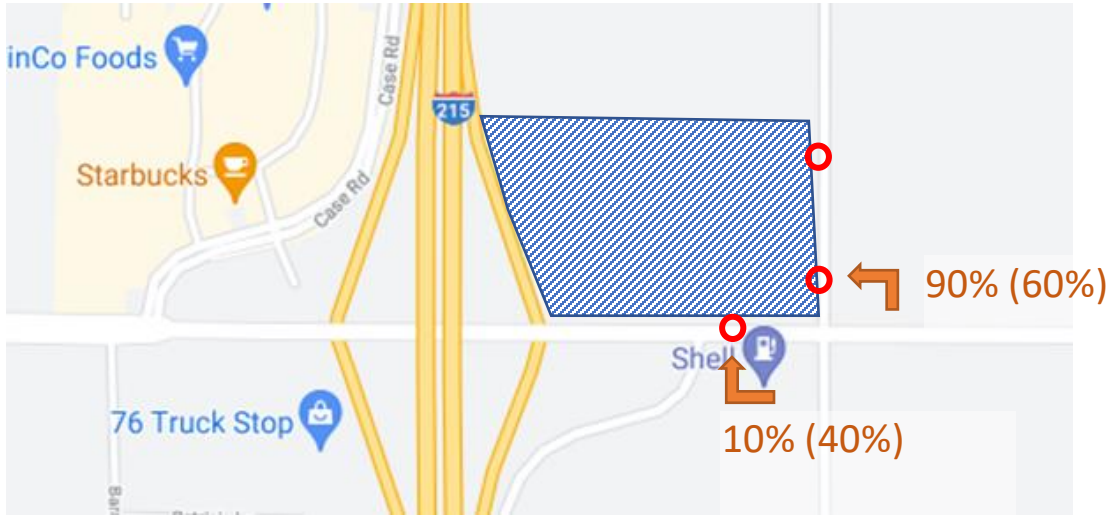
-  - Project Site
-  - Study Intersection
-  - Project Driveway
- XX%** - Pass-By Passenger Car Distribution

Study Intersections:

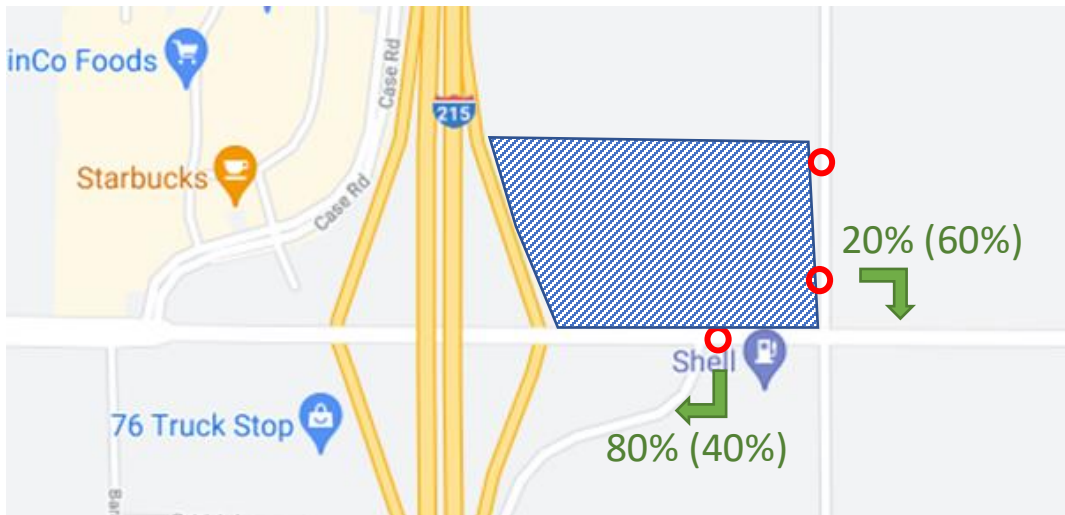
1. SR-215 SB Ramps at Ethanac Road
 2. SR-215 NB Ramps at Ethanac Road
 3. Encanto Drive at Ethanac Road
 4. Trumble Road at Ethanac Road
- D1. Ethanac Road at Project Driveway (Gas Station)
 D2. Trumble Road at North Driveway (Truck Driveway)
 D3. Trumble Road at South Driveway (Gas Station)

ATTACHMENT 4C – PASSENGER CAR DISTRIBUTION (DRIVEWAYS)

Driveway Distribution - IN



Driveway Distribution - OUT



Legend:



- Project Site



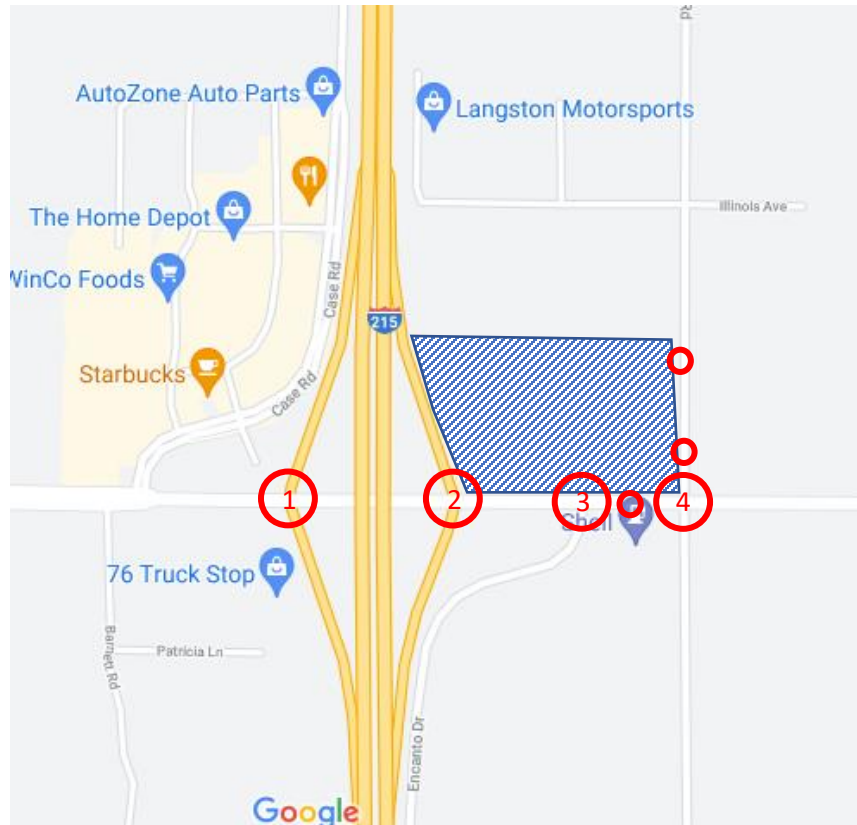
- Project Driveway

XX% (YY%)

- Primary (Pass-by) Driveway Distribution

ATTACHMENT 4D – TRUCK DISTRIBUTION

50% (168/185)



50% (168/185)

Legend:



- Project Site



- Study Intersection



- Project Driveway

YY%

- Pass-By Truck Distribution

(YY/ZZ)

- AM/PM PCE Trips

Study Intersections:

1. SR-215 SB Ramps at Ethanac Road

2. SR-215 NB Ramps at Ethanac Road

3. Encanto Drive at Ethanac Road

4. Trumble Road at Ethanac Road

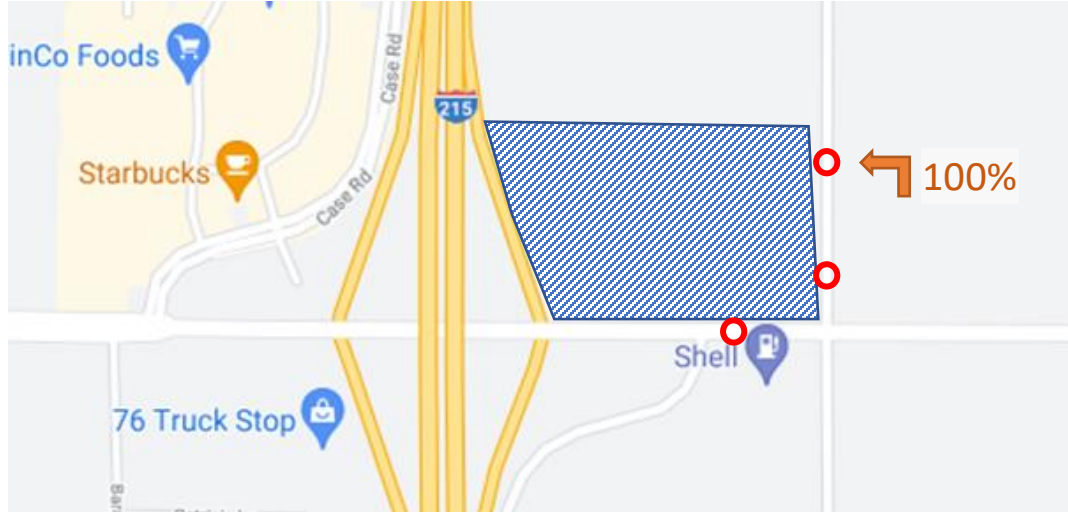
D1. Ethanac Road at Project Driveway (Gas Station)

D2. Trumble Road at North Driveway (Truck Driveway)

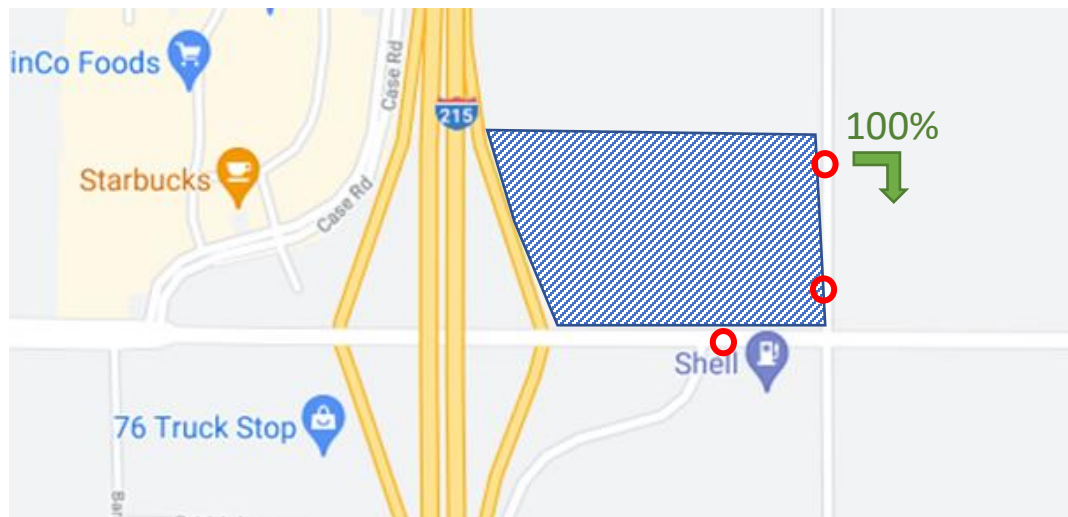
D3. Trumble Road at South Driveway (Gas Station)

ATTACHMENT 4E – TRUCK DISTRIBUTION (DRIVEWAYS)

Driveway Distribution - IN



Driveway Distribution - OUT



Legend:



- Project Site

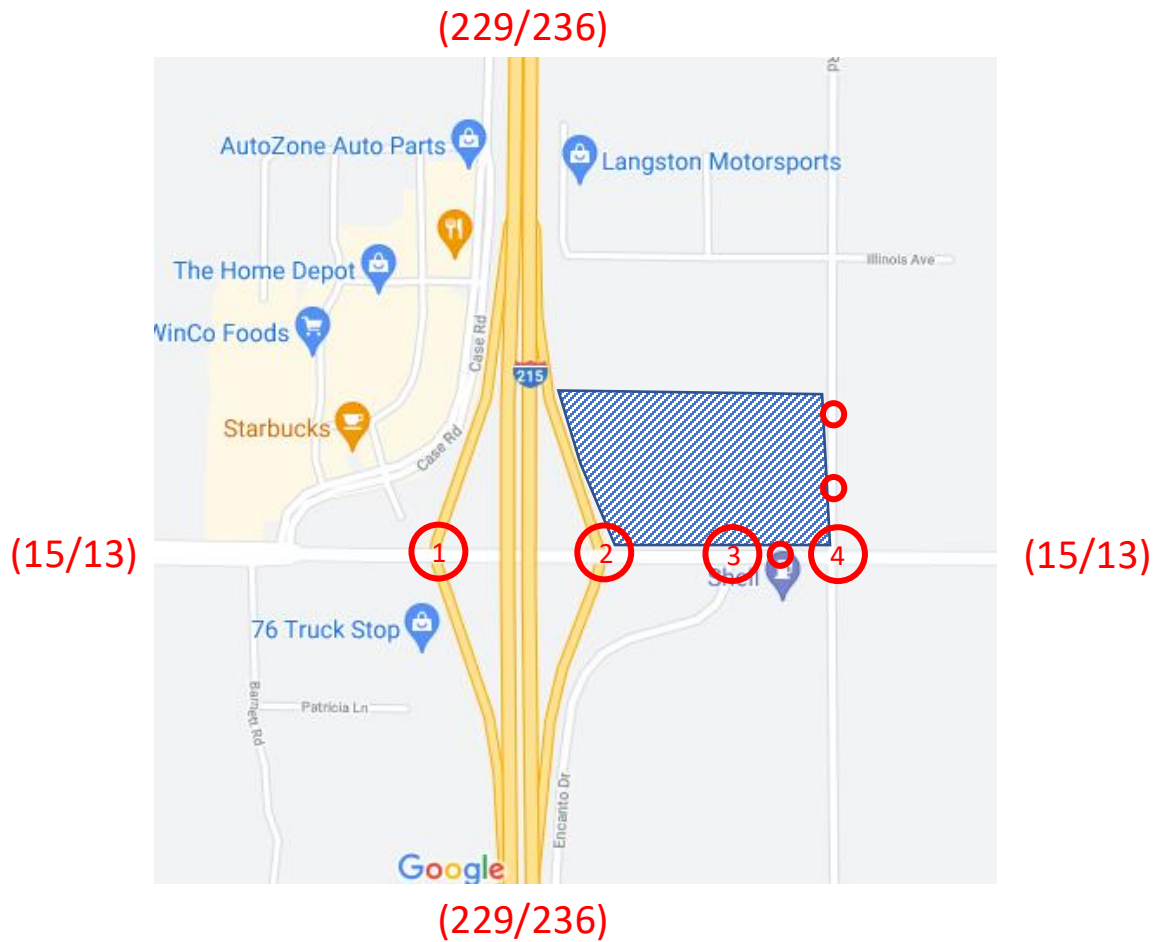


- Project Driveway




XX% (YY%)

- Truck Driveway Distribution

ATTACHMENT 4F – PROJECT-RELATED TRIP DISTRIBUTION (TOTAL PRIMARY/NET NEW PCE TRIPS)



Legend:

-  - Project Site
-  - Study Intersection
-  - Project Driveway
- (YY/ZZ) - Total AM/PM Primary (Net New) PCE Trips

Study Intersections:

1. SR-215 SB Ramps at Ethanac Road
 2. SR-215 NB Ramps at Ethanac Road
 3. Encanto Drive at Ethanac Road
 4. Trumble Road at Ethanac Road
- D1. Ethanac Road at Project Driveway (Gas Station)
D2. Trumble Road at North Driveway (Truck Driveway)
D3. Trumble Road at South Driveway (Gas Station)



ATTACHMENT 5

**CITY OF PERRIS
VMT SCOPING FORM FOR LAND USE PROJECTS**

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

I. Project Description

Tract/Case No.

Project Name:

Project Location:

Project Description:
(Please attach a copy of the project Site Plan)

Current GP Land Use:

Proposed GP Land Use:

Current Zoning:

Proposed Zoning:

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

II. VMT Screening Criteria

- A. Is the Project 100% affordable housing?

| | | | |
|-----|--|----|---|
| YES | | NO | X |
|-----|--|----|---|

 Attachments:
- B. Is the Project within 1/2 mile of qualifying transit?

| | | | |
|-----|--|----|---|
| YES | | NO | X |
|-----|--|----|---|

 Attachments:
- C. Is the Project a local serving land use?

| | | | |
|-----|---|----|--|
| YES | X | NO | |
|-----|---|----|--|

 Attachments:
- D. Is the Project in a low VMT area?

| | | | |
|-----|--|----|---|
| YES | | NO | X |
|-----|--|----|---|

 Attachments:
- E. Are the Project's Net Daily Trips less than 500 ADT?

| | | | |
|-----|--|----|---|
| YES | | NO | X |
|-----|--|----|---|

 Attachments:

Low VMT Area Evaluation:

| Citywide VMT Averages ¹ | | |
|------------------------------------|-------|--------------|
| Citywide Home-Based VMT = | 15.05 | VMT/Capita |
| Citywide Employment-Based VMT = | 11.62 | VMT/Employee |

[WRCOG VMT MAP](#)

| Project TAZ | VMT Rate for Project TAZ ¹ | Type of Project | |
|-------------|---------------------------------------|------------------|---|
| 3900 | 4.64 VMT/Capita | Residential: | |
| | 15.26 VMT/Employee | Non-Residential: | X |

¹ Base year (2012) projections from RIVTAM.

Trip Generation Evaluation:

Source of Trip Generation:

Project Trip Generation:

| | |
|--------|---------------------------|
| 11,293 | Average Daily Trips (ADT) |
|--------|---------------------------|

| | | | | | | |
|--------------------------------|-----|-------------------------------------|----|-------------------------------------|----------------|----------------------|
| Internal Trip Credit: | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/> | % Trip Credit: | <input type="text"/> |
| Pass-By Trip Credit: | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/> | % Trip Credit: | <input type="text"/> |
| Affordable Housing Credit: | YES | <input type="checkbox"/> | NO | <input checked="" type="checkbox"/> | % Trip Credit: | <input type="text"/> |
| Existing Land Use Trip Credit: | YES | <input type="checkbox"/> | NO | <input checked="" type="checkbox"/> | Trip Credit: | <input type="text"/> |

Net Project Daily Trips:

| | |
|-------|---------------------------|
| 8,568 | Average Daily Trips (ADT) |
|-------|---------------------------|

 Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?

| | | | |
|-----|---|----|--|
| YES | X | NO | |
|-----|---|----|--|

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

| | | | |
|-----|-------------------------------------|----|--|
| YES | <input checked="" type="checkbox"/> | NO | |
|-----|-------------------------------------|----|--|

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:

| | |
|-----|-----|
| N/A | N/A |
|-----|-----|

B. Unmitigated Project TAZ VMT Rate:

| | |
|-----|-----|
| N/A | N/A |
|-----|-----|

C. Percentage Reduction Required to Achieve the Citywide Average VMT:

N/A

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates: _____

Project Location Setting _____

| | VMT Reduction Mitigation Measure: | Estimated VMT Reduction (%) |
|--------------------------------|-----------------------------------|-----------------------------|
| 1. | | 0.00% |
| 2. | | 0.00% |
| 3. | | 0.00% |
| 4. | | 0.00% |
| 5. | | 0.00% |
| 6. | | 0.00% |
| 7. | | 0.00% |
| 8. | | 0.00% |
| 9. | | 0.00% |
| 10. | | 0.00% |
| Total VMT Reduction (%) | | 0.00% |

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:

| | |
|-----|-----|
| N/A | N/A |
|-----|-----|

F. Is the project presumed to have a less than significant impact with mitigation?

N/A

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

| Prepared By | | Developer/Applicant | |
|-----------------|---|---------------------|---------------------------------------|
| Company: | Kimley-Horn and Associates, Inc. | Company: | Pilot Travel Center |
| Contact: | Trevor Briggs | Contact: | |
| Address: | 3880 Lemon Street, Suite 420, Riverside, CA | Address: | 5508 Lonas Drive, Knoxville, TN 37909 |
| Phone: | (714) 786-6117 | Phone: | (865) 474-2935 |
| Email: | trevor.briggs@kimley-horn.com | Email: | |
| Date: | 5/13/2022 | Date: | 5/13/2022 |

| Approved by: | | | |
|---------------------------------|-------------|-----------------------------|-------------|
| | | | |
| Perris Planning Division | Date | Perris City Engineer | Date |

APPENDIX B

TRAFFIC COUNT DATA SHEETS

APPENDIX B-1

**TRAFFIC COUNT DATA
SHEETS-
INTERSECTION COUNTS**

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 215 SB Ramps & Ethanac Rd
City: Perris
Control: Signalized

Project ID: 21-030079-001
Date: 9/29/2021

Data - Total

| NS/EW Streets: | SR 215 SB Ramps | | | | SR 215 SB Ramps | | | | Ethanac Rd | | | | Ethanac Rd | | | | |
|-------------------------|----------------------------|---------|---------|---------|-----------------|-----------|---------|---------|------------|---------|---------|---------|------------|---------|---------|---------|--------------|
| AM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | 0 NL | 0 NT | 0 NR | 0 NU | 0.5 SL | 0.5 ST | 1 SR | 0 SU | 0 EL | 1 ET | 1 ER | 0 EU | 1 WL | 2 WT | 0 WR | 0 WU | |
| 7:00 AM | 0 | 0 | 0 | 0 | 37 | 0 | 68 | 0 | 0 | 157 | 132 | 0 | 24 | 96 | 0 | 0 | 514 |
| 7:15 AM | 0 | 0 | 0 | 0 | 31 | 0 | 45 | 0 | 0 | 177 | 133 | 0 | 29 | 137 | 0 | 0 | 552 |
| 7:30 AM | 0 | 0 | 0 | 0 | 24 | 0 | 35 | 0 | 0 | 167 | 126 | 0 | 27 | 143 | 0 | 0 | 522 |
| 7:45 AM | 0 | 0 | 0 | 0 | 27 | 0 | 67 | 0 | 0 | 159 | 105 | 0 | 23 | 170 | 0 | 0 | 551 |
| 8:00 AM | 0 | 0 | 0 | 0 | 30 | 0 | 66 | 0 | 0 | 155 | 89 | 0 | 16 | 193 | 0 | 0 | 549 |
| 8:15 AM | 0 | 0 | 0 | 0 | 30 | 0 | 57 | 0 | 0 | 118 | 92 | 0 | 28 | 139 | 0 | 0 | 464 |
| 8:30 AM | 0 | 0 | 0 | 0 | 18 | 0 | 49 | 0 | 0 | 116 | 68 | 0 | 21 | 117 | 0 | 0 | 389 |
| 8:45 AM | 0 | 0 | 0 | 0 | 22 | 0 | 52 | 0 | 0 | 101 | 69 | 0 | 23 | 119 | 0 | 0 | 386 |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 219 | 0 | 439 | 0 | 0 | 1150 | 814 | 0 | 191 | 1114 | 0 | 0 | 3927 |
| APPROACH %'s : | | | | | 33.28% | 0.00% | 66.72% | 0.00% | 0.00% | 58.55% | 41.45% | 0.00% | 14.64% | 85.36% | 0.00% | 0.00% | |
| PEAK HR : | 07:15 AM - 08:15 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 0 | 0 | 0 | 0 | 112 | 0 | 213 | 0 | 0 | 658 | 453 | 0 | 95 | 643 | 0 | 0 | 2174 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.903 | 0.000 | 0.795 | 0.000 | 0.000 | 0.929 | 0.852 | 0.000 | 0.819 | 0.833 | 0.000 | 0.000 | 0.985 |
| | | | | | 0.846 | | | | 0.896 | | | | 0.883 | | | | |
| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | 0 NL | 0 NT | 0 NR | 0 NU | 0.5 SL | 0.5 ST | 1 SR | 0 SU | 0 EL | 1 ET | 1 ER | 0 EU | 1 WL | 2 WT | 0 WR | 0 WU | |
| 4:00 PM | 0 | 0 | 0 | 0 | 58 | 0 | 73 | 0 | 0 | 125 | 81 | 0 | 27 | 151 | 0 | 0 | 515 |
| 4:15 PM | 0 | 0 | 0 | 0 | 32 | 0 | 66 | 0 | 0 | 139 | 86 | 0 | 43 | 156 | 0 | 0 | 522 |
| 4:30 PM | 0 | 0 | 0 | 0 | 45 | 0 | 77 | 0 | 0 | 130 | 76 | 0 | 31 | 153 | 0 | 0 | 512 |
| 4:45 PM | 0 | 0 | 0 | 0 | 50 | 0 | 91 | 0 | 0 | 152 | 97 | 0 | 42 | 173 | 0 | 0 | 605 |
| 5:00 PM | 0 | 0 | 0 | 0 | 51 | 0 | 88 | 0 | 0 | 154 | 78 | 0 | 23 | 179 | 0 | 0 | 573 |
| 5:15 PM | 0 | 0 | 0 | 0 | 40 | 0 | 100 | 0 | 0 | 133 | 110 | 0 | 32 | 166 | 0 | 0 | 581 |
| 5:30 PM | 0 | 0 | 0 | 0 | 40 | 0 | 68 | 0 | 0 | 135 | 96 | 0 | 21 | 170 | 0 | 0 | 530 |
| 5:45 PM | 0 | 0 | 0 | 0 | 44 | 0 | 94 | 0 | 0 | 139 | 94 | 0 | 18 | 139 | 0 | 0 | 528 |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 360 | 0 | 657 | 0 | 0 | 1107 | 718 | 0 | 237 | 1287 | 0 | 0 | 4366 |
| APPROACH %'s : | | | | | 35.40% | 0.00% | 64.60% | 0.00% | 0.00% | 60.66% | 39.34% | 0.00% | 15.55% | 84.45% | 0.00% | 0.00% | |
| PEAK HR : | 04:45 PM - 05:45 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 0 | 0 | 0 | 0 | 181 | 0 | 347 | 0 | 0 | 574 | 381 | 0 | 118 | 688 | 0 | 0 | 2289 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.887 | 0.000 | 0.868 | 0.000 | 0.000 | 0.932 | 0.866 | 0.000 | 0.702 | 0.961 | 0.000 | 0.000 | 0.946 |
| | | | | | 0.936 | | | | 0.959 | | | | 0.937 | | | | |

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 215 NB Ramps & Ethanac Rd
City: Perris
Control: Signalized

Project ID: 21-030079-002
Date: 9/29/2021

Data - Total

| NS/EW Streets: | SR 215 NB Ramps | | | | SR 215 NB Ramps | | | | Ethanac Rd | | | | Ethanac Rd | | | | |
|-------------------------|---------------------|-----------|---------|---------|-----------------|---------|---------|---------|------------|---------|---------|---------|------------|---------|---------|---------|--------------|
| AM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | 0.5 NL | 0.5 NT | 1 NR | 0 NU | 0 SL | 0 ST | 0 SR | 0 SU | 1 EL | 1 ET | 0 ER | 0 EU | 0 WL | 1 WT | 0 WR | 0 WU | |
| 7:00 AM | 50 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 47 | 141 | 0 | 0 | 0 | 72 | 30 | 0 | 374 |
| 7:15 AM | 76 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 56 | 158 | 0 | 0 | 0 | 88 | 30 | 0 | 443 |
| 7:30 AM | 80 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 47 | 136 | 0 | 0 | 0 | 94 | 38 | 0 | 419 |
| 7:45 AM | 89 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 76 | 116 | 0 | 0 | 0 | 102 | 23 | 0 | 434 |
| 8:00 AM | 93 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 58 | 125 | 0 | 0 | 0 | 119 | 23 | 0 | 453 |
| 8:15 AM | 72 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 33 | 111 | 0 | 0 | 0 | 92 | 32 | 0 | 373 |
| 8:30 AM | 59 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 61 | 78 | 0 | 0 | 0 | 82 | 24 | 0 | 335 |
| 8:45 AM | 65 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 52 | 69 | 0 | 0 | 0 | 74 | 16 | 0 | 309 |
| TOTAL VOLUMES : | 584 | 0 | 253 | 0 | 0 | 0 | 0 | 0 | 430 | 934 | 0 | 0 | 0 | 723 | 216 | 0 | 3140 |
| APPROACH %'s : | 69.77% | 0.00% | 30.23% | 0.00% | | | | | 31.52% | 68.48% | 0.00% | 0.00% | 0.00% | 77.00% | 23.00% | 0.00% | |
| PEAK HR : | 07:15 AM - 08:15 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 338 | 0 | 122 | 0 | 0 | 0 | 0 | 0 | 237 | 535 | 0 | 0 | 0 | 403 | 114 | 0 | 1749 |
| PEAK HR FACTOR : | 0.909 | 0.000 | 0.871 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.780 | 0.847 | 0.000 | 0.000 | 0.000 | 0.847 | 0.750 | 0.000 | 0.965 |
| | 0.898 | | | | | | | | 0.902 | | | | 0.910 | | | | |

| NS/EW Streets: | SR 215 NB Ramps | | | | SR 215 NB Ramps | | | | Ethanac Rd | | | | Ethanac Rd | | | | |
|-------------------------|---------------------|-----------|---------|---------|-----------------|---------|---------|---------|------------|---------|---------|---------|------------|---------|---------|---------|--------------|
| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | 0.5 NL | 0.5 NT | 1 NR | 0 NU | 0 SL | 0 ST | 0 SR | 0 SU | 1 EL | 1 ET | 0 ER | 0 EU | 0 WL | 1 WT | 0 WR | 0 WU | |
| 4:00 PM | 98 | 1 | 55 | 0 | 0 | 0 | 0 | 0 | 47 | 140 | 0 | 0 | 0 | 84 | 32 | 0 | 457 |
| 4:15 PM | 91 | 2 | 53 | 0 | 0 | 0 | 0 | 0 | 42 | 116 | 0 | 0 | 0 | 106 | 40 | 0 | 450 |
| 4:30 PM | 81 | 1 | 42 | 0 | 0 | 0 | 0 | 0 | 61 | 126 | 0 | 0 | 0 | 105 | 49 | 0 | 465 |
| 4:45 PM | 119 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 58 | 140 | 0 | 0 | 0 | 94 | 36 | 0 | 498 |
| 5:00 PM | 104 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 67 | 143 | 0 | 0 | 0 | 102 | 51 | 0 | 504 |
| 5:15 PM | 97 | 1 | 50 | 0 | 0 | 0 | 0 | 0 | 45 | 122 | 0 | 0 | 0 | 98 | 49 | 0 | 462 |
| 5:30 PM | 88 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 55 | 125 | 0 | 0 | 0 | 107 | 23 | 0 | 441 |
| 5:45 PM | 89 | 2 | 30 | 0 | 0 | 0 | 0 | 0 | 42 | 140 | 0 | 0 | 0 | 63 | 26 | 0 | 392 |
| TOTAL VOLUMES : | 767 | 7 | 361 | 0 | 0 | 0 | 0 | 0 | 417 | 1052 | 0 | 0 | 0 | 759 | 306 | 0 | 3669 |
| APPROACH %'s : | 67.58% | 0.62% | 31.81% | 0.00% | | | | | 28.39% | 71.61% | 0.00% | 0.00% | 0.00% | 71.27% | 28.73% | 0.00% | |
| PEAK HR : | 04:30 PM - 05:30 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 401 | 2 | 180 | 0 | 0 | 0 | 0 | 0 | 231 | 531 | 0 | 0 | 0 | 399 | 185 | 0 | 1929 |
| PEAK HR FACTOR : | 0.842 | 0.500 | 0.882 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.862 | 0.928 | 0.000 | 0.000 | 0.000 | 0.950 | 0.907 | 0.000 | 0.957 |
| | 0.857 | | | | | | | | 0.907 | | | | 0.948 | | | | |

National Data & Surveying Services Intersection Turning Movement Count

Location: Encanto Dr & Ethanac Rd
City: Perris
Control: 1-Way Stop(NB)

Project ID: 21-030079-003
Date: 9/29/2021

Data - Totals

| NS/EW Streets: | Encanto Dr | | | | Encanto Dr | | | | Ethanac Rd | | | | Ethanac Rd | | | | |
|-------------------------|---------------------|-------|--------|-------|------------|-------|-------|-------|------------|--------|--------|-------|------------|--------|-------|-------|-------|
| AM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | |
| | 0.5 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | |
| 7:00 AM | 8 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 164 | 13 | 0 | 0 | 98 | 0 | 0 | 293 |
| 7:15 AM | 8 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 172 | 15 | 0 | 4 | 107 | 0 | 0 | 315 |
| 7:30 AM | 17 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 148 | 15 | 0 | 4 | 118 | 0 | 0 | 315 |
| 7:45 AM | 15 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 105 | 42 | 0 | 10 | 108 | 0 | 0 | 285 |
| 8:00 AM | 22 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 42 | 0 | 10 | 123 | 0 | 0 | 326 |
| 8:15 AM | 24 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 106 | 36 | 0 | 6 | 95 | 0 | 0 | 276 |
| 8:30 AM | 19 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 102 | 12 | 0 | 6 | 91 | 0 | 0 | 240 |
| 8:45 AM | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 15 | 0 | 3 | 82 | 0 | 0 | 190 |
| TOTAL VOLUMES : | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| | 118 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 995 | 190 | 0 | 43 | 822 | 0 | 0 | 2240 |
| APPROACH %'s : | 62.11% | 0.00% | 37.89% | 0.00% | | | | | 0.00% | 83.97% | 16.03% | 0.00% | 4.97% | 95.03% | 0.00% | 0.00% | |
| PEAK HR : | 07:15 AM - 08:15 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 62 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 540 | 114 | 0 | 28 | 456 | 0 | 0 | 1241 |
| PEAK HR FACTOR : | 0.705 | 0.000 | 0.732 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.785 | 0.679 | 0.000 | 0.700 | 0.927 | 0.000 | 0.000 | 0.952 |
| | 0.715 | | | | | | | | 0.874 | | | | 0.910 | | | | |
| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | |
| | 0.5 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | |
| 4:00 PM | 21 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 169 | 27 | 0 | 12 | 103 | 0 | 0 | 347 |
| 4:15 PM | 17 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 15 | 0 | 12 | 126 | 0 | 0 | 332 |
| 4:30 PM | 15 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 154 | 17 | 0 | 13 | 135 | 0 | 0 | 352 |
| 4:45 PM | 16 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 166 | 16 | 0 | 8 | 116 | 0 | 0 | 331 |
| 5:00 PM | 17 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 18 | 0 | 8 | 146 | 0 | 0 | 378 |
| 5:15 PM | 22 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 19 | 0 | 6 | 113 | 0 | 0 | 316 |
| 5:30 PM | 22 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 144 | 21 | 0 | 9 | 111 | 0 | 0 | 317 |
| 5:45 PM | 17 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 152 | 23 | 0 | 7 | 69 | 0 | 0 | 278 |
| TOTAL VOLUMES : | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| | 147 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 1256 | 156 | 0 | 75 | 919 | 0 | 0 | 2651 |
| APPROACH %'s : | 60.00% | 0.00% | 40.00% | 0.00% | | | | | 0.00% | 88.95% | 11.05% | 0.00% | 7.55% | 92.45% | 0.00% | 0.00% | |
| PEAK HR : | 04:15 PM - 05:15 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 65 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 641 | 66 | 0 | 41 | 523 | 0 | 0 | 1393 |
| PEAK HR FACTOR : | 0.956 | 0.000 | 0.792 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.937 | 0.917 | 0.000 | 0.788 | 0.896 | 0.000 | 0.000 | 0.921 |
| | 0.871 | | | | | | | | 0.935 | | | | 0.916 | | | | |

National Data & Surveying Services Intersection Turning Movement Count

Location: Trumble Rd & Ethanac Rd
City: Perris
Control: Signalized

Project ID: 21-030079-004
Date: 9/29/2021

Data - Total

| NS/EW Streets: | Trumble Rd | | | | Trumble Rd | | | | Ethanac Rd | | | | Ethanac Rd | | | | |
|-------------------------|---------------------|-------|--------|-------|------------|--------|--------|-------|------------|--------|-------|-------|------------|--------|-------|-------|-------|
| AM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | |
| 7:00 AM | 22 | 3 | 12 | 0 | 2 | 1 | 19 | 0 | 23 | 143 | 3 | 0 | 8 | 52 | 2 | 0 | 290 |
| 7:15 AM | 19 | 0 | 10 | 0 | 2 | 2 | 20 | 0 | 18 | 154 | 4 | 0 | 19 | 75 | 2 | 0 | 325 |
| 7:30 AM | 23 | 1 | 4 | 0 | 2 | 2 | 14 | 0 | 13 | 136 | 5 | 0 | 10 | 83 | 2 | 0 | 295 |
| 7:45 AM | 17 | 4 | 7 | 0 | 0 | 1 | 15 | 0 | 16 | 90 | 7 | 0 | 7 | 92 | 1 | 0 | 257 |
| 8:00 AM | 22 | 5 | 11 | 0 | 3 | 8 | 15 | 0 | 17 | 96 | 2 | 0 | 11 | 90 | 0 | 0 | 280 |
| 8:15 AM | 20 | 1 | 12 | 0 | 1 | 2 | 17 | 0 | 15 | 85 | 5 | 0 | 13 | 66 | 2 | 0 | 239 |
| 8:30 AM | 14 | 0 | 5 | 0 | 4 | 0 | 23 | 0 | 17 | 82 | 2 | 0 | 7 | 57 | 3 | 0 | 214 |
| 8:45 AM | 12 | 2 | 5 | 0 | 2 | 2 | 10 | 0 | 11 | 73 | 5 | 0 | 9 | 66 | 3 | 0 | 200 |
| TOTAL VOLUMES : | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| APPROACH %'s : | 64.50% | 6.93% | 28.57% | 0.00% | 9.58% | 10.78% | 79.64% | 0.00% | 12.72% | 84.05% | 3.23% | 0.00% | 12.35% | 85.44% | 2.21% | 0.00% | 2100 |
| PEAK HR : | 07:00 AM - 08:00 AM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 81 | 8 | 33 | 0 | 6 | 6 | 68 | 0 | 70 | 523 | 19 | 0 | 44 | 302 | 7 | 0 | 1167 |
| PEAK HR FACTOR : | 0.880 | 0.500 | 0.688 | 0.000 | 0.750 | 0.750 | 0.850 | 0.000 | 0.761 | 0.849 | 0.679 | 0.000 | 0.579 | 0.821 | 0.875 | 0.000 | 0.898 |
| | 0.824 | | | | 0.833 | | | | 0.869 | | | | 0.883 | | | | |
| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | TOTAL |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | |
| 4:00 PM | 15 | 1 | 17 | 0 | 6 | 3 | 32 | 0 | 16 | 151 | 6 | 0 | 10 | 67 | 2 | 0 | 326 |
| 4:15 PM | 30 | 0 | 8 | 0 | 4 | 1 | 19 | 0 | 17 | 135 | 8 | 0 | 16 | 94 | 3 | 0 | 335 |
| 4:30 PM | 20 | 0 | 5 | 0 | 2 | 1 | 40 | 0 | 23 | 128 | 7 | 0 | 5 | 83 | 1 | 0 | 315 |
| 4:45 PM | 14 | 2 | 12 | 0 | 3 | 5 | 21 | 0 | 18 | 139 | 9 | 1 | 14 | 91 | 0 | 0 | 329 |
| 5:00 PM | 18 | 3 | 10 | 0 | 17 | 7 | 52 | 0 | 11 | 155 | 8 | 0 | 8 | 82 | 0 | 0 | 371 |
| 5:15 PM | 17 | 3 | 6 | 0 | 2 | 1 | 31 | 0 | 11 | 126 | 9 | 0 | 5 | 73 | 1 | 0 | 285 |
| 5:30 PM | 19 | 1 | 10 | 0 | 3 | 2 | 20 | 0 | 9 | 131 | 10 | 0 | 7 | 79 | 2 | 0 | 293 |
| 5:45 PM | 13 | 1 | 13 | 0 | 5 | 1 | 15 | 0 | 8 | 129 | 11 | 0 | 4 | 49 | 0 | 0 | 249 |
| TOTAL VOLUMES : | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| APPROACH %'s : | 61.34% | 4.62% | 34.03% | 0.00% | 14.33% | 7.17% | 78.50% | 0.00% | 8.86% | 85.74% | 5.33% | 0.08% | 9.91% | 88.79% | 1.29% | 0.00% | 2503 |
| PEAK HR : | 04:15 PM - 05:15 PM | | | | | | | | | | | | | | | | TOTAL |
| PEAK HR VOL : | 82 | 5 | 35 | 0 | 26 | 14 | 132 | 0 | 69 | 557 | 32 | 1 | 43 | 350 | 4 | 0 | 1350 |
| PEAK HR FACTOR : | 0.683 | 0.417 | 0.729 | 0.000 | 0.382 | 0.500 | 0.635 | 0.000 | 0.750 | 0.898 | 0.889 | 0.250 | 0.672 | 0.931 | 0.333 | 0.000 | 0.910 |
| | 0.803 | | | | 0.566 | | | | 0.947 | | | | 0.878 | | | | |

