

Paleontological Resources Assessment
for the
Lowe's Parking Lot Project
in the
City of Perris
Riverside County, California



Prepared by:

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2 ATTACHMENTS

Attachment 1: Results of Paleontological Records Search

3 ACRONYMS AND ABBREVIATIONS

Bgs	Below ground surface
IP	Invertebrate Paleontology
KHA	Kimley-Horn and Associates, Inc.
LACM	Los Angeles County Museum
LACMNH	Los Angeles County Museum of Natural History
MM	Mitigation Measure
PRIMP	Paleontological Resources Impact Mitigation Program
Qa	Very late Pleistocene and recent young alluvium
Qoa	Pleistocene-aged older alluvium
USGS	United States Geological Survey
VP	Vertebrate Paleontology
WEAP	Worker Education and Awareness Program

4 INTRODUCTION

Kimley-Horn and Associates, Inc. (KHA) conducted a Paleontological Resources Assessment of the Lowe's Parking Lot Project (Project) area located within the City of Perris in Riverside County, California. This study was completed to support the Lead Agency's review of potential impacts to paleontological resources as a result of the proposed Project. A literature review and records search was conducted for the property to identify the likelihood of present paleontological resources that would be adversely impacted by the Project.

4.1 Project Description

The Project area is located within the City of Perris, Riverside County, California within Section 7, Township 4 South, Range 3 West of the USGS Perris 7.5 minute quadrangle. The proposed Project consists of the development of 12 acres of vacant land into a surface parking lot for truck trailer storage and holding to serve the existing Lowe's distribution center located to the northwest of the Project area (Figures 1-2). The Project area is vacant within temporary fencing cutting northeast-southwest across the south-eastern portion. It is bounded by Indian Ave on the east and south and the existing Lowe's distribution center and parking lot to the north and west.