APPENDIX B-2

**TRAFFIC COUNT -
PCE VOLUMES SPREADSHEETS**

Existing Peak Hour Volumes - Classification Counts

1 I-215 SB Ramps at Ethanac Road

| | AM Peak Hour Volumes | | | | | | | | | PM Peak Hour Volumes | | | | | | | | |
|--------------------------|----------------------|---------------|--------|--------|--------------|------------|-----|-------------|------------------|----------------------|---------------|--------|--------|--------------|------------|-----|-------------|------------------|
| | Passenger Vehicles | Truck Volumes | | | | | | Average PCE | Total PCE Volume | Passenger Vehicles | Truck Volumes | | | | | | Average PCE | Total PCE Volume |
| | | 2-Axle | 3-Axle | 4-Axle | Total Trucks | Truck %age | PCE | | | | 2-Axle | 3-Axle | 4-Axle | Total Trucks | Truck %age | PCE | | |
| NL | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | |
| NT | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | |
| NR | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | |
| SL | 100 | 6 | 3 | 3 | 12 | 10.7% | 24 | 2.0 | 124 | 172 | 4 | 0 | 5 | 9 | 5.0% | 21 | 2.3 | 193 |
| ST | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | |
| SR | 181 | 18 | 5 | 9 | 32 | 15.0% | 64 | 2.0 | 245 | 338 | 3 | 0 | 6 | 9 | 2.6% | 23 | 2.6 | 361 |
| EL | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | |
| ET | 599 | 32 | 6 | 21 | 59 | 9.0% | 123 | 2.1 | 722 | 546 | 17 | 3 | 8 | 28 | 4.9% | 56 | 2.0 | 602 |
| ER | 408 | 22 | 11 | 12 | 45 | 9.9% | 91 | 2.0 | 499 | 376 | 5 | 0 | 0 | 5 | 1.3% | 8 | 1.6 | 384 |
| WL | 85 | 5 | 3 | 2 | 10 | 10.5% | 20 | 2.0 | 105 | 112 | 3 | 1 | 2 | 6 | 5.1% | 13 | 2.2 | 125 |
| WT | 593 | 19 | 12 | 19 | 50 | 7.8% | 110 | 2.2 | 703 | 663 | 13 | 3 | 9 | 25 | 3.6% | 53 | 2.1 | 716 |
| WR | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | |
| | | | | | | | | | 2,398 | | | | | | | | | 2,381 |
| North Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 281 | 24 | 8 | 12 | 44 | | 88 | | 369 | 510 | 7 | 0 | 11 | 18 | | 44 | | 554 |
| Depart | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 |
| Total | 281 | 24 | 8 | 12 | 44 | 13.5% | 88 | 2.0 | 369 | 510 | 7 | 0 | 11 | 18 | 3.4% | 44 | 2.4 | 554 |
| South Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 |
| Depart | 493 | 27 | 14 | 14 | 55 | | 111 | | 604 | 488 | 8 | 1 | 2 | 11 | | 21 | | 509 |
| Total | 493 | 27 | 14 | 14 | 55 | 10.0% | 111 | 2.0 | 604 | 488 | 8 | 1 | 2 | 11 | 2.2% | 21 | 1.9 | 509 |
| East Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 678 | 24 | 15 | 21 | 60 | | 130 | | 808 | 775 | 16 | 4 | 11 | 31 | | 66 | | 841 |
| Depart | 699 | 38 | 9 | 24 | 71 | | 147 | | 846 | 718 | 21 | 3 | 13 | 37 | | 77 | | 795 |
| Total | 1,377 | 62 | 24 | 45 | 131 | 8.7% | 277 | 2.1 | 1,654 | 1,493 | 37 | 7 | 24 | 68 | 4.4% | 143 | 2.1 | 1,636 |
| West Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 1,007 | 54 | 17 | 33 | 104 | | 214 | | 1,221 | 922 | 22 | 3 | 8 | 33 | | 64 | | 986 |
| Depart | 774 | 37 | 17 | 28 | 82 | | 174 | | 948 | 1,001 | 16 | 3 | 15 | 34 | | 76 | | 1,077 |
| Total | 1,781 | 91 | 34 | 61 | 186 | 9.5% | 388 | 2.1 | 2,169 | 1,923 | 38 | 6 | 23 | 67 | 3.4% | 140 | 2.1 | 2,063 |
| All Legs | | | | | | | | | | | | | | | | | | |
| Approach | 1,966 | 102 | 40 | 66 | 208 | | 432 | | 2,398 | 2,207 | 45 | 7 | 30 | 82 | | 174 | | 2,381 |
| Depart | 1,966 | 102 | 40 | 66 | 208 | | 432 | | 2,398 | 2,207 | 45 | 7 | 30 | 82 | | 174 | | 2,381 |
| Total | 3,932 | 204 | 80 | 132 | 416 | 9.6% | 864 | 2.1 | 4,796 | 4,414 | 90 | 14 | 60 | 164 | 3.6% | 348 | 2.1 | 4,762 |

Existing Peak Hour Volumes - Classification Counts

2 I-215 NB Ramps at Ethanac Road

| | AM Peak Hour Volumes | | | | | | | | | PM Peak Hour Volumes | | | | | | | | |
|--------------------------|----------------------|---------------|------------|------------|--------------|------------|-----|-------------|------------------|----------------------|---------------|------------|------------|--------------|------------|-----|-------------|------------------|
| | Passenger Vehicles | Truck Volumes | | | | | | Average PCE | Total PCE Volume | Passenger Vehicles | Truck Volumes | | | | | | Average PCE | Total PCE Volume |
| | | 2-Axle 1.5 | 3-Axle 2.0 | 4-Axle 3.0 | Total Trucks | Truck %age | PCE | | | | 2-Axle 1.5 | 3-Axle 2.0 | 4-Axle 3.0 | Total Trucks | Truck %age | PCE | | |
| NL | 323 | 11 | 1 | 3 | 15 | 4.4% | 28 | 1.9 | 351 | 377 | 12 | 5 | 7 | 24 | 6.0% | 49 | 2.0 | 426 |
| NT | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 2 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 2 |
| NR | 108 | 7 | 5 | 2 | 14 | 11.5% | 27 | 1.9 | 135 | 165 | 7 | 2 | 6 | 15 | 8.3% | 33 | 2.2 | 198 |
| SL | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 |
| ST | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 |
| SR | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 |
| EL | 213 | 9 | 2 | 13 | 24 | 10.1% | 57 | 2.4 | 270 | 218 | 6 | 2 | 5 | 13 | 5.6% | 28 | 2.2 | 246 |
| ET | 487 | 29 | 8 | 11 | 48 | 9.0% | 93 | 1.9 | 580 | 497 | 18 | 2 | 14 | 34 | 6.4% | 73 | 2.1 | 570 |
| ER | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 |
| WL | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 |
| WT | 361 | 12 | 13 | 17 | 42 | 10.4% | 95 | 2.3 | 456 | 387 | 6 | 1 | 5 | 12 | 3.0% | 26 | 2.2 | 413 |
| WR | 94 | 3 | 7 | 10 | 20 | 17.5% | 49 | 2.5 | 143 | 178 | 3 | 0 | 4 | 7 | 3.8% | 17 | 2.4 | 195 |
| | | | | | | | | | 1,935 | | | | | | | | | 2,050 |
| North Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 |
| Depart | 307 | 12 | 9 | 23 | 44 | | 106 | | 413 | 398 | 9 | 2 | 9 | 20 | | 45 | | 443 |
| Total | 307 | 12 | 9 | 23 | 44 | 12.5% | 106 | 2.4 | 413 | 398 | 9 | 2 | 9 | 20 | 4.8% | 45 | 2.3 | 443 |
| South Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 431 | 18 | 6 | 5 | 29 | | 55 | | 486 | 544 | 19 | 7 | 13 | 39 | | 82 | | 626 |
| Depart | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 |
| Total | 431 | 18 | 6 | 5 | 29 | 6.3% | 55 | 1.9 | 486 | 544 | 19 | 7 | 13 | 39 | 6.7% | 82 | 2.1 | 626 |
| East Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 455 | 15 | 20 | 27 | 62 | | 144 | | 599 | 565 | 9 | 1 | 9 | 19 | | 43 | | 608 |
| Depart | 595 | 36 | 13 | 13 | 62 | | 120 | | 715 | 662 | 25 | 4 | 20 | 49 | | 106 | | 768 |
| Total | 1,050 | 51 | 33 | 40 | 124 | 10.6% | 264 | 2.1 | 1,314 | 1,227 | 34 | 5 | 29 | 68 | 5.3% | 149 | 2.2 | 1,376 |
| West Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 700 | 38 | 10 | 24 | 72 | | 150 | | 850 | 715 | 24 | 4 | 19 | 47 | | 101 | | 816 |
| Depart | 684 | 23 | 14 | 20 | 57 | | 123 | | 807 | 764 | 18 | 6 | 12 | 36 | | 75 | | 839 |
| Total | 1,384 | 61 | 24 | 44 | 129 | 8.5% | 273 | 2.1 | 1,657 | 1,479 | 42 | 10 | 31 | 83 | 5.3% | 176 | 2.1 | 1,655 |
| All Legs | | | | | | | | | | | | | | | | | | |
| Approach | 1,586 | 71 | 36 | 56 | 163 | | 349 | | 1,935 | 1,824 | 52 | 12 | 41 | 105 | | 226 | | 2,050 |
| Depart | 1,586 | 71 | 36 | 56 | 163 | | 349 | | 1,935 | 1,824 | 52 | 12 | 41 | 105 | | 226 | | 2,050 |
| Total | 3,172 | 142 | 72 | 112 | 326 | 9.3% | 698 | 2.1 | 3,870 | 3,648 | 104 | 24 | 82 | 210 | 5.4% | 452 | 2.2 | 4,100 |

Existing Peak Hour Volumes - Classification Counts

3 Ethanac Road at Encanto Drive

| | AM Peak Hour Volumes | | | | | | | | | PM Peak Hour Volumes | | | | | | | | |
|--------------------------|----------------------|---------------|------------|------------|--------------|------------|-------------|------------------|--------------------|----------------------|------------|------------|--------------|------------|-------------|------------------|-------|-------|
| | Passenger Vehicles | Truck Volumes | | | | | Average PCE | Total PCE Volume | Passenger Vehicles | Truck Volumes | | | | | Average PCE | Total PCE Volume | | |
| | | 2-Axle 1.5 | 3-Axle 2.0 | 4-Axle 3.0 | Total Trucks | Truck %age | | | | 2-Axle 1.5 | 3-Axle 2.0 | 4-Axle 3.0 | Total Trucks | Truck %age | | | | |
| NL | 62 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 62 | 65 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 65 |
| NT | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 |
| NR | 41 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 41 | 57 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 57 | 0 |
| SL | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 |
| ST | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 |
| SR | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 |
| EL | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 |
| ET | 540 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 540 | 641 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 641 | 0 |
| ER | 114 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 114 | 66 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 66 | 0 |
| WL | 28 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 28 | 41 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 41 | 0 |
| WT | 456 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 456 | 523 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 523 | 0 |
| WR | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 0 | 0 |
| | | | | | | | | | 1,241 | | | | | | | | | 1,393 |
| North Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 | 0 |
| Depart | 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 |
| South Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 103 | 0 | 0 | 0 | 0 | | 0 | | 103 | 122 | 0 | 0 | 0 | | 0 | | 122 | 0 |
| Depart | 142 | 0 | 0 | 0 | 0 | | 0 | | 142 | 107 | 0 | 0 | 0 | | 0 | | 107 | 0 |
| Total | 245 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 245 | 229 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 229 | 0 |
| East Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 484 | 0 | 0 | 0 | 0 | | 0 | | 484 | 564 | 0 | 0 | 0 | | 0 | | 564 | 0 |
| Depart | 581 | 0 | 0 | 0 | 0 | | 0 | | 581 | 698 | 0 | 0 | 0 | | 0 | | 698 | 0 |
| Total | 1,065 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 1,065 | 1,262 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 1,262 | 0 |
| West Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 654 | 0 | 0 | 0 | 0 | | 0 | | 654 | 707 | 0 | 0 | 0 | | 0 | | 707 | 0 |
| Depart | 518 | 0 | 0 | 0 | 0 | | 0 | | 518 | 588 | 0 | 0 | 0 | | 0 | | 588 | 0 |
| Total | 1,172 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 1,172 | 1,295 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 1,295 | 0 |
| All Legs | | | | | | | | | | | | | | | | | | |
| Approach | 1,241 | 0 | 0 | 0 | 0 | | 0 | | 1,241 | 1,393 | 0 | 0 | 0 | | 0 | | 1,393 | 0 |
| Depart | 1,241 | 0 | 0 | 0 | 0 | | 0 | | 1,241 | 1,393 | 0 | 0 | 0 | | 0 | | 1,393 | 0 |
| Total | 2,482 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 2,482 | 2,786 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 2,786 | 0 |

Existing Peak Hour Volumes - Classification Counts

4 Trumble Road at Ethanac Road

| | AM Peak Hour Volumes | | | | | | | | | PM Peak Hour Volumes | | | | | | | | |
|--------------------------|----------------------|---------------|------------|------------|--------------|------------|-----|-------------|------------------|----------------------|---------------|------------|------------|--------------|------------|-----|-------------|------------------|
| | Passenger Vehicles | Truck Volumes | | | | | | Average PCE | Total PCE Volume | Passenger Vehicles | Truck Volumes | | | | | | Average PCE | Total PCE Volume |
| | | 2-Axle 1.5 | 3-Axle 2.0 | 4-Axle 3.0 | Total Trucks | Truck %age | PCE | | | | 2-Axle 1.5 | 3-Axle 2.0 | 4-Axle 3.0 | Total Trucks | Truck %age | PCE | | |
| NL | 64 | 5 | 9 | 3 | 17 | 21.0% | 35 | 2.1 | 99 | 80 | 1 | 1 | 0 | 2 | 2.4% | 4 | 2.0 | 84 |
| NT | 7 | 1 | 0 | 0 | 1 | 12.5% | 2 | 2.0 | 9 | 5 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 5 |
| NR | 31 | 2 | 0 | 0 | 2 | 6.1% | 3 | 1.5 | 34 | 31 | 4 | 0 | 0 | 4 | 11.4% | 6 | 1.5 | 37 |
| SL | 5 | 0 | 0 | 1 | 1 | 16.7% | 3 | 3.0 | 8 | 24 | 0 | 0 | 2 | 2 | 7.7% | 6 | 3.0 | 30 |
| ST | 4 | 1 | 0 | 1 | 2 | 33.3% | 5 | 2.5 | 9 | 13 | 1 | 0 | 0 | 1 | 7.1% | 2 | 2.0 | 15 |
| SR | 42 | 6 | 2 | 18 | 26 | 38.2% | 67 | 2.6 | 109 | 124 | 5 | 0 | 3 | 8 | 6.1% | 17 | 2.1 | 141 |
| EL | 56 | 5 | 4 | 5 | 14 | 20.0% | 31 | 2.2 | 87 | 67 | 0 | 3 | 0 | 3 | 4.3% | 6 | 2.0 | 73 |
| ET | 484 | 27 | 3 | 9 | 39 | 7.5% | 74 | 1.9 | 558 | 524 | 19 | 7 | 7 | 33 | 5.9% | 64 | 1.9 | 588 |
| ER | 11 | 1 | 0 | 7 | 8 | 42.1% | 23 | 2.9 | 34 | 31 | 1 | 0 | 0 | 1 | 3.1% | 2 | 2.0 | 33 |
| WL | 26 | 7 | 9 | 2 | 18 | 40.9% | 35 | 1.9 | 61 | 42 | 1 | 0 | 0 | 1 | 2.3% | 2 | 2.0 | 44 |
| WT | 270 | 12 | 7 | 13 | 32 | 10.6% | 71 | 2.2 | 341 | 341 | 5 | 0 | 4 | 9 | 2.6% | 20 | 2.2 | 361 |
| WR | 4 | 0 | 2 | 1 | 3 | 42.9% | 7 | 2.3 | 11 | 4 | 0 | 0 | 0 | 0 | 0.0% | 0 | 0.0 | 4 |
| | | | | | | | | | 1,360 | | | | | | | | | 1,415 |
| North Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 51 | 7 | 2 | 20 | 29 | | 75 | | 126 | 161 | 6 | 0 | 5 | 11 | | 25 | | 186 |
| Depart | 67 | 6 | 6 | 6 | 18 | | 40 | | 107 | 76 | 0 | 3 | 0 | 3 | | 6 | | 82 |
| Total | 118 | 13 | 8 | 26 | 47 | 28.5% | 115 | 2.4 | 233 | 237 | 6 | 3 | 5 | 14 | 5.6% | 31 | 2.2 | 268 |
| South Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 102 | 8 | 9 | 3 | 20 | | 40 | | 142 | 116 | 5 | 1 | 0 | 6 | | 10 | | 126 |
| Depart | 41 | 9 | 9 | 10 | 28 | | 63 | | 104 | 86 | 3 | 0 | 0 | 3 | | 6 | | 92 |
| Total | 143 | 17 | 18 | 13 | 48 | 25.1% | 103 | 2.1 | 246 | 202 | 8 | 1 | 0 | 9 | 4.3% | 16 | 1.8 | 218 |
| East Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 300 | 19 | 18 | 16 | 53 | | 113 | | 413 | 387 | 6 | 0 | 4 | 10 | | 22 | | 409 |
| Depart | 520 | 29 | 3 | 10 | 42 | | 80 | | 600 | 579 | 23 | 7 | 9 | 39 | | 76 | | 655 |
| Total | 820 | 48 | 21 | 26 | 95 | 10.4% | 193 | 2.0 | 1,013 | 966 | 29 | 7 | 13 | 49 | 4.8% | 98 | 2.0 | 1,064 |
| West Leg Volumes | | | | | | | | | | | | | | | | | | |
| Approach | 551 | 33 | 7 | 21 | 61 | | 128 | | 679 | 622 | 20 | 10 | 7 | 37 | | 72 | | 694 |
| Depart | 376 | 23 | 18 | 34 | 75 | | 173 | | 549 | 545 | 11 | 1 | 7 | 19 | | 41 | | 586 |
| Total | 927 | 56 | 25 | 55 | 136 | 12.8% | 301 | 2.2 | 1,228 | 1,167 | 31 | 11 | 14 | 56 | 4.6% | 113 | 2.0 | 1,280 |
| All Legs | | | | | | | | | | | | | | | | | | |
| Approach | 1,004 | 67 | 36 | 60 | 163 | | 356 | | 1,360 | 1,286 | 37 | 11 | 16 | 64 | | 129 | | 1,415 |
| Depart | 1,004 | 67 | 36 | 60 | 163 | | 356 | | 1,360 | 1,286 | 37 | 11 | 16 | 64 | | 129 | | 1,415 |
| Total | 2,008 | 134 | 72 | 120 | 326 | 14.0% | 712 | 2.2 | 2,720 | 2,572 | 74 | 22 | 32 | 128 | 4.7% | 258 | 2.0 | 2,830 |

APPENDIX C

COLLECTED SITE-SPECIFIC
TRIP WORKSHEETS

| PV+RV only | | HV only | | All Vehicles | |
|-------------|--------|-------------------|--------|--------------|--------|
| Total Trips | Daily | Total Trips | Daily | Total Trips | Daily |
| Orland | 3303 | Orland | 1647 | Orland | 4950 |
| Patterson | 4055 | Patterson | 2003 | Patterson | 6057 |
| Lost Hills | 3903 | Lost Hills | 1846 | Lost Hills | 5750 |
| Combined | 11261 | Combined | 5497 | Combined | 16757 |
| Rates by FP | | Rates by Truck FP | | Rates by FP | |
| | Daily | | Daily | | Daily |
| Orland | 235.92 | Orland | 183.05 | Orland | 215.23 |
| Patterson | 202.73 | Patterson | 222.52 | Patterson | 208.87 |
| Lost Hills | 487.92 | Lost Hills | 263.77 | Lost Hills | 383.31 |
| Combined | 268.11 | Combined | 219.86 | Combined | 250.11 |

| | Perris | Orland | Patterson | Lost Hills | Combined |
|---------------------|--------|--------|-----------|------------|----------|
| Building size (kSF) | 14 | 14 | 15.4 | 10.5 | 39.9 |
| fueling pumps | 16 | 14 | 20 | 8 | 42 |
| Truck FPs | 7 | 9 | 9 | 7 | 25 |

| | | |
|---------|-----|-----|
| | 945 | 950 |
| 5AM-8PM | 85% | 87% |
| 8PM-5AM | 15% | 13% |

| PV+RV only | | | HV only | | | All Vehicles | | |
|--------------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------|--------------|
| Total Trips | AM Trips | PM Trips | Total Trips | AM Trips | PM Trips | Total Trips | AM Trips | PM Trips |
| Orland | 144 | 245 | Orland | 96 | 87 | Orland | 239 | 330 |
| Patterson | 233 | 258 | Patterson | 99 | 105 | Patterson | 340 | 379 |
| Lost Hills | 170 | 265 | Lost Hills | 115 | 133 | Lost Hills | 280 | 392 |
| Combined | 547 | 768 | Combined | 310 | 325 | Combined | 859 | 1101 |
| Rates by FP | AM Trip Rate | PM Trip Rate | Rates by Truck FP | AM Trip Rate | PM Trip Rate | Rates by FP | AM Trip Rate | PM Trip Rate |
| ITE (11th Edition) | 31.60 | 26.90 | ITE | 13.97 | 15.42 | ITE | N/A | N/A |
| Orland | 10.29 | 17.50 | Orland | 10.67 | 9.67 | Orland | 10.39 | 14.35 |
| Patterson | 11.65 | 12.90 | Patterson | 11.00 | 11.67 | Patterson | 11.72 | 13.07 |
| Lost Hills | 21.25 | 33.13 | Lost Hills | 16.43 | 19.00 | Lost Hills | 18.67 | 26.13 |
| Combined | 13.02 | 18.29 | Combined | 12.40 | 13.00 | Combined | 12.82 | 16.43 |

| | Perris | Orland | Patterson | Lost Hills | Combined |
|---------------------|--------|--------|-----------|------------|----------|
| Building size (kSF) | 14 | 14 | 15.4 | 10.5 | 39.9 |
| Fueling pumps (FP) | 16 | 14 | 20 | 8 | 42 |
| Truck FPs | 7 | 9 | 9 | 7 | 25 |

Driveway IN/OUT

Custom ID: 1-001

Location: Commerce Ln & Pilot Travel Center North Dwy

City: Orland

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|------------|--------------|-----------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 6 | 5 | 0 | 0 | 0 | 0 | 6 | 5 |
| 5:15 AM | 10 | 1 | 0 | 0 | 0 | 0 | 10 | 1 |
| 5:30 AM | 12 | 6 | 0 | 0 | 0 | 0 | 12 | 6 |
| 5:45 AM | 4 | 2 | 0 | 0 | 0 | 0 | 4 | 2 |
| 6:00 AM | 12 | 1 | 0 | 0 | 0 | 0 | 12 | 1 |
| 6:15 AM | 7 | 4 | 3 | 0 | 0 | 0 | 10 | 4 |
| 6:30 AM | 7 | 5 | 0 | 1 | 0 | 0 | 7 | 6 |
| 6:45 AM | 4 | 2 | 0 | 0 | 1 | 0 | 5 | 2 |
| 7:00 AM | 7 | 7 | 0 | 0 | 0 | 0 | 7 | 7 |
| 7:15 AM | 7 | 7 | 1 | 0 | 0 | 0 | 8 | 7 |
| 7:30 AM | 10 | 6 | 0 | 1 | 0 | 0 | 10 | 7 |
| 7:45 AM | 12 | 4 | 0 | 0 | 0 | 0 | 12 | 4 |
| 8:00 AM | 11 | 2 | 0 | 0 | 0 | 0 | 11 | 2 |
| 8:15 AM | 16 | 3 | 0 | 0 | 0 | 0 | 16 | 3 |
| 8:30 AM | 10 | 3 | 0 | 0 | 0 | 0 | 10 | 3 |
| 8:45 AM | 9 | 8 | 0 | 0 | 0 | 0 | 9 | 8 |
| 9:00 AM | 13 | 1 | 0 | 0 | 0 | 0 | 13 | 1 |
| 9:15 AM | 11 | 4 | 0 | 0 | 0 | 0 | 11 | 4 |
| 9:30 AM | 18 | 5 | 1 | 0 | 0 | 0 | 19 | 5 |
| 9:45 AM | 11 | 11 | 0 | 0 | 0 | 0 | 11 | 11 |
| 10:00 AM | 10 | 7 | 1 | 0 | 0 | 0 | 11 | 7 |
| 10:15 AM | 10 | 4 | 0 | 0 | 1 | 0 | 11 | 4 |
| 10:30 AM | 14 | 8 | 0 | 0 | 0 | 0 | 14 | 8 |
| 10:45 AM | 8 | 6 | 0 | 0 | 0 | 0 | 8 | 6 |
| 11:00 AM | 17 | 3 | 0 | 0 | 0 | 0 | 17 | 3 |
| 11:15 AM | 29 | 6 | 0 | 0 | 0 | 0 | 29 | 6 |
| 11:30 AM | 22 | 13 | 2 | 0 | 0 | 0 | 24 | 13 |
| 11:45 AM | 26 | 14 | 0 | 2 | 2 | 0 | 28 | 16 |
| 12:00 PM | 28 | 10 | 1 | 0 | 0 | 0 | 29 | 10 |
| 12:15 PM | 18 | 18 | 1 | 0 | 0 | 2 | 19 | 20 |
| 12:30 PM | 18 | 11 | 0 | 0 | 0 | 0 | 18 | 11 |
| 12:45 PM | 22 | 9 | 1 | 0 | 0 | 0 | 23 | 9 |
| 1:00 PM | 25 | 7 | 0 | 0 | 0 | 0 | 25 | 7 |
| 1:15 PM | 15 | 14 | 0 | 1 | 1 | 0 | 16 | 15 |
| 1:30 PM | 26 | 10 | 1 | 0 | 0 | 0 | 27 | 10 |
| 1:45 PM | 21 | 9 | 1 | 1 | 0 | 0 | 22 | 10 |
| 2:00 PM | 22 | 7 | 0 | 0 | 0 | 0 | 22 | 7 |
| 2:15 PM | 18 | 10 | 0 | 0 | 0 | 0 | 18 | 10 |
| 2:30 PM | 23 | 8 | 1 | 2 | 0 | 0 | 24 | 10 |
| 2:45 PM | 17 | 2 | 1 | 0 | 0 | 0 | 18 | 2 |
| 3:00 PM | 14 | 8 | 0 | 0 | 3 | 0 | 17 | 8 |
| 3:15 PM | 25 | 10 | 0 | 0 | 0 | 0 | 25 | 10 |
| 3:30 PM | 18 | 11 | 0 | 0 | 1 | 1 | 19 | 12 |
| 3:45 PM | 17 | 6 | 1 | 0 | 0 | 0 | 18 | 6 |
| 4:00 PM | 16 | 10 | 0 | 0 | 0 | 0 | 16 | 10 |
| 4:15 PM | 16 | 4 | 0 | 0 | 0 | 0 | 16 | 4 |
| 4:30 PM | 29 | 6 | 1 | 0 | 0 | 0 | 30 | 6 |
| 4:45 PM | 15 | 13 | 0 | 0 | 0 | 0 | 15 | 13 |
| 5:00 PM | 27 | 10 | 1 | 0 | 0 | 0 | 28 | 10 |
| 5:15 PM | 18 | 13 | 0 | 0 | 2 | 0 | 20 | 13 |
| 5:30 PM | 19 | 4 | 0 | 0 | 0 | 0 | 19 | 4 |
| 5:45 PM | 18 | 10 | 0 | 0 | 0 | 2 | 18 | 12 |
| 6:00 PM | 10 | 13 | 0 | 0 | 0 | 0 | 10 | 13 |
| 6:15 PM | 19 | 10 | 0 | 0 | 0 | 0 | 19 | 10 |
| 6:30 PM | 19 | 8 | 1 | 0 | 1 | 0 | 21 | 8 |
| 6:45 PM | 14 | 4 | 0 | 0 | 0 | 0 | 14 | 4 |
| 7:00 PM | 10 | 4 | 0 | 2 | 0 | 0 | 10 | 6 |
| 7:15 PM | 13 | 7 | 0 | 0 | 0 | 0 | 13 | 7 |
| 7:30 PM | 9 | 4 | 0 | 0 | 0 | 0 | 9 | 4 |
| 7:45 PM | 18 | 7 | 0 | 0 | 0 | 0 | 18 | 7 |
| Totals | 930 | 425 | 19 | 10 | 12 | 5 | 961 | 440 |

Driveway IN/OUT

Custom ID: 1-002

Location: Commerce Ln & Pilot Travel Center Middle Dwy

City: Orland

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|------------|--------------|-----------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 7 | 5 | 0 | 0 | 0 | 0 | 7 | 5 |
| 5:15 AM | 4 | 5 | 0 | 0 | 0 | 0 | 4 | 5 |
| 5:30 AM | 5 | 11 | 0 | 0 | 0 | 0 | 5 | 11 |
| 5:45 AM | 4 | 9 | 0 | 0 | 0 | 0 | 4 | 9 |
| 6:00 AM | 6 | 7 | 0 | 0 | 0 | 0 | 6 | 7 |
| 6:15 AM | 2 | 12 | 0 | 1 | 0 | 0 | 2 | 13 |
| 6:30 AM | 9 | 7 | 0 | 0 | 0 | 0 | 9 | 7 |
| 6:45 AM | 9 | 7 | 0 | 0 | 0 | 0 | 9 | 7 |
| 7:00 AM | 10 | 15 | 0 | 1 | 0 | 1 | 10 | 17 |
| 7:15 AM | 4 | 9 | 0 | 0 | 0 | 0 | 4 | 9 |
| 7:30 AM | 9 | 12 | 0 | 0 | 0 | 0 | 9 | 12 |
| 7:45 AM | 9 | 7 | 0 | 0 | 0 | 0 | 9 | 7 |
| 8:00 AM | 5 | 15 | 0 | 0 | 0 | 0 | 5 | 15 |
| 8:15 AM | 5 | 17 | 0 | 0 | 0 | 0 | 5 | 17 |
| 8:30 AM | 1 | 16 | 0 | 0 | 0 | 0 | 1 | 16 |
| 8:45 AM | 7 | 12 | 0 | 0 | 0 | 0 | 7 | 12 |
| 9:00 AM | 2 | 8 | 0 | 0 | 0 | 0 | 2 | 8 |
| 9:15 AM | 10 | 14 | 0 | 0 | 0 | 0 | 10 | 14 |
| 9:30 AM | 5 | 17 | 0 | 0 | 0 | 0 | 5 | 17 |
| 9:45 AM | 10 | 13 | 0 | 1 | 0 | 0 | 10 | 14 |
| 10:00 AM | 9 | 12 | 0 | 1 | 0 | 0 | 9 | 13 |
| 10:15 AM | 9 | 15 | 0 | 0 | 0 | 0 | 9 | 15 |
| 10:30 AM | 6 | 13 | 0 | 0 | 0 | 1 | 6 | 14 |
| 10:45 AM | 5 | 11 | 0 | 0 | 0 | 0 | 5 | 11 |
| 11:00 AM | 7 | 18 | 0 | 0 | 0 | 0 | 7 | 18 |
| 11:15 AM | 6 | 16 | 0 | 0 | 0 | 0 | 6 | 16 |
| 11:30 AM | 8 | 20 | 1 | 0 | 0 | 0 | 9 | 20 |
| 11:45 AM | 10 | 17 | 0 | 0 | 0 | 0 | 10 | 17 |
| 12:00 PM | 8 | 21 | 0 | 1 | 2 | 2 | 10 | 24 |
| 12:15 PM | 14 | 19 | 0 | 0 | 0 | 0 | 14 | 19 |
| 12:30 PM | 9 | 27 | 0 | 1 | 0 | 0 | 9 | 28 |
| 12:45 PM | 7 | 24 | 1 | 2 | 0 | 0 | 8 | 26 |
| 1:00 PM | 9 | 16 | 1 | 1 | 0 | 0 | 10 | 17 |
| 1:15 PM | 10 | 19 | 1 | 0 | 0 | 0 | 11 | 19 |
| 1:30 PM | 10 | 26 | 0 | 1 | 0 | 1 | 10 | 28 |
| 1:45 PM | 4 | 17 | 0 | 0 | 0 | 0 | 4 | 17 |
| 2:00 PM | 5 | 13 | 0 | 0 | 0 | 0 | 5 | 13 |
| 2:15 PM | 8 | 22 | 1 | 1 | 0 | 0 | 9 | 23 |
| 2:30 PM | 4 | 14 | 0 | 0 | 0 | 0 | 4 | 14 |
| 2:45 PM | 8 | 19 | 0 | 0 | 0 | 0 | 8 | 19 |
| 3:00 PM | 11 | 22 | 0 | 1 | 0 | 1 | 11 | 24 |
| 3:15 PM | 8 | 19 | 0 | 0 | 0 | 0 | 8 | 19 |
| 3:30 PM | 8 | 17 | 0 | 0 | 0 | 1 | 8 | 18 |
| 3:45 PM | 8 | 17 | 0 | 1 | 0 | 0 | 8 | 18 |
| 4:00 PM | 10 | 25 | 0 | 0 | 0 | 1 | 10 | 26 |
| 4:15 PM | 2 | 13 | 0 | 0 | 0 | 0 | 2 | 13 |
| 4:30 PM | 7 | 20 | 0 | 0 | 0 | 0 | 7 | 20 |
| 4:45 PM | 7 | 20 | 0 | 1 | 0 | 0 | 7 | 21 |
| 5:00 PM | 6 | 20 | 0 | 1 | 0 | 0 | 6 | 21 |
| 5:15 PM | 6 | 14 | 1 | 0 | 0 | 0 | 7 | 14 |
| 5:30 PM | 4 | 18 | 0 | 1 | 0 | 0 | 4 | 19 |
| 5:45 PM | 9 | 17 | 0 | 0 | 0 | 0 | 9 | 17 |
| 6:00 PM | 14 | 14 | 0 | 0 | 0 | 0 | 14 | 14 |
| 6:15 PM | 8 | 19 | 0 | 0 | 0 | 0 | 8 | 19 |
| 6:30 PM | 5 | 15 | 0 | 0 | 0 | 0 | 5 | 15 |
| 6:45 PM | 4 | 19 | 1 | 0 | 0 | 1 | 5 | 20 |
| 7:00 PM | 8 | 11 | 0 | 0 | 0 | 0 | 8 | 11 |
| 7:15 PM | 3 | 13 | 0 | 0 | 0 | 0 | 3 | 13 |
| 7:30 PM | 8 | 11 | 0 | 0 | 0 | 0 | 8 | 11 |
| 7:45 PM | 6 | 17 | 0 | 0 | 0 | 0 | 6 | 17 |
| Totals | 421 | 918 | 7 | 16 | 2 | 9 | 430 | 943 |

Driveway IN/OUT

Custom ID: 1-003

Location: Commerce Ln & Pilot Travel Center South Dwy

City: Orland

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|------------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 1 | 0 | 3 | 6 | 0 | 0 | 4 | 6 |
| 5:15 AM | 0 | 1 | 2 | 10 | 0 | 0 | 2 | 11 |
| 5:30 AM | 0 | 1 | 2 | 8 | 0 | 0 | 2 | 9 |
| 5:45 AM | 0 | 0 | 3 | 9 | 0 | 0 | 3 | 9 |
| 6:00 AM | 0 | 0 | 2 | 10 | 0 | 0 | 2 | 10 |
| 6:15 AM | 0 | 0 | 4 | 5 | 0 | 0 | 4 | 5 |
| 6:30 AM | 0 | 0 | 4 | 9 | 0 | 0 | 4 | 9 |
| 6:45 AM | 0 | 0 | 4 | 13 | 0 | 0 | 4 | 13 |
| 7:00 AM | 0 | 0 | 2 | 6 | 0 | 0 | 2 | 6 |
| 7:15 AM | 0 | 1 | 1 | 13 | 0 | 0 | 1 | 14 |
| 7:30 AM | 0 | 0 | 1 | 11 | 0 | 0 | 1 | 11 |
| 7:45 AM | 0 | 0 | 2 | 11 | 0 | 0 | 2 | 11 |
| 8:00 AM | 0 | 1 | 2 | 11 | 0 | 0 | 2 | 12 |
| 8:15 AM | 0 | 0 | 2 | 12 | 0 | 0 | 2 | 12 |
| 8:30 AM | 0 | 0 | 3 | 12 | 0 | 0 | 3 | 12 |
| 8:45 AM | 0 | 1 | 3 | 8 | 0 | 0 | 3 | 9 |
| 9:00 AM | 1 | 0 | 2 | 14 | 0 | 0 | 3 | 14 |
| 9:15 AM | 1 | 0 | 4 | 14 | 0 | 0 | 5 | 14 |
| 9:30 AM | 0 | 1 | 3 | 9 | 0 | 0 | 3 | 10 |
| 9:45 AM | 0 | 0 | 8 | 9 | 0 | 0 | 8 | 9 |
| 10:00 AM | 0 | 2 | 1 | 12 | 0 | 0 | 1 | 14 |
| 10:15 AM | 0 | 1 | 1 | 13 | 0 | 0 | 1 | 14 |
| 10:30 AM | 0 | 0 | 7 | 13 | 0 | 0 | 7 | 13 |
| 10:45 AM | 0 | 1 | 8 | 10 | 0 | 0 | 8 | 11 |
| 11:00 AM | 0 | 2 | 6 | 9 | 0 | 0 | 6 | 11 |
| 11:15 AM | 0 | 1 | 3 | 13 | 0 | 0 | 3 | 14 |
| 11:30 AM | 0 | 1 | 7 | 13 | 0 | 0 | 7 | 14 |
| 11:45 AM | 1 | 1 | 2 | 10 | 0 | 0 | 3 | 11 |
| 12:00 PM | 0 | 0 | 3 | 17 | 1 | 1 | 4 | 18 |
| 12:15 PM | 1 | 1 | 6 | 9 | 0 | 0 | 7 | 10 |
| 12:30 PM | 0 | 1 | 7 | 15 | 0 | 0 | 7 | 16 |
| 12:45 PM | 1 | 4 | 5 | 14 | 0 | 0 | 6 | 18 |
| 1:00 PM | 0 | 1 | 6 | 10 | 0 | 0 | 6 | 11 |
| 1:15 PM | 0 | 0 | 3 | 14 | 0 | 0 | 3 | 14 |
| 1:30 PM | 0 | 0 | 7 | 12 | 0 | 0 | 7 | 12 |
| 1:45 PM | 0 | 1 | 4 | 10 | 0 | 0 | 4 | 11 |
| 2:00 PM | 0 | 0 | 4 | 14 | 1 | 0 | 5 | 14 |
| 2:15 PM | 1 | 0 | 6 | 11 | 1 | 1 | 8 | 12 |
| 2:30 PM | 0 | 0 | 3 | 14 | 0 | 0 | 3 | 14 |
| 2:45 PM | 0 | 0 | 7 | 14 | 0 | 1 | 7 | 15 |
| 3:00 PM | 0 | 1 | 5 | 14 | 0 | 0 | 5 | 15 |
| 3:15 PM | 0 | 0 | 4 | 12 | 0 | 0 | 4 | 12 |
| 3:30 PM | 0 | 1 | 2 | 20 | 0 | 0 | 2 | 21 |
| 3:45 PM | 0 | 0 | 6 | 5 | 0 | 0 | 6 | 5 |
| 4:00 PM | 1 | 0 | 4 | 4 | 1 | 0 | 6 | 4 |
| 4:15 PM | 0 | 1 | 6 | 10 | 0 | 1 | 6 | 12 |
| 4:30 PM | 2 | 2 | 5 | 9 | 0 | 0 | 7 | 11 |
| 4:45 PM | 3 | 2 | 4 | 8 | 0 | 0 | 7 | 10 |
| 5:00 PM | 0 | 0 | 7 | 10 | 0 | 0 | 7 | 10 |
| 5:15 PM | 0 | 0 | 4 | 12 | 1 | 0 | 5 | 12 |
| 5:30 PM | 0 | 0 | 8 | 9 | 1 | 1 | 9 | 10 |
| 5:45 PM | 0 | 0 | 6 | 8 | 0 | 1 | 6 | 9 |
| 6:00 PM | 0 | 0 | 4 | 10 | 0 | 0 | 4 | 10 |
| 6:15 PM | 1 | 2 | 4 | 4 | 0 | 0 | 5 | 6 |
| 6:30 PM | 2 | 2 | 4 | 5 | 0 | 0 | 6 | 7 |
| 6:45 PM | 0 | 0 | 5 | 6 | 0 | 0 | 5 | 6 |
| 7:00 PM | 1 | 1 | 4 | 10 | 0 | 0 | 5 | 11 |
| 7:15 PM | 2 | 1 | 3 | 7 | 0 | 0 | 5 | 8 |
| 7:30 PM | 1 | 1 | 4 | 8 | 0 | 0 | 5 | 9 |
| 7:45 PM | 0 | 0 | 6 | 11 | 0 | 0 | 6 | 11 |
| Totals | 20 | 37 | 248 | 629 | 6 | 6 | 274 | 672 |

Driveway IN/OUT

Custom ID: 1-004

Location: Pilot Travel Center South East Dwy & CR 13

City: Orland

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|----------|--------------|-----------|-----------------------|----------|------------|-----------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 0 | 0 | 8 | 2 | 0 | 0 | 8 | 2 |
| 5:15 AM | 1 | 0 | 7 | 0 | 0 | 0 | 8 | 0 |
| 5:30 AM | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 1 |
| 5:45 AM | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| 6:00 AM | 0 | 0 | 7 | 1 | 0 | 0 | 7 | 1 |
| 6:15 AM | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 3 |
| 6:30 AM | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 |
| 6:45 AM | 0 | 0 | 4 | 2 | 0 | 0 | 4 | 2 |
| 7:00 AM | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 0 |
| 7:15 AM | 0 | 0 | 7 | 2 | 0 | 0 | 7 | 2 |
| 7:30 AM | 0 | 0 | 3 | 1 | 0 | 0 | 3 | 1 |
| 7:45 AM | 0 | 0 | 6 | 1 | 0 | 0 | 6 | 1 |
| 8:00 AM | 0 | 0 | 5 | 1 | 0 | 0 | 5 | 1 |
| 8:15 AM | 0 | 0 | 15 | 0 | 0 | 0 | 15 | 0 |
| 8:30 AM | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 0 |
| 8:45 AM | 1 | 0 | 10 | 3 | 0 | 0 | 11 | 3 |
| 9:00 AM | 0 | 0 | 14 | 3 | 0 | 0 | 14 | 3 |
| 9:15 AM | 0 | 0 | 9 | 1 | 0 | 0 | 9 | 1 |
| 9:30 AM | 2 | 0 | 9 | 0 | 0 | 0 | 11 | 0 |
| 9:45 AM | 0 | 0 | 3 | 2 | 0 | 0 | 3 | 2 |
| 10:00 AM | 1 | 0 | 13 | 2 | 0 | 0 | 14 | 2 |
| 10:15 AM | 1 | 0 | 12 | 3 | 0 | 0 | 13 | 3 |
| 10:30 AM | 2 | 1 | 10 | 2 | 0 | 0 | 12 | 3 |
| 10:45 AM | 1 | 0 | 6 | 3 | 0 | 0 | 7 | 3 |
| 11:00 AM | 0 | 0 | 8 | 1 | 0 | 0 | 8 | 1 |
| 11:15 AM | 1 | 0 | 5 | 3 | 0 | 0 | 6 | 3 |
| 11:30 AM | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 |
| 11:45 AM | 1 | 0 | 15 | 0 | 0 | 0 | 16 | 0 |
| 12:00 PM | 0 | 1 | 7 | 0 | 0 | 0 | 7 | 1 |
| 12:15 PM | 1 | 0 | 14 | 3 | 0 | 0 | 15 | 3 |
| 12:30 PM | 2 | 0 | 8 | 4 | 0 | 0 | 10 | 4 |
| 12:45 PM | 1 | 0 | 8 | 1 | 0 | 0 | 9 | 1 |
| 1:00 PM | 0 | 0 | 6 | 1 | 0 | 0 | 6 | 1 |
| 1:15 PM | 0 | 0 | 11 | 3 | 0 | 0 | 11 | 3 |
| 1:30 PM | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 |
| 1:45 PM | 2 | 1 | 13 | 0 | 0 | 0 | 15 | 1 |
| 2:00 PM | 0 | 0 | 7 | 2 | 0 | 0 | 7 | 2 |
| 2:15 PM | 0 | 0 | 9 | 1 | 0 | 0 | 9 | 1 |
| 2:30 PM | 0 | 0 | 11 | 0 | 0 | 0 | 11 | 0 |
| 2:45 PM | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 0 |
| 3:00 PM | 0 | 0 | 7 | 3 | 0 | 0 | 7 | 3 |
| 3:15 PM | 1 | 0 | 9 | 0 | 0 | 0 | 10 | 0 |
| 3:30 PM | 0 | 0 | 7 | 2 | 0 | 0 | 7 | 2 |
| 3:45 PM | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 |
| 4:00 PM | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 1 |
| 4:15 PM | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 |
| 4:30 PM | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 0 |
| 4:45 PM | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 |
| 5:00 PM | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 |
| 5:15 PM | 1 | 1 | 3 | 0 | 0 | 0 | 4 | 1 |
| 5:30 PM | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 1 |
| 5:45 PM | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 |
| 6:00 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 6:15 PM | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 0 |
| 6:30 PM | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 |
| 6:45 PM | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 |
| 7:00 PM | 0 | 0 | 11 | 1 | 0 | 0 | 11 | 1 |
| 7:15 PM | 1 | 1 | 8 | 0 | 0 | 0 | 9 | 1 |
| 7:30 PM | 0 | 0 | 10 | 1 | 0 | 0 | 10 | 1 |
| 7:45 PM | 0 | 0 | 6 | 2 | 0 | 0 | 6 | 2 |
| Totals | 20 | 5 | 439 | 65 | 0 | 0 | 459 | 70 |

Driveway IN/OUT

Custom ID: 2-001

Location: Park Center Dr & Flying J Travel Center North Dwy

City: Patterson

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|------------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 0 | 0 | 13 | 4 | 0 | 0 | 13 | 4 |
| 5:15 AM | 0 | 0 | 7 | 5 | 0 | 0 | 7 | 5 |
| 5:30 AM | 0 | 0 | 5 | 3 | 0 | 0 | 5 | 3 |
| 5:45 AM | 0 | 0 | 8 | 4 | 0 | 0 | 8 | 4 |
| 6:00 AM | 2 | 2 | 9 | 3 | 0 | 0 | 11 | 5 |
| 6:15 AM | 0 | 0 | 11 | 4 | 0 | 0 | 11 | 4 |
| 6:30 AM | 1 | 0 | 8 | 3 | 0 | 0 | 9 | 3 |
| 6:45 AM | 1 | 1 | 8 | 1 | 0 | 0 | 9 | 2 |
| 7:00 AM | 3 | 3 | 8 | 5 | 0 | 0 | 11 | 8 |
| 7:15 AM | 0 | 0 | 13 | 4 | 0 | 0 | 13 | 4 |
| 7:30 AM | 2 | 1 | 11 | 2 | 0 | 0 | 13 | 3 |
| 7:45 AM | 0 | 0 | 3 | 5 | 0 | 0 | 3 | 5 |
| 8:00 AM | 1 | 0 | 7 | 5 | 0 | 0 | 8 | 5 |
| 8:15 AM | 0 | 0 | 9 | 5 | 0 | 0 | 9 | 5 |
| 8:30 AM | 1 | 0 | 18 | 5 | 0 | 0 | 19 | 5 |
| 8:45 AM | 1 | 0 | 10 | 4 | 0 | 0 | 11 | 4 |
| 9:00 AM | 0 | 2 | 12 | 8 | 0 | 0 | 12 | 10 |
| 9:15 AM | 0 | 0 | 12 | 2 | 0 | 0 | 12 | 2 |
| 9:30 AM | 1 | 0 | 11 | 6 | 0 | 0 | 12 | 6 |
| 9:45 AM | 1 | 2 | 12 | 9 | 0 | 0 | 13 | 11 |
| 10:00 AM | 2 | 0 | 16 | 1 | 0 | 0 | 18 | 1 |
| 10:15 AM | 0 | 1 | 9 | 4 | 0 | 0 | 9 | 5 |
| 10:30 AM | 0 | 0 | 11 | 3 | 0 | 0 | 11 | 3 |
| 10:45 AM | 1 | 1 | 19 | 2 | 0 | 0 | 20 | 3 |
| 11:00 AM | 1 | 0 | 27 | 3 | 0 | 0 | 28 | 3 |
| 11:15 AM | 1 | 1 | 20 | 7 | 0 | 0 | 21 | 8 |
| 11:30 AM | 0 | 0 | 24 | 6 | 0 | 0 | 24 | 6 |
| 11:45 AM | 1 | 1 | 13 | 7 | 0 | 0 | 14 | 8 |
| 12:00 PM | 1 | 1 | 15 | 10 | 0 | 0 | 16 | 11 |
| 12:15 PM | 2 | 1 | 12 | 3 | 0 | 0 | 14 | 4 |
| 12:30 PM | 0 | 0 | 10 | 6 | 0 | 0 | 10 | 6 |
| 12:45 PM | 1 | 1 | 16 | 3 | 0 | 0 | 17 | 4 |
| 1:00 PM | 0 | 1 | 13 | 7 | 0 | 0 | 13 | 8 |
| 1:15 PM | 1 | 1 | 21 | 3 | 0 | 0 | 22 | 4 |
| 1:30 PM | 5 | 3 | 19 | 5 | 0 | 0 | 24 | 8 |
| 1:45 PM | 2 | 1 | 23 | 4 | 0 | 0 | 25 | 5 |
| 2:00 PM | 1 | 0 | 19 | 2 | 0 | 0 | 20 | 2 |
| 2:15 PM | 1 | 2 | 11 | 3 | 0 | 0 | 12 | 5 |
| 2:30 PM | 0 | 0 | 17 | 7 | 0 | 0 | 17 | 7 |
| 2:45 PM | 1 | 0 | 14 | 3 | 0 | 0 | 15 | 3 |
| 3:00 PM | 2 | 0 | 11 | 6 | 0 | 0 | 13 | 6 |
| 3:15 PM | 1 | 3 | 13 | 7 | 0 | 0 | 14 | 10 |
| 3:30 PM | 0 | 0 | 22 | 1 | 0 | 0 | 22 | 1 |
| 3:45 PM | 0 | 0 | 17 | 4 | 0 | 0 | 17 | 4 |
| 4:00 PM | 0 | 0 | 14 | 4 | 0 | 0 | 14 | 4 |
| 4:15 PM | 1 | 0 | 15 | 1 | 0 | 0 | 16 | 1 |
| 4:30 PM | 1 | 0 | 16 | 2 | 0 | 0 | 17 | 2 |
| 4:45 PM | 0 | 0 | 14 | 2 | 0 | 0 | 14 | 2 |
| 5:00 PM | 0 | 0 | 22 | 1 | 0 | 0 | 22 | 1 |
| 5:15 PM | 1 | 0 | 7 | 1 | 0 | 0 | 8 | 1 |
| 5:30 PM | 0 | 1 | 16 | 2 | 0 | 0 | 16 | 3 |
| 5:45 PM | 0 | 0 | 10 | 3 | 0 | 0 | 10 | 3 |
| 6:00 PM | 0 | 0 | 13 | 7 | 0 | 0 | 13 | 7 |
| 6:15 PM | 2 | 1 | 12 | 2 | 0 | 0 | 14 | 3 |
| 6:30 PM | 0 | 0 | 11 | 0 | 0 | 0 | 11 | 0 |
| 6:45 PM | 0 | 0 | 15 | 3 | 0 | 0 | 15 | 3 |
| 7:00 PM | 3 | 0 | 16 | 1 | 0 | 0 | 19 | 1 |
| 7:15 PM | 0 | 0 | 9 | 1 | 0 | 0 | 9 | 1 |
| 7:30 PM | 1 | 0 | 15 | 5 | 0 | 0 | 16 | 5 |
| 7:45 PM | 1 | 1 | 12 | 3 | 0 | 0 | 13 | 4 |
| Totals | 48 | 32 | 804 | 232 | 0 | 0 | 852 | 264 |

Driveway IN/OUT

Custom ID: 2-002

Location: Park Center Dr & Flying J Travel Center Middle Dwy

City: Patterson

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|------------|-----------------------|----------|-----------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 10 |
| 5:15 AM | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 10 |
| 5:30 AM | 0 | 1 | 1 | 5 | 0 | 0 | 1 | 6 |
| 5:45 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 6:00 AM | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| 6:15 AM | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 11 |
| 6:30 AM | 0 | 0 | 1 | 9 | 0 | 0 | 1 | 9 |
| 6:45 AM | 1 | 0 | 1 | 12 | 0 | 0 | 2 | 12 |
| 7:00 AM | 0 | 2 | 0 | 7 | 0 | 0 | 0 | 9 |
| 7:15 AM | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| 7:30 AM | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 13 |
| 7:45 AM | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 15 |
| 8:00 AM | 0 | 1 | 1 | 6 | 0 | 0 | 1 | 7 |
| 8:15 AM | 0 | 0 | 1 | 9 | 0 | 0 | 1 | 9 |
| 8:30 AM | 2 | 2 | 1 | 10 | 0 | 0 | 3 | 12 |
| 8:45 AM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| 9:00 AM | 1 | 1 | 0 | 14 | 0 | 0 | 1 | 15 |
| 9:15 AM | 1 | 1 | 0 | 5 | 0 | 0 | 1 | 6 |
| 9:30 AM | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 5 |
| 9:45 AM | 1 | 1 | 0 | 11 | 0 | 0 | 1 | 12 |
| 10:00 AM | 0 | 0 | 1 | 9 | 0 | 0 | 1 | 9 |
| 10:15 AM | 0 | 0 | 2 | 14 | 0 | 0 | 2 | 14 |
| 10:30 AM | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 11 |
| 10:45 AM | 0 | 0 | 1 | 12 | 0 | 0 | 1 | 12 |
| 11:00 AM | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| 11:15 AM | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 17 |
| 11:30 AM | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 11 |
| 11:45 AM | 1 | 0 | 1 | 12 | 0 | 0 | 2 | 12 |
| 12:00 PM | 2 | 2 | 1 | 10 | 0 | 0 | 3 | 12 |
| 12:15 PM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| 12:30 PM | 1 | 2 | 0 | 4 | 0 | 0 | 1 | 6 |
| 12:45 PM | 0 | 0 | 2 | 10 | 0 | 0 | 2 | 10 |
| 1:00 PM | 0 | 0 | 1 | 9 | 0 | 0 | 1 | 9 |
| 1:15 PM | 0 | 0 | 1 | 11 | 0 | 0 | 1 | 11 |
| 1:30 PM | 0 | 0 | 1 | 16 | 0 | 0 | 1 | 16 |
| 1:45 PM | 1 | 2 | 0 | 16 | 0 | 0 | 1 | 18 |
| 2:00 PM | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| 2:15 PM | 1 | 4 | 0 | 11 | 0 | 0 | 1 | 15 |
| 2:30 PM | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| 2:45 PM | 2 | 1 | 0 | 14 | 0 | 0 | 2 | 15 |
| 3:00 PM | 0 | 2 | 0 | 6 | 0 | 0 | 0 | 8 |
| 3:15 PM | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| 3:30 PM | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 15 |
| 3:45 PM | 0 | 0 | 1 | 13 | 0 | 0 | 1 | 13 |
| 4:00 PM | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 10 |
| 4:15 PM | 1 | 1 | 0 | 11 | 0 | 0 | 1 | 12 |
| 4:30 PM | 1 | 1 | 0 | 7 | 0 | 0 | 1 | 8 |
| 4:45 PM | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 15 |
| 5:00 PM | 0 | 1 | 0 | 15 | 0 | 0 | 0 | 16 |
| 5:15 PM | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 12 |
| 5:30 PM | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| 5:45 PM | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 10 |
| 6:00 PM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| 6:15 PM | 0 | 0 | 1 | 14 | 0 | 0 | 1 | 14 |
| 6:30 PM | 0 | 1 | 1 | 5 | 0 | 0 | 1 | 6 |
| 6:45 PM | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| 7:00 PM | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 5 |
| 7:15 PM | 0 | 2 | 0 | 11 | 0 | 0 | 0 | 13 |
| 7:30 PM | 0 | 1 | 0 | 13 | 0 | 0 | 0 | 14 |
| 7:45 PM | 0 | 0 | 1 | 11 | 0 | 0 | 1 | 11 |
| Totals | 16 | 34 | 22 | 609 | 0 | 0 | 38 | 643 |

Driveway IN/OUT

Custom ID: 2-003

Location: Park Center Dr & Flying J Travel Center South Dwy

City: Patterson

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|------------|--------------|----------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 4 | 4 | 0 | 0 | 0 | 0 | 4 | 4 |
| 5:15 AM | 4 | 5 | 0 | 0 | 0 | 0 | 4 | 5 |
| 5:30 AM | 6 | 5 | 0 | 0 | 0 | 0 | 6 | 5 |
| 5:45 AM | 8 | 8 | 0 | 0 | 0 | 0 | 8 | 8 |
| 6:00 AM | 6 | 9 | 0 | 0 | 0 | 0 | 6 | 9 |
| 6:15 AM | 6 | 3 | 0 | 0 | 0 | 0 | 6 | 3 |
| 6:30 AM | 1 | 7 | 0 | 0 | 0 | 0 | 1 | 7 |
| 6:45 AM | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 2 |
| 7:00 AM | 3 | 7 | 0 | 0 | 0 | 0 | 3 | 7 |
| 7:15 AM | 4 | 6 | 0 | 0 | 0 | 0 | 4 | 6 |
| 7:30 AM | 8 | 4 | 1 | 0 | 0 | 0 | 9 | 4 |
| 7:45 AM | 6 | 4 | 0 | 0 | 0 | 0 | 6 | 4 |
| 8:00 AM | 12 | 5 | 0 | 0 | 0 | 0 | 12 | 5 |
| 8:15 AM | 13 | 5 | 1 | 0 | 0 | 0 | 14 | 5 |
| 8:30 AM | 12 | 15 | 1 | 0 | 0 | 0 | 13 | 15 |
| 8:45 AM | 4 | 7 | 0 | 0 | 0 | 0 | 4 | 7 |
| 9:00 AM | 9 | 7 | 1 | 0 | 0 | 0 | 10 | 7 |
| 9:15 AM | 6 | 10 | 0 | 0 | 0 | 0 | 6 | 10 |
| 9:30 AM | 5 | 9 | 0 | 0 | 0 | 0 | 5 | 9 |
| 9:45 AM | 3 | 3 | 0 | 1 | 0 | 0 | 3 | 4 |
| 10:00 AM | 9 | 8 | 0 | 0 | 0 | 0 | 9 | 8 |
| 10:15 AM | 6 | 5 | 0 | 0 | 0 | 0 | 6 | 5 |
| 10:30 AM | 5 | 5 | 0 | 0 | 1 | 0 | 6 | 5 |
| 10:45 AM | 9 | 7 | 0 | 0 | 0 | 0 | 9 | 7 |
| 11:00 AM | 4 | 9 | 0 | 0 | 0 | 0 | 4 | 9 |
| 11:15 AM | 15 | 13 | 2 | 1 | 0 | 0 | 17 | 14 |
| 11:30 AM | 8 | 13 | 0 | 1 | 0 | 0 | 8 | 14 |
| 11:45 AM | 10 | 11 | 1 | 0 | 0 | 0 | 11 | 11 |
| 12:00 PM | 19 | 16 | 2 | 0 | 0 | 0 | 21 | 16 |
| 12:15 PM | 12 | 15 | 0 | 0 | 0 | 0 | 12 | 15 |
| 12:30 PM | 12 | 19 | 0 | 1 | 0 | 0 | 12 | 20 |
| 12:45 PM | 7 | 10 | 0 | 0 | 0 | 0 | 7 | 10 |
| 1:00 PM | 10 | 10 | 1 | 1 | 0 | 0 | 11 | 11 |
| 1:15 PM | 10 | 4 | 0 | 0 | 1 | 0 | 11 | 4 |
| 1:30 PM | 12 | 10 | 1 | 0 | 0 | 0 | 13 | 10 |
| 1:45 PM | 10 | 7 | 0 | 1 | 0 | 0 | 10 | 8 |
| 2:00 PM | 11 | 2 | 2 | 0 | 0 | 0 | 13 | 2 |
| 2:15 PM | 7 | 5 | 0 | 0 | 0 | 0 | 7 | 5 |
| 2:30 PM | 11 | 7 | 0 | 0 | 0 | 0 | 11 | 7 |
| 2:45 PM | 13 | 8 | 1 | 0 | 0 | 0 | 14 | 8 |
| 3:00 PM | 10 | 12 | 1 | 0 | 0 | 0 | 11 | 12 |
| 3:15 PM | 8 | 2 | 1 | 0 | 0 | 0 | 9 | 2 |
| 3:30 PM | 13 | 5 | 0 | 0 | 1 | 0 | 14 | 5 |
| 3:45 PM | 12 | 5 | 1 | 0 | 0 | 0 | 13 | 5 |
| 4:00 PM | 12 | 7 | 0 | 1 | 0 | 0 | 12 | 8 |
| 4:15 PM | 13 | 6 | 1 | 0 | 0 | 0 | 14 | 6 |
| 4:30 PM | 9 | 3 | 0 | 1 | 0 | 0 | 9 | 4 |
| 4:45 PM | 17 | 8 | 0 | 1 | 0 | 0 | 17 | 9 |
| 5:00 PM | 8 | 4 | 0 | 0 | 0 | 0 | 8 | 4 |
| 5:15 PM | 16 | 5 | 1 | 0 | 0 | 0 | 17 | 5 |
| 5:30 PM | 19 | 15 | 1 | 0 | 0 | 0 | 20 | 15 |
| 5:45 PM | 15 | 9 | 0 | 0 | 0 | 0 | 15 | 9 |
| 6:00 PM | 10 | 9 | 0 | 0 | 0 | 0 | 10 | 9 |
| 6:15 PM | 18 | 5 | 0 | 0 | 0 | 0 | 18 | 5 |
| 6:30 PM | 9 | 7 | 0 | 0 | 0 | 0 | 9 | 7 |
| 6:45 PM | 18 | 9 | 0 | 0 | 0 | 0 | 18 | 9 |
| 7:00 PM | 10 | 10 | 0 | 0 | 0 | 0 | 10 | 10 |
| 7:15 PM | 17 | 4 | 0 | 0 | 0 | 0 | 17 | 4 |
| 7:30 PM | 7 | 3 | 0 | 0 | 0 | 0 | 7 | 3 |
| 7:45 PM | 8 | 7 | 0 | 0 | 0 | 0 | 8 | 7 |
| Totals | 572 | 444 | 20 | 9 | 3 | 0 | 595 | 453 |

Driveway IN/OUT

Custom ID: 2-004

Location: Flying J Travel Center South East Dwy & Sperry Ave

City: Patterson

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|------------|--------------|-----------|-----------------------|----------|-------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 10 | 9 | 0 | 0 | 0 | 0 | 10 | 9 |
| 5:15 AM | 18 | 12 | 2 | 1 | 0 | 0 | 20 | 13 |
| 5:30 AM | 16 | 17 | 0 | 1 | 0 | 0 | 16 | 18 |
| 5:45 AM | 15 | 12 | 0 | 1 | 0 | 0 | 15 | 13 |
| 6:00 AM | 18 | 17 | 0 | 0 | 0 | 0 | 18 | 17 |
| 6:15 AM | 20 | 11 | 0 | 0 | 0 | 0 | 20 | 11 |
| 6:30 AM | 20 | 16 | 0 | 0 | 0 | 0 | 20 | 16 |
| 6:45 AM | 18 | 9 | 0 | 0 | 0 | 0 | 18 | 9 |
| 7:00 AM | 10 | 12 | 0 | 0 | 0 | 0 | 10 | 12 |
| 7:15 AM | 19 | 9 | 0 | 0 | 0 | 0 | 19 | 9 |
| 7:30 AM | 24 | 8 | 0 | 0 | 0 | 1 | 24 | 9 |
| 7:45 AM | 16 | 22 | 0 | 0 | 0 | 0 | 16 | 22 |
| 8:00 AM | 13 | 13 | 0 | 1 | 0 | 0 | 13 | 14 |
| 8:15 AM | 17 | 8 | 0 | 1 | 0 | 0 | 17 | 9 |
| 8:30 AM | 16 | 12 | 0 | 1 | 0 | 0 | 16 | 13 |
| 8:45 AM | 13 | 7 | 0 | 0 | 0 | 0 | 13 | 7 |
| 9:00 AM | 16 | 4 | 0 | 0 | 0 | 0 | 16 | 4 |
| 9:15 AM | 13 | 3 | 0 | 1 | 0 | 0 | 13 | 4 |
| 9:30 AM | 18 | 17 | 0 | 0 | 0 | 0 | 18 | 17 |
| 9:45 AM | 29 | 9 | 0 | 0 | 0 | 0 | 29 | 9 |
| 10:00 AM | 18 | 12 | 0 | 0 | 0 | 0 | 18 | 12 |
| 10:15 AM | 15 | 9 | 1 | 1 | 0 | 0 | 16 | 10 |
| 10:30 AM | 14 | 13 | 0 | 0 | 0 | 0 | 14 | 13 |
| 10:45 AM | 24 | 13 | 0 | 0 | 0 | 1 | 24 | 14 |
| 11:00 AM | 18 | 10 | 0 | 0 | 0 | 0 | 18 | 10 |
| 11:15 AM | 17 | 6 | 1 | 1 | 0 | 0 | 18 | 7 |
| 11:30 AM | 20 | 9 | 0 | 1 | 0 | 0 | 20 | 10 |
| 11:45 AM | 21 | 12 | 0 | 1 | 0 | 0 | 21 | 13 |
| 12:00 PM | 19 | 7 | 1 | 2 | 0 | 0 | 20 | 9 |
| 12:15 PM | 20 | 12 | 0 | 1 | 0 | 0 | 20 | 13 |
| 12:30 PM | 22 | 14 | 2 | 1 | 0 | 0 | 24 | 15 |
| 12:45 PM | 15 | 9 | 0 | 2 | 1 | 0 | 16 | 11 |
| 1:00 PM | 26 | 7 | 1 | 0 | 0 | 0 | 27 | 7 |
| 1:15 PM | 24 | 10 | 0 | 0 | 0 | 1 | 24 | 11 |
| 1:30 PM | 12 | 9 | 0 | 0 | 0 | 1 | 12 | 10 |
| 1:45 PM | 12 | 5 | 1 | 1 | 0 | 0 | 13 | 6 |
| 2:00 PM | 18 | 13 | 0 | 0 | 0 | 0 | 18 | 13 |
| 2:15 PM | 7 | 7 | 0 | 0 | 0 | 0 | 7 | 7 |
| 2:30 PM | 18 | 9 | 0 | 0 | 0 | 0 | 18 | 9 |
| 2:45 PM | 17 | 6 | 1 | 0 | 0 | 0 | 18 | 6 |
| 3:00 PM | 20 | 9 | 0 | 1 | 0 | 0 | 20 | 10 |
| 3:15 PM | 12 | 8 | 0 | 0 | 1 | 0 | 13 | 8 |
| 3:30 PM | 14 | 11 | 0 | 0 | 0 | 0 | 14 | 11 |
| 3:45 PM | 16 | 9 | 0 | 0 | 0 | 0 | 16 | 9 |
| 4:00 PM | 11 | 7 | 0 | 0 | 0 | 1 | 11 | 8 |
| 4:15 PM | 16 | 9 | 1 | 0 | 0 | 0 | 17 | 9 |
| 4:30 PM | 27 | 10 | 1 | 0 | 0 | 0 | 28 | 10 |
| 4:45 PM | 17 | 10 | 0 | 0 | 0 | 0 | 17 | 10 |
| 5:00 PM | 7 | 9 | 1 | 1 | 0 | 0 | 8 | 10 |
| 5:15 PM | 18 | 8 | 0 | 0 | 0 | 0 | 18 | 8 |
| 5:30 PM | 17 | 8 | 0 | 2 | 0 | 0 | 17 | 10 |
| 5:45 PM | 14 | 10 | 0 | 0 | 0 | 0 | 14 | 10 |
| 6:00 PM | 13 | 5 | 0 | 0 | 0 | 0 | 13 | 5 |
| 6:15 PM | 13 | 6 | 0 | 0 | 0 | 0 | 13 | 6 |
| 6:30 PM | 12 | 9 | 0 | 0 | 0 | 0 | 12 | 9 |
| 6:45 PM | 20 | 5 | 0 | 0 | 0 | 0 | 20 | 5 |
| 7:00 PM | 10 | 3 | 1 | 0 | 0 | 0 | 11 | 3 |
| 7:15 PM | 14 | 8 | 0 | 0 | 0 | 0 | 14 | 8 |
| 7:30 PM | 18 | 7 | 0 | 0 | 0 | 0 | 18 | 7 |
| 7:45 PM | 12 | 5 | 0 | 0 | 0 | 0 | 12 | 5 |
| Totals | 997 | 575 | 14 | 22 | 2 | 5 | 1013 | 602 |

Driveway IN/OUT

Custom ID: 2-005

Location: Flying J Travel Center South East Dwy 2 & Sperry Ave

City: Patterson

Date: 6/23/2021

Day: Wednesday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|------------|--------------|----------|-----------------------|----------|-----------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 2 | 4 | 0 | 0 | 0 | 0 | 2 | 4 |
| 5:15 AM | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 3 |
| 5:30 AM | 2 | 3 | 0 | 0 | 0 | 0 | 2 | 3 |
| 5:45 AM | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 2 |
| 6:00 AM | 1 | 6 | 0 | 0 | 0 | 0 | 1 | 6 |
| 6:15 AM | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| 6:30 AM | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 11 |
| 6:45 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:00 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 7:15 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| 7:30 AM | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| 7:45 AM | 1 | 8 | 0 | 0 | 0 | 0 | 1 | 8 |
| 8:00 AM | 2 | 7 | 0 | 0 | 0 | 0 | 2 | 7 |
| 8:15 AM | 2 | 10 | 1 | 0 | 0 | 0 | 3 | 10 |
| 8:30 AM | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 8 |
| 8:45 AM | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| 9:00 AM | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| 9:15 AM | 3 | 10 | 0 | 0 | 0 | 0 | 3 | 10 |
| 9:30 AM | 2 | 9 | 0 | 0 | 0 | 0 | 2 | 9 |
| 9:45 AM | 1 | 7 | 0 | 0 | 1 | 0 | 2 | 7 |
| 10:00 AM | 1 | 15 | 0 | 0 | 0 | 0 | 1 | 15 |
| 10:15 AM | 1 | 10 | 0 | 0 | 0 | 1 | 1 | 11 |
| 10:30 AM | 1 | 5 | 0 | 0 | 0 | 0 | 1 | 5 |
| 10:45 AM | 1 | 10 | 0 | 0 | 0 | 0 | 1 | 10 |
| 11:00 AM | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| 11:15 AM | 1 | 10 | 0 | 0 | 0 | 0 | 1 | 10 |
| 11:30 AM | 1 | 8 | 0 | 0 | 0 | 0 | 1 | 8 |
| 11:45 AM | 2 | 9 | 0 | 0 | 0 | 0 | 2 | 9 |
| 12:00 PM | 2 | 12 | 0 | 0 | 0 | 0 | 2 | 12 |
| 12:15 PM | 1 | 9 | 0 | 0 | 0 | 0 | 1 | 9 |
| 12:30 PM | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 14 |
| 12:45 PM | 1 | 7 | 2 | 0 | 0 | 0 | 3 | 7 |
| 1:00 PM | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 20 |
| 1:15 PM | 1 | 10 | 0 | 1 | 0 | 0 | 1 | 11 |
| 1:30 PM | 2 | 14 | 0 | 0 | 0 | 0 | 2 | 14 |
| 1:45 PM | 2 | 10 | 0 | 0 | 0 | 0 | 2 | 10 |
| 2:00 PM | 0 | 18 | 0 | 1 | 0 | 0 | 0 | 19 |
| 2:15 PM | 2 | 8 | 0 | 1 | 0 | 0 | 2 | 9 |
| 2:30 PM | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| 2:45 PM | 2 | 13 | 0 | 1 | 0 | 0 | 2 | 14 |
| 3:00 PM | 4 | 15 | 0 | 0 | 0 | 0 | 4 | 15 |
| 3:15 PM | 3 | 14 | 0 | 0 | 0 | 0 | 3 | 14 |
| 3:30 PM | 3 | 11 | 0 | 0 | 0 | 1 | 3 | 12 |
| 3:45 PM | 3 | 15 | 0 | 0 | 0 | 0 | 3 | 15 |
| 4:00 PM | 2 | 14 | 0 | 0 | 0 | 0 | 2 | 14 |
| 4:15 PM | 1 | 16 | 0 | 0 | 0 | 0 | 1 | 16 |
| 4:30 PM | 1 | 21 | 0 | 1 | 0 | 0 | 1 | 22 |
| 4:45 PM | 1 | 12 | 0 | 0 | 0 | 0 | 1 | 12 |
| 5:00 PM | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 18 |
| 5:15 PM | 1 | 11 | 0 | 0 | 0 | 0 | 1 | 11 |
| 5:30 PM | 1 | 16 | 0 | 0 | 0 | 0 | 1 | 16 |
| 5:45 PM | 2 | 21 | 0 | 0 | 0 | 0 | 2 | 21 |
| 6:00 PM | 3 | 10 | 0 | 0 | 0 | 0 | 3 | 10 |
| 6:15 PM | 2 | 15 | 0 | 0 | 0 | 0 | 2 | 15 |
| 6:30 PM | 2 | 17 | 0 | 0 | 0 | 0 | 2 | 17 |
| 6:45 PM | 2 | 18 | 0 | 0 | 0 | 0 | 2 | 18 |
| 7:00 PM | 1 | 13 | 0 | 0 | 0 | 0 | 1 | 13 |
| 7:15 PM | 1 | 23 | 0 | 0 | 0 | 0 | 1 | 23 |
| 7:30 PM | 3 | 6 | 0 | 0 | 0 | 0 | 3 | 6 |
| 7:45 PM | 1 | 17 | 0 | 0 | 0 | 0 | 1 | 17 |
| Totals | 76 | 650 | 4 | 6 | 1 | 2 | 81 | 658 |

Driveway IN/OUT

Custom ID: 3-001

Location: Pilot Gas Station North Dwy & Paso Robles Hwy

City: Lost Hills

Date: 7/1/2021

Day: Thursday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-------------|--------------|-----------|-----------------------|----------|------------|-------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 8 | 2 | 0 | 0 | 0 | 0 | 8 | 2 |
| 5:15 AM | 10 | 6 | 0 | 0 | 0 | 0 | 10 | 6 |
| 5:30 AM | 3 | 9 | 0 | 0 | 0 | 0 | 3 | 9 |
| 5:45 AM | 3 | 7 | 0 | 0 | 0 | 0 | 3 | 7 |
| 6:00 AM | 8 | 9 | 1 | 0 | 0 | 0 | 9 | 9 |
| 6:15 AM | 6 | 7 | 0 | 1 | 0 | 0 | 6 | 8 |
| 6:30 AM | 7 | 6 | 0 | 0 | 0 | 0 | 7 | 6 |
| 6:45 AM | 6 | 9 | 1 | 0 | 0 | 0 | 7 | 9 |
| 7:00 AM | 8 | 13 | 0 | 2 | 0 | 0 | 8 | 15 |
| 7:15 AM | 5 | 8 | 0 | 0 | 0 | 0 | 5 | 8 |
| 7:30 AM | 14 | 16 | 1 | 0 | 0 | 0 | 15 | 16 |
| 7:45 AM | 11 | 12 | 0 | 1 | 0 | 0 | 11 | 13 |
| 8:00 AM | 12 | 22 | 0 | 0 | 0 | 0 | 12 | 22 |
| 8:15 AM | 6 | 13 | 1 | 0 | 0 | 0 | 7 | 13 |
| 8:30 AM | 8 | 8 | 0 | 0 | 0 | 1 | 8 | 9 |
| 8:45 AM | 9 | 12 | 0 | 0 | 0 | 0 | 9 | 12 |
| 9:00 AM | 6 | 20 | 0 | 0 | 0 | 0 | 6 | 20 |
| 9:15 AM | 11 | 10 | 0 | 0 | 0 | 0 | 11 | 10 |
| 9:30 AM | 11 | 14 | 0 | 0 | 0 | 0 | 11 | 14 |
| 9:45 AM | 16 | 14 | 0 | 0 | 0 | 0 | 16 | 14 |
| 10:00 AM | 9 | 23 | 0 | 0 | 0 | 0 | 9 | 23 |
| 10:15 AM | 15 | 13 | 0 | 0 | 0 | 0 | 15 | 13 |
| 10:30 AM | 13 | 21 | 0 | 0 | 0 | 0 | 13 | 21 |
| 10:45 AM | 20 | 14 | 0 | 0 | 0 | 0 | 20 | 14 |
| 11:00 AM | 13 | 24 | 0 | 1 | 0 | 0 | 13 | 25 |
| 11:15 AM | 18 | 23 | 0 | 0 | 0 | 0 | 18 | 23 |
| 11:30 AM | 8 | 19 | 0 | 0 | 0 | 0 | 8 | 19 |
| 11:45 AM | 9 | 22 | 0 | 0 | 1 | 0 | 10 | 22 |
| 12:00 PM | 19 | 13 | 0 | 0 | 0 | 0 | 19 | 13 |
| 12:15 PM | 18 | 17 | 0 | 1 | 0 | 0 | 18 | 18 |
| 12:30 PM | 15 | 21 | 0 | 0 | 0 | 0 | 15 | 21 |
| 12:45 PM | 24 | 26 | 0 | 0 | 0 | 0 | 24 | 26 |
| 1:00 PM | 16 | 27 | 1 | 0 | 0 | 1 | 17 | 28 |
| 1:15 PM | 15 | 19 | 0 | 2 | 0 | 0 | 17 | 19 |
| 1:30 PM | 15 | 15 | 1 | 2 | 0 | 0 | 16 | 17 |
| 1:45 PM | 15 | 22 | 0 | 3 | 0 | 0 | 15 | 25 |
| 2:00 PM | 8 | 26 | 0 | 0 | 0 | 0 | 8 | 26 |
| 2:15 PM | 19 | 20 | 0 | 0 | 0 | 0 | 19 | 20 |
| 2:30 PM | 12 | 11 | 0 | 0 | 0 | 0 | 12 | 11 |
| 2:45 PM | 16 | 18 | 0 | 0 | 0 | 0 | 16 | 18 |
| 3:00 PM | 7 | 18 | 0 | 0 | 0 | 0 | 7 | 18 |
| 3:15 PM | 21 | 15 | 0 | 0 | 0 | 0 | 21 | 15 |
| 3:30 PM | 20 | 28 | 0 | 0 | 0 | 0 | 20 | 28 |
| 3:45 PM | 18 | 19 | 1 | 1 | 0 | 0 | 19 | 20 |
| 4:00 PM | 18 | 16 | 0 | 1 | 0 | 0 | 18 | 17 |
| 4:15 PM | 17 | 30 | 0 | 2 | 0 | 1 | 17 | 33 |
| 4:30 PM | 12 | 18 | 1 | 0 | 0 | 0 | 13 | 18 |
| 4:45 PM | 12 | 14 | 0 | 1 | 0 | 0 | 12 | 15 |
| 5:00 PM | 18 | 21 | 0 | 0 | 0 | 0 | 18 | 21 |
| 5:15 PM | 15 | 14 | 0 | 0 | 0 | 0 | 15 | 14 |
| 5:30 PM | 17 | 26 | 1 | 0 | 0 | 0 | 18 | 26 |
| 5:45 PM | 16 | 24 | 0 | 0 | 0 | 0 | 16 | 24 |
| 6:00 PM | 13 | 17 | 0 | 0 | 0 | 0 | 13 | 17 |
| 6:15 PM | 20 | 25 | 0 | 0 | 0 | 0 | 20 | 25 |
| 6:30 PM | 14 | 20 | 0 | 0 | 0 | 0 | 14 | 20 |
| 6:45 PM | 16 | 13 | 0 | 0 | 1 | 0 | 17 | 13 |
| 7:00 PM | 11 | 22 | 0 | 1 | 1 | 1 | 12 | 24 |
| 7:15 PM | 13 | 16 | 0 | 0 | 0 | 0 | 13 | 16 |
| 7:30 PM | 14 | 24 | 0 | 0 | 0 | 0 | 14 | 24 |
| 7:45 PM | 21 | 21 | 2 | 0 | 0 | 0 | 23 | 21 |
| Totals | 778 | 1012 | 13 | 17 | 3 | 4 | 794 | 1033 |

Driveway IN/OUT

Custom ID: 3-002

Location: Warren St & Pilot Gas Station West Dwy

City: Lost Hills

Date: 7/1/2021

Day: Thursday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|------------|--------------|----------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 3 | 5 | 1 | 0 | 0 | 0 | 4 | 5 |
| 5:15 AM | 7 | 5 | 0 | 0 | 0 | 0 | 7 | 5 |
| 5:30 AM | 4 | 3 | 0 | 0 | 0 | 0 | 4 | 3 |
| 5:45 AM | 8 | 3 | 1 | 0 | 0 | 0 | 9 | 3 |
| 6:00 AM | 8 | 4 | 0 | 0 | 0 | 0 | 8 | 4 |
| 6:15 AM | 6 | 1 | 0 | 0 | 0 | 0 | 6 | 1 |
| 6:30 AM | 5 | 8 | 0 | 0 | 0 | 0 | 5 | 8 |
| 6:45 AM | 5 | 5 | 0 | 0 | 0 | 0 | 5 | 5 |
| 7:00 AM | 7 | 3 | 0 | 0 | 0 | 1 | 7 | 4 |
| 7:15 AM | 8 | 3 | 1 | 0 | 0 | 0 | 9 | 3 |
| 7:30 AM | 6 | 5 | 0 | 0 | 0 | 0 | 6 | 5 |
| 7:45 AM | 11 | 2 | 0 | 1 | 0 | 0 | 11 | 3 |
| 8:00 AM | 6 | 6 | 0 | 0 | 0 | 0 | 6 | 6 |
| 8:15 AM | 8 | 2 | 1 | 0 | 1 | 0 | 10 | 2 |
| 8:30 AM | 12 | 7 | 0 | 1 | 0 | 0 | 12 | 8 |
| 8:45 AM | 9 | 3 | 0 | 1 | 0 | 0 | 9 | 4 |
| 9:00 AM | 17 | 8 | 0 | 0 | 0 | 0 | 17 | 8 |
| 9:15 AM | 12 | 7 | 0 | 0 | 0 | 0 | 12 | 7 |
| 9:30 AM | 13 | 10 | 0 | 0 | 0 | 0 | 13 | 10 |
| 9:45 AM | 9 | 10 | 0 | 0 | 0 | 0 | 9 | 10 |
| 10:00 AM | 17 | 5 | 0 | 0 | 0 | 0 | 17 | 5 |
| 10:15 AM | 18 | 13 | 0 | 0 | 0 | 0 | 18 | 13 |
| 10:30 AM | 13 | 8 | 0 | 0 | 0 | 0 | 13 | 8 |
| 10:45 AM | 10 | 11 | 0 | 0 | 0 | 0 | 10 | 11 |
| 11:00 AM | 26 | 8 | 1 | 0 | 0 | 0 | 27 | 8 |
| 11:15 AM | 21 | 11 | 1 | 0 | 0 | 0 | 22 | 11 |
| 11:30 AM | 14 | 13 | 0 | 1 | 0 | 0 | 14 | 14 |
| 11:45 AM | 13 | 9 | 0 | 0 | 0 | 1 | 13 | 10 |
| 12:00 PM | 13 | 7 | 0 | 0 | 0 | 0 | 13 | 7 |
| 12:15 PM | 17 | 16 | 1 | 0 | 0 | 0 | 18 | 16 |
| 12:30 PM | 17 | 13 | 0 | 0 | 1 | 0 | 18 | 13 |
| 12:45 PM | 10 | 10 | 0 | 0 | 0 | 0 | 10 | 10 |
| 1:00 PM | 13 | 12 | 1 | 0 | 0 | 0 | 14 | 12 |
| 1:15 PM | 7 | 6 | 1 | 2 | 0 | 0 | 8 | 8 |
| 1:30 PM | 13 | 10 | 1 | 0 | 0 | 0 | 14 | 10 |
| 1:45 PM | 12 | 11 | 0 | 0 | 0 | 0 | 12 | 11 |
| 2:00 PM | 14 | 4 | 0 | 0 | 0 | 0 | 14 | 4 |
| 2:15 PM | 6 | 1 | 0 | 0 | 0 | 0 | 6 | 1 |
| 2:30 PM | 8 | 10 | 0 | 0 | 0 | 0 | 8 | 10 |
| 2:45 PM | 20 | 9 | 0 | 0 | 0 | 0 | 20 | 9 |
| 3:00 PM | 13 | 13 | 0 | 0 | 0 | 0 | 13 | 13 |
| 3:15 PM | 13 | 9 | 0 | 0 | 0 | 0 | 13 | 9 |
| 3:30 PM | 17 | 10 | 0 | 0 | 0 | 0 | 17 | 10 |
| 3:45 PM | 4 | 8 | 1 | 0 | 1 | 0 | 6 | 8 |
| 4:00 PM | 7 | 4 | 2 | 0 | 0 | 0 | 9 | 4 |
| 4:15 PM | 5 | 8 | 0 | 0 | 1 | 0 | 6 | 8 |
| 4:30 PM | 17 | 8 | 1 | 0 | 0 | 0 | 18 | 8 |
| 4:45 PM | 12 | 10 | 0 | 0 | 0 | 0 | 12 | 10 |
| 5:00 PM | 13 | 8 | 0 | 1 | 0 | 1 | 13 | 10 |
| 5:15 PM | 13 | 11 | 0 | 0 | 0 | 0 | 13 | 11 |
| 5:30 PM | 11 | 6 | 0 | 0 | 0 | 0 | 11 | 6 |
| 5:45 PM | 15 | 7 | 1 | 1 | 0 | 0 | 16 | 8 |
| 6:00 PM | 15 | 9 | 0 | 1 | 0 | 0 | 15 | 10 |
| 6:15 PM | 8 | 8 | 0 | 0 | 0 | 0 | 8 | 8 |
| 6:30 PM | 13 | 5 | 0 | 0 | 0 | 0 | 13 | 5 |
| 6:45 PM | 10 | 11 | 1 | 0 | 0 | 0 | 11 | 11 |
| 7:00 PM | 14 | 10 | 0 | 0 | 0 | 0 | 14 | 10 |
| 7:15 PM | 20 | 7 | 0 | 0 | 0 | 1 | 20 | 8 |
| 7:30 PM | 15 | 6 | 0 | 0 | 0 | 0 | 15 | 6 |
| 7:45 PM | 12 | 5 | 0 | 0 | 0 | 0 | 12 | 5 |
| Totals | 693 | 450 | 16 | 9 | 4 | 4 | 713 | 463 |

Driveway IN/OUT

Custom ID: 3-003

Location: Warren St & Pilot Travel Center West North Dwy

City: Lost Hills

Date: 7/1/2021

Day: Thursday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|------------|-----------------------|----------|-----------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 5:15 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 5:30 AM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 5:45 AM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| 6:00 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 6:15 AM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 6:30 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 6:45 AM | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 6 |
| 7:00 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 7:15 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 7:30 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 7:45 AM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 8:00 AM | 0 | 1 | 1 | 4 | 0 | 0 | 1 | 5 |
| 8:15 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 8:30 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 8:45 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 9:00 AM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 9:15 AM | 1 | 1 | 0 | 2 | 0 | 0 | 1 | 3 |
| 9:30 AM | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 7 |
| 9:45 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 10:00 AM | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 7 |
| 10:15 AM | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| 10:30 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 10:45 AM | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 9 |
| 11:00 AM | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 2 |
| 11:15 AM | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 5 |
| 11:30 AM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 11:45 AM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 12:00 PM | 2 | 2 | 0 | 3 | 0 | 0 | 2 | 5 |
| 12:15 PM | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 7 |
| 12:30 PM | 3 | 2 | 0 | 2 | 0 | 0 | 3 | 4 |
| 12:45 PM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 1:00 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 1:15 PM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 1:30 PM | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 2 |
| 1:45 PM | 1 | 1 | 0 | 4 | 0 | 0 | 1 | 5 |
| 2:00 PM | 0 | 3 | 1 | 3 | 0 | 0 | 1 | 6 |
| 2:15 PM | 1 | 0 | 0 | 4 | 0 | 0 | 1 | 4 |
| 2:30 PM | 1 | 3 | 0 | 7 | 0 | 0 | 1 | 10 |
| 2:45 PM | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 5 |
| 3:00 PM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 4 |
| 3:15 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 3:30 PM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 3:45 PM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| 4:00 PM | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 6 |
| 4:15 PM | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 6 |
| 4:30 PM | 1 | 2 | 0 | 2 | 0 | 0 | 1 | 4 |
| 4:45 PM | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 6 |
| 5:00 PM | 1 | 2 | 0 | 5 | 0 | 0 | 1 | 7 |
| 5:15 PM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 5:30 PM | 1 | 1 | 0 | 6 | 0 | 0 | 1 | 7 |
| 5:45 PM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 6:00 PM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 6:15 PM | 1 | 2 | 0 | 7 | 0 | 0 | 1 | 9 |
| 6:30 PM | 1 | 1 | 0 | 4 | 0 | 0 | 1 | 5 |
| 6:45 PM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 7:00 PM | 1 | 1 | 0 | 5 | 0 | 0 | 1 | 6 |
| 7:15 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 7:30 PM | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 7 |
| 7:45 PM | 1 | 1 | 0 | 5 | 0 | 0 | 1 | 6 |
| Totals | 19 | 49 | 2 | 251 | 0 | 0 | 21 | 300 |

Driveway IN/OUT

Custom ID: 3-004

Location: Warren St & Pilot Travel Center West Middle Dwy

City: Lost Hills

Date: 7/1/2021

Day: Thursday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|------------|-----------------------|----------|-----------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 5:15 AM | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 6 |
| 5:30 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 5:45 AM | 0 | 0 | 1 | 8 | 0 | 0 | 1 | 8 |
| 6:00 AM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 6:15 AM | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 6:30 AM | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 6 |
| 6:45 AM | 0 | 1 | 1 | 4 | 0 | 0 | 1 | 5 |
| 7:00 AM | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| 7:15 AM | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 |
| 7:30 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 7:45 AM | 0 | 1 | 1 | 5 | 0 | 0 | 1 | 6 |
| 8:00 AM | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 5 |
| 8:15 AM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 8:30 AM | 0 | 1 | 0 | 5 | 0 | 1 | 0 | 7 |
| 8:45 AM | 0 | 0 | 1 | 6 | 0 | 1 | 1 | 7 |
| 9:00 AM | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 5 |
| 9:15 AM | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 |
| 9:30 AM | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 4 |
| 9:45 AM | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 2 |
| 10:00 AM | 1 | 0 | 0 | 7 | 0 | 0 | 1 | 7 |
| 10:15 AM | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 3 |
| 10:30 AM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 10:45 AM | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 8 |
| 11:00 AM | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 |
| 11:15 AM | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 5 |
| 11:30 AM | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 11:45 AM | 1 | 0 | 0 | 4 | 0 | 0 | 1 | 4 |
| 12:00 PM | 2 | 1 | 0 | 2 | 0 | 0 | 2 | 3 |
| 12:15 PM | 1 | 1 | 0 | 8 | 0 | 0 | 1 | 9 |
| 12:30 PM | 0 | 4 | 0 | 5 | 0 | 0 | 0 | 9 |
| 12:45 PM | 1 | 1 | 1 | 5 | 0 | 0 | 2 | 6 |
| 1:00 PM | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 5 |
| 1:15 PM | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 5 |
| 1:30 PM | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 6 |
| 1:45 PM | 0 | 1 | 1 | 6 | 0 | 0 | 1 | 7 |
| 2:00 PM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 6 |
| 2:15 PM | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 5 |
| 2:30 PM | 1 | 1 | 0 | 2 | 0 | 1 | 1 | 4 |
| 2:45 PM | 1 | 1 | 0 | 3 | 0 | 0 | 1 | 4 |
| 3:00 PM | 2 | 4 | 0 | 4 | 0 | 0 | 2 | 8 |
| 3:15 PM | 0 | 0 | 1 | 6 | 0 | 0 | 1 | 6 |
| 3:30 PM | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 8 |
| 3:45 PM | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 5 |
| 4:00 PM | 0 | 0 | 1 | 9 | 0 | 0 | 1 | 9 |
| 4:15 PM | 1 | 1 | 0 | 3 | 0 | 0 | 1 | 4 |
| 4:30 PM | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 4 |
| 4:45 PM | 2 | 3 | 0 | 9 | 0 | 0 | 2 | 12 |
| 5:00 PM | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 5 |
| 5:15 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| 5:30 PM | 0 | 2 | 1 | 6 | 0 | 0 | 1 | 8 |
| 5:45 PM | 0 | 1 | 1 | 3 | 0 | 0 | 1 | 4 |
| 6:00 PM | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| 6:15 PM | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 5 |
| 6:30 PM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 6:45 PM | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| 7:00 PM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| 7:15 PM | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 5 |
| 7:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:45 PM | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4 |
| Totals | 22 | 42 | 13 | 275 | 0 | 3 | 35 | 320 |

Driveway IN/OUT

Custom ID: 3-005

Location: Warren St & Pilot Travel Center West South Dwy

City: Lost Hills

Date: 7/1/2021

Day: Thursday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|------------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 0 | 2 | 8 | 4 | 0 | 0 | 8 | 6 |
| 5:15 AM | 0 | 0 | 3 | 1 | 0 | 0 | 3 | 1 |
| 5:30 AM | 0 | 0 | 3 | 3 | 0 | 0 | 3 | 3 |
| 5:45 AM | 1 | 0 | 1 | 1 | 0 | 0 | 2 | 1 |
| 6:00 AM | 0 | 0 | 3 | 2 | 0 | 0 | 3 | 2 |
| 6:15 AM | 0 | 0 | 5 | 4 | 0 | 0 | 5 | 4 |
| 6:30 AM | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 |
| 6:45 AM | 0 | 0 | 5 | 3 | 0 | 0 | 5 | 3 |
| 7:00 AM | 0 | 1 | 4 | 2 | 0 | 0 | 4 | 3 |
| 7:15 AM | 0 | 1 | 4 | 6 | 0 | 0 | 4 | 7 |
| 7:30 AM | 0 | 0 | 5 | 5 | 0 | 0 | 5 | 5 |
| 7:45 AM | 0 | 0 | 5 | 2 | 0 | 0 | 5 | 2 |
| 8:00 AM | 0 | 0 | 5 | 6 | 0 | 0 | 5 | 6 |
| 8:15 AM | 0 | 1 | 4 | 4 | 2 | 0 | 6 | 5 |
| 8:30 AM | 1 | 0 | 5 | 1 | 0 | 0 | 6 | 1 |
| 8:45 AM | 1 | 1 | 3 | 0 | 0 | 0 | 4 | 1 |
| 9:00 AM | 1 | 0 | 1 | 4 | 0 | 0 | 2 | 4 |
| 9:15 AM | 0 | 1 | 3 | 4 | 0 | 0 | 3 | 5 |
| 9:30 AM | 3 | 1 | 2 | 3 | 0 | 0 | 5 | 4 |
| 9:45 AM | 0 | 0 | 5 | 3 | 0 | 0 | 5 | 3 |
| 10:00 AM | 0 | 0 | 8 | 2 | 0 | 0 | 8 | 2 |
| 10:15 AM | 1 | 0 | 10 | 3 | 0 | 0 | 11 | 3 |
| 10:30 AM | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 |
| 10:45 AM | 1 | 1 | 6 | 3 | 0 | 0 | 7 | 4 |
| 11:00 AM | 0 | 1 | 5 | 2 | 0 | 0 | 5 | 3 |
| 11:15 AM | 0 | 0 | 2 | 3 | 0 | 0 | 2 | 3 |
| 11:30 AM | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 3 |
| 11:45 AM | 0 | 1 | 4 | 2 | 0 | 0 | 4 | 3 |
| 12:00 PM | 0 | 1 | 3 | 3 | 0 | 0 | 3 | 4 |
| 12:15 PM | 0 | 2 | 11 | 1 | 0 | 0 | 11 | 3 |
| 12:30 PM | 1 | 2 | 8 | 0 | 0 | 0 | 9 | 2 |
| 12:45 PM | 1 | 1 | 10 | 4 | 0 | 0 | 11 | 5 |
| 1:00 PM | 2 | 1 | 3 | 4 | 0 | 0 | 5 | 5 |
| 1:15 PM | 2 | 0 | 8 | 1 | 1 | 0 | 11 | 1 |
| 1:30 PM | 1 | 0 | 4 | 5 | 0 | 0 | 5 | 5 |
| 1:45 PM | 1 | 1 | 2 | 7 | 0 | 0 | 3 | 8 |
| 2:00 PM | 0 | 2 | 3 | 1 | 0 | 0 | 3 | 3 |
| 2:15 PM | 1 | 1 | 7 | 3 | 1 | 1 | 9 | 5 |
| 2:30 PM | 0 | 1 | 5 | 5 | 0 | 0 | 5 | 6 |
| 2:45 PM | 0 | 1 | 5 | 7 | 0 | 0 | 5 | 8 |
| 3:00 PM | 2 | 0 | 5 | 5 | 0 | 0 | 7 | 5 |
| 3:15 PM | 0 | 0 | 9 | 3 | 0 | 0 | 9 | 3 |
| 3:30 PM | 0 | 1 | 7 | 1 | 0 | 0 | 7 | 2 |
| 3:45 PM | 0 | 0 | 7 | 3 | 0 | 0 | 7 | 3 |
| 4:00 PM | 0 | 0 | 6 | 6 | 0 | 0 | 6 | 6 |
| 4:15 PM | 0 | 1 | 3 | 3 | 0 | 0 | 3 | 4 |
| 4:30 PM | 1 | 1 | 5 | 1 | 0 | 0 | 6 | 2 |
| 4:45 PM | 1 | 2 | 6 | 4 | 0 | 0 | 7 | 6 |
| 5:00 PM | 0 | 0 | 6 | 5 | 0 | 0 | 6 | 5 |
| 5:15 PM | 1 | 0 | 8 | 3 | 0 | 0 | 9 | 3 |
| 5:30 PM | 0 | 0 | 5 | 2 | 0 | 0 | 5 | 2 |
| 5:45 PM | 0 | 1 | 13 | 1 | 0 | 0 | 13 | 2 |
| 6:00 PM | 0 | 0 | 6 | 2 | 0 | 0 | 6 | 2 |
| 6:15 PM | 0 | 0 | 3 | 4 | 0 | 0 | 3 | 4 |
| 6:30 PM | 0 | 1 | 2 | 2 | 0 | 0 | 2 | 3 |
| 6:45 PM | 0 | 1 | 3 | 6 | 0 | 0 | 3 | 7 |
| 7:00 PM | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 |
| 7:15 PM | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 3 |
| 7:30 PM | 1 | 1 | 5 | 2 | 0 | 0 | 6 | 3 |
| 7:45 PM | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 1 |
| Totals | 24 | 34 | 292 | 175 | 4 | 1 | 320 | 210 |

Driveway IN/OUT

Custom ID: 3-006

Location: Aloma St & Pilot Travel Center East Dwy

City: Lost Hills

Date: 7/1/2021

Day: Thursday

| TIME | Passenger Vehicles | | Heavy Trucks | | Recreational Vehicles | | Total | |
|---------------|--------------------|-----------|--------------|-----------|-----------------------|----------|------------|------------|
| | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound | Inbound | Outbound |
| 5:00 AM | 1 | 0 | 5 | 1 | 0 | 0 | 6 | 1 |
| 5:15 AM | 1 | 0 | 9 | 0 | 0 | 0 | 10 | 0 |
| 5:30 AM | 0 | 0 | 6 | 1 | 0 | 0 | 6 | 1 |
| 5:45 AM | 0 | 0 | 9 | 4 | 0 | 0 | 9 | 4 |
| 6:00 AM | 0 | 1 | 8 | 0 | 0 | 0 | 8 | 1 |
| 6:15 AM | 0 | 0 | 8 | 1 | 0 | 0 | 8 | 1 |
| 6:30 AM | 1 | 0 | 6 | 1 | 0 | 0 | 7 | 1 |
| 6:45 AM | 1 | 1 | 7 | 2 | 0 | 0 | 8 | 3 |
| 7:00 AM | 1 | 0 | 14 | 2 | 0 | 0 | 15 | 2 |
| 7:15 AM | 1 | 0 | 7 | 0 | 0 | 0 | 8 | 0 |
| 7:30 AM | 0 | 0 | 9 | 2 | 0 | 0 | 9 | 2 |
| 7:45 AM | 2 | 1 | 5 | 0 | 0 | 0 | 7 | 1 |
| 8:00 AM | 1 | 1 | 7 | 0 | 0 | 0 | 8 | 1 |
| 8:15 AM | 3 | 1 | 7 | 3 | 0 | 0 | 10 | 4 |
| 8:30 AM | 2 | 2 | 6 | 2 | 0 | 0 | 8 | 4 |
| 8:45 AM | 1 | 1 | 9 | 2 | 0 | 0 | 10 | 3 |
| 9:00 AM | 3 | 1 | 7 | 0 | 0 | 0 | 10 | 1 |
| 9:15 AM | 2 | 0 | 6 | 1 | 0 | 0 | 8 | 1 |
| 9:30 AM | 2 | 2 | 10 | 0 | 0 | 0 | 12 | 2 |
| 9:45 AM | 1 | 1 | 5 | 1 | 0 | 0 | 6 | 2 |
| 10:00 AM | 4 | 3 | 8 | 0 | 0 | 0 | 12 | 3 |
| 10:15 AM | 3 | 2 | 5 | 3 | 0 | 0 | 8 | 5 |
| 10:30 AM | 2 | 2 | 6 | 3 | 0 | 0 | 8 | 5 |
| 10:45 AM | 3 | 1 | 9 | 1 | 0 | 0 | 12 | 2 |
| 11:00 AM | 3 | 1 | 6 | 2 | 0 | 0 | 9 | 3 |
| 11:15 AM | 1 | 1 | 2 | 2 | 1 | 0 | 4 | 3 |
| 11:30 AM | 3 | 1 | 4 | 0 | 0 | 0 | 7 | 1 |
| 11:45 AM | 3 | 1 | 11 | 1 | 0 | 0 | 14 | 2 |
| 12:00 PM | 3 | 2 | 4 | 1 | 0 | 0 | 7 | 3 |
| 12:15 PM | 2 | 0 | 10 | 1 | 0 | 0 | 12 | 1 |
| 12:30 PM | 4 | 0 | 5 | 1 | 0 | 0 | 9 | 1 |
| 12:45 PM | 3 | 2 | 8 | 4 | 0 | 0 | 11 | 6 |
| 1:00 PM | 2 | 2 | 5 | 2 | 0 | 0 | 7 | 4 |
| 1:15 PM | 3 | 2 | 10 | 2 | 0 | 0 | 13 | 4 |
| 1:30 PM | 0 | 1 | 9 | 1 | 0 | 0 | 9 | 2 |
| 1:45 PM | 3 | 0 | 8 | 1 | 0 | 0 | 11 | 1 |
| 2:00 PM | 4 | 0 | 5 | 1 | 1 | 1 | 10 | 2 |
| 2:15 PM | 4 | 1 | 10 | 1 | 0 | 0 | 14 | 2 |
| 2:30 PM | 7 | 1 | 11 | 1 | 0 | 0 | 18 | 2 |
| 2:45 PM | 0 | 0 | 11 | 3 | 0 | 0 | 11 | 3 |
| 3:00 PM | 3 | 0 | 8 | 1 | 0 | 0 | 11 | 1 |
| 3:15 PM | 1 | 0 | 14 | 2 | 0 | 0 | 15 | 2 |
| 3:30 PM | 5 | 5 | 8 | 1 | 0 | 0 | 13 | 6 |
| 3:45 PM | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 |
| 4:00 PM | 0 | 1 | 8 | 1 | 0 | 0 | 8 | 2 |
| 4:15 PM | 3 | 0 | 11 | 2 | 0 | 0 | 14 | 2 |
| 4:30 PM | 2 | 1 | 13 | 0 | 0 | 0 | 15 | 1 |
| 4:45 PM | 3 | 1 | 13 | 0 | 0 | 0 | 16 | 1 |
| 5:00 PM | 3 | 3 | 10 | 1 | 0 | 0 | 13 | 4 |
| 5:15 PM | 3 | 1 | 5 | 4 | 0 | 0 | 8 | 5 |
| 5:30 PM | 2 | 0 | 6 | 0 | 0 | 0 | 8 | 0 |
| 5:45 PM | 3 | 1 | 4 | 2 | 0 | 0 | 7 | 3 |
| 6:00 PM | 2 | 1 | 8 | 3 | 0 | 0 | 10 | 4 |
| 6:15 PM | 1 | 1 | 12 | 2 | 0 | 0 | 13 | 3 |
| 6:30 PM | 1 | 1 | 11 | 0 | 0 | 0 | 12 | 1 |
| 6:45 PM | 2 | 2 | 11 | 2 | 0 | 0 | 13 | 4 |
| 7:00 PM | 1 | 0 | 4 | 0 | 0 | 0 | 5 | 0 |
| 7:15 PM | 2 | 1 | 6 | 0 | 0 | 0 | 8 | 1 |
| 7:30 PM | 4 | 2 | 7 | 0 | 0 | 0 | 11 | 2 |
| 7:45 PM | 2 | 0 | 4 | 1 | 0 | 0 | 6 | 1 |
| Totals | 123 | 56 | 467 | 76 | 2 | 1 | 592 | 133 |

APPENDIX D

INTERSECTION ANALYSIS
WORKSHEETS

APPENDIX D-1

INTERSECTION ANALYSIS
WORKSHEETS -
EXISTING CONDITIONS

Perris Travel Center Project

Vistro File: K:\...\Perris TC_AM.vistro

Scenario 1 Ex AM

Report File: K:\...\1 EX AM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | WB Left | 0.729 | 16.2 | B |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | EB Left | 0.704 | 26.8 | C |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Left | 0.309 | 30.6 | D |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | NB Left | 0.505 | 24.0 | C |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | EB Thru | 0.007 | 0.0 | A |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.001 | 0.0 | A |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.001 | 0.0 | A |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 16.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.729 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | ↑↓ | | | ↓↑ | | | ↑↑ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 124 | 0 | 245 | 0 | 722 | 499 | 105 | 703 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 124 | 0 | 245 | 0 | 722 | 499 | 105 | 703 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 0.9850 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 31 | 0 | 62 | 0 | 183 | 127 | 27 | 178 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 126 | 0 | 249 | 0 | 733 | 507 | 107 | 714 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 21 | 0 | 46 | 67 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|-------|-------|------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 16 | 16 | 55 | 55 | 7 | 66 |
| g / C, Green / Cycle | | 0.18 | 0.18 | 0.61 | 0.61 | 0.08 | 0.73 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.07 | 0.15 | 0.39 | 0.31 | 0.06 | 0.20 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 319 | 285 | 1161 | 987 | 143 | 2657 |
| d1, Uniform Delay [s] | | 32.80 | 36.08 | 11.09 | 9.93 | 40.56 | 3.95 |
| k, delay calibration | | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 0.79 | 8.22 | 2.62 | 1.91 | 7.52 | 0.25 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|--------|--------|--------|--------|-------|
| X, volume / capacity | | 0.39 | 0.87 | 0.63 | 0.51 | 0.75 | 0.27 |
| d, Delay for Lane Group [s/veh] | | 33.59 | 44.30 | 13.70 | 11.84 | 48.07 | 4.20 |
| Lane Group LOS | | C | D | B | B | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 2.47 | 5.86 | 8.97 | 5.56 | 2.59 | 1.76 |
| 50th-Percentile Queue Length [ft/ln] | | 61.69 | 146.58 | 224.37 | 138.98 | 64.81 | 43.99 |
| 95th-Percentile Queue Length [veh/ln] | | 4.44 | 9.83 | 13.89 | 9.43 | 4.67 | 3.17 |
| 95th-Percentile Queue Length [ft/ln] | | 111.05 | 245.85 | 347.20 | 235.65 | 116.65 | 79.19 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 33.59 | 33.59 | 44.30 | 0.00 | 13.70 | 11.84 | 48.07 | 4.20 | 0.00 |
| Movement LOS | | | | C | C | D | | B | B | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 40.70 | | | 12.94 | | | 9.92 | | |
| Approach LOS | A | | | D | | | B | | | A | | |
| d_I, Intersection Delay [s/veh] | 16.19 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.729 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.064 | 0.000 | 2.542 |
| Crosswalk LOS | F | B | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 422 | 378 | 1400 |
| d_b, Bicycle Delay [s] | 45.00 | 28.01 | 29.61 | 4.05 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 2.178 | 3.606 | 2.237 |
| Bicycle LOS | D | B | D | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 26.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.704 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 351 | 0 | 135 | 0 | 0 | 0 | 270 | 580 | 0 | 0 | 456 | 143 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 351 | 0 | 135 | 0 | 0 | 0 | 270 | 580 | 0 | 0 | 456 | 143 |
| Peak Hour Factor | 0.9650 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 1.0000 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 0.9650 | 0.9650 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 91 | 0 | 35 | 0 | 0 | 0 | 70 | 150 | 0 | 0 | 118 | 37 |
| Total Analysis Volume [veh/h] | 364 | 0 | 140 | 0 | 0 | 0 | 280 | 601 | 0 | 0 | 473 | 148 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 1.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 26 | 0 | 0 | 0 | 0 | 17 | 64 | 0 | 0 | 47 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|-------|-------|--|-------|------|-------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 20 | 20 | | 15 | 62 | 43 |
| g / C, Green / Cycle | 0.22 | 0.22 | | 0.17 | 0.69 | 0.48 |
| (v / s)_i Volume / Saturation Flow Rate | 0.20 | 0.09 | | 0.15 | 0.32 | 0.34 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1823 |
| c, Capacity [veh/h] | 402 | 359 | | 299 | 1309 | 874 |
| d1, Uniform Delay [s] | 34.06 | 29.79 | | 37.12 | 6.38 | 18.50 |
| k, delay calibration | 0.16 | 0.11 | | 0.11 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.80 | 0.69 | | 13.31 | 1.16 | 4.88 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|--------|--------|--|--------|--------|--------|
| X, volume / capacity | 0.90 | 0.39 | | 0.94 | 0.46 | 0.71 |
| d, Delay for Lane Group [s/veh] | 44.86 | 30.48 | | 50.43 | 7.54 | 23.38 |
| Lane Group LOS | D | C | | D | A | C |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 8.75 | 2.61 | | 7.06 | 4.73 | 10.74 |
| 50th-Percentile Queue Length [ft/ln] | 218.80 | 65.17 | | 176.43 | 118.18 | 268.60 |
| 95th-Percentile Queue Length [veh/ln] | 13.60 | 4.69 | | 11.41 | 8.29 | 16.12 |
| 95th-Percentile Queue Length [ft/ln] | 340.10 | 117.31 | | 285.35 | 207.33 | 402.99 |

Movement, Approach, & Intersection Results

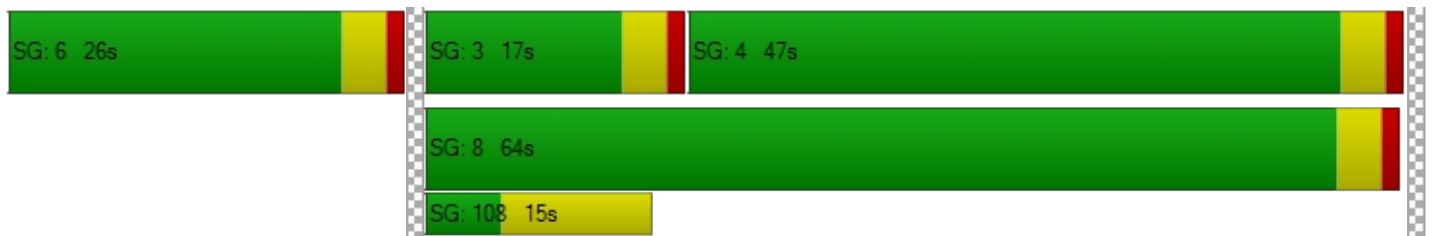
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 44.86 | 44.86 | 30.48 | 0.00 | 0.00 | 0.00 | 50.43 | 7.54 | 0.00 | 0.00 | 23.38 | 23.38 |
| Movement LOS | D | D | C | | | | D | A | | | C | C |
| d_A, Approach Delay [s/veh] | 40.87 | | | 0.00 | | | 21.17 | | | 23.38 | | |
| Approach LOS | D | | | A | | | C | | | C | | |
| d_I, Intersection Delay [s/veh] | 26.80 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.704 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.106 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 489 | 0 | 1333 | 956 |
| d_b, Bicycle Delay [s] | 25.69 | 45.00 | 5.00 | 12.27 |
| I_b,int, Bicycle LOS Score for Intersection | 2.391 | 4.132 | 3.013 | 2.584 |
| Bicycle LOS | B | D | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 30.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.309 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 62 | 41 | 540 | 114 | 28 | 456 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 62 | 41 | 540 | 114 | 28 | 456 |
| Peak Hour Factor | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 16 | 11 | 142 | 30 | 7 | 120 |
| Total Analysis Volume [veh/h] | 65 | 43 | 567 | 120 | 29 | 479 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.31 | 0.09 | 0.01 | 0.00 | 0.03 | 0.00 |
| d_M, Delay for Movement [s/veh] | 30.62 | 20.88 | 0.00 | 0.00 | 9.06 | 0.00 |
| Movement LOS | D | C | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 1.82 | 1.82 | 0.00 | 0.00 | 0.10 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 45.47 | 45.47 | 0.00 | 0.00 | 2.45 | 0.00 |
| d_A, Approach Delay [s/veh] | 26.74 | | 0.00 | | 0.52 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 2.42 | | | | | |
| Intersection LOS | D | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 24.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.505 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 99 | 9 | 34 | 8 | 9 | 109 | 87 | 558 | 34 | 61 | 341 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 99 | 9 | 34 | 8 | 9 | 109 | 87 | 558 | 34 | 61 | 341 | 11 |
| Peak Hour Factor | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 3 | 9 | 2 | 3 | 30 | 24 | 155 | 9 | 17 | 95 | 3 |
| Total Analysis Volume [veh/h] | 110 | 10 | 38 | 9 | 10 | 121 | 97 | 621 | 38 | 68 | 380 | 12 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 0.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 7 | 10 | 0 | 7 | 10 | 0 | 7 | 10 | 0 | 7 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 21 | 0 | 12 | 21 | 0 | 28 | 46 | 0 | 11 | 29 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 3.7 | 0.0 | 2.0 | 3.7 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|-------|-------|-------|-------|-------|-------|------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 5.70 | 5.70 | 4.00 | 5.70 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 3.70 | 3.70 | 2.00 | 3.70 |
| g_i, Effective Green Time [s] | 7 | 15 | 1 | 10 | 6 | 50 | 50 | 6 | 49 |
| g / C, Green / Cycle | 0.08 | 0.17 | 0.02 | 0.11 | 0.07 | 0.56 | 0.56 | 0.06 | 0.55 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.03 | 0.00 | 0.08 | 0.05 | 0.33 | 0.02 | 0.04 | 0.21 |
| s, saturation flow rate [veh/h] | 1810 | 1667 | 1810 | 1634 | 1810 | 1900 | 1615 | 1810 | 1890 |
| c, Capacity [veh/h] | 139 | 280 | 29 | 175 | 130 | 1056 | 897 | 115 | 1035 |
| d1, Uniform Delay [s] | 40.83 | 32.06 | 43.79 | 38.99 | 40.98 | 13.20 | 9.10 | 41.00 | 11.62 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.59 | 0.29 | 5.98 | 6.24 | 8.30 | 2.41 | 0.09 | 4.75 | 1.06 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|--------|-------|-------|--------|
| X, volume / capacity | 0.79 | 0.17 | 0.31 | 0.75 | 0.75 | 0.59 | 0.04 | 0.59 | 0.38 |
| d, Delay for Lane Group [s/veh] | 50.41 | 32.35 | 49.78 | 45.23 | 49.28 | 15.61 | 9.19 | 45.75 | 12.68 |
| Lane Group LOS | D | C | D | D | D | B | A | D | B |
| Critical Lane Group | Yes | No | No | Yes | No | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | 2.74 | 0.91 | 0.24 | 3.07 | 2.38 | 8.29 | 0.34 | 1.60 | 4.46 |
| 50th-Percentile Queue Length [ft/ln] | 68.39 | 22.69 | 6.11 | 76.80 | 59.57 | 207.23 | 8.55 | 40.06 | 111.62 |
| 95th-Percentile Queue Length [veh/ln] | 4.92 | 1.63 | 0.44 | 5.53 | 4.29 | 13.01 | 0.62 | 2.88 | 7.93 |
| 95th-Percentile Queue Length [ft/ln] | 123.10 | 40.84 | 11.00 | 138.25 | 107.23 | 325.27 | 15.39 | 72.10 | 198.25 |

Movement, Approach, & Intersection Results

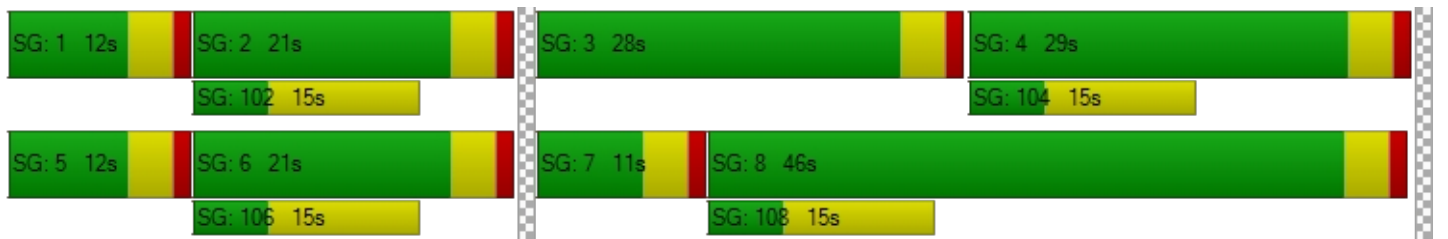
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 50.41 | 32.35 | 32.35 | 49.78 | 45.23 | 45.23 | 49.28 | 15.61 | 9.19 | 45.75 | 12.68 | 12.68 |
| Movement LOS | D | C | C | D | D | D | D | B | A | D | B | B |
| d_A, Approach Delay [s/veh] | 44.93 | | | 45.53 | | | 19.60 | | | 17.57 | | |
| Approach LOS | D | | | D | | | B | | | B | | |
| d_I, Intersection Delay [s/veh] | 24.03 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.505 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 9.0 | 9.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 36.45 | 36.45 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.031 | 2.026 | 2.466 | 2.308 |
| Crosswalk LOS | B | B | B | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 378 | 378 | 933 | 556 |
| d_b, Bicycle Delay [s] | 29.61 | 29.61 | 12.80 | 23.47 |
| I_b,int, Bicycle LOS Score for Intersection | 1.820 | 1.791 | 2.807 | 2.319 |
| Bicycle LOS | A | A | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.007 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↑ | | ↶ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 679 | 484 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 679 | 484 | 0 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 179 | 127 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 715 | 509 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 11.34 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | B | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.34 | | 0.00 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.001 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 28 | 33 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 113 | 133 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.48 | 0.00 | 0.00 | 0.00 | 9.85 | 8.93 |
| Movement LOS | A | A | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.39 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.001 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 28 | 33 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 113 | 133 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.46 | 0.00 | 0.00 | 0.00 | 9.82 | 8.91 |
| Movement LOS | A | A | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.36 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Perris Travel Center Project

Vistro File: K:\...\Perris TC_PM.vistro

Scenario 1 EX PM

Report File: K:\...\1 EX PM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | SB Right | 0.784 | 22.0 | C |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | NB Left | 0.903 | 34.0 | C |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Left | 0.473 | 52.9 | F |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | WB Left | 0.635 | 23.3 | C |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | EB Thru | 0.007 | 0.0 | A |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.002 | 0.0 | A |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.002 | 0.0 | A |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 22.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.784 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road Eastbound | | | Ethanac Road Westbound | | |
|------------------------------|------------|--------|--------|------------|--------|--------|------------------------|--------|--------|------------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 193 | 0 | 361 | 0 | 602 | 384 | 125 | 716 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 193 | 0 | 361 | 0 | 602 | 384 | 125 | 716 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 0.9460 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 51 | 0 | 95 | 0 | 159 | 101 | 33 | 189 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 204 | 0 | 382 | 0 | 636 | 406 | 132 | 757 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 41 | 0 | 22 | 63 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|-------|-------|-------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 23 | 23 | 47 | 47 | 8 | 59 |
| g / C, Green / Cycle | | 0.25 | 0.25 | 0.52 | 0.52 | 0.09 | 0.66 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.11 | 0.24 | 0.33 | 0.25 | 0.07 | 0.21 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 459 | 410 | 985 | 837 | 171 | 2378 |
| d1, Uniform Delay [s] | | 28.23 | 32.81 | 15.68 | 13.93 | 39.82 | 6.69 |
| k, delay calibration | | 0.11 | 0.24 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 0.67 | 17.94 | 3.26 | 2.01 | 7.29 | 0.35 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | | 0.44 | 0.93 | 0.65 | 0.48 | 0.77 | 0.32 |
| d, Delay for Lane Group [s/veh] | | 28.91 | 50.75 | 18.94 | 15.94 | 47.11 | 7.04 |
| Lane Group LOS | | C | D | B | B | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 3.71 | 9.93 | 9.63 | 5.42 | 3.16 | 2.84 |
| 50th-Percentile Queue Length [ft/ln] | | 92.79 | 248.34 | 240.73 | 135.57 | 79.02 | 70.95 |
| 95th-Percentile Queue Length [veh/ln] | | 6.68 | 15.10 | 14.72 | 9.24 | 5.69 | 5.11 |
| 95th-Percentile Queue Length [ft/ln] | | 167.02 | 377.56 | 367.95 | 231.04 | 142.24 | 127.71 |

Movement, Approach, & Intersection Results

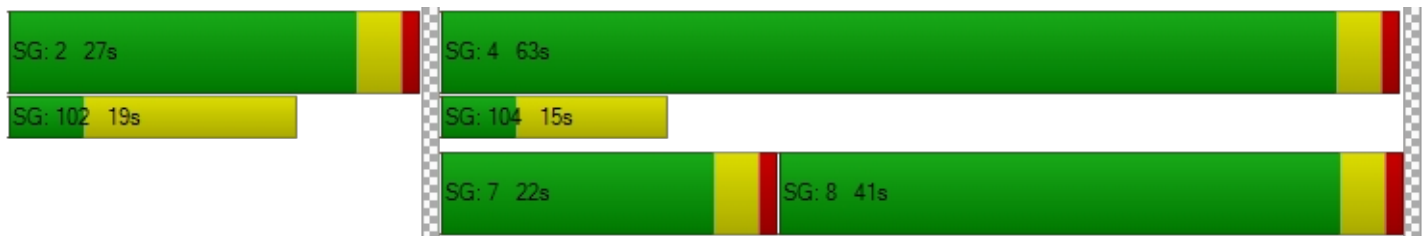
| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 28.91 | 28.91 | 50.75 | 0.00 | 18.94 | 15.94 | 47.11 | 7.04 | 0.00 |
| Movement LOS | | | | C | C | D | | B | B | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 43.15 | | | 17.77 | | | 12.99 | | |
| Approach LOS | A | | | D | | | B | | | B | | |
| d_I, Intersection Delay [s/veh] | 21.99 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.784 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.132 | 0.000 | 2.554 |
| Crosswalk LOS | F | B | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 511 | 822 | 1311 |
| d_b, Bicycle Delay [s] | 45.00 | 24.94 | 15.61 | 5.34 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 2.527 | 3.279 | 2.293 |
| Bicycle LOS | D | B | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 34.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.903 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 426 | 2 | 198 | 0 | 0 | 0 | 246 | 570 | 0 | 0 | 413 | 195 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 426 | 2 | 198 | 0 | 0 | 0 | 246 | 570 | 0 | 0 | 413 | 195 |
| Peak Hour Factor | 0.9570 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 1.0000 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 0.9570 | 0.9570 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 111 | 1 | 52 | 0 | 0 | 0 | 64 | 149 | 0 | 0 | 108 | 51 |
| Total Analysis Volume [veh/h] | 445 | 2 | 207 | 0 | 0 | 0 | 257 | 596 | 0 | 0 | 432 | 204 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 26 | 0 | 0 | 0 | 0 | 17 | 64 | 0 | 0 | 47 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|-------|-------|--|-------|------|-------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 22 | 22 | | 13 | 60 | 43 |
| g / C, Green / Cycle | 0.24 | 0.24 | | 0.14 | 0.67 | 0.48 |
| (v / s)_i Volume / Saturation Flow Rate | 0.25 | 0.13 | | 0.14 | 0.31 | 0.35 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1798 |
| c, Capacity [veh/h] | 442 | 395 | | 261 | 1267 | 859 |
| d1, Uniform Delay [s] | 34.00 | 29.47 | | 38.39 | 7.29 | 18.99 |
| k, delay calibration | 0.26 | 0.11 | | 0.11 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 33.46 | 1.08 | | 22.17 | 1.26 | 5.69 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|--------|--------|--|--------|--------|--------|
| X, volume / capacity | 1.01 | 0.52 | | 0.98 | 0.47 | 0.74 |
| d, Delay for Lane Group [s/veh] | 67.46 | 30.55 | | 60.56 | 8.54 | 24.68 |
| Lane Group LOS | F | C | | E | A | C |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 13.48 | 3.92 | | 7.15 | 5.17 | 11.37 |
| 50th-Percentile Queue Length [ft/ln] | 337.11 | 97.96 | | 178.81 | 129.35 | 284.20 |
| 95th-Percentile Queue Length [veh/ln] | 19.62 | 7.05 | | 11.54 | 8.90 | 16.90 |
| 95th-Percentile Queue Length [ft/ln] | 490.60 | 176.33 | | 288.46 | 222.61 | 422.43 |

Movement, Approach, & Intersection Results

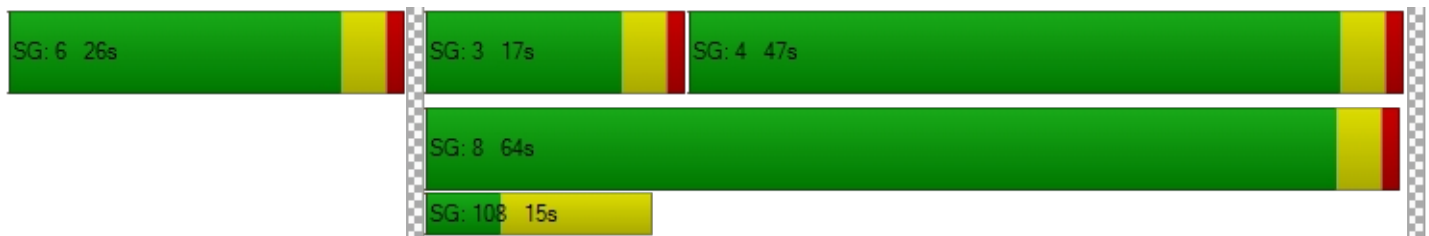
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 67.46 | 67.46 | 30.55 | 0.00 | 0.00 | 0.00 | 60.56 | 8.54 | 0.00 | 0.00 | 24.68 | 24.68 |
| Movement LOS | F | E | C | | | | E | A | | | C | C |
| d_A, Approach Delay [s/veh] | 55.78 | | | 0.00 | | | 24.21 | | | 24.68 | | |
| Approach LOS | E | | | A | | | C | | | C | | |
| d_I, Intersection Delay [s/veh] | 33.99 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.903 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| l_p,int, Pedestrian LOS Score for Intersection | 2.154 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 489 | 0 | 1333 | 956 |
| d_b, Bicycle Delay [s] | 25.69 | 45.00 | 5.00 | 12.27 |
| l_b,int, Bicycle LOS Score for Intersection | 2.639 | 4.132 | 2.967 | 2.609 |
| Bicycle LOS | B | D | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 52.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.473 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 65 | 57 | 641 | 66 | 41 | 523 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 65 | 57 | 641 | 66 | 41 | 523 |
| Peak Hour Factor | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 15 | 174 | 18 | 11 | 142 |
| Total Analysis Volume [veh/h] | 71 | 62 | 696 | 72 | 45 | 568 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.47 | 0.15 | 0.01 | 0.00 | 0.05 | 0.01 |
| d_M, Delay for Movement [s/veh] | 52.87 | 37.37 | 0.00 | 0.00 | 9.44 | 0.00 |
| Movement LOS | F | E | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 3.60 | 3.60 | 0.00 | 0.00 | 0.17 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 90.11 | 90.11 | 0.00 | 0.00 | 4.16 | 0.00 |
| d_A, Approach Delay [s/veh] | 45.65 | | 0.00 | | 0.69 | |
| Approach LOS | E | | A | | A | |
| d_I, Intersection Delay [s/veh] | 4.29 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 23.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.635 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵↑ | | | ↵↑ | | | ↵↑↻ | | | ↵↑ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Base Volume Input [veh/h] | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Peak Hour Factor | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 23 | 1 | 10 | 8 | 4 | 39 | 20 | 162 | 9 | 12 | 99 | 1 |
| Total Analysis Volume [veh/h] | 92 | 5 | 41 | 33 | 16 | 155 | 80 | 646 | 36 | 48 | 397 | 4 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 10 | 19 | 0 | 18 | 27 | 0 | 29 | 44 | 0 | 9 | 24 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|-------|-------|-------|-------|-------|-------|------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 14 | 3 | 11 | 5 | 53 | 53 | 3 | 51 |
| g / C, Green / Cycle | 0.07 | 0.16 | 0.03 | 0.13 | 0.06 | 0.59 | 0.59 | 0.04 | 0.57 |
| (v / s)_i Volume / Saturation Flow Rate | 0.05 | 0.03 | 0.02 | 0.10 | 0.04 | 0.34 | 0.02 | 0.03 | 0.21 |
| s, saturation flow rate [veh/h] | 1810 | 1642 | 1810 | 1638 | 1810 | 1900 | 1615 | 1810 | 1897 |
| c, Capacity [veh/h] | 118 | 261 | 58 | 207 | 108 | 1125 | 956 | 70 | 1084 |
| d1, Uniform Delay [s] | 41.44 | 32.74 | 42.93 | 38.36 | 41.63 | 11.35 | 7.66 | 42.70 | 10.49 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.66 | 0.32 | 8.38 | 8.14 | 9.55 | 2.14 | 0.07 | 10.94 | 0.97 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|-------|--------|-------|-------|--------|
| X, volume / capacity | 0.78 | 0.18 | 0.57 | 0.83 | 0.74 | 0.57 | 0.04 | 0.68 | 0.37 |
| d, Delay for Lane Group [s/veh] | 52.10 | 33.05 | 51.31 | 46.50 | 51.18 | 13.49 | 7.74 | 53.64 | 11.46 |
| Lane Group LOS | D | C | D | D | D | B | A | D | B |
| Critical Lane Group | Yes | No | No | Yes | No | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | 2.33 | 0.88 | 0.85 | 4.09 | 2.01 | 7.82 | 0.29 | 1.26 | 4.26 |
| 50th-Percentile Queue Length [ft/ln] | 58.36 | 22.03 | 21.31 | 102.22 | 50.35 | 195.52 | 7.22 | 31.42 | 106.61 |
| 95th-Percentile Queue Length [veh/ln] | 4.20 | 1.59 | 1.53 | 7.36 | 3.63 | 12.41 | 0.52 | 2.26 | 7.65 |
| 95th-Percentile Queue Length [ft/ln] | 105.05 | 39.65 | 38.35 | 184.00 | 90.63 | 310.18 | 12.99 | 56.56 | 191.28 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 52.10 | 33.05 | 33.05 | 51.31 | 46.50 | 46.50 | 51.18 | 13.49 | 7.74 | 53.64 | 11.46 | 11.46 |
| Movement LOS | D | C | C | D | D | D | D | B | A | D | B | B |
| d_A, Approach Delay [s/veh] | 45.75 | | | 47.28 | | | 17.17 | | | 15.97 | | |
| Approach LOS | D | | | D | | | B | | | B | | |
| d_I, Intersection Delay [s/veh] | 23.32 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.635 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.019 | 0.000 | 0.000 | 2.322 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 333 | 511 | 889 | 444 |
| d_b, Bicycle Delay [s] | 31.25 | 24.94 | 13.89 | 27.22 |
| I_b,int, Bicycle LOS Score for Intersection | 1.787 | 1.896 | 2.817 | 2.300 |
| Bicycle LOS | A | A | C | B |

Sequence




| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.007 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|---|--------|---|--------|---|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 694 | 564 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 694 | 564 | 0 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 183 | 148 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 731 | 594 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 12.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | B | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 12.08 | | 0.00 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 22 | 49 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 86 | 196 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.59 | 0.00 | 0.00 | 0.00 | 10.05 | 9.23 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.64 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 22 | 49 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 86 | 196 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.61 | 0.00 | 0.00 | 0.00 | 10.08 | 9.26 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.67 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

APPENDIX D-2

INTERSECTION ANALYSIS
WORKSHEETS -
EXISTING PLUS PROJECT

Perris Travel Center Project

Vistro File: K:\...\Perris TC_AM.vistro

Scenario 5 2 EX WP AM

Report File: K:\...\2 EX WP AM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | WB Left | 0.798 | 20.2 | C |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | WB Thru | 0.991 | 34.7 | C |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Right | 0.306 | 18.9 | C |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | SB Left | 0.821 | 36.3 | D |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | SB Right | 0.173 | 14.8 | B |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.153 | 9.6 | A |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.043 | 9.9 | A |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 20.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.798 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 124 | 0 | 245 | 0 | 722 | 499 | 105 | 703 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 95 | 0 | 0 | 0 | 5 | 0 | 97 | 5 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 219 | 0 | 245 | 0 | 727 | 499 | 202 | 708 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 0.9850 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 56 | 0 | 62 | 0 | 185 | 127 | 51 | 180 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 222 | 0 | 249 | 0 | 738 | 507 | 205 | 719 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 44 | 0 | 23 | 67 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|-------|-------|-------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 16 | 16 | 50 | 50 | 12 | 66 |
| g / C, Green / Cycle | | 0.18 | 0.18 | 0.55 | 0.55 | 0.14 | 0.73 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.12 | 0.15 | 0.39 | 0.31 | 0.11 | 0.20 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 322 | 288 | 1046 | 889 | 250 | 2652 |
| d1, Uniform Delay [s] | | 34.66 | 35.95 | 14.85 | 13.24 | 37.71 | 4.00 |
| k, delay calibration | | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 2.63 | 7.75 | 4.00 | 2.65 | 6.61 | 0.25 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|--------|--------|--------|--------|-------|
| X, volume / capacity | | 0.69 | 0.87 | 0.71 | 0.57 | 0.82 | 0.27 |
| d, Delay for Lane Group [s/veh] | | 37.28 | 43.70 | 18.85 | 15.89 | 44.32 | 4.25 |
| Lane Group LOS | | D | D | B | B | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 4.71 | 5.82 | 11.21 | 6.81 | 4.78 | 1.79 |
| 50th-Percentile Queue Length [ft/ln] | | 117.67 | 145.53 | 280.22 | 170.17 | 119.44 | 44.75 |
| 95th-Percentile Queue Length [veh/ln] | | 8.26 | 9.78 | 16.70 | 11.09 | 8.36 | 3.22 |
| 95th-Percentile Queue Length [ft/ln] | | 206.62 | 244.46 | 417.49 | 277.14 | 209.06 | 80.55 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 37.28 | 37.28 | 43.70 | 0.00 | 18.85 | 15.89 | 44.32 | 4.25 | 0.00 |
| Movement LOS | | | | D | D | D | | B | B | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 40.67 | | | 17.65 | | | 13.14 | | |
| Approach LOS | A | | | D | | | B | | | B | | |
| d_I, Intersection Delay [s/veh] | 20.18 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.798 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.095 | 0.000 | 2.592 |
| Crosswalk LOS | F | B | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 422 | 889 | 1400 |
| d_b, Bicycle Delay [s] | 45.00 | 28.01 | 13.89 | 4.05 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 2.337 | 3.614 | 2.322 |
| Bicycle LOS | D | B | D | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 34.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.991 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 351 | 0 | 135 | 0 | 0 | 0 | 270 | 580 | 0 | 0 | 456 | 143 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 95 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 102 | 98 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 351 | 0 | 230 | 0 | 0 | 0 | 270 | 680 | 0 | 0 | 558 | 241 |
| Peak Hour Factor | 0.9650 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 1.0000 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 0.9650 | 0.9650 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 91 | 0 | 60 | 0 | 0 | 0 | 70 | 176 | 0 | 0 | 145 | 62 |
| Total Analysis Volume [veh/h] | 364 | 0 | 238 | 0 | 0 | 0 | 280 | 705 | 0 | 0 | 578 | 250 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 24 | 0 | 0 | 0 | 0 | 24 | 66 | 0 | 0 | 42 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|-------|-------|--|-------|------|-------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 20 | 20 | | 16 | 62 | 42 |
| g / C, Green / Cycle | 0.22 | 0.22 | | 0.18 | 0.69 | 0.47 |
| (v / s)_i Volume / Saturation Flow Rate | 0.20 | 0.15 | | 0.15 | 0.37 | 0.46 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1804 |
| c, Capacity [veh/h] | 397 | 355 | | 321 | 1314 | 847 |
| d1, Uniform Delay [s] | 34.30 | 32.14 | | 36.02 | 6.81 | 23.40 |
| k, delay calibration | 0.16 | 0.11 | | 0.11 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 11.96 | 2.20 | | 7.32 | 1.57 | 25.93 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|--------|--------|--|--------|--------|--------|
| X, volume / capacity | 0.92 | 0.67 | | 0.87 | 0.54 | 0.98 |
| d, Delay for Lane Group [s/veh] | 46.26 | 34.34 | | 43.34 | 8.39 | 49.33 |
| Lane Group LOS | D | C | | D | A | D |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 8.90 | 4.86 | | 6.52 | 5.99 | 21.95 |
| 50th-Percentile Queue Length [ft/ln] | 222.39 | 121.45 | | 162.89 | 149.66 | 548.79 |
| 95th-Percentile Queue Length [veh/ln] | 13.79 | 8.47 | | 10.70 | 10.00 | 29.64 |
| 95th-Percentile Queue Length [ft/ln] | 344.68 | 211.82 | | 267.55 | 249.98 | 740.89 |

Movement, Approach, & Intersection Results

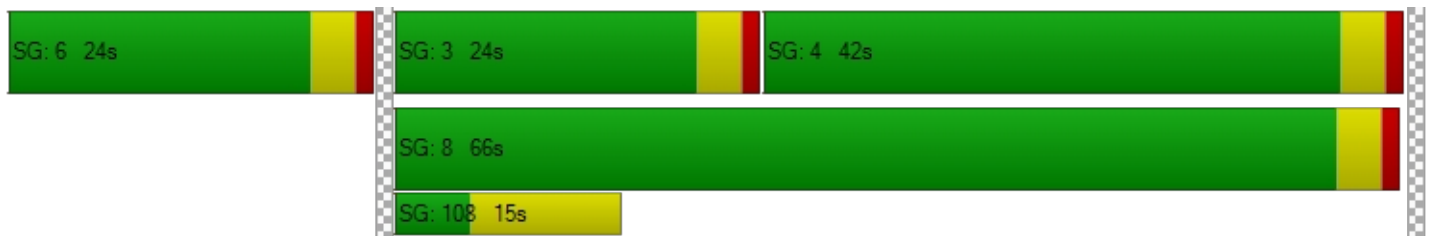
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 46.26 | 46.26 | 34.34 | 0.00 | 0.00 | 0.00 | 43.34 | 8.39 | 0.00 | 0.00 | 49.33 | 49.33 |
| Movement LOS | D | D | C | | | | D | A | | | D | D |
| d_A, Approach Delay [s/veh] | 41.55 | | | 0.00 | | | 18.32 | | | 49.33 | | |
| Approach LOS | D | | | A | | | B | | | D | | |
| d_I, Intersection Delay [s/veh] | 34.74 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.991 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.137 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 444 | 0 | 1378 | 844 |
| d_b, Bicycle Delay [s] | 27.22 | 45.00 | 4.36 | 15.02 |
| I_b,int, Bicycle LOS Score for Intersection | 2.553 | 4.132 | 3.185 | 2.926 |
| Bicycle LOS | B | D | C | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 18.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.306 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↻ | | ↑ | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 62 | 41 | 540 | 114 | 28 | 456 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 195 | 0 | 0 | 200 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 68 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 68 | 109 | 735 | 114 | 31 | 656 |
| Peak Hour Factor | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 29 | 193 | 30 | 8 | 172 |
| Total Analysis Volume [veh/h] | 71 | 114 | 772 | 120 | 33 | 689 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.31 | 0.01 | 0.00 | 0.00 | 0.01 |
| d_M, Delay for Movement [s/veh] | 0.00 | 18.89 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | C | A | A | | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 1.27 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 31.87 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 18.89 | | 0.00 | | 0.00 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.27 | | | | | |
| Intersection LOS | C | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 36.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.821 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇑ | | | ⇑⇐ | | | ⇑⇐⇑ | | | ⇑⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 99 | 9 | 34 | 8 | 9 | 109 | 87 | 558 | 34 | 61 | 341 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 5 | 0 | 148 | 195 | 0 | 0 | 0 | 5 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 11 | 0 | 0 | 11 | -11 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 0 | 31 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 99 | 9 | 34 | 24 | 9 | 257 | 361 | 547 | 34 | 92 | 346 | 11 |
| Peak Hour Factor | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 3 | 9 | 7 | 3 | 72 | 101 | 152 | 9 | 26 | 96 | 3 |
| Total Analysis Volume [veh/h] | 110 | 10 | 38 | 27 | 10 | 286 | 402 | 609 | 38 | 102 | 385 | 12 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 21 | 0 | 12 | 21 | 0 | 28 | 46 | 0 | 11 | 29 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 7 | 22 | 2 | 18 | 22 | 43 | 43 | 6 | 27 |
| g / C, Green / Cycle | 0.08 | 0.25 | 0.03 | 0.20 | 0.24 | 0.47 | 0.47 | 0.07 | 0.30 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.03 | 0.01 | 0.18 | 0.22 | 0.32 | 0.02 | 0.06 | 0.21 |
| s, saturation flow rate [veh/h] | 1810 | 1667 | 1810 | 1623 | 1810 | 1900 | 1615 | 1810 | 1890 |
| c, Capacity [veh/h] | 139 | 414 | 51 | 324 | 438 | 900 | 765 | 130 | 573 |
| d1, Uniform Delay [s] | 40.82 | 26.17 | 43.14 | 35.24 | 33.22 | 18.34 | 12.76 | 41.09 | 27.66 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.12 | 0.21 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.52 | 0.12 | 8.22 | 10.77 | 13.67 | 4.07 | 0.12 | 9.97 | 6.75 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| X, volume / capacity | 0.79 | 0.12 | 0.53 | 0.91 | 0.92 | 0.68 | 0.05 | 0.79 | 0.69 |
| d, Delay for Lane Group [s/veh] | 50.34 | 26.29 | 51.35 | 46.02 | 46.88 | 22.41 | 12.89 | 51.06 | 34.41 |
| Lane Group LOS | D | C | D | D | D | C | B | D | C |
| Critical Lane Group | Yes | No | No | Yes | Yes | No | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 2.73 | 0.80 | 0.70 | 7.17 | 9.97 | 10.23 | 0.43 | 2.56 | 8.38 |
| 50th-Percentile Queue Length [ft/ln] | 68.34 | 19.98 | 17.59 | 179.13 | 249.14 | 255.76 | 10.65 | 63.91 | 209.58 |
| 95th-Percentile Queue Length [veh/ln] | 4.92 | 1.44 | 1.27 | 11.55 | 15.14 | 15.48 | 0.77 | 4.60 | 13.13 |
| 95th-Percentile Queue Length [ft/ln] | 123.01 | 35.96 | 31.67 | 288.87 | 378.56 | 386.90 | 19.18 | 115.03 | 328.29 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 50.34 | 26.29 | 26.29 | 51.35 | 46.02 | 46.02 | 46.88 | 22.41 | 12.89 | 51.06 | 34.41 | 34.41 |
| Movement LOS | D | C | C | D | D | D | D | C | B | D | C | C |
| d_A, Approach Delay [s/veh] | 43.04 | | | 46.46 | | | 31.44 | | | 37.82 | | |
| Approach LOS | D | | | D | | | C | | | D | | |
| d_I, Intersection Delay [s/veh] | 36.31 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.821 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.042 | 0.000 | 0.000 | 2.323 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 378 | 378 | 933 | 556 |
| d_b, Bicycle Delay [s] | 29.61 | 29.61 | 12.80 | 23.47 |
| I_b,int, Bicycle LOS Score for Intersection | 1.820 | 2.093 | 3.290 | 2.383 |
| Bicycle LOS | A | B | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 14.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.173 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↑ | | ↶ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 679 | 453 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 52 | 0 | 195 | 148 | 5 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 21 | 0 | 0 | -21 | 21 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 68 | 0 |
| Total Hourly Volume [veh/h] | 0 | 73 | 0 | 874 | 648 | 26 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 19 | 0 | 230 | 171 | 7 |
| Total Analysis Volume [veh/h] | 0 | 77 | 0 | 920 | 682 | 27 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.17 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 14.77 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | B | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.62 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 15.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 14.77 | | 0.00 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.67 | | | | | |
| Intersection LOS | B | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 9.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.153 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 128 | 0 | 0 | 0 | 0 | 133 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 128 | 107 | 126 | 0 | 0 | 133 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 34 | 28 | 33 | 0 | 0 | 35 |
| Total Analysis Volume [veh/h] | 135 | 113 | 133 | 0 | 0 | 140 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|-------|
| V/C, Movement V/C Ratio | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 |
| d_M, Delay for Movement [s/veh] | 7.73 | 0.00 | 0.00 | 0.00 | 13.41 | 9.64 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.31 | 0.31 | 0.00 | 0.00 | 0.54 | 0.54 |
| 95th-Percentile Queue Length [ft/ln] | 7.67 | 7.67 | 0.00 | 0.00 | 13.45 | 13.45 |
| d_A, Approach Delay [s/veh] | 4.21 | | 0.00 | | 9.64 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 4.59 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 9.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.043 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 67 | 128 | 133 | 0 | 0 | 20 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 11 | 0 | 0 | 0 | 0 | 11 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 78 | 235 | 259 | 0 | 0 | 31 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 21 | 62 | 68 | 0 | 0 | 8 |
| Total Analysis Volume [veh/h] | 82 | 247 | 273 | 0 | 0 | 33 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 |
| d_M, Delay for Movement [s/veh] | 7.95 | 0.00 | 0.00 | 0.00 | 14.51 | 9.88 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.20 | 0.20 | 0.00 | 0.00 | 0.13 | 0.13 |
| 95th-Percentile Queue Length [ft/ln] | 5.03 | 5.03 | 0.00 | 0.00 | 3.35 | 3.35 |
| d_A, Approach Delay [s/veh] | 1.98 | | 0.00 | | 9.88 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.54 | | | | | |
| Intersection LOS | A | | | | | |

Perris Travel Center Project

Vistro File: K:\...\Perris TC_PM.vistro

Scenario 5 2 EX WP PM

Report File: K:\...\2 EX WP PM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | SB Right | 0.864 | 25.8 | C |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | NB Left | 1.062 | 44.2 | D |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Right | 0.460 | 26.7 | D |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | SB Left | 0.868 | 39.4 | D |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | SB Right | 0.237 | 15.5 | C |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.159 | 10.0 | B |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.068 | 10.4 | B |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 25.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.864 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 193 | 0 | 361 | 0 | 602 | 384 | 125 | 716 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 115 | 0 | 0 | 0 | 7 | 0 | 106 | 7 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 308 | 0 | 361 | 0 | 609 | 384 | 231 | 723 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 0.9460 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 81 | 0 | 95 | 0 | 161 | 101 | 61 | 191 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 326 | 0 | 382 | 0 | 644 | 406 | 244 | 764 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 41 | 0 | 22 | 63 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|-------|-------|-------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 23 | 23 | 41 | 41 | 14 | 59 |
| g / C, Green / Cycle | | 0.25 | 0.25 | 0.45 | 0.45 | 0.16 | 0.66 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.18 | 0.24 | 0.34 | 0.25 | 0.13 | 0.21 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 460 | 410 | 859 | 730 | 290 | 2377 |
| d1, Uniform Delay [s] | | 30.54 | 32.80 | 20.43 | 18.04 | 36.66 | 6.71 |
| k, delay calibration | | 0.11 | 0.24 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 2.13 | 17.87 | 5.96 | 3.04 | 6.47 | 0.36 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | | 0.71 | 0.93 | 0.75 | 0.56 | 0.84 | 0.32 |
| d, Delay for Lane Group [s/veh] | | 32.67 | 50.67 | 26.39 | 21.08 | 43.13 | 7.07 |
| Lane Group LOS | | C | D | C | C | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 6.54 | 9.92 | 11.93 | 6.47 | 5.63 | 2.87 |
| 50th-Percentile Queue Length [ft/ln] | | 163.52 | 248.12 | 298.37 | 161.74 | 140.83 | 71.82 |
| 95th-Percentile Queue Length [veh/ln] | | 10.74 | 15.09 | 17.60 | 10.64 | 9.53 | 5.17 |
| 95th-Percentile Queue Length [ft/ln] | | 268.38 | 377.29 | 440.02 | 266.02 | 238.14 | 129.28 |

Movement, Approach, & Intersection Results

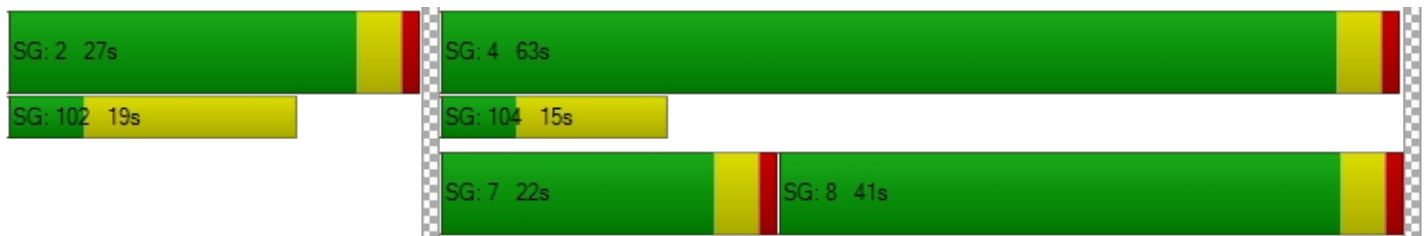
| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 32.67 | 32.67 | 50.67 | 0.00 | 26.39 | 21.08 | 43.13 | 7.07 | 0.00 |
| Movement LOS | | | | C | C | D | | C | C | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 42.38 | | | 24.33 | | | 15.80 | | |
| Approach LOS | A | | | D | | | C | | | B | | |
| d_I, Intersection Delay [s/veh] | 25.84 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.864 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.172 | 0.000 | 2.615 |
| Crosswalk LOS | F | B | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 511 | 822 | 1311 |
| d_b, Bicycle Delay [s] | 45.00 | 24.94 | 15.61 | 5.34 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 2.728 | 3.292 | 2.391 |
| Bicycle LOS | D | B | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 44.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.062 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 426 | 2 | 198 | 0 | 0 | 0 | 246 | 570 | 0 | 0 | 413 | 195 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 115 | 0 | 0 | 0 | 0 | 122 | 0 | 0 | 113 | 106 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 426 | 2 | 313 | 0 | 0 | 0 | 246 | 692 | 0 | 0 | 526 | 301 |
| Peak Hour Factor | 0.9570 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 1.0000 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 0.9570 | 0.9570 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 111 | 1 | 82 | 0 | 0 | 0 | 64 | 181 | 0 | 0 | 137 | 79 |
| Total Analysis Volume [veh/h] | 445 | 2 | 327 | 0 | 0 | 0 | 257 | 723 | 0 | 0 | 550 | 315 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 26 | 0 | 0 | 0 | 0 | 17 | 64 | 0 | 0 | 47 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|-------|-------|--|-------|------|-------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 22 | 22 | | 13 | 60 | 43 |
| g / C, Green / Cycle | 0.24 | 0.24 | | 0.14 | 0.67 | 0.48 |
| (v / s)_i Volume / Saturation Flow Rate | 0.25 | 0.20 | | 0.14 | 0.38 | 0.48 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1785 |
| c, Capacity [veh/h] | 442 | 395 | | 261 | 1267 | 853 |
| d1, Uniform Delay [s] | 34.00 | 32.21 | | 38.39 | 8.07 | 23.50 |
| k, delay calibration | 0.26 | 0.16 | | 0.11 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 33.46 | 6.59 | | 22.17 | 1.87 | 34.37 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|--------|--------|--|--------|--------|--------|
| X, volume / capacity | 1.01 | 0.83 | | 0.98 | 0.57 | 1.01 |
| d, Delay for Lane Group [s/veh] | 67.46 | 38.80 | | 60.56 | 9.94 | 57.87 |
| Lane Group LOS | F | D | | E | A | F |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 13.48 | 7.28 | | 7.15 | 7.02 | 24.76 |
| 50th-Percentile Queue Length [ft/ln] | 337.11 | 182.11 | | 178.81 | 175.46 | 618.92 |
| 95th-Percentile Queue Length [veh/ln] | 19.62 | 11.71 | | 11.54 | 11.36 | 33.28 |
| 95th-Percentile Queue Length [ft/ln] | 490.60 | 292.77 | | 288.46 | 284.08 | 832.04 |

Movement, Approach, & Intersection Results

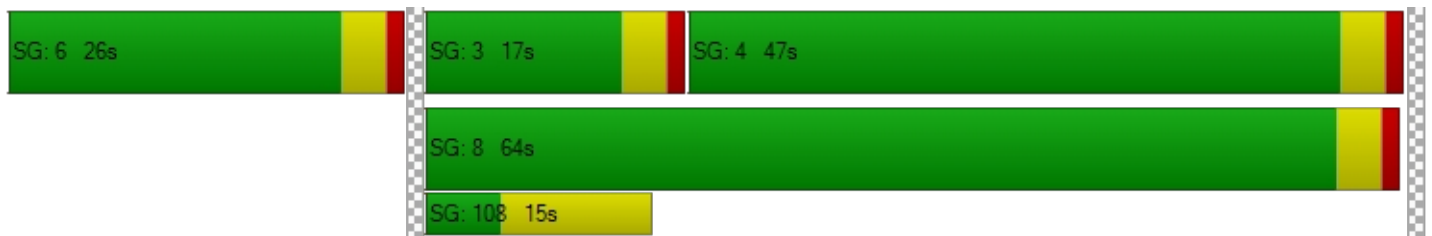
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 67.46 | 67.46 | 38.80 | 0.00 | 0.00 | 0.00 | 60.56 | 9.94 | 0.00 | 0.00 | 57.87 | 57.87 |
| Movement LOS | F | E | D | | | | E | A | | | E | E |
| d_A, Approach Delay [s/veh] | 55.35 | | | 0.00 | | | 23.22 | | | 57.87 | | |
| Approach LOS | E | | | A | | | C | | | E | | |
| d_I, Intersection Delay [s/veh] | 44.16 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 1.062 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.193 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 489 | 0 | 1333 | 956 |
| d_b, Bicycle Delay [s] | 25.69 | 45.00 | 5.00 | 12.27 |
| I_b,int, Bicycle LOS Score for Intersection | 2.837 | 4.132 | 3.177 | 2.987 |
| Bicycle LOS | C | D | C | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 26.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.460 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | ↶ | | ↷ | | ↑ | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 65 | 57 | 641 | 66 | 41 | 523 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 237 | 0 | 0 | 219 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 71 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 71 | 128 | 878 | 66 | 45 | 742 |
| Peak Hour Factor | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 19 | 35 | 238 | 18 | 12 | 201 |
| Total Analysis Volume [veh/h] | 77 | 139 | 953 | 72 | 49 | 806 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.46 | 0.01 | 0.00 | 0.00 | 0.01 |
| d_M, Delay for Movement [s/veh] | 0.00 | 26.68 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | D | A | A | | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 2.30 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 57.44 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 26.68 | | 0.00 | | 0.00 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.88 | | | | | |
| Intersection LOS | D | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 39.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.868 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 7 | 0 | 150 | 237 | 0 | 0 | 0 | 7 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 17 | 0 | 0 | 17 | -17 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 45 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 84 | 5 | 37 | 54 | 15 | 291 | 398 | 571 | 33 | 89 | 368 | 4 |
| Peak Hour Factor | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 23 | 1 | 10 | 15 | 4 | 80 | 109 | 157 | 9 | 24 | 101 | 1 |
| Total Analysis Volume [veh/h] | 92 | 5 | 41 | 59 | 16 | 320 | 437 | 627 | 36 | 98 | 404 | 4 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 10 | 19 | 0 | 18 | 27 | 0 | 29 | 44 | 0 | 9 | 24 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 22 | 4 | 20 | 24 | 42 | 42 | 6 | 24 |
| g / C, Green / Cycle | 0.07 | 0.25 | 0.04 | 0.23 | 0.26 | 0.46 | 0.46 | 0.07 | 0.27 |
| (v / s)_i Volume / Saturation Flow Rate | 0.05 | 0.03 | 0.03 | 0.21 | 0.24 | 0.33 | 0.02 | 0.05 | 0.22 |
| s, saturation flow rate [veh/h] | 1810 | 1642 | 1810 | 1627 | 1810 | 1900 | 1615 | 1810 | 1897 |
| c, Capacity [veh/h] | 118 | 406 | 81 | 369 | 476 | 877 | 745 | 125 | 507 |
| d1, Uniform Delay [s] | 41.44 | 26.22 | 42.46 | 33.89 | 32.24 | 19.48 | 13.35 | 41.25 | 30.77 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.17 | 0.25 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.65 | 0.12 | 11.92 | 12.86 | 15.07 | 4.96 | 0.12 | 10.41 | 12.76 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| X, volume / capacity | 0.78 | 0.11 | 0.73 | 0.91 | 0.92 | 0.72 | 0.05 | 0.79 | 0.80 |
| d, Delay for Lane Group [s/veh] | 52.09 | 26.35 | 54.38 | 46.76 | 47.31 | 24.45 | 13.47 | 51.67 | 43.53 |
| Lane Group LOS | D | C | D | D | D | C | B | D | D |
| Critical Lane Group | Yes | No | No | Yes | Yes | No | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 2.33 | 0.77 | 1.55 | 8.28 | 10.95 | 11.11 | 0.42 | 2.47 | 9.82 |
| 50th-Percentile Queue Length [ft/ln] | 58.36 | 19.17 | 38.73 | 207.06 | 273.66 | 277.83 | 10.38 | 61.82 | 245.46 |
| 95th-Percentile Queue Length [veh/ln] | 4.20 | 1.38 | 2.79 | 13.00 | 16.37 | 16.58 | 0.75 | 4.45 | 14.96 |
| 95th-Percentile Queue Length [ft/ln] | 105.04 | 34.50 | 69.72 | 325.06 | 409.31 | 414.51 | 18.68 | 111.28 | 373.93 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 52.09 | 26.35 | 26.35 | 54.38 | 46.76 | 46.76 | 47.31 | 24.45 | 13.47 | 51.67 | 43.53 | 43.53 |
| Movement LOS | D | C | C | D | D | D | D | C | B | D | D | D |
| d_A, Approach Delay [s/veh] | 43.51 | | | 47.90 | | | 33.17 | | | 45.11 | | |
| Approach LOS | D | | | D | | | C | | | D | | |
| d_I, Intersection Delay [s/veh] | 39.38 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.868 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.035 | 0.000 | 0.000 | 2.342 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 333 | 511 | 889 | 444 |
| d_b, Bicycle Delay [s] | 31.25 | 24.94 | 13.89 | 27.22 |
| I_b,int, Bicycle LOS Score for Intersection | 1.787 | 2.211 | 3.375 | 2.395 |
| Bicycle LOS | A | B | C | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 15.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.237 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↑ | | ↶ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 694 | 519 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 69 | 0 | 237 | 150 | 7 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 32 | 0 | 0 | -32 | 32 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 101 | 0 | 931 | 637 | 39 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 27 | 0 | 245 | 168 | 10 |
| Total Analysis Volume [veh/h] | 0 | 106 | 0 | 980 | 671 | 41 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.24 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 15.52 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | C | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.91 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 22.78 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 15.52 | | 0.00 | | 0.00 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.91 | | | | | |
| Intersection LOS | C | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 10.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.159 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 146 | 0 | 0 | 0 | 0 | 128 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 146 | 82 | 186 | 0 | 0 | 128 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 38 | 22 | 49 | 0 | 0 | 34 |
| Total Analysis Volume [veh/h] | 154 | 86 | 196 | 0 | 0 | 135 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|-------|
| V/C, Movement V/C Ratio | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 |
| d_M, Delay for Movement [s/veh] | 7.91 | 0.00 | 0.00 | 0.00 | 14.40 | 10.03 |
| Movement LOS | A | A | A | A | B | B |
| 95th-Percentile Queue Length [veh/ln] | 0.37 | 0.37 | 0.00 | 0.00 | 0.56 | 0.56 |
| 95th-Percentile Queue Length [ft/ln] | 9.33 | 9.33 | 0.00 | 0.00 | 14.06 | 14.06 |
| d_A, Approach Delay [s/veh] | 5.08 | | 0.00 | | 10.03 | |
| Approach LOS | A | | A | | B | |
| d_I, Intersection Delay [s/veh] | 4.51 | | | | | |
| Intersection LOS | B | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 10.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.068 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↰ | | ↱ | | ↻ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 91 | 146 | 128 | 0 | 0 | 29 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 17 | 0 | 0 | 0 | 0 | 17 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 108 | 228 | 314 | 0 | 0 | 46 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 60 | 83 | 0 | 0 | 12 |
| Total Analysis Volume [veh/h] | 114 | 240 | 331 | 0 | 0 | 48 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|-------|
| V/C, Movement V/C Ratio | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 |
| d_M, Delay for Movement [s/veh] | 8.23 | 0.00 | 0.00 | 0.00 | 16.74 | 10.43 |
| Movement LOS | A | A | A | A | C | B |
| 95th-Percentile Queue Length [veh/ln] | 0.31 | 0.31 | 0.00 | 0.00 | 0.22 | 0.22 |
| 95th-Percentile Queue Length [ft/ln] | 7.66 | 7.66 | 0.00 | 0.00 | 5.42 | 5.42 |
| d_A, Approach Delay [s/veh] | 2.65 | | 0.00 | | 10.43 | |
| Approach LOS | A | | A | | B | |
| d_I, Intersection Delay [s/veh] | 1.96 | | | | | |
| Intersection LOS | B | | | | | |

APPENDIX D-3

**INTERSECTION ANALYSIS
WORKSHEETS -
OPENING YEAR 2024 CUMULATIVE**

Perris Travel Center Project

Vistro File: K:\...\Perris TC_AM.vistro

Scenario 3 OY 2024 CP AM

Report File: K:\...\3 OY CP AM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | SB Right | 1.501 | 173.0 | F |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | NB Left | 1.779 | 254.7 | F |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Left | 2.106 | 698.0 | F |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | NB Left | 0.862 | 35.6 | D |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | EB Thru | 0.010 | 0.0 | A |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.001 | 0.0 | A |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.001 | 0.0 | A |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 173.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.501 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 124 | 0 | 245 | 0 | 722 | 499 | 105 | 703 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 124 | 0 | 366 | 0 | 412 | 381 | 235 | 349 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 259 | 0 | 633 | 0 | 1199 | 925 | 349 | 1115 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 0.9850 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 66 | 0 | 161 | 0 | 304 | 235 | 89 | 283 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 263 | 0 | 643 | 0 | 1217 | 939 | 354 | 1132 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 44 | 0 | 23 | 67 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|--------|--------|--------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 19 | 19 | 39 | 39 | 20 | 63 |
| g / C, Green / Cycle | | 0.21 | 0.21 | 0.44 | 0.44 | 0.22 | 0.70 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.15 | 0.40 | 0.64 | 0.58 | 0.20 | 0.31 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 382 | 341 | 829 | 704 | 397 | 2532 |
| d1, Uniform Delay [s] | | 32.77 | 35.50 | 25.38 | 25.38 | 34.08 | 5.89 |
| k, delay calibration | | 0.11 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 2.21 | 409.61 | 217.58 | 159.60 | 7.02 | 0.57 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|---------|---------|---------|--------|--------|
| X, volume / capacity | | 0.69 | 1.89 | 1.47 | 1.33 | 0.89 | 0.45 |
| d, Delay for Lane Group [s/veh] | | 34.98 | 445.11 | 242.96 | 184.98 | 41.11 | 6.47 |
| Lane Group LOS | | C | F | F | F | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 5.42 | 46.07 | 66.58 | 45.25 | 8.08 | 4.00 |
| 50th-Percentile Queue Length [ft/ln] | | 135.41 | 1151.75 | 1664.61 | 1131.35 | 202.09 | 100.10 |
| 95th-Percentile Queue Length [veh/ln] | | 9.23 | 72.66 | 100.77 | 67.59 | 12.75 | 7.21 |
| 95th-Percentile Queue Length [ft/ln] | | 230.83 | 1816.61 | 2519.21 | 1689.80 | 318.66 | 180.18 |

Movement, Approach, & Intersection Results

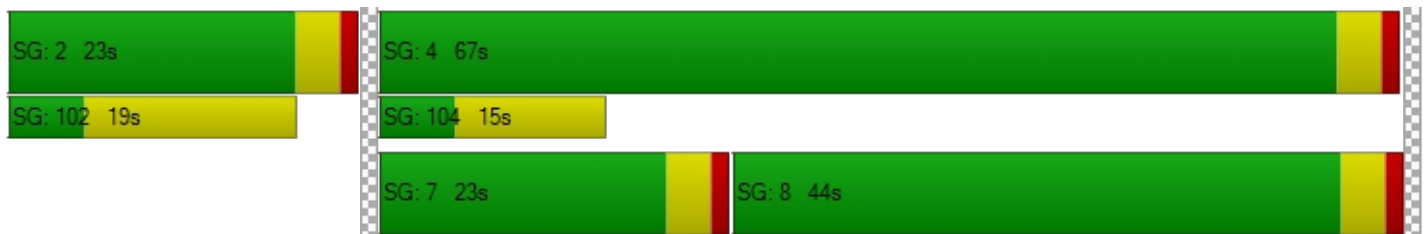
| | | | | | | | | | | | | |
|---------------------------------|--------|------|------|--------|-------|--------|--------|--------|--------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 34.98 | 34.98 | 445.11 | 0.00 | 242.96 | 184.98 | 41.11 | 6.47 | 0.00 |
| Movement LOS | | | | C | C | F | | F | F | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 326.06 | | | 217.71 | | | 14.72 | | |
| Approach LOS | A | | | F | | | F | | | B | | |
| d_I, Intersection Delay [s/veh] | 172.97 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.501 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.236 | 0.000 | 2.856 |
| Crosswalk LOS | F | B | F | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 422 | 889 | 1400 |
| d_b, Bicycle Delay [s] | 45.00 | 28.01 | 13.89 | 4.05 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 3.055 | 5.117 | 2.786 |
| Bicycle LOS | D | C | F | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 254.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.779 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 351 | 0 | 135 | 0 | 0 | 0 | 270 | 580 | 0 | 0 | 456 | 143 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 323 | 0 | 124 | 0 | 0 | 0 | 395 | 142 | 0 | 0 | 261 | 235 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 706 | 0 | 271 | 0 | 0 | 0 | 689 | 774 | 0 | 0 | 758 | 391 |
| Peak Hour Factor | 0.9650 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 1.0000 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 0.9650 | 0.9650 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 183 | 0 | 70 | 0 | 0 | 0 | 178 | 201 | 0 | 0 | 196 | 101 |
| Total Analysis Volume [veh/h] | 732 | 0 | 281 | 0 | 0 | 0 | 714 | 802 | 0 | 0 | 785 | 405 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 24 | 0 | 0 | 0 | 0 | 24 | 66 | 0 | 0 | 42 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|--------|-------|--|--------|------|--------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 20 | 20 | | 20 | 62 | 38 |
| g / C, Green / Cycle | 0.22 | 0.22 | | 0.22 | 0.69 | 0.42 |
| (v / s)_i Volume / Saturation Flow Rate | 0.40 | 0.17 | | 0.39 | 0.42 | 0.66 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1792 |
| c, Capacity [veh/h] | 402 | 359 | | 402 | 1309 | 757 |
| d1, Uniform Delay [s] | 35.00 | 32.96 | | 35.00 | 7.54 | 26.00 |
| k, delay calibration | 0.50 | 0.11 | | 0.50 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 378.84 | 3.76 | | 358.99 | 2.15 | 263.99 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|---------|--------|--|---------|--------|---------|
| X, volume / capacity | 1.82 | 0.78 | | 1.78 | 0.61 | 1.57 |
| d, Delay for Lane Group [s/veh] | 413.84 | 36.72 | | 393.99 | 9.69 | 289.99 |
| Lane Group LOS | F | D | | F | A | F |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 50.88 | 6.01 | | 48.66 | 7.57 | 70.64 |
| 50th-Percentile Queue Length [ft/ln] | 1271.96 | 150.22 | | 1216.50 | 189.32 | 1765.89 |
| 95th-Percentile Queue Length [veh/ln] | 79.45 | 10.03 | | 75.87 | 12.09 | 108.90 |
| 95th-Percentile Queue Length [ft/ln] | 1986.15 | 250.73 | | 1896.78 | 302.15 | 2722.45 |

Movement, Approach, & Intersection Results

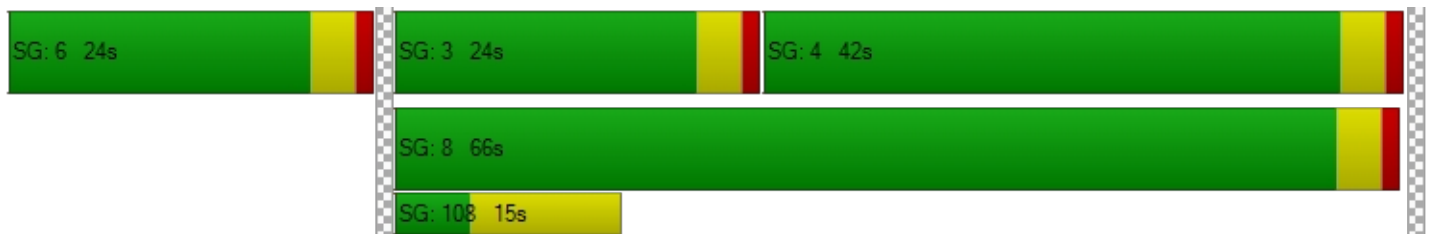
| | | | | | | | | | | | | |
|---------------------------------|--------|--------|-------|------|------|------|--------|------|------|--------|--------|--------|
| d_M, Delay for Movement [s/veh] | 413.84 | 413.84 | 36.72 | 0.00 | 0.00 | 0.00 | 393.99 | 9.69 | 0.00 | 0.00 | 289.99 | 289.99 |
| Movement LOS | F | F | D | | | | F | A | | | F | F |
| d_A, Approach Delay [s/veh] | 309.23 | | | 0.00 | | | 190.68 | | | 289.99 | | |
| Approach LOS | F | | | A | | | F | | | F | | |
| d_I, Intersection Delay [s/veh] | 254.75 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.779 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.271 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 444 | 0 | 1378 | 844 |
| d_b, Bicycle Delay [s] | 27.22 | 45.00 | 4.36 | 15.02 |
| I_b,int, Bicycle LOS Score for Intersection | 3.231 | 4.132 | 4.061 | 3.523 |
| Bicycle LOS | C | D | D | D |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 698.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 2.106 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 62 | 41 | 540 | 114 | 28 | 456 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 59 | 0 | 236 | 30 | 0 | 445 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 127 | 45 | 825 | 154 | 31 | 942 |
| Peak Hour Factor | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 33 | 12 | 217 | 40 | 8 | 247 |
| Total Analysis Volume [veh/h] | 133 | 47 | 867 | 162 | 33 | 989 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|--------|--------|------|------|-------|------|
| V/C, Movement V/C Ratio | 2.11 | 0.15 | 0.01 | 0.00 | 0.05 | 0.01 |
| d_M, Delay for Movement [s/veh] | 698.01 | 652.28 | 0.00 | 0.00 | 10.54 | 0.00 |
| Movement LOS | F | F | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 16.59 | 16.59 | 0.00 | 0.00 | 0.15 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 414.65 | 414.65 | 0.00 | 0.00 | 3.80 | 0.00 |
| d_A, Approach Delay [s/veh] | 686.07 | | 0.00 | | 0.34 | |
| Approach LOS | F | | A | | A | |
| d_I, Intersection Delay [s/veh] | 55.51 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 35.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.862 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 99 | 9 | 34 | 8 | 9 | 109 | 87 | 558 | 34 | 61 | 341 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 59 | 0 | 0 | 0 | 0 | 7 | 11 | 196 | 30 | 0 | 379 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 167 | 10 | 37 | 9 | 10 | 126 | 106 | 804 | 67 | 66 | 751 | 12 |
| Peak Hour Factor | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 46 | 3 | 10 | 3 | 3 | 35 | 30 | 224 | 19 | 18 | 209 | 3 |
| Total Analysis Volume [veh/h] | 186 | 11 | 41 | 10 | 11 | 140 | 118 | 895 | 75 | 73 | 836 | 13 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 21 | 0 | 12 | 21 | 0 | 28 | 46 | 0 | 11 | 29 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|-------|-------|-------|-------|-------|-------|------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 8 | 17 | 1 | 10 | 8 | 51 | 51 | 5 | 48 |
| g / C, Green / Cycle | 0.09 | 0.19 | 0.01 | 0.11 | 0.08 | 0.57 | 0.57 | 0.05 | 0.54 |
| (v / s)_i Volume / Saturation Flow Rate | 0.10 | 0.03 | 0.01 | 0.09 | 0.07 | 0.47 | 0.05 | 0.04 | 0.45 |
| s, saturation flow rate [veh/h] | 1810 | 1668 | 1810 | 1633 | 1810 | 1900 | 1615 | 1810 | 1895 |
| c, Capacity [veh/h] | 161 | 314 | 23 | 184 | 154 | 1079 | 918 | 95 | 1016 |
| d1, Uniform Delay [s] | 41.00 | 30.59 | 44.09 | 39.06 | 40.32 | 15.87 | 8.80 | 42.07 | 17.55 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 85.15 | 0.25 | 11.96 | 8.85 | 7.82 | 7.38 | 0.17 | 11.89 | 8.13 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|--------|-------|-------|--------|
| X, volume / capacity | 1.16 | 0.17 | 0.43 | 0.82 | 0.77 | 0.83 | 0.08 | 0.76 | 0.84 |
| d, Delay for Lane Group [s/veh] | 126.15 | 30.84 | 56.05 | 47.91 | 48.13 | 23.25 | 8.98 | 53.96 | 25.68 |
| Lane Group LOS | F | C | E | D | D | C | A | D | C |
| Critical Lane Group | Yes | No | No | Yes | Yes | No | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 7.32 | 0.96 | 0.30 | 3.66 | 2.86 | 15.59 | 0.67 | 1.90 | 15.67 |
| 50th-Percentile Queue Length [ft/ln] | 182.91 | 23.89 | 7.42 | 91.60 | 71.47 | 389.76 | 16.66 | 47.43 | 391.82 |
| 95th-Percentile Queue Length [veh/ln] | 12.35 | 1.72 | 0.53 | 6.60 | 5.15 | 22.07 | 1.20 | 3.42 | 22.17 |
| 95th-Percentile Queue Length [ft/ln] | 308.74 | 42.99 | 13.35 | 164.88 | 128.65 | 551.65 | 29.98 | 85.38 | 554.14 |

Movement, Approach, & Intersection Results

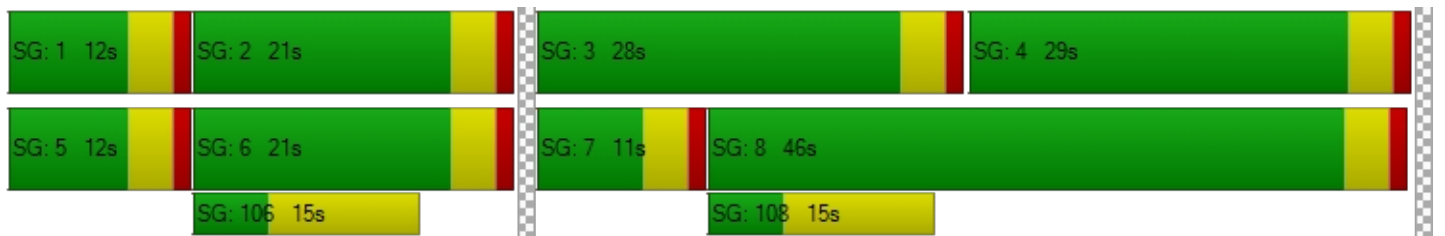
| | | | | | | | | | | | | |
|---------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 126.15 | 30.84 | 30.84 | 56.05 | 47.91 | 47.91 | 48.13 | 23.25 | 8.98 | 53.96 | 25.68 | 25.68 |
| Movement LOS | F | C | C | E | D | D | D | C | A | D | C | C |
| d_A, Approach Delay [s/veh] | 105.32 | | | 48.42 | | | 24.96 | | | 27.92 | | |
| Approach LOS | F | | | D | | | C | | | C | | |
| d_I, Intersection Delay [s/veh] | 35.60 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.862 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.071 | 0.000 | 0.000 | 2.549 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 378 | 378 | 933 | 556 |
| d_b, Bicycle Delay [s] | 29.61 | 29.61 | 12.80 | 23.47 |
| I_b,int, Bicycle LOS Score for Intersection | 1.952 | 1.825 | 3.355 | 3.081 |
| Bicycle LOS | A | A | C | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.010 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↱ | | ↑ | | ↵ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 679 | 453 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 236 | 445 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 915 | 898 | 0 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 241 | 236 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 963 | 945 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 16.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | C | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 16.24 | | 0.00 | | 0.00 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.001 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 7 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 118 | 133 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 31 | 35 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 124 | 140 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.49 | 0.00 | 0.00 | 0.00 | 9.97 | 8.96 |
| Movement LOS | A | A | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.46 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.001 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 7 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 118 | 133 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 31 | 35 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 124 | 140 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.47 | 0.00 | 0.00 | 0.00 | 9.94 | 8.94 |
| Movement LOS | A | A | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.44 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Perris Travel Center Project

Vistro File: K:\...\Perris TC_PM.vistro

Scenario 3 OY 2024 CP PM

Report File: K:\...\3 OY CP PM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | SB Right | 1.739 | 242.0 | F |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | EB Left | 1.962 | 377.9 | F |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Left | 4.594 | 2,027.6 | F |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | NB Left | 1.042 | 57.7 | E |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | EB Thru | 0.013 | 0.0 | A |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.002 | 0.0 | A |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | SB Thru | 0.002 | 0.0 | A |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 242.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.739 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 193 | 0 | 361 | 0 | 602 | 384 | 125 | 716 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 274 | 0 | 495 | 0 | 522 | 450 | 194 | 500 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 484 | 0 | 888 | 0 | 1178 | 869 | 330 | 1280 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 0.9460 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 128 | 0 | 235 | 0 | 311 | 230 | 87 | 338 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 512 | 0 | 939 | 0 | 1245 | 919 | 349 | 1353 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 41 | 0 | 22 | 63 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|--------|--------|--------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 23 | 23 | 35 | 35 | 20 | 59 |
| g / C, Green / Cycle | | 0.26 | 0.26 | 0.39 | 0.39 | 0.22 | 0.66 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.28 | 0.58 | 0.66 | 0.57 | 0.19 | 0.37 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 462 | 413 | 748 | 636 | 393 | 2372 |
| d1, Uniform Delay [s] | | 33.50 | 33.50 | 27.27 | 27.27 | 34.16 | 8.53 |
| k, delay calibration | | 0.34 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 67.71 | 581.49 | 304.48 | 208.87 | 6.90 | 1.00 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|---------|---------|---------|--------|--------|
| X, volume / capacity | | 1.11 | 2.28 | 1.66 | 1.44 | 0.89 | 0.57 |
| d, Delay for Lane Group [s/veh] | | 101.21 | 614.99 | 331.75 | 236.15 | 41.06 | 9.53 |
| Lane Group LOS | | F | F | F | F | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 18.47 | 75.38 | 78.47 | 49.80 | 7.96 | 6.52 |
| 50th-Percentile Queue Length [ft/ln] | | 461.66 | 1884.60 | 1961.72 | 1245.09 | 199.03 | 162.98 |
| 95th-Percentile Queue Length [veh/ln] | | 27.05 | 119.56 | 121.62 | 75.94 | 12.59 | 10.71 |
| 95th-Percentile Queue Length [ft/ln] | | 676.21 | 2988.93 | 3040.60 | 1898.59 | 314.72 | 267.67 |

Movement, Approach, & Intersection Results

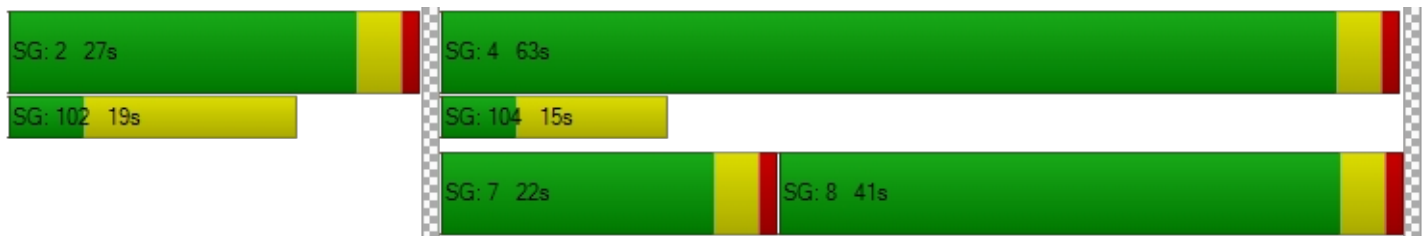
| | | | | | | | | | | | | |
|---------------------------------|--------|------|------|--------|--------|--------|--------|--------|--------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 101.21 | 101.21 | 614.99 | 0.00 | 331.75 | 236.15 | 41.06 | 9.53 | 0.00 |
| Movement LOS | | | | F | F | F | | F | F | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 433.70 | | | 291.15 | | | 16.00 | | |
| Approach LOS | A | | | F | | | F | | | B | | |
| d_I, Intersection Delay [s/veh] | 241.97 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.739 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.413 | 0.000 | 2.976 |
| Crosswalk LOS | F | B | F | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 511 | 822 | 1311 |
| d_b, Bicycle Delay [s] | 45.00 | 24.94 | 15.61 | 5.34 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 3.954 | 5.130 | 2.964 |
| Bicycle LOS | D | D | F | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 377.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.962 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 426 | 2 | 198 | 0 | 0 | 0 | 246 | 570 | 0 | 0 | 413 | 195 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 477 | 0 | 274 | 0 | 0 | 0 | 492 | 304 | 0 | 0 | 217 | 194 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 941 | 2 | 490 | 0 | 0 | 0 | 760 | 925 | 0 | 0 | 667 | 407 |
| Peak Hour Factor | 0.9570 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 1.0000 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 0.9570 | 0.9570 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 246 | 1 | 128 | 0 | 0 | 0 | 199 | 242 | 0 | 0 | 174 | 106 |
| Total Analysis Volume [veh/h] | 983 | 2 | 512 | 0 | 0 | 0 | 794 | 967 | 0 | 0 | 697 | 425 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 26 | 0 | 0 | 0 | 0 | 17 | 64 | 0 | 0 | 47 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|--------|--------|--|--------|-------|--------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 22 | 22 | | 13 | 60 | 43 |
| g / C, Green / Cycle | 0.24 | 0.24 | | 0.14 | 0.67 | 0.48 |
| (v / s)_i Volume / Saturation Flow Rate | 0.54 | 0.32 | | 0.44 | 0.51 | 0.63 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1781 |
| c, Capacity [veh/h] | 442 | 395 | | 261 | 1267 | 851 |
| d1, Uniform Delay [s] | 34.00 | 34.00 | | 38.50 | 10.18 | 23.50 |
| k, delay calibration | 0.50 | 0.42 | | 0.50 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 559.28 | 148.49 | | 927.15 | 4.40 | 151.65 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|---------|--------|--|---------|--------|---------|
| X, volume / capacity | 2.23 | 1.30 | | 3.04 | 0.76 | 1.32 |
| d, Delay for Lane Group [s/veh] | 593.28 | 182.49 | | 965.65 | 14.59 | 175.15 |
| Lane Group LOS | F | F | | F | B | F |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 78.10 | 24.65 | | 72.97 | 12.28 | 52.42 |
| 50th-Percentile Queue Length [ft/ln] | 1952.38 | 616.16 | | 1824.21 | 307.00 | 1310.42 |
| 95th-Percentile Queue Length [veh/ln] | 122.88 | 37.47 | | 112.57 | 18.03 | 77.37 |
| 95th-Percentile Queue Length [ft/ln] | 3072.09 | 936.82 | | 2814.25 | 450.68 | 1934.23 |

Movement, Approach, & Intersection Results

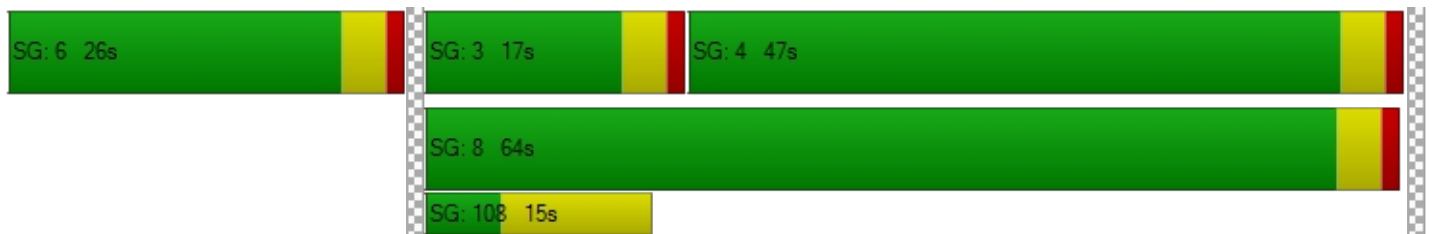
| | | | | | | | | | | | | |
|---------------------------------|--------|--------|--------|------|------|------|--------|-------|------|--------|--------|--------|
| d_M, Delay for Movement [s/veh] | 593.28 | 593.28 | 182.49 | 0.00 | 0.00 | 0.00 | 965.65 | 14.59 | 0.00 | 0.00 | 175.15 | 175.15 |
| Movement LOS | F | F | F | | | | F | B | | | F | F |
| d_A, Approach Delay [s/veh] | 452.78 | | | 0.00 | | | 443.40 | | | 175.15 | | |
| Approach LOS | F | | | A | | | F | | | F | | |
| d_I, Intersection Delay [s/veh] | 377.89 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.962 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.428 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 489 | 0 | 1333 | 956 |
| d_b, Bicycle Delay [s] | 25.69 | 45.00 | 5.00 | 12.27 |
| I_b,int, Bicycle LOS Score for Intersection | 4.030 | 4.132 | 4.465 | 3.411 |
| Bicycle LOS | D | D | E | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|---------|
| Control Type: | Two-way stop | Delay (sec / veh): | 2,027.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 4.594 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 65 | 57 | 641 | 66 | 41 | 523 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 49 | 0 | 509 | 67 | 0 | 375 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 120 | 62 | 1208 | 139 | 45 | 945 |
| Peak Hour Factor | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 33 | 17 | 328 | 38 | 12 | 257 |
| Total Analysis Volume [veh/h] | 130 | 67 | 1312 | 151 | 49 | 1026 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|---------|---------|------|------|-------|------|
| V/C, Movement V/C Ratio | 4.59 | 0.38 | 0.01 | 0.00 | 0.10 | 0.01 |
| d_M, Delay for Movement [s/veh] | 2027.63 | 1920.77 | 0.00 | 0.00 | 13.59 | 0.00 |
| Movement LOS | F | F | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 22.90 | 22.90 | 0.00 | 0.00 | 0.35 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 572.49 | 572.49 | 0.00 | 0.00 | 8.72 | 0.00 |
| d_A, Approach Delay [s/veh] | 1991.28 | | 0.00 | | 0.62 | |
| Approach LOS | F | | A | | A | |
| d_I, Intersection Delay [s/veh] | 143.67 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 57.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.042 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇈ | | | ⇈⇐ | | | ⇈⇈⇈ | | | ⇈⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 49 | 0 | 0 | 0 | 0 | 12 | 11 | 431 | 67 | 0 | 314 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 141 | 5 | 40 | 33 | 16 | 166 | 91 | 1072 | 103 | 48 | 707 | 4 |
| Peak Hour Factor | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 39 | 1 | 11 | 9 | 4 | 46 | 25 | 295 | 28 | 13 | 194 | 1 |
| Total Analysis Volume [veh/h] | 155 | 5 | 44 | 36 | 18 | 182 | 100 | 1178 | 113 | 53 | 777 | 4 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 10 | 19 | 0 | 18 | 27 | 0 | 29 | 44 | 0 | 9 | 24 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|--------|-------|-------|-------|-------|-------|------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 16 | 3 | 13 | 7 | 51 | 51 | 4 | 48 |
| g / C, Green / Cycle | 0.07 | 0.18 | 0.03 | 0.14 | 0.07 | 0.57 | 0.57 | 0.04 | 0.54 |
| (v / s)_i Volume / Saturation Flow Rate | 0.09 | 0.03 | 0.02 | 0.12 | 0.06 | 0.62 | 0.07 | 0.03 | 0.41 |
| s, saturation flow rate [veh/h] | 1810 | 1640 | 1810 | 1637 | 1810 | 1900 | 1615 | 1810 | 1898 |
| c, Capacity [veh/h] | 121 | 291 | 61 | 237 | 133 | 1083 | 921 | 74 | 1021 |
| d1, Uniform Delay [s] | 42.00 | 31.40 | 42.85 | 37.51 | 40.91 | 19.35 | 8.94 | 42.64 | 16.34 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 141.38 | 0.27 | 8.59 | 8.04 | 8.35 | 54.35 | 0.27 | 12.10 | 5.46 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|---------|-------|-------|--------|
| X, volume / capacity | 1.28 | 0.17 | 0.59 | 0.85 | 0.75 | 1.09 | 0.12 | 0.72 | 0.77 |
| d, Delay for Lane Group [s/veh] | 183.38 | 31.67 | 51.44 | 45.55 | 49.26 | 73.70 | 9.22 | 54.75 | 21.80 |
| Lane Group LOS | F | C | D | D | D | F | A | D | C |
| Critical Lane Group | Yes | No | No | Yes | No | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | 7.38 | 0.91 | 0.93 | 4.74 | 2.46 | 36.15 | 1.02 | 1.40 | 13.03 |
| 50th-Percentile Queue Length [ft/ln] | 184.51 | 22.87 | 23.20 | 118.62 | 61.41 | 903.80 | 25.62 | 35.02 | 325.82 |
| 95th-Percentile Queue Length [veh/ln] | 12.72 | 1.65 | 1.67 | 8.32 | 4.42 | 49.27 | 1.84 | 2.52 | 18.95 |
| 95th-Percentile Queue Length [ft/ln] | 318.05 | 41.16 | 41.76 | 207.93 | 110.53 | 1231.80 | 46.11 | 63.03 | 473.84 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 183.38 | 31.67 | 31.67 | 51.44 | 45.55 | 45.55 | 49.26 | 73.70 | 9.22 | 54.75 | 21.80 | 21.80 |
| Movement LOS | F | C | C | D | D | D | D | F | A | D | C | C |
| d_A, Approach Delay [s/veh] | 146.94 | | | 46.45 | | | 66.70 | | | 23.90 | | |
| Approach LOS | F | | | D | | | E | | | C | | |
| d_I, Intersection Delay [s/veh] | 57.66 | | | | | | | | | | | |
| Intersection LOS | E | | | | | | | | | | | |
| Intersection V/C | 1.042 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.068 | 0.000 | 0.000 | 2.622 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 333 | 511 | 889 | 444 |
| d_b, Bicycle Delay [s] | 31.25 | 24.94 | 13.89 | 27.22 |
| I_b,int, Bicycle LOS Score for Intersection | 1.896 | 1.949 | 3.855 | 2.936 |
| Bicycle LOS | A | A | D | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.013 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↑ | | ↶ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 694 | 564 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 509 | 375 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 1203 | 939 | 0 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 317 | 247 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 1266 | 988 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 16.90 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | C | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 16.90 | | 0.00 | | 0.00 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 12 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 93 | 198 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 24 | 52 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 98 | 208 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.62 | 0.00 | 0.00 | 0.00 | 10.22 | 9.30 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.76 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 0.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 12 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 93 | 198 | 0 | 0 | 0 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 24 | 52 | 0 | 0 | 0 |
| Total Analysis Volume [veh/h] | 0 | 98 | 208 | 0 | 0 | 0 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 7.64 | 0.00 | 0.00 | 0.00 | 10.25 | 9.33 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 0.00 | | 0.00 | | 9.79 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.00 | | | | | |
| Intersection LOS | A | | | | | |

APPENDIX D-4

**INTERSECTION ANALYSIS
WORKSHEETS -
OPENING YEAR 2024 CUMULATIVE
PLUS PROJECT**

Perris Travel Center Project

Vistro File: K:\...\Perris TC_AM.vistro

Scenario 4 OY 2024 CP WP AM

Report File: K:\...4 OY CP WP AM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | SB Right | 1.571 | 211.3 | F |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | WB Thru | 1.924 | 292.3 | F |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Right | 0.490 | 33.3 | D |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | WB Thru | 1.195 | 125.3 | F |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | SB Right | 0.322 | 27.1 | D |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.154 | 9.7 | A |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.043 | 9.9 | A |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 211.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.571 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 124 | 0 | 245 | 0 | 722 | 499 | 105 | 703 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 124 | 0 | 366 | 0 | 412 | 381 | 235 | 349 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 95 | 0 | 0 | 0 | 5 | 0 | 97 | 5 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 354 | 0 | 633 | 0 | 1204 | 925 | 446 | 1120 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 1.0000 | 0.9850 | 0.9850 | 0.9850 | 0.9850 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 90 | 0 | 161 | 0 | 306 | 235 | 113 | 284 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 359 | 0 | 643 | 0 | 1222 | 939 | 453 | 1137 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 44 | 0 | 23 | 67 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|-------|--------|--------|--------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 19 | 19 | 34 | 34 | 25 | 63 |
| g / C, Green / Cycle | | 0.21 | 0.21 | 0.38 | 0.38 | 0.28 | 0.70 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.20 | 0.40 | 0.64 | 0.58 | 0.25 | 0.31 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 382 | 341 | 724 | 616 | 497 | 2532 |
| d1, Uniform Delay [s] | | 34.94 | 35.50 | 27.85 | 27.85 | 31.60 | 5.91 |
| k, delay calibration | | 0.15 | 0.50 | 0.50 | 0.50 | 0.12 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 14.65 | 409.61 | 315.38 | 244.70 | 7.45 | 0.58 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|--------|---------|---------|---------|--------|--------|
| X, volume / capacity | | 0.94 | 1.89 | 1.69 | 1.53 | 0.91 | 0.45 |
| d, Delay for Lane Group [s/veh] | | 49.59 | 445.11 | 343.22 | 272.55 | 39.05 | 6.48 |
| Lane Group LOS | | D | F | F | F | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 9.10 | 46.07 | 78.20 | 54.38 | 10.23 | 4.03 |
| 50th-Percentile Queue Length [ft/ln] | | 227.39 | 1151.75 | 1954.88 | 1359.57 | 255.76 | 100.75 |
| 95th-Percentile Queue Length [veh/ln] | | 14.04 | 72.66 | 121.38 | 83.85 | 15.48 | 7.25 |
| 95th-Percentile Queue Length [ft/ln] | | 351.04 | 1816.61 | 3034.62 | 2096.13 | 386.90 | 181.35 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|--------|------|------|--------|-------|--------|--------|--------|--------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 49.59 | 49.59 | 445.11 | 0.00 | 343.22 | 272.55 | 39.05 | 6.48 | 0.00 |
| Movement LOS | | | | D | D | F | | F | F | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 303.40 | | | 312.52 | | | 15.76 | | |
| Approach LOS | A | | | F | | | F | | | B | | |
| d_I, Intersection Delay [s/veh] | 211.32 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.571 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.267 | 0.000 | 2.906 |
| Crosswalk LOS | F | B | F | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 422 | 889 | 1400 |
| d_b, Bicycle Delay [s] | 45.00 | 28.01 | 13.89 | 4.05 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 3.213 | 5.125 | 2.871 |
| Bicycle LOS | D | C | F | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 292.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.924 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 300.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 351 | 0 | 135 | 0 | 0 | 0 | 270 | 580 | 0 | 0 | 456 | 143 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 323 | 0 | 124 | 0 | 0 | 0 | 395 | 142 | 0 | 0 | 261 | 235 |
| Site-Generated Trips [veh/h] | 0 | 0 | 95 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 102 | 98 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 706 | 0 | 366 | 0 | 0 | 0 | 689 | 874 | 0 | 0 | 860 | 489 |
| Peak Hour Factor | 0.9650 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 1.0000 | 0.9650 | 0.9650 | 1.0000 | 1.0000 | 0.9650 | 0.9650 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 183 | 0 | 95 | 0 | 0 | 0 | 178 | 226 | 0 | 0 | 223 | 127 |
| Total Analysis Volume [veh/h] | 732 | 0 | 379 | 0 | 0 | 0 | 714 | 906 | 0 | 0 | 891 | 507 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 24 | 0 | 0 | 0 | 0 | 24 | 66 | 0 | 0 | 42 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|--------|-------|--|--------|------|--------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 20 | 20 | | 20 | 62 | 38 |
| g / C, Green / Cycle | 0.22 | 0.22 | | 0.22 | 0.69 | 0.42 |
| (v / s)_i Volume / Saturation Flow Rate | 0.40 | 0.23 | | 0.39 | 0.48 | 0.78 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1786 |
| c, Capacity [veh/h] | 402 | 359 | | 402 | 1309 | 754 |
| d1, Uniform Delay [s] | 35.00 | 35.00 | | 35.00 | 8.33 | 26.00 |
| k, delay calibration | 0.50 | 0.23 | | 0.50 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 378.84 | 48.27 | | 358.99 | 3.03 | 389.50 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|---------|--------|--|---------|--------|---------|
| X, volume / capacity | 1.82 | 1.06 | | 1.78 | 0.69 | 1.85 |
| d, Delay for Lane Group [s/veh] | 413.84 | 83.27 | | 393.99 | 11.35 | 415.50 |
| Lane Group LOS | F | F | | F | B | F |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 50.88 | 12.45 | | 48.66 | 9.58 | 96.66 |
| 50th-Percentile Queue Length [ft/ln] | 1271.96 | 311.34 | | 1216.50 | 239.38 | 2416.51 |
| 95th-Percentile Queue Length [veh/ln] | 79.45 | 18.78 | | 75.87 | 14.65 | 153.02 |
| 95th-Percentile Queue Length [ft/ln] | 1986.15 | 469.61 | | 1896.78 | 366.24 | 3825.45 |

Movement, Approach, & Intersection Results

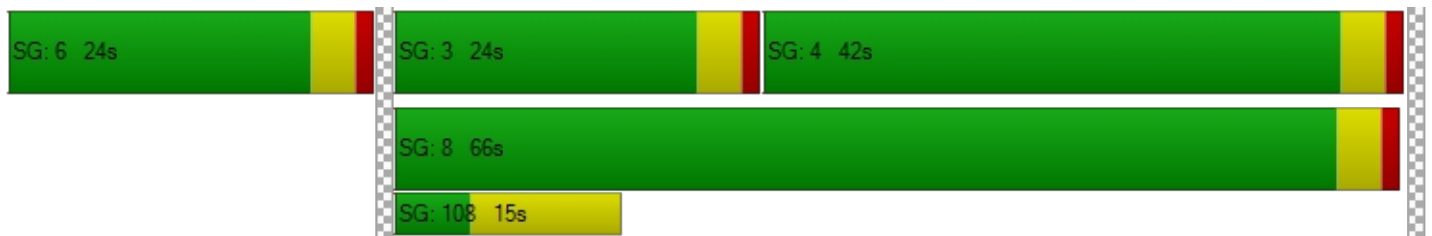
| | | | | | | | | | | | | |
|---------------------------------|--------|--------|-------|------|------|------|--------|-------|------|--------|--------|--------|
| d_M, Delay for Movement [s/veh] | 413.84 | 413.84 | 83.27 | 0.00 | 0.00 | 0.00 | 393.99 | 11.35 | 0.00 | 0.00 | 415.50 | 415.50 |
| Movement LOS | F | F | F | | | | F | B | | | F | F |
| d_A, Approach Delay [s/veh] | 301.08 | | | 0.00 | | | 179.99 | | | 415.50 | | |
| Approach LOS | F | | | A | | | F | | | F | | |
| d_I, Intersection Delay [s/veh] | 292.31 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.924 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.303 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 444 | 0 | 1378 | 844 |
| d_b, Bicycle Delay [s] | 27.22 | 45.00 | 4.36 | 15.02 |
| I_b,int, Bicycle LOS Score for Intersection | 3.393 | 4.132 | 4.233 | 3.866 |
| Bicycle LOS | C | D | D | D |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 33.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.490 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | ↶ | | ↷ | | ↑ | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 62 | 41 | 540 | 114 | 28 | 456 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 0 | 0 | 236 | 30 | 0 | 445 |
| Site-Generated Trips [veh/h] | 0 | 0 | 195 | 0 | 0 | 200 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 68 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 68 | 113 | 1020 | 154 | 31 | 1142 |
| Peak Hour Factor | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 | 0.9520 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 30 | 268 | 40 | 8 | 300 |
| Total Analysis Volume [veh/h] | 71 | 119 | 1071 | 162 | 33 | 1200 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.49 | 0.01 | 0.00 | 0.00 | 0.01 |
| d_M, Delay for Movement [s/veh] | 0.00 | 33.26 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | D | A | A | | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 2.48 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 62.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 33.26 | | 0.00 | | 0.00 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.55 | | | | | |
| Intersection LOS | D | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 125.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.195 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵↑ | | | ↵↑ | | | ↵↑↵ | | | ↵↑ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 99 | 9 | 34 | 8 | 9 | 109 | 87 | 558 | 34 | 61 | 341 | 11 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 59 | 0 | 0 | 0 | 0 | 7 | 11 | 196 | 30 | 0 | 379 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 5 | 0 | 148 | 195 | 0 | 0 | 0 | 5 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 11 | 0 | 0 | 11 | -11 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 0 | 31 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 167 | 10 | 37 | 25 | 10 | 274 | 380 | 793 | 67 | 97 | 756 | 12 |
| Peak Hour Factor | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 | 0.8980 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 46 | 3 | 10 | 7 | 3 | 76 | 106 | 221 | 19 | 27 | 210 | 3 |
| Total Analysis Volume [veh/h] | 186 | 11 | 41 | 28 | 11 | 305 | 423 | 883 | 75 | 108 | 842 | 13 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 21 | 0 | 12 | 21 | 0 | 28 | 46 | 0 | 11 | 29 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 8 | 22 | 3 | 17 | 23 | 42 | 42 | 7 | 26 |
| g / C, Green / Cycle | 0.09 | 0.25 | 0.03 | 0.19 | 0.25 | 0.47 | 0.47 | 0.08 | 0.29 |
| (v / s)_i Volume / Saturation Flow Rate | 0.10 | 0.03 | 0.02 | 0.19 | 0.23 | 0.46 | 0.05 | 0.06 | 0.45 |
| s, saturation flow rate [veh/h] | 1810 | 1668 | 1810 | 1623 | 1810 | 1900 | 1615 | 1810 | 1895 |
| c, Capacity [veh/h] | 161 | 413 | 54 | 307 | 457 | 891 | 757 | 137 | 553 |
| d1, Uniform Delay [s] | 41.00 | 26.27 | 43.02 | 36.50 | 32.81 | 23.71 | 13.31 | 40.90 | 31.87 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.15 | 0.23 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 85.15 | 0.14 | 7.48 | 35.80 | 15.48 | 28.08 | 0.26 | 9.72 | 254.62 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|---------|
| X, volume / capacity | 1.16 | 0.13 | 0.52 | 1.03 | 0.93 | 0.99 | 0.10 | 0.79 | 1.55 |
| d, Delay for Lane Group [s/veh] | 126.15 | 26.41 | 50.49 | 72.30 | 48.29 | 51.79 | 13.57 | 50.62 | 286.49 |
| Lane Group LOS | F | C | D | F | D | D | B | D | F |
| Critical Lane Group | Yes | No | No | Yes | Yes | No | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 7.32 | 0.87 | 0.72 | 9.63 | 10.69 | 24.09 | 0.87 | 2.69 | 50.69 |
| 50th-Percentile Queue Length [ft/ln] | 182.91 | 21.72 | 18.02 | 240.63 | 267.23 | 602.29 | 21.81 | 67.31 | 1267.15 |
| 95th-Percentile Queue Length [veh/ln] | 12.35 | 1.56 | 1.30 | 14.93 | 16.05 | 32.14 | 1.57 | 4.85 | 77.52 |
| 95th-Percentile Queue Length [ft/ln] | 308.74 | 39.09 | 32.43 | 373.37 | 401.28 | 803.53 | 39.25 | 121.16 | 1937.98 |

Movement, Approach, & Intersection Results

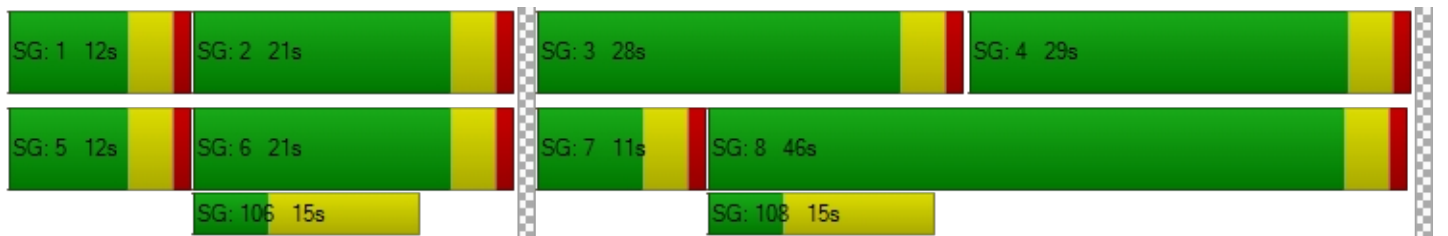
| | | | | | | | | | | | | |
|---------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| d_M, Delay for Movement [s/veh] | 126.15 | 26.41 | 26.41 | 50.49 | 72.30 | 72.30 | 48.29 | 51.79 | 13.57 | 50.62 | 286.49 | 286.49 |
| Movement LOS | F | C | C | D | E | E | D | D | B | D | F | F |
| d_A, Approach Delay [s/veh] | 104.36 | | | 70.52 | | | 48.64 | | | 260.04 | | |
| Approach LOS | F | | | E | | | D | | | F | | |
| d_I, Intersection Delay [s/veh] | 125.32 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.195 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.082 | 0.000 | 0.000 | 2.564 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 378 | 378 | 933 | 556 |
| d_b, Bicycle Delay [s] | 29.61 | 29.61 | 12.80 | 23.47 |
| I_b,int, Bicycle LOS Score for Intersection | 1.952 | 2.127 | 3.838 | 3.149 |
| Bicycle LOS | A | B | D | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 27.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.322 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↑ | | ↶ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 679 | 453 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 236 | 445 | 0 |
| Site-Generated Trips [veh/h] | 0 | 52 | 0 | 195 | 148 | 5 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 21 | 0 | 0 | -21 | 21 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 68 | 0 |
| Total Hourly Volume [veh/h] | 0 | 73 | 0 | 1110 | 1093 | 26 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 19 | 0 | 292 | 288 | 7 |
| Total Analysis Volume [veh/h] | 0 | 77 | 0 | 1168 | 1151 | 27 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.32 | 0.00 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 27.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | D | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 1.34 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 33.46 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 27.08 | | 0.00 | | 0.00 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.86 | | | | | |
| Intersection LOS | D | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 9.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.154 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 7 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 128 | 0 | 0 | 0 | 0 | 133 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 128 | 118 | 133 | 0 | 0 | 133 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 34 | 31 | 35 | 0 | 0 | 35 |
| Total Analysis Volume [veh/h] | 135 | 124 | 140 | 0 | 0 | 140 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|-------|
| V/C, Movement V/C Ratio | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 |
| d_M, Delay for Movement [s/veh] | 7.75 | 0.00 | 0.00 | 0.00 | 13.62 | 9.69 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.31 | 0.31 | 0.00 | 0.00 | 0.54 | 0.54 |
| 95th-Percentile Queue Length [ft/ln] | 7.72 | 7.72 | 0.00 | 0.00 | 13.59 | 13.59 |
| d_A, Approach Delay [s/veh] | 4.04 | | 0.00 | | 9.69 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 4.46 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 9.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.043 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↵ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 107 | 126 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 7 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 67 | 128 | 133 | 0 | 0 | 20 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 11 | 0 | 0 | 0 | 0 | 11 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 78 | 246 | 266 | 0 | 0 | 31 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 21 | 65 | 70 | 0 | 0 | 8 |
| Total Analysis Volume [veh/h] | 82 | 259 | 280 | 0 | 0 | 33 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 |
| d_M, Delay for Movement [s/veh] | 7.97 | 0.00 | 0.00 | 0.00 | 14.77 | 9.93 |
| Movement LOS | A | A | A | A | B | A |
| 95th-Percentile Queue Length [veh/ln] | 0.20 | 0.20 | 0.00 | 0.00 | 0.14 | 0.14 |
| 95th-Percentile Queue Length [ft/ln] | 5.07 | 5.07 | 0.00 | 0.00 | 3.38 | 3.38 |
| d_A, Approach Delay [s/veh] | 1.92 | | 0.00 | | 9.93 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.50 | | | | | |
| Intersection LOS | A | | | | | |

Perris Travel Center Project

Vistro File: K:\...\Perris TC_PM.vistro

Scenario 4 OY 2024 CP WP PM

Report File: K:\...4 OY CP WP PM.pdf

9/19/2022

Intersection Analysis Summary

| ID | Intersection Name | Control Type | Method | Worst Mvmt | V/C | Delay (s/veh) | LOS |
|----|----------------------------------|--------------|-----------------|------------|-------|---------------|-----|
| 1 | I-215 SB Ramps at Ethanac Road | Signalized | HCM 6th Edition | SB Right | 1.819 | 301.1 | F |
| 2 | I-215 NB Ramps at Ethanac Road | Signalized | HCM 6th Edition | EB Left | 2.121 | 406.1 | F |
| 3 | Ethanac Road at Encanto Drive | Two-way stop | HCM 6th Edition | NB Right | 1.158 | 197.3 | F |
| 4 | Trumble Road at Ethanac Road | Signalized | HCM 6th Edition | WB Thru | 1.190 | 185.4 | F |
| 5 | Ethanac Road at Project Driveway | Two-way stop | HCM 6th Edition | SB Right | 0.399 | 27.3 | D |
| 6 | Trumble Road at North Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.161 | 10.1 | B |
| 7 | Trumble Road at South Driveway | Two-way stop | HCM 6th Edition | EB Right | 0.069 | 10.5 | B |

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: I-215 SB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 301.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.819 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | | | | No | | | No | | | No | | |
| Crosswalk | No | | | Yes | | | No | | | Yes | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 193 | 0 | 361 | 0 | 602 | 384 | 125 | 716 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 274 | 0 | 495 | 0 | 522 | 450 | 194 | 500 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 115 | 0 | 0 | 0 | 7 | 0 | 106 | 7 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 0 | 599 | 0 | 888 | 0 | 1185 | 869 | 436 | 1287 | 0 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 1.0000 | 0.9460 | 0.9460 | 0.9460 | 0.9460 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 158 | 0 | 235 | 0 | 313 | 230 | 115 | 340 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 633 | 0 | 939 | 0 | 1253 | 919 | 461 | 1360 | 0 |
| Presence of On-Street Parking | | | | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|---------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 41 | 0 | 22 | 63 | 0 |
| Vehicle Extension [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | | C | R | C | R | L | C |
|---|--|--------|--------|--------|--------|-------|------|
| C, Cycle Length [s] | | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | | 23 | 23 | 30 | 30 | 25 | 59 |
| g / C, Green / Cycle | | 0.26 | 0.26 | 0.33 | 0.33 | 0.28 | 0.66 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.35 | 0.58 | 0.66 | 0.57 | 0.25 | 0.38 |
| s, saturation flow rate [veh/h] | | 1810 | 1615 | 1900 | 1615 | 1810 | 3618 |
| c, Capacity [veh/h] | | 462 | 413 | 630 | 536 | 506 | 2372 |
| d1, Uniform Delay [s] | | 33.50 | 33.50 | 30.07 | 30.07 | 31.35 | 8.56 |
| k, delay calibration | | 0.49 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | | 179.03 | 581.49 | 450.38 | 329.88 | 6.79 | 1.02 |
| d3, Initial Queue Delay [s] | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | |
|---------------------------------------|--|---------|---------|---------|---------|--------|--------|
| X, volume / capacity | | 1.37 | 2.28 | 1.99 | 1.72 | 0.91 | 0.57 |
| d, Delay for Lane Group [s/veh] | | 212.53 | 614.99 | 480.45 | 359.95 | 38.14 | 9.57 |
| Lane Group LOS | | F | F | F | F | D | A |
| Critical Lane Group | | No | Yes | Yes | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | | 32.77 | 75.38 | 91.90 | 60.18 | 10.30 | 6.57 |
| 50th-Percentile Queue Length [ft/ln] | | 819.17 | 1884.60 | 2297.42 | 1504.55 | 257.51 | 164.37 |
| 95th-Percentile Queue Length [veh/ln] | | 49.52 | 119.56 | 144.75 | 94.38 | 15.56 | 10.78 |
| 95th-Percentile Queue Length [ft/ln] | | 1237.96 | 2988.93 | 3618.72 | 2359.62 | 389.09 | 269.49 |

Movement, Approach, & Intersection Results

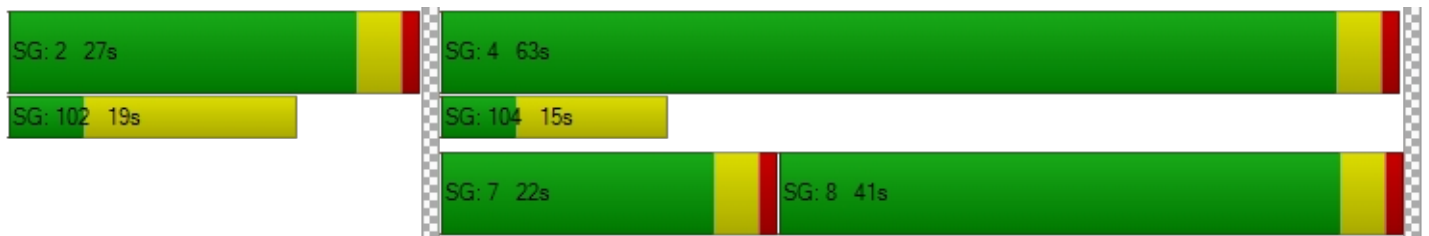
| | | | | | | | | | | | | |
|---------------------------------|--------|------|------|--------|--------|--------|--------|--------|--------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 212.53 | 212.53 | 614.99 | 0.00 | 480.45 | 359.95 | 38.14 | 9.57 | 0.00 |
| Movement LOS | | | | F | F | F | | F | F | D | A | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 452.93 | | | 429.47 | | | 16.80 | | |
| Approach LOS | A | | | F | | | F | | | B | | |
| d_I, Intersection Delay [s/veh] | 301.06 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.819 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | 9.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 0.00 | 36.45 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | 2.453 | 0.000 | 3.036 |
| Crosswalk LOS | F | B | F | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 0 | 511 | 822 | 1311 |
| d_b, Bicycle Delay [s] | 45.00 | 24.94 | 15.61 | 5.34 |
| I_b,int, Bicycle LOS Score for Intersection | 4.132 | 4.153 | 5.143 | 3.062 |
| Bicycle LOS | D | D | F | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 2 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 2: I-215 NB Ramps at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 406.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 2.121 |

Intersection Setup

| Name | Northbound | | | Southbound | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|------------|--------|--------|------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | No | | |

Volumes

| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
|---|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 426 | 2 | 198 | 0 | 0 | 0 | 246 | 570 | 0 | 0 | 413 | 195 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | 0.00 | 0.00 | 2.00 | 2.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0000 | 1.0900 | 1.0900 | 1.0000 | 1.0000 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 477 | 0 | 274 | 0 | 0 | 0 | 492 | 304 | 0 | 0 | 217 | 194 |
| Site-Generated Trips [veh/h] | 0 | 0 | 115 | 0 | 0 | 0 | 0 | 122 | 0 | 0 | 113 | 106 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 941 | 2 | 605 | 0 | 0 | 0 | 760 | 1047 | 0 | 0 | 780 | 513 |
| Peak Hour Factor | 0.9570 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 1.0000 | 0.9570 | 0.9570 | 1.0000 | 1.0000 | 0.9570 | 0.9570 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 246 | 1 | 158 | 0 | 0 | 0 | 199 | 274 | 0 | 0 | 204 | 134 |
| Total Analysis Volume [veh/h] | 983 | 2 | 632 | 0 | 0 | 0 | 794 | 1094 | 0 | 0 | 815 | 536 |
| Presence of On-Street Parking | No | | No | | | | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|-------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 26 | 0 | 0 | 0 | 0 | 17 | 64 | 0 | 0 | 47 | 0 |
| Vehicle Extension [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | C | R | | L | C | C |
|---|--------|--------|--|--------|-------|--------|
| C, Cycle Length [s] | 90 | 90 | | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 22 | 22 | | 13 | 60 | 43 |
| g / C, Green / Cycle | 0.24 | 0.24 | | 0.14 | 0.67 | 0.48 |
| (v / s)_i Volume / Saturation Flow Rate | 0.54 | 0.39 | | 0.44 | 0.58 | 0.76 |
| s, saturation flow rate [veh/h] | 1810 | 1615 | | 1810 | 1900 | 1776 |
| c, Capacity [veh/h] | 442 | 395 | | 261 | 1267 | 848 |
| d1, Uniform Delay [s] | 34.00 | 34.00 | | 38.50 | 11.79 | 23.50 |
| k, delay calibration | 0.50 | 0.50 | | 0.50 | 0.50 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 559.28 | 282.05 | | 927.15 | 7.97 | 272.19 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | |
|---------------------------------------|---------|---------|--|---------|--------|---------|
| X, volume / capacity | 2.23 | 1.60 | | 3.04 | 0.86 | 1.59 |
| d, Delay for Lane Group [s/veh] | 593.28 | 316.05 | | 965.65 | 19.76 | 295.69 |
| Lane Group LOS | F | F | | F | B | F |
| Critical Lane Group | Yes | No | | Yes | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 78.10 | 39.29 | | 72.97 | 16.86 | 80.67 |
| 50th-Percentile Queue Length [ft/ln] | 1952.38 | 982.31 | | 1824.21 | 421.41 | 2016.70 |
| 95th-Percentile Queue Length [veh/ln] | 122.88 | 61.24 | | 112.57 | 23.59 | 125.05 |
| 95th-Percentile Queue Length [ft/ln] | 3072.09 | 1530.89 | | 2814.25 | 589.75 | 3126.24 |

Movement, Approach, & Intersection Results

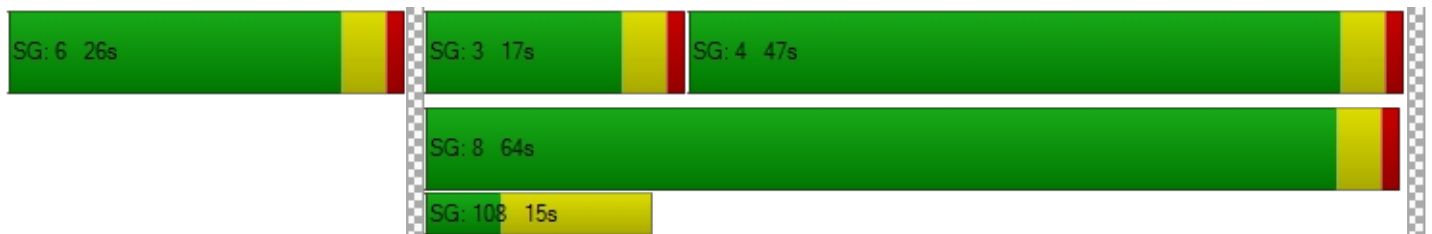
| | | | | | | | | | | | | |
|---------------------------------|--------|--------|--------|------|------|------|--------|-------|------|--------|--------|--------|
| d_M, Delay for Movement [s/veh] | 593.28 | 593.28 | 316.05 | 0.00 | 0.00 | 0.00 | 965.65 | 19.76 | 0.00 | 0.00 | 295.69 | 295.69 |
| Movement LOS | F | F | F | | | | F | B | | | F | F |
| d_A, Approach Delay [s/veh] | 484.92 | | | 0.00 | | | 417.55 | | | 295.69 | | |
| Approach LOS | F | | | A | | | F | | | F | | |
| d_I, Intersection Delay [s/veh] | 406.08 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 2.121 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 0.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 0.00 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.467 | 0.000 | 0.000 | 0.000 |
| Crosswalk LOS | B | F | F | F |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 489 | 0 | 1333 | 956 |
| d_b, Bicycle Delay [s] | 25.69 | 45.00 | 5.00 | 12.27 |
| I_b,int, Bicycle LOS Score for Intersection | 4.228 | 4.132 | 4.675 | 3.789 |
| Bicycle LOS | D | D | E | D |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | - | 6 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | - | - | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 3: Ethanac Road at Encanto Drive

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 197.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.158 |

Intersection Setup

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↻ | | ↑ | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Encanto Drive | | Ethanac Road | | Ethanac Road | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 65 | 57 | 641 | 66 | 41 | 523 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 0 | 0 | 509 | 67 | 0 | 375 |
| Site-Generated Trips [veh/h] | 0 | 0 | 237 | 0 | 0 | 219 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 71 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 71 | 133 | 1445 | 139 | 45 | 1164 |
| Peak Hour Factor | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 | 0.9210 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 19 | 36 | 392 | 38 | 12 | 316 |
| Total Analysis Volume [veh/h] | 77 | 144 | 1569 | 151 | 49 | 1264 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|--------|--------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 1.16 | 0.02 | 0.00 | 0.00 | 0.01 |
| d_M, Delay for Movement [s/veh] | 0.00 | 197.26 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | F | A | A | | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 8.68 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 216.91 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 197.26 | | 0.00 | | 0.00 | |
| Approach LOS | F | | A | | A | |
| d_I, Intersection Delay [s/veh] | 9.08 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 4: Trumble Road at Ethanac Road

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 185.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 1.190 |

Intersection Setup

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇈ | | | ⇈⇐ | | | ⇈⇈⇈ | | | ⇈⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | No | | | No | | | Yes | | |

Volumes

| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
|---|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 | 1.0900 |
| In-Process Volume [veh/h] | 49 | 0 | 0 | 0 | 0 | 12 | 11 | 431 | 67 | 0 | 314 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 7 | 0 | 150 | 237 | 0 | 0 | 0 | 7 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 17 | 0 | 0 | 17 | -17 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 45 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 141 | 5 | 40 | 57 | 16 | 316 | 416 | 1055 | 103 | 93 | 714 | 4 |
| Peak Hour Factor | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 | 0.9100 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 39 | 1 | 11 | 16 | 4 | 87 | 114 | 290 | 28 | 26 | 196 | 1 |
| Total Analysis Volume [veh/h] | 155 | 5 | 44 | 63 | 18 | 347 | 457 | 1159 | 113 | 102 | 785 | 4 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Semi-actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 10 | 19 | 0 | 18 | 27 | 0 | 29 | 44 | 0 | 9 | 24 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | L | C | R | L | C |
|---|--------|-------|-------|-------|-------|--------|-------|-------|--------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 24 | 4 | 22 | 24 | 40 | 40 | 6 | 22 |
| g / C, Green / Cycle | 0.07 | 0.26 | 0.05 | 0.24 | 0.27 | 0.44 | 0.44 | 0.07 | 0.24 |
| (v / s)_i Volume / Saturation Flow Rate | 0.09 | 0.03 | 0.03 | 0.22 | 0.25 | 0.61 | 0.07 | 0.06 | 0.42 |
| s, saturation flow rate [veh/h] | 1810 | 1640 | 1810 | 1627 | 1810 | 1900 | 1615 | 1810 | 1898 |
| c, Capacity [veh/h] | 121 | 431 | 85 | 395 | 491 | 846 | 719 | 122 | 457 |
| d1, Uniform Delay [s] | 42.00 | 25.21 | 42.35 | 33.25 | 31.95 | 24.96 | 14.89 | 41.48 | 34.16 |
| k, delay calibration | 0.11 | 0.11 | 0.11 | 0.21 | 0.27 | 0.50 | 0.50 | 0.11 | 0.50 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 141.38 | 0.12 | 12.00 | 15.82 | 17.18 | 174.05 | 0.47 | 13.82 | 335.21 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | |
|---------------------------------------|--------|-------|-------|--------|--------|---------|-------|--------|---------|
| X, volume / capacity | 1.28 | 0.11 | 0.74 | 0.92 | 0.93 | 1.37 | 0.16 | 0.84 | 1.72 |
| d, Delay for Lane Group [s/veh] | 183.38 | 25.33 | 54.35 | 49.07 | 49.13 | 199.01 | 15.36 | 55.31 | 369.37 |
| Lane Group LOS | F | C | D | D | D | F | B | E | F |
| Critical Lane Group | Yes | No | No | Yes | Yes | No | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 7.38 | 0.80 | 1.65 | 9.29 | 11.72 | 57.67 | 1.43 | 2.68 | 52.30 |
| 50th-Percentile Queue Length [ft/ln] | 184.51 | 19.95 | 41.27 | 232.15 | 292.90 | 1441.64 | 35.72 | 66.88 | 1307.41 |
| 95th-Percentile Queue Length [veh/ln] | 12.72 | 1.44 | 2.97 | 14.28 | 17.33 | 85.71 | 2.57 | 4.82 | 81.06 |
| 95th-Percentile Queue Length [ft/ln] | 318.05 | 35.92 | 74.29 | 357.09 | 433.24 | 2142.85 | 64.30 | 120.39 | 2026.58 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|--------|-------|-------|-------|-------|-------|--------|--------|-------|--------|--------|--------|
| d_M, Delay for Movement [s/veh] | 183.38 | 25.33 | 25.33 | 54.35 | 49.07 | 49.07 | 49.13 | 199.01 | 15.36 | 55.31 | 369.37 | 369.37 |
| Movement LOS | F | C | C | D | D | D | D | F | B | E | F | F |
| d_A, Approach Delay [s/veh] | 145.41 | | | 49.85 | | | 147.39 | | | 333.41 | | |
| Approach LOS | F | | | D | | | F | | | F | | |
| d_I, Intersection Delay [s/veh] | 185.40 | | | | | | | | | | | |
| Intersection LOS | F | | | | | | | | | | | |
| Intersection V/C | 1.190 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 9.0 | 0.0 | 0.0 | 9.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 36.45 | 0.00 | 0.00 | 36.45 |
| I_p,int, Pedestrian LOS Score for Intersection | 2.084 | 0.000 | 0.000 | 2.643 |
| Crosswalk LOS | B | F | F | B |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 333 | 511 | 889 | 444 |
| d_b, Bicycle Delay [s] | 31.25 | 24.94 | 13.89 | 27.22 |
| I_b,int, Bicycle LOS Score for Intersection | 1.896 | 2.266 | 4.412 | 3.030 |
| Bicycle LOS | A | B | E | C |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 5: Ethanac Road at Project Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 27.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.399 |

Intersection Setup

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|------------------------------|------------------|--------|--------------|--------|--------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↻ | | ↑ | | ↶ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway | | Ethanac Road | | Ethanac Road | |
|---|------------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 0 | 694 | 519 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 509 | 375 | 0 |
| Site-Generated Trips [veh/h] | 0 | 69 | 0 | 237 | 150 | 7 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 32 | 0 | 0 | -32 | 32 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 101 | 0 | 1440 | 1012 | 39 |
| Peak Hour Factor | 1.0000 | 0.9500 | 1.0000 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 27 | 0 | 379 | 266 | 10 |
| Total Analysis Volume [veh/h] | 0 | 106 | 0 | 1516 | 1065 | 41 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.40 | 0.00 | 0.02 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 27.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | D | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 1.83 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 45.64 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 27.28 | | 0.00 | | 0.00 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.06 | | | | | |
| Intersection LOS | D | | | | | |

Intersection Level Of Service Report
Intersection 6: Trumble Road at North Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 10.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.161 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | North Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 12 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 146 | 0 | 0 | 0 | 0 | 128 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 146 | 93 | 198 | 0 | 0 | 128 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 38 | 24 | 52 | 0 | 0 | 34 |
| Total Analysis Volume [veh/h] | 154 | 98 | 208 | 0 | 0 | 135 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|-------|
| V/C, Movement V/C Ratio | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 |
| d_M, Delay for Movement [s/veh] | 7.95 | 0.00 | 0.00 | 0.00 | 14.73 | 10.12 |
| Movement LOS | A | A | A | A | B | B |
| 95th-Percentile Queue Length [veh/ln] | 0.38 | 0.38 | 0.00 | 0.00 | 0.57 | 0.57 |
| 95th-Percentile Queue Length [ft/ln] | 9.44 | 9.44 | 0.00 | 0.00 | 14.32 | 14.32 |
| d_A, Approach Delay [s/veh] | 4.86 | | 0.00 | | 10.12 | |
| Approach LOS | A | | A | | B | |
| d_I, Intersection Delay [s/veh] | 4.35 | | | | | |
| Intersection LOS | B | | | | | |

Intersection Level Of Service Report
Intersection 7: Trumble Road at South Driveway

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 10.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.069 |

Intersection Setup

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|------------------------------|--------------|--------|--------------|--------|----------------|--------|
| Approach | Northbound | | Southbound | | Eastbound | |
| Lane Configuration | ↶ | | ↷ | | ↷ | |
| Turning Movement | Left | Thru | Thru | Right | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Trumble Road | | Trumble Road | | South Driveway | |
|---|--------------|--------|--------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 0 | 82 | 186 | 0 | 0 | 0 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 11 | 12 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 91 | 146 | 128 | 0 | 0 | 29 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 17 | 0 | 0 | 0 | 0 | 17 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 108 | 239 | 326 | 0 | 0 | 46 |
| Peak Hour Factor | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 | 0.9500 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 63 | 86 | 0 | 0 | 12 |
| Total Analysis Volume [veh/h] | 114 | 252 | 343 | 0 | 0 | 48 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Free | Free | Stop |
| Flared Lane | | | No |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | | | No |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|-------|-------|
| V/C, Movement V/C Ratio | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 |
| d_M, Delay for Movement [s/veh] | 8.27 | 0.00 | 0.00 | 0.00 | 17.15 | 10.52 |
| Movement LOS | A | A | A | A | C | B |
| 95th-Percentile Queue Length [veh/ln] | 0.31 | 0.31 | 0.00 | 0.00 | 0.22 | 0.22 |
| 95th-Percentile Queue Length [ft/ln] | 7.74 | 7.74 | 0.00 | 0.00 | 5.51 | 5.51 |
| d_A, Approach Delay [s/veh] | 2.57 | | 0.00 | | 10.52 | |
| Approach LOS | A | | A | | B | |
| d_I, Intersection Delay [s/veh] | 1.91 | | | | | |
| Intersection LOS | B | | | | | |

APPENDIX D-5

**INTERSECTION ANALYSIS
WORKSHEETS -
OPENING YEAR 2024 CUMULATIVE
PLUS PROJECT WITH
IMPROVEMENTS**

Option 1: Add 2nd EBT, 2nd WBL, 2nd SBR, Free EBR

| | | | | | | | | | | | | |
|-------------------------------|--------------------------------|------|-------|------------|------|-------|--------------|------|-------|--------------|------|-------|
| Number | 1 | | | | | | | | | | | |
| Intersection | I-215 SB Ramps at Ethanac Road | | | | | | | | | | | |
| Control Type | Signalized | | | | | | | | | | | |
| Analysis Method | HCM 6th Edition | | | | | | | | | | | |
| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 124 | 0 | 245 | 0 | 722 | 499 | 105 | 703 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 359 | 0 | 643 | 0 | 1222 | 939 | 453 | 1137 | 0 |

Intersection Settings

| | | | | | | | | | | | | |
|----------------------------|---------------------------------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Cycle Length [s] | 120 | | | | | | | | | | | |
| Coordination Type | Time of Day Pattern Coordinated | | | | | | | | | | | |
| Actuation Type | Semi-actuated | | | | | | | | | | | |
| Lost time [s] | 16.00 | | | | | | | | | | | |
| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 73 | 0 | 19 | 92 | 0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| l1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Pedestrian Signal Group | 0 | | | | | | | | | | | |
| Pedestrian Walk [s] | 0 | | | | | | | | | | | |
| Pedestrian Clearance [s] | 0 | | | | | | | | | | | |

Lane Group Calculations

| | | | | | | | | |
|---|---|-------|-------|-------|-------|-------|-------|------|
| g / C, Green / Cycle | | 0.20 | 0.20 | 0.20 | 0.55 | 0.55 | 0.15 | 0.73 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.18 | 0.21 | 0.21 | 0.34 | 0.58 | 0.13 | 0.31 |
| so, Base Saturation Flow per Lane [pc/h/ln] | | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Arrival type | 3 | 3 | | | 3 | | 3 | |
| s, saturation flow rate [veh/h] | | 1810 | 1628 | 1615 | 3618 | 1615 | 3514 | 3618 |
| c, Capacity [veh/h] | | 362 | 326 | 323 | 1983 | 885 | 534 | 2653 |
| X, volume / capacity | | 0.92 | 1.03 | 1.03 | 0.62 | 1.06 | 0.85 | 0.43 |
| d, Delay for Lane Group [s/veh] | | 66.75 | 94.56 | 97.37 | 19.95 | 74.85 | 53.40 | 6.73 |
| Lane Group LOS | | E | F | F | B | F | D | A |

| Critical Lane Group | | NO | NO | Yes | NO | Yes | Yes | NO |
|---------------------------------------|--|--------|--------|--------|--------|---------|--------|--------|
| 50th-Percentile Queue Length [veh/ln] | | 11.72 | 13.89 | 14.03 | 11.66 | 35.63 | 6.88 | 5.17 |
| 50th-Percentile Queue Length [ft/ln] | | 292.94 | 347.29 | 350.79 | 291.40 | 890.80 | 172.03 | 129.14 |
| 95th-Percentile Queue Length [veh/ln] | | 17.33 | 20.28 | 20.54 | 17.26 | 47.68 | 11.18 | 8.89 |
| 95th-Percentile Queue Length [ft/ln] | | 433.29 | 507.02 | 513.54 | 431.38 | 1192.09 | 279.58 | 222.32 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 68.69 | 94.56 | 96.02 | 0.00 | 19.95 | 74.85 | 53.40 | 6.73 | 0.00 |
| Movement LOS | | | | E | F | F | | B | F | D | A | |
| Critical Movement | | | | No | No | Yes | | No | No | No | No | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 86.23 | | | 43.81 | | | 20.03 | | |
| Approach LOS | A | | | F | | | D | | | C | | |
| d_I, Intersection Delay [s/veh] | 44.79 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 1.058 | | | | | | | | | | | |

Option 1: Add 2nd EBT, 2nd WBL, 2nd SBR, Free EBR

| | | | | | | | | | | | | |
|-------------------------------|--------------------------------|------|-------|------------|------|-------|--------------|------|-------|--------------|------|-------|
| Number | 1 | | | | | | | | | | | |
| Intersection | I-215 SB Ramps at Ethanac Road | | | | | | | | | | | |
| Control Type | Signalized | | | | | | | | | | | |
| Analysis Method | HCM 6th Edition | | | | | | | | | | | |
| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Base Volume Input [veh/h] | 0 | 0 | 0 | 193 | 0 | 361 | 0 | 602 | 384 | 125 | 716 | 0 |
| Total Analysis Volume [veh/h] | 0 | 0 | 0 | 633 | 0 | 939 | 0 | 1253 | 919 | 461 | 1360 | 0 |

Intersection Settings

| | | | | | | | | | | | | |
|----------------------------|---------------------------------|---------|---------|-------|-------|-------|---------|---------|---------|----------|---------|---------|
| Cycle Length [s] | 120 | | | | | | | | | | | |
| Coordination Type | Time of Day Pattern Coordinated | | | | | | | | | | | |
| Actuation Type | Semi-actuated | | | | | | | | | | | |
| Lost time [s] | 16.00 | | | | | | | | | | | |
| Control Type | Permiss | Permiss | Permiss | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss |
| Signal Group | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | Lead | - | - |
| Minimum Green [s] | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 65 | 0 | 18 | 83 | 0 |
| Walk [s] | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| l1, Start-Up Lost Time [s] | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | | | | | No | | | No | | No | No | |
| Maximum Recall | | | | | No | | | No | | No | No | |
| Pedestrian Recall | | | | | No | | | No | | No | No | |
| Pedestrian Signal Group | 0 | | | | | | | | | | | |
| Pedestrian Walk [s] | 0 | | | | | | | | | | | |
| Pedestrian Clearance [s] | 0 | | | | | | | | | | | |

Lane Group Calculations

| | | | | | | | | |
|---|---|-------|--------|--------|-------|--------|-------|-------|
| g / C, Green / Cycle | | 0.28 | 0.28 | 0.28 | 0.47 | 0.47 | 0.16 | 0.66 |
| (v / s)_i Volume / Saturation Flow Rate | | 0.29 | 0.32 | 0.32 | 0.35 | 0.57 | 0.13 | 0.38 |
| so, Base Saturation Flow per Lane [pc/h/ln] | | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Arrival type | 3 | 3 | | | 3 | | 3 | |
| s, saturation flow rate [veh/h] | | 1810 | 1652 | 1615 | 3618 | 1615 | 3514 | 3618 |
| c, Capacity [veh/h] | | 498 | 454 | 444 | 1701 | 759 | 544 | 2382 |
| X, volume / capacity | | 1.05 | 1.15 | 1.18 | 0.74 | 1.21 | 0.85 | 0.57 |
| d, Delay for Lane Group [s/veh] | | 98.29 | 135.03 | 145.52 | 28.65 | 138.48 | 53.10 | 12.22 |
| Lane Group LOS | | F | F | F | C | F | D | B |

| Critical Lane Group | | NO | NO | Yes | NO | Yes | Yes | NO |
|---------------------------------------|--|--------|--------|--------|--------|---------|--------|--------|
| 50th-Percentile Queue Length [veh/ln] | | 22.18 | 24.89 | 25.62 | 14.86 | 43.71 | 6.99 | 9.60 |
| 50th-Percentile Queue Length [ft/ln] | | 554.53 | 622.14 | 640.59 | 371.50 | 1092.66 | 174.74 | 239.95 |
| 95th-Percentile Queue Length [veh/ln] | | 30.89 | 35.97 | 37.34 | 21.18 | 62.45 | 11.33 | 14.68 |
| 95th-Percentile Queue Length [ft/ln] | | 772.24 | 899.23 | 933.53 | 529.55 | 1561.17 | 283.14 | 366.98 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|--------|--------|--------|-------|-------|--------|-------|-------|------|
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 0.00 | 104.62 | 135.03 | 140.89 | 0.00 | 28.65 | 138.48 | 53.10 | 12.22 | 0.00 |
| Movement LOS | | | | F | F | F | | C | F | D | B | |
| Critical Movement | | | | No | No | Yes | | No | No | No | No | |
| d_A, Approach Delay [s/veh] | 0.00 | | | 126.28 | | | 75.12 | | | 22.57 | | |
| Approach LOS | A | | | F | | | E | | | C | | |
| d_I, Intersection Delay [s/veh] | 72.38 | | | | | | | | | | | |
| Intersection LOS | E | | | | | | | | | | | |
| Intersection V/C | 1.182 | | | | | | | | | | | |

Option 1: Add 2nd EBT, 2nd WBT, 2nd EBL, WBR, 2nd NBL

| | | | | | | | | | | | | |
|-------------------------------|--------------------------------|------|-------|------------|------|-------|--------------|------|-------|--------------|------|-------|
| Number | 2 | | | | | | | | | | | |
| Intersection | I-215 NB Ramps at Ethanac Road | | | | | | | | | | | |
| Control Type | Signalized | | | | | | | | | | | |
| Analysis Method | HCM 6th Edition | | | | | | | | | | | |
| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Base Volume Input [veh/h] | 351 | 0 | 135 | 0 | 0 | 0 | 270 | 580 | 0 | 0 | 456 | 143 |
| Total Analysis Volume [veh/h] | 732 | 0 | 379 | 0 | 0 | 0 | 714 | 906 | 0 | 0 | 891 | 507 |

Intersection Settings

| | | | | | | | | | | | | |
|----------------------------|---------------------------------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Cycle Length [s] | 90 | | | | | | | | | | | |
| Coordination Type | Time of Day Pattern Coordinated | | | | | | | | | | | |
| Actuation Type | Semi-actuated | | | | | | | | | | | |
| Lost time [s] | 16.00 | | | | | | | | | | | |
| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 24 | 0 | 0 | 0 | 0 | 24 | 66 | 0 | 0 | 42 | 0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| l1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Pedestrian Signal Group | 0 | | | | | | | | | | | |
| Pedestrian Walk [s] | 0 | | | | | | | | | | | |
| Pedestrian Clearance [s] | 0 | | | | | | | | | | | |

Lane Group Calculations

| | | | | | | | | |
|---|-------|-------|-------|---|-------|------|-------|-------|
| g / C, Green / Cycle | 0.22 | 0.22 | 0.22 | | 0.22 | 0.69 | 0.42 | 0.42 |
| (v / s)_i Volume / Saturation Flow Rate | 0.20 | 0.20 | 0.23 | | 0.20 | 0.25 | 0.25 | 0.31 |
| so, Base Saturation Flow per Lane [pc/h/ln] | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | 1900 |
| Arrival type | 3 | | | 3 | 3 | | 3 | |
| s, saturation flow rate [veh/h] | 1810 | 1810 | 1615 | | 3514 | 3618 | 3618 | 1615 |
| c, Capacity [veh/h] | 402 | 402 | 359 | | 778 | 2492 | 1530 | 683 |
| X, volume / capacity | 0.91 | 0.91 | 1.06 | | 0.92 | 0.36 | 0.58 | 0.74 |
| d, Delay for Lane Group [s/veh] | 45.58 | 45.58 | 83.27 | | 39.15 | 6.22 | 21.50 | 28.98 |
| Lane Group LOS | D | D | F | | D | A | C | C |

| Critical Lane Group | No | NO | Yes | | Yes | NO | NO | Yes |
|---------------------------------------|--------|--------|--------|--|--------|--------|--------|--------|
| 50th-Percentile Queue Length [veh/ln] | 8.88 | 8.88 | 12.45 | | 7.96 | 3.10 | 7.17 | 9.88 |
| 50th-Percentile Queue Length [ft/ln] | 221.93 | 221.93 | 311.34 | | 199.02 | 77.50 | 179.13 | 247.05 |
| 95th-Percentile Queue Length [veh/ln] | 13.76 | 13.76 | 18.78 | | 12.59 | 5.58 | 11.56 | 15.04 |
| 95th-Percentile Queue Length [ft/ln] | 344.09 | 344.09 | 469.61 | | 314.70 | 139.50 | 288.88 | 375.93 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 45.58 | 45.58 | 83.27 | 0.00 | 0.00 | 0.00 | 39.15 | 6.22 | 0.00 | 0.00 | 21.50 | 28.98 |
| Movement LOS | D | D | F | | | | D | A | | | C | C |
| Critical Movement | No | No | Yes | | | | No | No | | | No | No |
| d_A, Approach Delay [s/veh] | 58.44 | | | 0.00 | | | 20.73 | | | 24.21 | | |
| Approach LOS | E | | | A | | | C | | | C | | |
| d_I, Intersection Delay [s/veh] | 32.06 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.914 | | | | | | | | | | | |

Option 1: Add 2nd EBT, 2nd WBT, 2nd EBL, WBR, 2nd NBL

| | | | | | | | | | | | | |
|-------------------------------|--------------------------------|------|-------|------------|------|-------|--------------|------|-------|--------------|------|-------|
| Number | 2 | | | | | | | | | | | |
| Intersection | I-215 NB Ramps at Ethanac Road | | | | | | | | | | | |
| Control Type | Signalized | | | | | | | | | | | |
| Analysis Method | HCM 6th Edition | | | | | | | | | | | |
| Name | | | | | | | Ethanac Road | | | Ethanac Road | | |
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Base Volume Input [veh/h] | 426 | 2 | 198 | 0 | 0 | 0 | 246 | 570 | 0 | 0 | 413 | 195 |
| Total Analysis Volume [veh/h] | 983 | 2 | 632 | 0 | 0 | 0 | 794 | 1094 | 0 | 0 | 815 | 536 |

Intersection Settings

| | | | | | | | | | | | | |
|----------------------------|---------------------------------|-------|-------|---------|---------|---------|----------|---------|---------|---------|---------|---------|
| Cycle Length [s] | 120 | | | | | | | | | | | |
| Coordination Type | Time of Day Pattern Coordinated | | | | | | | | | | | |
| Actuation Type | Semi-actuated | | | | | | | | | | | |
| Lost time [s] | 16.00 | | | | | | | | | | | |
| Control Type | Split | Split | Split | Permiss | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss |
| Signal Group | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | - | - | - |
| Minimum Green [s] | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 10 | 0 |
| Maximum Green [s] | 0 | 30 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 0 | 48 | 0 | 0 | 0 | 0 | 30 | 72 | 0 | 0 | 42 | 0 |
| Walk [s] | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| l1, Start-Up Lost Time [s] | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | | No | | | | | No | No | | | No | |
| Maximum Recall | | No | | | | | No | No | | | No | |
| Pedestrian Recall | | No | | | | | No | No | | | No | |
| Pedestrian Signal Group | 0 | | | | | | | | | | | |
| Pedestrian Walk [s] | 0 | | | | | | | | | | | |
| Pedestrian Clearance [s] | 0 | | | | | | | | | | | |

Lane Group Calculations

| | | | | | | | | |
|---|-------|-------|-------|---|-------|-------|-------|-------|
| g / C, Green / Cycle | 0.37 | 0.37 | 0.37 | | 0.22 | 0.57 | 0.32 | 0.32 |
| (v / s)_i Volume / Saturation Flow Rate | 0.27 | 0.27 | 0.39 | | 0.23 | 0.30 | 0.23 | 0.33 |
| so, Base Saturation Flow per Lane [pc/h/ln] | 1900 | 1900 | 1900 | | 1900 | 1900 | 1900 | 1900 |
| Arrival type | 3 | | | 3 | 3 | | 3 | |
| s, saturation flow rate [veh/h] | 1810 | 1810 | 1615 | | 3514 | 3618 | 3618 | 1615 |
| c, Capacity [veh/h] | 663 | 664 | 592 | | 761 | 2050 | 1146 | 511 |
| X, volume / capacity | 0.74 | 0.74 | 1.07 | | 1.04 | 0.53 | 0.71 | 1.05 |
| d, Delay for Lane Group [s/veh] | 37.18 | 37.17 | 94.23 | | 74.87 | 17.15 | 39.93 | 93.97 |
| Lane Group LOS | D | D | F | | F | B | D | F |

| Critical Lane Group | No | NO | Yes | | Yes | NO | NO | Yes |
|---------------------------------------|--------|--------|--------|--|--------|--------|--------|--------|
| 50th-Percentile Queue Length [veh/ln] | 13.09 | 13.09 | 26.29 | | 14.24 | 9.35 | 11.06 | 22.41 |
| 50th-Percentile Queue Length [ft/ln] | 327.30 | 327.26 | 657.29 | | 355.89 | 233.74 | 276.58 | 560.34 |
| 95th-Percentile Queue Length [veh/ln] | 19.03 | 19.02 | 36.31 | | 20.90 | 14.36 | 16.52 | 31.13 |
| 95th-Percentile Queue Length [ft/ln] | 475.65 | 475.60 | 907.67 | | 522.51 | 359.10 | 412.95 | 778.19 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|------|------|------|-------|-------|------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 37.18 | 37.17 | 94.23 | 0.00 | 0.00 | 0.00 | 74.87 | 17.15 | 0.00 | 0.00 | 39.93 | 93.97 |
| Movement LOS | D | D | F | | | | F | B | | | D | F |
| Critical Movement | No | No | Yes | | | | No | No | | | No | No |
| d_A, Approach Delay [s/veh] | 59.48 | | | 0.00 | | | 41.43 | | | 61.37 | | |
| Approach LOS | E | | | A | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 52.99 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 1.095 | | | | | | | | | | | |

Option 1: Copy of Trumble Road at Ethanac Road

| | | | | | | | | | | | | |
|-------------------------------|------------------------------|------|-------|--------------|------|-------|--------------|------|-------|--------------|------|-------|
| Number | 4 | | | | | | | | | | | |
| Intersection | Trumble Road at Ethanac Road | | | | | | | | | | | |
| Control Type | Signalized | | | | | | | | | | | |
| Analysis Method | HCM 6th Edition | | | | | | | | | | | |
| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Base Volume Input [veh/h] | 99 | 9 | 34 | 8 | 9 | 109 | 87 | 558 | 34 | 61 | 341 | 11 |
| Total Analysis Volume [veh/h] | 186 | 11 | 41 | 28 | 11 | 305 | 423 | 883 | 75 | 108 | 842 | 13 |

Intersection Settings

| | | | | | | | | | | | | |
|----------------------------|---------------------------------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Cycle Length [s] | 90 | | | | | | | | | | | |
| Coordination Type | Time of Day Pattern Coordinated | | | | | | | | | | | |
| Actuation Type | Semi-actuated | | | | | | | | | | | |
| Lost time [s] | 16.00 | | | | | | | | | | | |
| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 10 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 30 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 16 | 19 | 0 | 11 | 14 | 14 | 44 | 46 | 0 | 14 | 16 | 0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 5 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 10 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| 11, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | No | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | No | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | No | No | No | | No | No | |
| Pedestrian Signal Group | 0 | | | | | | | | | | | |
| Pedestrian Walk [s] | 0 | | | | | | | | | | | |
| Pedestrian Clearance [s] | 0 | | | | | | | | | | | |

Lane Group Calculations

| | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| g / C, Green / Cycle | 0.12 | 0.20 | 0.03 | 0.11 | 0.42 | 0.27 | 0.51 | 0.51 | 0.08 | 0.32 | 0.32 | |
| (v / s)_i Volume / Saturation Flow Rate | 0.10 | 0.03 | 0.02 | 0.01 | 0.19 | 0.23 | 0.25 | 0.26 | 0.06 | 0.23 | 0.23 | |
| so, Base Saturation Flow per Lane [pc/h/ln] | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Arrival type | 3 | | | 3 | | | 3 | | | 3 | | |
| s, saturation flow rate [veh/h] | 1810 | 1668 | 1810 | 1900 | 1615 | 1810 | 1900 | 1848 | 1810 | 1900 | 1890 | |
| c, Capacity [veh/h] | 221 | 340 | 53 | 211 | 683 | 484 | 973 | 946 | 139 | 610 | 607 | |
| X, volume / capacity | 0.84 | 0.15 | 0.52 | 0.05 | 0.45 | 0.87 | 0.50 | 0.50 | 0.78 | 0.70 | 0.70 | |
| d, Delay for Lane Group [s/veh] | 46.95 | 29.65 | 50.79 | 35.87 | 19.02 | 36.58 | 16.20 | 16.29 | 49.72 | 33.41 | 33.44 | |
| Lane Group LOS | D | C | D | D | B | D | B | B | D | C | C | |

| Critical Lane Group | Yes | No | NO | NO | Yes | Yes | NO | NO | NO | NO | Yes |
|---------------------------------------|--------|-------|-------|------|--------|--------|--------|--------|--------|--------|--------|
| 50th-Percentile Queue Length [veh/ln] | 4.46 | 0.93 | 0.72 | 0.22 | 4.45 | 9.21 | 6.54 | 6.42 | 2.67 | 8.91 | 8.87 |
| 50th-Percentile Queue Length [ft/ln] | 111.57 | 23.30 | 18.08 | 5.50 | 111.25 | 230.17 | 163.51 | 160.46 | 66.64 | 222.78 | 221.73 |
| 95th-Percentile Queue Length [veh/ln] | 7.93 | 1.68 | 1.30 | 0.40 | 7.91 | 14.18 | 10.73 | 10.57 | 4.80 | 13.81 | 13.75 |
| 95th-Percentile Queue Length [ft/ln] | 198.18 | 41.95 | 32.55 | 9.90 | 197.73 | 354.57 | 268.36 | 264.33 | 119.96 | 345.17 | 343.83 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 46.95 | 29.65 | 29.65 | 50.79 | 35.87 | 19.02 | 36.58 | 16.24 | 16.29 | 49.72 | 33.42 | 33.44 |
| Movement LOS | D | C | C | D | D | B | D | B | B | D | C | C |
| Critical Movement | No | No | No | Yes | No | No | No | No | No | No | No | No |
| d_A, Approach Delay [s/veh] | 43.17 | | | 22.14 | | | 22.47 | | | 35.25 | | |
| Approach LOS | D | | | C | | | C | | | D | | |
| d_I, Intersection Delay [s/veh] | 28.32 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.847 | | | | | | | | | | | |

Option 1: Add 2nd EBT, 2nd WBT

| | | | | | | | | | | | | |
|-------------------------------|------------------------------|------|-------|--------------|------|-------|--------------|------|-------|--------------|------|-------|
| Number | 4 | | | | | | | | | | | |
| Intersection | Trumble Road at Ethanac Road | | | | | | | | | | | |
| Control Type | Signalized | | | | | | | | | | | |
| Analysis Method | HCM 6th Edition | | | | | | | | | | | |
| Name | Trumble Road | | | Trumble Road | | | Ethanac Road | | | Ethanac Road | | |
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Base Volume Input [veh/h] | 84 | 5 | 37 | 30 | 15 | 141 | 73 | 588 | 33 | 44 | 361 | 4 |
| Total Analysis Volume [veh/h] | 155 | 5 | 44 | 63 | 18 | 347 | 457 | 1159 | 113 | 102 | 785 | 4 |

Intersection Settings

| | | | | | | | | | | | | |
|----------------------------|---------------------------------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Cycle Length [s] | 90 | | | | | | | | | | | |
| Coordination Type | Time of Day Pattern Coordinated | | | | | | | | | | | |
| Actuation Type | Semi-actuated | | | | | | | | | | | |
| Lost time [s] | 16.00 | | | | | | | | | | | |
| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Overlap | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
| Signal Group | 1 | 6 | 0 | 5 | 2 | 2 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | 2,3 | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 5 | 10 | 0 | 5 | 10 | 10 | 5 | 10 | 0 | 5 | 10 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 30 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 19 | 0 | 9 | 15 | 15 | 37 | 52 | 0 | 10 | 25 | 0 |
| Walk [s] | 0 | 5 | 0 | 0 | 5 | 5 | 0 | 5 | 0 | 0 | 5 | 0 |
| Pedestrian Clearance [s] | 0 | 10 | 0 | 0 | 10 | 10 | 0 | 10 | 0 | 0 | 10 | 0 |
| Delayed Vehicle Green [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 |
| l1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | No | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | No | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | No | No | No | | No | No | |
| Pedestrian Signal Group | 0 | | | | | | | | | | | |
| Pedestrian Walk [s] | 0 | | | | | | | | | | | |
| Pedestrian Clearance [s] | 0 | | | | | | | | | | | |

Lane Group Calculations

| | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| g / C, Green / Cycle | 0.10 | 0.17 | 0.05 | 0.11 | 0.44 | 0.28 | 0.54 | 0.54 | 0.07 | 0.33 | 0.33 |
| (v / s)_i Volume / Saturation Flow Rate | 0.09 | 0.03 | 0.03 | 0.01 | 0.21 | 0.25 | 0.34 | 0.34 | 0.06 | 0.21 | 0.21 |
| so, Base Saturation Flow per Lane [pc/h/ln] | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Arrival type | 3 | | 3 | | | 3 | | | 3 | | |
| s, saturation flow rate [veh/h] | 1810 | 1640 | 1810 | 1900 | 1615 | 1810 | 1900 | 1842 | 1810 | 1900 | 1897 |
| c, Capacity [veh/h] | 181 | 273 | 82 | 212 | 713 | 516 | 1025 | 993 | 129 | 618 | 617 |
| X, volume / capacity | 0.86 | 0.18 | 0.76 | 0.08 | 0.49 | 0.89 | 0.62 | 0.64 | 0.79 | 0.64 | 0.64 |
| d, Delay for Lane Group [s/veh] | 50.84 | 32.56 | 56.07 | 36.01 | 18.80 | 40.51 | 17.27 | 17.65 | 51.56 | 30.83 | 30.84 |
| Lane Group LOS | D | C | E | D | B | D | B | B | D | C | C |

| Critical Lane Group | Yes | No | NO | NO | Yes | Yes | NO | NO | NO | NO | Yes |
|---------------------------------------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 50th-Percentile Queue Length [veh/ln] | 3.88 | 0.93 | 1.68 | 0.36 | 5.09 | 10.57 | 9.15 | 9.16 | 2.57 | 7.81 | 7.80 |
| 50th-Percentile Queue Length [ft/ln] | 96.92 | 23.27 | 42.02 | 9.03 | 127.27 | 264.26 | 228.65 | 229.08 | 64.24 | 195.28 | 194.98 |
| 95th-Percentile Queue Length [veh/ln] | 6.98 | 1.68 | 3.03 | 0.65 | 8.79 | 15.90 | 14.11 | 14.13 | 4.63 | 12.39 | 12.38 |
| 95th-Percentile Queue Length [ft/ln] | 174.45 | 41.89 | 75.64 | 16.26 | 219.77 | 397.56 | 352.64 | 353.19 | 115.64 | 309.87 | 309.48 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 50.84 | 32.56 | 32.56 | 56.07 | 36.01 | 18.80 | 40.51 | 17.44 | 17.65 | 51.56 | 30.84 | 30.84 |
| Movement LOS | D | C | C | E | D | B | D | B | B | D | C | C |
| Critical Movement | No | No | No | Yes | No | No | No | No | No | No | No | No |
| d_A, Approach Delay [s/veh] | 46.45 | | | 25.01 | | | 23.55 | | | 33.21 | | |
| Approach LOS | D | | | C | | | C | | | C | | |
| d_I, Intersection Delay [s/veh] | 27.83 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.845 | | | | | | | | | | | |

APPENDIX E

**CUMULATIVE PROJECTS
INFORMATION**

CUMULATIVE PROJECTS - DISTRIBUTION

TOTAL OF ALL CUMULATIVE PROJECTS

| | | AM Peak Hour | | | | | | | | | | | |
|---|---------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1 | SR-215 SB Ramps at Ethanac Road | 0 | 0 | 0 | 124 | 0 | 257 | 0 | 372 | 358 | 235 | 272 | 0 |
| 2 | SR-215 NB Ramps at Ethanac Road | 257 | 0 | 124 | 0 | 0 | 0 | 358 | 139 | 0 | 0 | 250 | 235 |
| 3 | Encanto Drive at Ethanac Road | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 30 | 0 | 434 | 0 |
| 4 | Trumble Road at Ethanac Road | 59 | 0 | 0 | 0 | 0 | 7 | 11 | 193 | 30 | 0 | 368 | 0 |

| | | PM Peak Hour | | | | | | | | | | | |
|---|---------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1 | SR-215 SB Ramps at Ethanac Road | 0 | 0 | 0 | 274 | 0 | 452 | 0 | 385 | 366 | 194 | 472 | 0 |
| 2 | SR-215 NB Ramps at Ethanac Road | 452 | 0 | 274 | 0 | 0 | 0 | 366 | 293 | 0 | 0 | 214 | 194 |
| 3 | Encanto Drive at Ethanac Road | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 498 | 67 | 0 | 372 | 0 |
| 4 | Trumble Road at Ethanac Road | 49 | 0 | 0 | 0 | 0 | 12 | 11 | 420 | 67 | 0 | 311 | 0 |

CUMULATIVE PROJECTS - HAND ENTERED FROM TRAFFIC STUDIES

| | | AM Peak Hour | | | | | | | | | | | |
|---|---------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1 | SR-215 SB Ramps at Ethanac Road | 0 | 0 | 0 | 0 | 0 | 109 | 0 | 40 | 23 | 0 | 77 | 0 |
| 2 | SR-215 NB Ramps at Ethanac Road | 66 | 0 | 0 | 0 | 0 | 0 | 37 | 3 | 0 | 0 | 11 | 0 |
| 3 | Encanto Drive at Ethanac Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 11 | 0 |
| 4 | Trumble Road at Ethanac Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 11 | 0 |

| | | PM Peak Hour | | | | | | | | | | | |
|---|---------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1 | SR-215 SB Ramps at Ethanac Road | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 137 | 84 | 0 | 28 | 0 |
| 2 | SR-215 NB Ramps at Ethanac Road | 25 | 0 | 0 | 0 | 0 | 0 | 126 | 11 | 0 | 0 | 3 | 0 |
| 3 | Encanto Drive at Ethanac Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 3 | 0 |
| 4 | Trumble Road at Ethanac Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 3 | 0 |

TOTAL CUMULATIVE PROJECTS TRAFFIC

| | | AM Peak Hour | | | | | | | | | | | |
|---|---------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1 | SR-215 SB Ramps at Ethanac Road | 0 | 0 | 0 | 124 | 0 | 366 | 0 | 412 | 381 | 235 | 349 | 0 |
| 2 | SR-215 NB Ramps at Ethanac Road | 323 | 0 | 124 | 0 | 0 | 0 | 395 | 142 | 0 | 0 | 261 | 235 |
| 3 | Encanto Drive at Ethanac Road | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 236 | 30 | 0 | 445 | 0 |
| 4 | Trumble Road at Ethanac Road | 59 | 0 | 0 | 0 | 0 | 7 | 11 | 196 | 30 | 0 | 379 | 0 |

| | | PM Peak Hour | | | | | | | | | | | |
|---|---------------------------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1 | SR-215 SB Ramps at Ethanac Road | 0 | 0 | 0 | 274 | 0 | 495 | 0 | 522 | 450 | 194 | 500 | 0 |
| 2 | SR-215 NB Ramps at Ethanac Road | 477 | 0 | 274 | 0 | 0 | 0 | 492 | 304 | 0 | 0 | 217 | 194 |
| 3 | Encanto Drive at Ethanac Road | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 509 | 67 | 0 | 375 | 0 |
| 4 | Trumble Road at Ethanac Road | 49 | 0 | 0 | 0 | 0 | 12 | 11 | 431 | 67 | 0 | 314 | 0 |

Int. #: 1 SR-215 SB Ramps at Ethanac Road

Zone # 5 1,6,21

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | 24% | | | | | 25% | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 26% | 24% | 0% | 0% | 0% |
| AM Out | | | | | | | | 26% | 24% | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 24% | 0% | 0% | 0% | 0% | 26% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 26% | 24% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 762 | 0 | 0 | 0 | 0 | 0 | 183 | 0 | 0 | 0 | 0 | 198 | 0 |
| AM Out | 736 | 0 | 0 | 0 | 0 | 0 | 0 | 191 | 177 | 0 | 0 | 0 | 0 |
| PM In | 1,019 | 0 | 0 | 0 | 0 | 0 | 245 | 0 | 0 | 0 | 0 | 265 | 0 |
| PM Out | 971 | 0 | 0 | 0 | 0 | 0 | 0 | 252 | 233 | 0 | 0 | 0 | 0 |

Zone # 6 8, 14, 15,16,17, 18

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | 20% | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 20% | 0% | 0% |
| AM Out | | | | | | | | | | 20% | | |
| PM In | 0% | 0% | 0% | 20% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 20% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 592 | 0 | 0 | 0 | 118 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 1,176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 235 | 0 | 0 |
| PM In | 1,338 | 0 | 0 | 0 | 268 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 194 | 0 | 0 |

Zone # 7 7,12,13,22

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | 35% | | | | | 35% | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 35% | 0% | 0% | 0% |
| AM Out | | | | | | | | 35% | 35% | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 35% | 0% | 0% | 0% | 0% | 35% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 35% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 100 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 35 | 0 |
| AM Out | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 64 | 0 | 0 | 0 | 0 |
| PM In | 216 | 0 | 0 | 0 | 0 | 0 | 76 | 0 | 0 | 0 | 0 | 76 | 0 |
| PM Out | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 56 | 0 | 0 | 0 | 0 |

Zone # 8 2,3

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | 15% | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 15% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 38 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 38 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 9 10,11,24

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | 25% | | | | | 25% | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 25% | 0% | 0% | 0% |
| AM Out | | | | | | | | 25% | 25% | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 25% | 0% | 0% | 0% | 0% | 25% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 25% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 156 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 39 | 0 |
| AM Out | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 117 | 0 | 0 | 0 | 0 |
| PM In | 522 | 0 | 0 | 0 | 0 | 0 | 131 | 0 | 0 | 0 | 0 | 131 | 0 |
| PM Out | 307 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 77 | 0 | 0 | 0 | 0 |

Enter only in blue cells Yellow cells calculate

Int. #: 2 SR-215 NB Ramps at Ethanac Road

N

| TOTAL CUMULATIVE PROJECTS TRAFFIC | | | | | | | | | | | | |
|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| AM In | 257 | 0 | 124 | 0 | 0 | 0 | 0 | 124 | 0 | 0 | 15 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 358 | 15 | 0 | 0 | 235 | 235 |
| AM Tot | 257 | 0 | 124 | 0 | 0 | 0 | 358 | 139 | 0 | 0 | 250 | 235 |
| PM In | 452 | 0 | 274 | 0 | 0 | 0 | 0 | 274 | 0 | 0 | 20 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 366 | 19 | 0 | 0 | 194 | 194 |
| PM Tot | 452 | 0 | 274 | 0 | 0 | 0 | 366 | 293 | 0 | 0 | 214 | 194 |

Zone # 1 1

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 2 19,20

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 3 23, 24, 27

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 4 4,5,9,23

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 194 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 137 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 5 1,6,21

Int. #: 2 SR-215 NB Ramps at Ethanac Road

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 24% | | | | | | | | | | 2% | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 24% | 2% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | 24% | 2% | | | | |
| PM In | 24% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 24% | 2% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 762 | 183 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 |
| AM Out | 736 | 0 | 0 | 0 | 0 | 0 | 0 | 177 | 15 | 0 | 0 | 0 | 0 |
| PM In | 1,019 | 245 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| PM Out | 971 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 19 | 0 | 0 | 0 | 0 |

Zone # 6 8, 14, 15,16,17, 18

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | 20% | | | | | 20% | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 20% | 20% |
| AM Out | | | | | | | | | | 20% | 20% | |
| PM In | 0% | 0% | 20% | 0% | 0% | 0% | 0% | 20% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 20% | 20% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 592 | 0 | 0 | 118 | 0 | 0 | 0 | 0 | 118 | 0 | 0 | 0 | 0 |
| AM Out | 1,176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 235 | 235 | |
| PM In | 1,338 | 0 | 0 | 268 | 0 | 0 | 0 | 0 | 268 | 0 | 0 | 0 | 0 |
| PM Out | 970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 194 | 194 | |

Zone # 7 7,12,13,22

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 35% | | | | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | 35% | | | | | |
| PM In | 35% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 100 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 |
| PM In | 216 | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 |

Zone # 8 2,3

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | 15% | | | | | 15% | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 15% | 0% | 0% | 0% | 0% | 15% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 38 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| AM Out | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 38 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 |
| PM Out | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 9 10,11,24

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 25% | | | | | | | | | | | |
| N | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | 25% | | | | | |
| PM In | 25% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 156 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 0 | 0 | 0 | 0 | 0 |
| PM In | 522 | 131 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 307 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 0 | 0 | 0 | 0 | 0 |

Enter only in blue cells Yellow cells calculate

Int. #: 3 Encanto Drive at Ethanac Road

Y

| TOTAL CUMULATIVE PROJECTS TRAFFIC | | | | | | | | | | | | | |
|-----------------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pk Hr | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| AM In | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 218 | 30 | 0 | 15 | 0 |
| AM Out | | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 419 | 0 |
| AM Tot | | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 233 | 30 | 0 | 434 | 0 |
| PM In | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 479 | 67 | 0 | 20 | 0 |
| PM Out | | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 352 | 0 |
| PM Tot | | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 498 | 67 | 0 | 372 | 0 |

Zone # 1 1

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 2 19,20

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 3 23, 24, 27

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 4 4,5,9,23

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 194 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 137 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 5 1,6,21

Int. #: 3 Encanto Drive at Ethanac Road

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | 2% | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 762 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 |
| AM Out | 736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 |
| PM In | 1,019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| PM Out | 971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 |

Zone # 6 8, 14, 15,16,17, 18

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | 35% | 5% | | | |
| Y | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 5% | 0% | 0% | 0% |
| PM Out | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 35% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 592 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 207 | 30 | 0 | 0 | 0 |
| AM Out | 1,176 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 | 0 |
| PM In | 1,338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 468 | 67 | 0 | 0 | 0 |
| PM Out | 970 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 340 | 0 |

Zone # 7 7,12,13,22

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 8 2,3

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | 30% | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 |
| AM Out | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 |
| PM In | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 |
| PM Out | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 |

Zone # 9 10,11,24

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 522 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 307 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Enter only in blue cells Yellow cells calculate

Int. #: 4 Trumble Road at Ethanac Road

Y

| TOTAL CUMULATIVE PROJECTS TRAFFIC | | | | | | | | | | | | | |
|-----------------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pk Hr | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| AM In | | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 178 | 30 | 0 | 15 | 0 |
| AM Out | | 59 | 0 | 0 | 0 | 0 | 7 | 0 | 15 | 0 | 0 | 353 | 0 |
| AM Tot | | 59 | 0 | 0 | 0 | 0 | 7 | 11 | 193 | 30 | 0 | 368 | 0 |
| PM In | | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 401 | 67 | 0 | 20 | 0 |
| PM Out | | 49 | 0 | 0 | 0 | 0 | 12 | 0 | 19 | 0 | 0 | 291 | 0 |
| PM Tot | | 49 | 0 | 0 | 0 | 0 | 12 | 11 | 420 | 67 | 0 | 311 | 0 |

Zone # 1 1

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 2 19,20

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 3 23, 24, 27

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 4 4,5,9,23

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 194 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 137 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 5 1,6,21

Int. #: 4 Trumble Road at Ethanac Road

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | 2% | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 762 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 |
| AM Out | 736 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 |
| PM In | 1,019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 |
| PM Out | 971 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 |

Zone # 6 8, 14, 15,16,17, 18

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | 30% | 5% | | | |
| Y | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 5% | 0% | 0% | 0% |
| PM Out | 5% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 592 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 178 | 30 | 0 | 0 | 0 |
| AM Out | 1,176 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 353 | 0 |
| PM In | 1,338 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 401 | 67 | 0 | 0 | 0 |
| PM Out | 970 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 291 | 0 |

Zone # 7 7,12,13,22

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 8 2,3

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | 30% | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 30% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 30% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 30% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 24 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 40 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |

Zone # 9 10,11,24

| Pk Hr | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | | | | | | | | | | | | |
| Y | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| AM Out | | | | | | | | | | | | |
| PM In | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| PM Out | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| Pk Hr | T Gen | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|--------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| AM In | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Out | 466 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM In | 522 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM Out | 307 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

APPENDIX F

**DRIVE-THROUGH
QUEUING ANALYSIS**

DRIVE-THROUGH QUEUING ANALYSIS

Project: Perris Travel Center - Drive-Through Restaurant
Location: NWC Ethanac Road at Trumble Road, Perris, CA

INPUT VALUES

| Variable | Description | Value |
|----------|--|-------|
| A = | average number of vehicle arrivals per hour ¹ | 30 |
| S = | service rate, number of vehicles per hour ² | 38 |
| I = | traffic intensity, utilization factor = A/S | 0.79 |
| Q = | queue capacity (vehicles) | 5 |

FORMULAS

Average Length of Queue

$$\text{Avg } Q = A^2 / S(S-A) = I^2 / 1-I \quad 2.96$$

Probability of Q Number of Vehicles in Queue

$$P(Q) = (I)^Q (1-I) \quad 6.46\%$$

Probability of Queue Exceeding Q Vehicles (5 Vehicles)

$$P(Q > a) = 1 - \sum_{Q=0}^{Q=a} P(Q) \quad 24.21\%$$

¹ Arrival rate assumes 60% of inbound traffic for the drive-through restaurant during the peak hour will use the drive-through.

² Service rate conservatively assumes 250 seconds of lost time for the first vehicle of the hour to move forward from the order board to the service window, while the remainder of the vehicles are assumed to be processed at a rate of 90 sec/veh

Source: Institute of Transportation Engineers (ITE)
 Transportation Planning Handbook, 3rd Edition

APPENDIX G

TUMF REGIONAL PROGRAM



TRANSPORTATION UNIFORM MITIGATION FEE
NEXUS STUDY
2016 UPDATE

FINAL REPORT

Prepared for the Western Riverside Council of Governments

In Cooperation with

The City of Banning
The City of Beaumont
The City of Calimesa
The City of Canyon Lake
The City of Corona
The City of Eastvale
The City of Hemet
The City of Jurupa Valley
The City of Lake Elsinore
The City of Menifee
The City of Moreno Valley
The City of Murrieta
The City of Norco
The City of Perris
The City of Riverside
The City of San Jacinto
The City of Temecula
The City of Wildomar
The County of Riverside
Eastern Municipal Water District
March Joint Powers Authority
Morongo Band of Mission Indians
Riverside County Superintendent of Schools
Riverside Transit Agency
Western Municipal Water District

Prepared by WSP

As adopted by the WRCOG Executive Committee, July 10, 2017



Table 4.4 - TUMF Network Cost Estimates

| AREA | PLAN DIS | CITY | STREETNAME | SEGMENTFROM | SEGMENTO | MILES | TOTAL COST | MAXIMUM TUMF SHARE |
|-----------|----------------|------------------------|------------------------------|----------------------------------|----------|-------|--------------|--------------------|
| Central | Menifee | Ethanac | Goetz | Murrieta | | 0.99 | \$0 | \$0 |
| Central | Menifee | Ethanac | Murrieta | I-215 | | 0.90 | \$0 | \$0 |
| Central | Menifee | Ethanac | I-215 | interchange | | 0.00 | \$17,897,000 | \$15,766,000 |
| Central | Menifee | Ethanac | Sherman | Matthews | | 0.61 | \$1,617,000 | \$1,617,000 |
| Central | Menifee | Ethanac | BNSF San Jacinto Branch | railroad crossing | | 0.00 | \$36,980,000 | \$33,018,000 |
| Central | Menifee | Menifee | SR-74 (Pinacate) | Simpson | | 2.49 | \$0 | \$0 |
| Central | Menifee | Menifee | Salt Creek | bridge | | 0.00 | \$0 | \$0 |
| Central | Menifee | Menifee | Simpson | Aldergate | | 0.64 | \$0 | \$0 |
| Central | Menifee | Menifee | Aldergate | Newport | | 0.98 | \$0 | \$0 |
| Central | Menifee | Menifee | Newport | Holland | | 1.07 | \$0 | \$0 |
| Central | Menifee | Menifee | Holland | Garbani | | 1.03 | \$0 | \$0 |
| Central | Menifee | Menifee | Garbani | Scott | | 1.00 | \$2,635,000 | \$2,635,000 |
| Central | Menifee | Menifee/Whitewood | Scott | Murrieta City Limit | | 0.53 | \$0 | \$0 |
| Central | Menifee | Newport | Goetz | Murrieta | | 1.81 | \$0 | \$0 |
| Central | Menifee | Newport | Murrieta | I-215 | | 2.05 | \$5,405,000 | \$5,405,000 |
| Central | Menifee | Newport | I-215 | Menifee | | 0.95 | \$0 | \$0 |
| Central | Menifee | Newport | Menifee | Lindenberger | | 0.77 | \$0 | \$0 |
| Central | Menifee | Newport | Lindenberger | SR-79 (Winchester) | | 3.58 | \$0 | \$0 |
| Central | Menifee | Scott | I-215 | Briggs | | 2.04 | \$0 | \$0 |
| Central | Menifee | Scott | I-215 | interchange | | 0.00 | \$37,060,000 | \$37,060,000 |
| Central | Menifee | Scott | Sunset | Murrieta | | 1.01 | \$2,654,000 | \$2,654,000 |
| Central | Menifee | Scott | Murrieta | I-215 | | 1.94 | \$10,254,000 | \$10,254,000 |
| Central | Menifee | SR-74 | Matthews | Briggs | | 1.89 | \$4,994,000 | \$4,994,000 |
| Central | Moreno Valley | Alessandro | I-215 | Perris | | 3.52 | \$6,394,000 | \$6,394,000 |
| Central | Moreno Valley | Alessandro | Perris | Nason | | 2.00 | \$22,632,000 | \$22,632,000 |
| Central | Moreno Valley | Alessandro | Nason | Moreno Beach | | 0.99 | \$6,922,000 | \$6,922,000 |
| Central | Moreno Valley | Alessandro | Moreno Beach | Gilman Springs | | 4.13 | \$10,902,000 | \$10,902,000 |
| Central | Moreno Valley | Gilman Springs | SR-60 | Alessandro | | 1.67 | \$4,411,000 | \$3,724,000 |
| Central | Moreno Valley | Gilman Springs | SR-60 | interchange | | 0.00 | \$17,897,000 | \$17,897,000 |
| Central | Moreno Valley | Perris | Reche Vista | Ironwood | | 2.09 | \$0 | \$0 |
| Central | Moreno Valley | Perris | Ironwood | Sunnymead | | 0.52 | \$0 | \$0 |
| Central | Moreno Valley | Perris | SR-60 | interchange | | 0.00 | \$17,897,000 | \$0 |
| Central | Moreno Valley | Perris | Sunnymead | Cactus | | 2.00 | \$0 | \$0 |
| Central | Moreno Valley | Perris | Cactus | Harley Knox | | 3.50 | \$0 | \$0 |
| Central | Moreno Valley | Reche Vista | Moreno Valley City Limit | Heacock | | 0.44 | \$3,310,000 | \$1,705,000 |
| Central | Perris | 11th/Case | Perris | Goetz | | 0.30 | \$2,100,000 | \$2,100,000 |
| Central | Perris | Case | Goetz | I-215 | | 2.36 | \$16,486,000 | \$13,538,000 |
| Central | Perris | Case | San Jacinto River | bridge | | 0.00 | \$1,126,000 | \$495,000 |
| Central | Perris | Ethanac | Keystone | Goetz | | 2.24 | \$7,327,000 | \$7,327,000 |
| Central | Perris | Ethanac | San Jacinto River | bridge | | 0.00 | \$7,378,000 | \$7,378,000 |
| Central | Perris | Ethanac | I-215 | Sherman | | 0.35 | \$2,435,000 | \$1,945,000 |
| Central | Perris | Goetz | Case | Ethanac | | 2.00 | \$5,267,000 | \$2,506,000 |
| Central | Perris | Goetz | San Jacinto River | bridge | | 0.00 | \$3,688,000 | \$1,925,000 |
| Central | Perris | Mid-County (Placentia) | I-215 | Perris | | 0.87 | \$13,127,000 | \$12,627,000 |
| Central | Perris | Mid-County (Placentia) | I-215 | interchange | | 0.00 | \$37,060,000 | \$12,354,000 |
| Central | Perris | Mid-County | Perris | Evans | | 1.57 | \$32,902,000 | \$32,902,000 |
| Central | Perris | Mid-County | Perris Valley Storm Channel | bridge | | 0.00 | \$8,299,000 | \$8,299,000 |
| Central | Perris | Perris | Harley Knox | Ramona | | 1.00 | \$0 | \$0 |
| Central | Perris | Perris | Ramona | Citrus | | 2.49 | \$6,578,000 | \$6,578,000 |
| Central | Perris | Perris | Citrus | Nuevo | | 0.50 | \$0 | \$0 |
| Central | Perris | Perris | Nuevo | 11th | | 1.75 | \$12,206,000 | \$9,034,000 |
| Central | Perris | Perris | I-215 overcrossing | bridge | | 0.00 | \$2,767,000 | \$1,356,000 |
| Central | Perris | Ramona | I-215 | Perris | | 1.47 | \$2,769,000 | \$2,769,000 |
| Central | Perris | Ramona | I-215 | interchange | | 0.00 | \$17,897,000 | \$5,965,000 |
| Central | Perris | Ramona | Perris | Evans | | 1.00 | \$0 | \$0 |
| Central | Perris | Ramona | Evans | Mid-County (2,800 ft E of Rider) | | 2.62 | \$0 | \$0 |
| Central | Perris | SR-74 (4th) | Ellis | I-215 | | 2.29 | \$0 | \$0 |
| Central | Unincorporated | Ethanac | SR-74 | Keystone | | 1.07 | \$5,646,000 | \$5,646,000 |
| Central | Unincorporated | Gilman Springs | Alessandro | Bridge | | 4.98 | \$15,815,000 | \$8,105,000 |
| Central | Unincorporated | Menifee | Nuevo | SR-74 (Pinacate) | | 4.07 | \$10,737,000 | \$10,737,000 |
| Central | Unincorporated | Mid-County | Evans | Ramona (2,800 ft E of Rider) | | 0.77 | \$8,587,000 | \$8,587,000 |
| Central | Unincorporated | Mid-County (Ramona) | Ramona (2,800 ft E of Rider) | Pico Avenue | | 0.44 | \$1,161,000 | \$1,161,000 |
| Central | Unincorporated | Mid-County (Ramona) | Pico Avenue | Bridge | | 5.95 | \$31,413,000 | \$25,287,000 |
| Central | Unincorporated | Mid-County (Ramona) | San Jacinto River | bridge | | 0.00 | \$23,978,000 | \$15,835,000 |
| Central | Unincorporated | Reche Canyon | San Bernardino County | Reche Vista | | 3.35 | \$12,457,000 | \$9,429,000 |
| Central | Unincorporated | Reche Vista | Reche Canyon | Moreno Valley City Limit | | 1.22 | \$9,180,000 | \$4,729,000 |
| Central | Unincorporated | Scott | Briggs | SR-79 (Winchester) | | 3.04 | \$16,042,000 | \$0 |
| Central | Unincorporated | SR-74 | Ethanac | Ellis | | 2.68 | \$0 | \$0 |
| Northwest | Corona | Cajalco | I-15 | Temescal Canyon | | 0.66 | \$2,306,000 | \$2,306,000 |
| Northwest | Corona | Cajalco | I-15 | interchange | | 0.00 | \$72,546,000 | \$44,251,000 |
| Northwest | Corona | Foothill | Paseo Grande | Lincoln | | 2.60 | \$19,330,000 | \$7,282,000 |
| Northwest | Corona | Foothill | Wardlow Wash | bridge | | 0.00 | \$5,534,000 | \$0 |
| Northwest | Corona | Foothill | Lincoln | California | | 2.81 | \$0 | \$0 |
| Northwest | Corona | Foothill | California | I-15 | | 0.89 | \$6,207,000 | \$4,304,000 |
| Northwest | Corona | Green River | SR-91 | Dominguez Ranch | | 0.52 | \$3,624,000 | \$1,000 |
| Northwest | Corona | Green River | Dominguez Ranch | Palisades | | 0.56 | \$4,214,000 | \$1,639,000 |
| Northwest | Corona | Green River | Palisades | Paseo Grande | | 2.01 | \$0 | \$0 |
| Northwest | Eastvale | Schleisman | San Bernardino County | 600' e/o Cucamonga Creek | | 0.65 | \$2,271,000 | \$2,271,000 |
| Northwest | Eastvale | Schleisman | Cucamonga Creek | bridge | | 0.00 | \$923,000 | \$923,000 |
| Northwest | Eastvale | Schleisman | 600' e/o Cucamonga Creek | Harrison | | 0.87 | \$0 | \$0 |
| Northwest | Eastvale | Schleisman | Harrison | Sumner | | 0.50 | \$0 | \$0 |
| Northwest | Eastvale | Schleisman | Sumner | Scholar | | 0.50 | \$3,493,000 | \$3,493,000 |
| Northwest | Eastvale | Schleisman | Scholar | A Street | | 0.31 | \$0 | \$0 |
| Northwest | Eastvale | Schleisman | A Street | Hammer | | 0.27 | \$0 | \$0 |
| Northwest | Jurupa Valley | Van Buren | SR-60 | Bellegrave | | 1.43 | \$9,976,000 | \$3,628,000 |
| Northwest | Jurupa Valley | Van Buren | Bellegrave | Santa Ana River | | 3.60 | \$25,115,000 | \$7,444,000 |

DRAFT Preliminary Engineering Study Report for
Ethanac Road Gap Closure Project



Prepared for:
County of Riverside
Department of Transportation



3525 14th Street
Riverside, CA 92501

Prepared by:



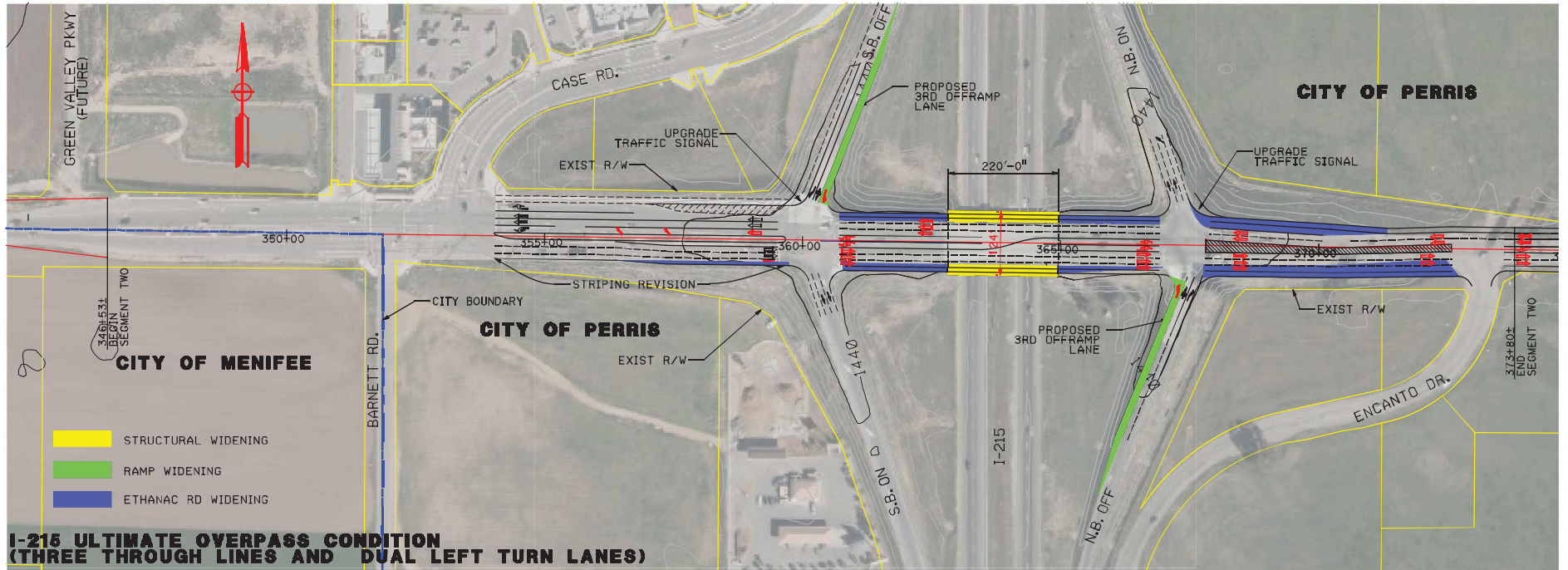
CNS Engineers, Inc.
10370 Hemet Street, Suite 230
Riverside, CA 92503

August 2014
Revised January 2016

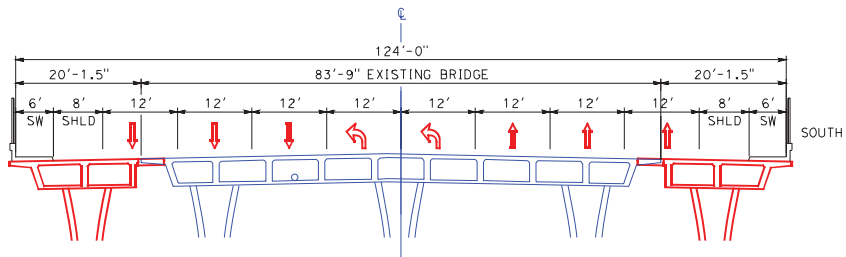


Attachment 2

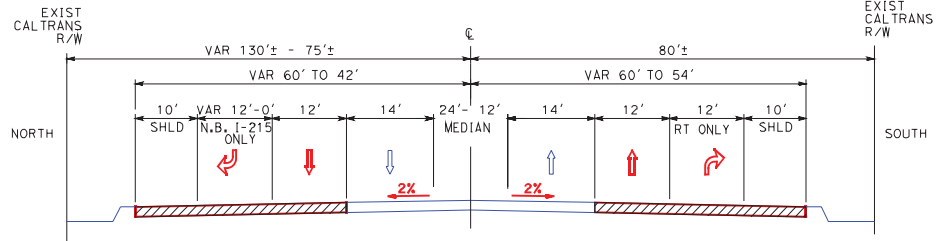
SEGMENT TWO - Preliminary Roadway Layouts



**I-215 ULTIMATE OVERPASS CONDITION
(THREE THROUGH LINES AND DUAL LEFT TURN LANES)**



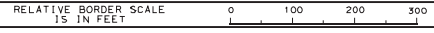
ETHANAC DRIVE AT I-215 WITH
DUAL LEFT TURN ALTERNATIVE



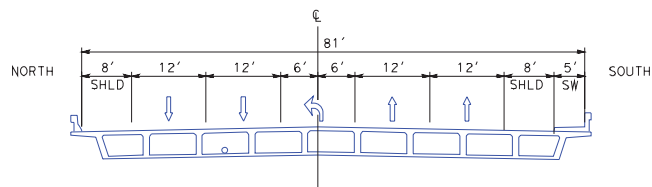
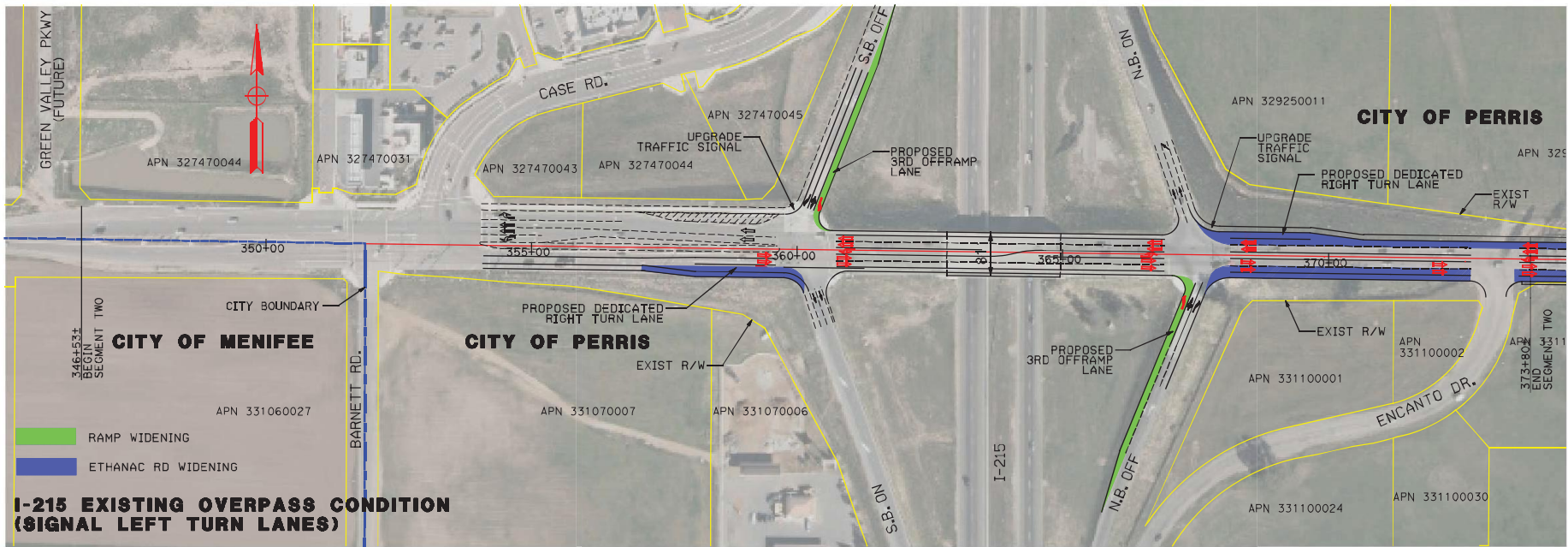
ETHANAC DRIVE FROM NORTHBOUND I-215 RAMP
TO ENCANTO DR TO SUPPORT DUAL LEFT TURN RAMP
AT THE INTERCHANGE

| | | | |
|---|---|---|--------------------------------------|
| | APPROVED BY: _____ | PLAN VIEW AND SECTIONS SEGMENT TWO ETHANAC ROAD GAP CLOSURE PROJECT ALTERNATIVE 2A - ULTIMATE INTERCHANGE | SHEET No. SHEET 1 OF 2 |
| | PREPARED BY: _____ DATE: _____ 10370 HEWET ST., Ste 230 RIVERSIDE, CA 92503 | | |
| USERNAME => MUSER DON FILE => BREQUEST | | COUNTY FILE No. _____ WO XX-XXXX | REVISION 08/27/2012 |

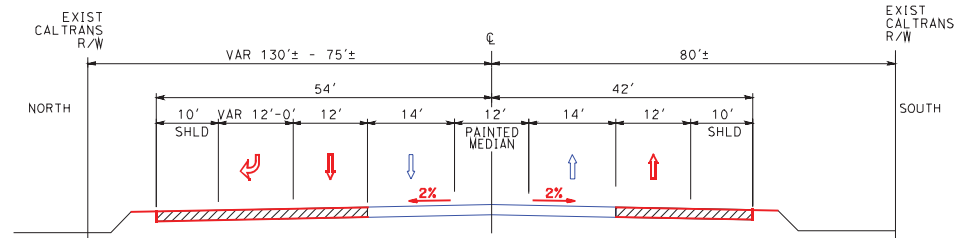
PLANNING STUDY



DATE: PRELIMINARY




ETHANAC ROAD OVER I-215
FROM SOUTHBOUND RAMPS TO NORTHBOUND RAMPS
TO SUPPORT SINGLE LEFT TURN LANES
CITY OF PERRIS
(EXISTING CONDITION)



ETHANAC ROAD FROM NORTHBOUND RAMPS TO
ENCANTO DRIVE TO SUPPORT SINGLE LEFT TURN LANES
AT THE INTERCHANGE
CITY OF PERRIS

PLANNING STUDY



| | | |
|--|--|--------------------------------------|
| CNS ENGINEERS, INC.  APPROVED BY: _____ PREPARED BY: _____ DATE: _____ 10370 HEMET ST., Ste 230 RIVERSIDE, CA 92503 | PLAN VIEW AND SECTIONS SEGMENT TWO ETHANAC ROAD GAP CLOSURE PROJECT ALTERNATIVE 2B - EXISTING OVERPASS | SHEET No. SHEET 2 OF 2 |
| | COUNTY FILE No. WO XX-XXXX | VERSION 08/27/2012 |