Figure 1: Regional Vicinity Map

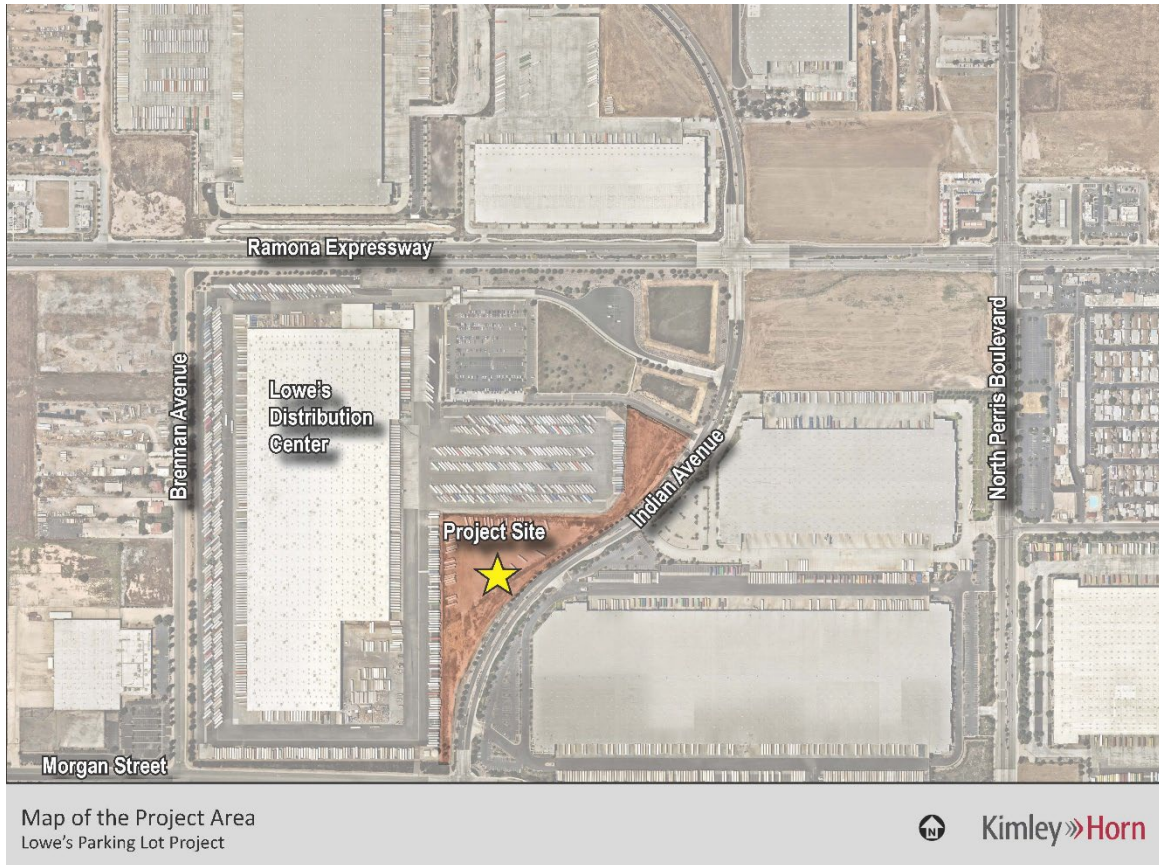


Figure 2: Map of the Project Area

4.2 Environmental Setting

The Project area is located within western Riverside County a portion of southern California known as the Inland Empire. It is located within Perris Valley and the broader San Jacinto Valley in an area underlain by the Southern California Batholith, which is a large geological intrusion of granite formed in the late Cretaceous period. The Project area is located within the Perris Block, which is one of three major northwest-trending mountain regions in southern California and is made up of bedrock highlands and isolated hills separated by alluvium-filled valleys. The geologic units underlying the Project area in particular is mapped as a mix of late Holocene and early to late Pleistocene alluvial deposits (Morton and Miller 2006). The entirety of the Project area is relatively level, and though it has been graded and modified in recent decades, its topography is indicative of its geographical location within the Perris Valley floor (Soil Survey Staff).

5 RESEARCH

5.1 Literature Review

A review of available geologic maps was conducted for the Project area. United States Geological Survey (USGS) geologic maps show that the Project area is underlain by recent young alluvium (Qa) and Pleistocene-aged older alluvium (Qoa) (Morton and Miller 2006). Geologic units of this age and type have relatively high potential for paleontological resources. In addition to USGS review, a paleontological records search was conducted for the Project area and surrounding region by the Los Angeles County Museum of Natural History (LACMNH) in October 29, 2023 (Attachment 1). While the results of the record search were negative for known specimens within the Project area, the repository cited high paleontological sensitivity for the Project area based on the age and composition of the native soils and sediments across the site and positive findings in similar sediment deposits within California. Table 1: Records Search Findings, below, summarizes the closest known findings within LACMNH records:

Records Search Findings				
Locality Number	Location	Formation	Taxa	Depth
LACM VP 4540	Junction of Jackrabbit Trail and Gilman Springs Road, San Jacinto Valley	Unnamed Formation (Pleistocene, gravel pit)	Horse family (<i>Equidae</i>)	Unknown
LACM VP 7811	West of Orchard Park, Chino Valley	Unknown formation (eolian, tan silt; Pleistocene)	Whip Snake (<i>Masticophis</i>)	9-11 ft bgs
LACM VP CIT 570 CIT572	South of Lake Elsinore	Unknown formation (Pleistocene)	Horse (<i>Equus</i>); peccary (<i>Platygonus</i>); camel (<i>Camelops</i>)	Unknown
LACM VP 5168	Point Marina Drive in East Bay Section of Canyon Lake	Unknown formation (Pleistocene; clay)	Horse (<i>Equus</i>)	Unknown
LACM VP 7261	Skinner Reservoir, Auld Valley	Unknown formation (Pleistocene, arenaceous silt)	Elephant clade (Proboscidea); ungulate (Ungulata)	Unknown
LACM VP 4619	Wineville Ave, Eastvale CA	Unknown Formation (Pleistocene)	Mammoth (<i>Mammuthus</i>)	100 feet bgs

*VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

6 RECOMMENDATIONS

No paleontological resources were identified within the Project area as a part of the current study. However, the age and composition of soils and sediments across the Project area, combined with the knowledge of paleontological resources identified within similar sediment deposits in southern California, indicate a moderate-to-high sensitivity for paleontological resources. Further, as only a very small percentage of the Project area has been subject to prior disturbance to an extent that paleontological resources would have been previously impacted, the likelihood of intact paleontological resources, which would be considered scientifically significant if discovered, being present within the Project area and inadvertently impacted by Project implementation remains high. As such, in order to mitigate impacts to paleontological resources, it is recommended that the following (or similar) language be adopted for the proposed Project:

- Paleo MM-1:** The applicant will submit a Paleontological Resources Impact Mitigation Program (PRIMP) prepared by a qualified paleontologist to the Lead Agency prior to the issuance of a grading permit. A qualified paleontologist is defined as an individual with an M.S./M.A. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, and who is knowledgeable in the geology and paleontology of the area.
- Paleo MM-2:** A qualified paleontologist will attend preconstruction meetings to consult with the grading and excavation contractors concerning planned depths, excavation schedules, paleontological field techniques, and safety issues. In addition, all onsite construction personnel will receive Worker Education and Awareness Program (WEAP) training prior to the commencement of excavation work. All ground-disturbing activities associated with Project construction occurring within previously undisturbed fossil bearing formations will be monitored by a qualified paleontologist or qualified paleontological monitor. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials and works under the direction of a qualified paleontologist. If fossils are discovered, the paleontologist (or paleontological monitor) will recover them. In most cases, this fossil salvage can be completed in a short period of time; however, some fossil specimens, such as a complete large mammal skeleton, may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) will be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains, such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on site.
- Paleo MM-3:** Fossil remains collected during the monitoring and salvage portion of the program will be cleaned, repaired, sorted, and catalogued. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will be deposited (as a donation) in a scientific institution with permanent paleontological collections located within Riverside County (or, if no repository is available, adjacent Counties). A final data recovery report will be completed by the qualified paleontologist that outlines the results of the paleontological monitoring program. This report will include discussions of the methods used,

stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. The report will be submitted to the Lead Agency upon completion.

7 REFERENCES

Morton, D. M., and Miller, F. K. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California: U.S. Geological Survey, Open-File Report OF-2006-1217, scale 1:100,000.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. *Web Soil Survey*. <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed October 9, 2023.

Attachment 1

Records Search Results from the Los Angeles County Museum of Natural History (LACMNH)

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

October 29, 2023

Kimley-Horn and Associates, Inc.
Attn: Jessica Mauck

re: Paleontological resources for the Perris Lowe's Parking Lot Project

Dear Jessica:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Perris Lowe's Parking Lot project area as outlined on the portion of the Perris USGS topographic quadrangle map that you sent to me via e-mail on October 3, 2023. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM VP 4540	junction of Jackrabbit Trail & Gilman Springs Road; San Jacinto Valley	Unnamed Formation (Pleistocene, gravel pit)	Horse Family (Equidae)	Unknown
LACM VP 5168	Point Marina Drive in East Bay Section of Canyon Lake	Unknown formation (Pleistocene; clay)	Horse (<i>Equus</i>)	Unknown
LACM VP CIT 570 – CIT572	South of Lake Elsinore	Unknown Formation (Pleistocene)	Horse (<i>Equus</i>); peccary (<i>Platygonus</i>); camel (<i>Camelops</i>)	Unknown
LACM VP 7261	Skinner Reservoir, Auld Valley	Unknown formation (Pleistocene, arenaceous silt)	Elephant clade (Proboscidea); ungulate (Ungulata)	Unknown
LACM VP 4619	Wineville Ave, Eastvale, CA	Unknown Formation (Pleistocene)	Mammoth (<i>Mammuthus</i>)	100 feet bgs
LACM VP 7811	W of Orchard Park, Chino Valley	Unknown formation (eolian, tan silt; Pleistocene)	Whip snake (<i>Masticophis</i>)	9-11 feet bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the NHMLA. It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As

such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

A handwritten signature in black ink that reads "Alyssa Bell". The signature is written in a cursive style and is set against a light yellow rectangular background.

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice