PALEONTOLOGICAL ASSESSMENT FOR THE CASE AND GOETZ PROJECT

CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

APNs 310-150-012 and 310-160-070

Submitted to:

City of Perris
Planning Division
135 North D Street
Perris, California 92570

Prepared for:

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May 31, 2024; Revised February 14, 2025

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Paleontological Database Information

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Report Title:	Paleontological Assessment for the Case and Goetz Project, City of Perris, Riverside County, California
Prepared for:	Alabbasi Construction & Engineering 764 Ramona Expressway, Suite C Perris, California 92571
Submitted to:	City of Perris Planning Division 135 North D Street Perris, California 92570
Assessor's Parcel Numbers:	310-150-012 and 310-160-070
USGS Quadrangle:	Section 32, Township 4 South, Range 3 West on the USGS *Perris*, *California* (7.5-minute) topographic quadrangle
Study Area:	Approximately 10 acres
Key Words:	Paleontological assessment; Pleistocene very old alluvial fan deposits; High paleontological sensitivity; City of Perris; full-time monitoring recommended starting at a depth of five feet below the surface.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the Case and Goetz Project site (Assessor's Parcel Numbers [APNs] 310-150-012 and 310-160-070) located along the southwest side of Case Road, east of Goetz Road, and north of Ellis Avenue, in the southern portion of the city of Perris, Riverside County, California (Figures 1 and 2). The project site is situated in Section 32, Township 4 South, Range 3 West of the San Bernardino Baseline and Meridian, as shown on the U.S. Geological Survey (USGS) (7.5-minute) 1:24,000-scale *Perris, California* topographic quadrangle map (see Figure 2). The project applicant proposes to develop the approximately 10-acre property with a gas station, restaurant and convenience store, a car wash, and a storage facility. Currently, the property consists of a construction staging area on an undeveloped property.

As the lead agency, the City of Perris has required the preparation of a paleontological assessment to evaluate the project's potential to yield paleontological resources. The paleontological assessment of the project site included a review of paleontological literature and fossil locality records in the area, a review of the underlying geology, and recommendations to mitigate impacts to potential paleontological resources, if necessary.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding regulation that sets the requirement for protecting California's cultural and paleontological resources. CEQA does not establish specific rules that must be followed but mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

State of California

Under the "Guidelines for Implementation of the California Environmental Quality Act," (CEQA Guidelines) as amended in December 2018 (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3, Sections 15000 et seq.), procedures define the types of activities, persons, and public agencies required to comply with CEQA. Section 15063 of the CEQA Guidelines provides a process by which a lead agency may review a project's potential impact to the environment, whether the impacts are significant, and provide recommendations, if necessary.

In the CEQA Guidelines Appendix G Environmental Checklist Form, a question to respond to is, "would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (Appendix G, Section VII, Part f). This is to ensure compliance with California Public Resources Code Section 5097.5, the law that protects nonrenewable resources including fossils, which is paraphrased below:

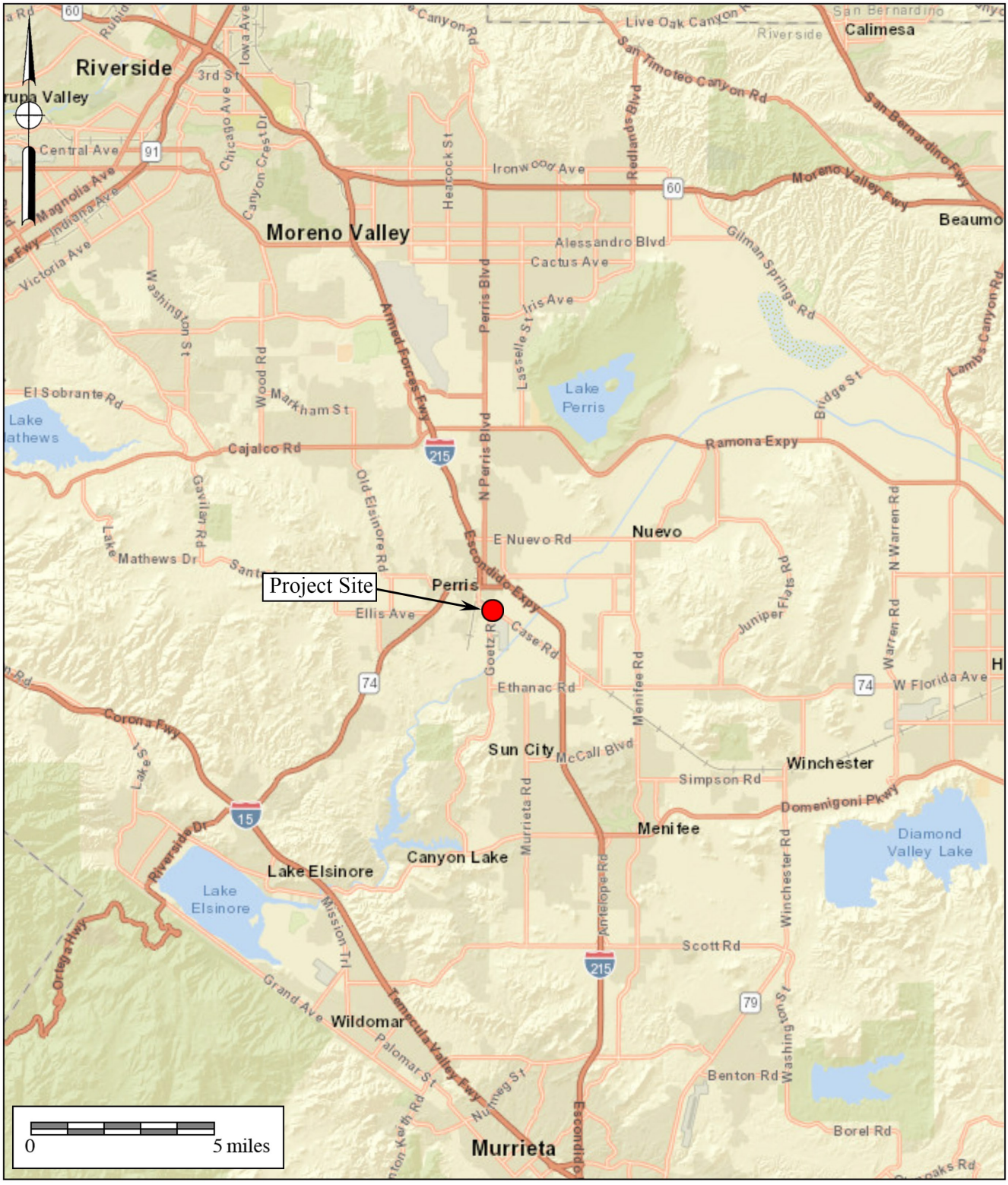

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Figure 1

General Location Map

The Case and Goetz Project Site

ESRI Street Map

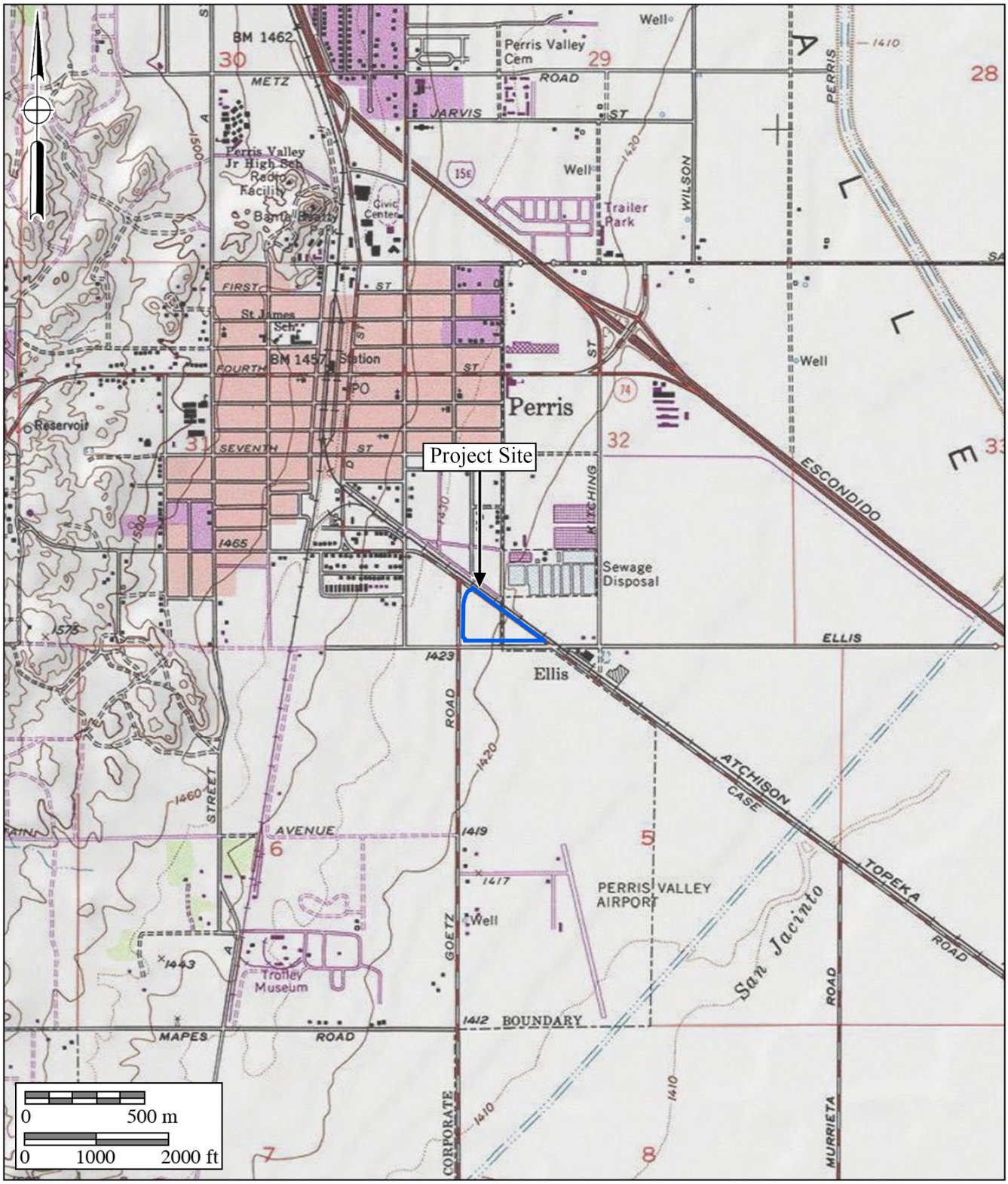

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Figure 2

Project Location Map

The Case and Goetz Project Site

USGS *Perris* Quadrangle (7.5-minute series)

a) A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.
b) As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.
c) A violation of this section is a misdemeanor.

City of Perris

The City of Perris has allocated requirements addressing paleontological resources in the Conservation Element of the City's General Plan (City of Perris 2005:26–27 [Exhibit CN-7]). The Conservation Element "provides goals and policies as a framework for the management, preservation, and use of the City's resources" (City of Perris 2005). Goals, policies, and implementation measures specific to paleontological resources are as follows:

> **Measure IV.A.4**: In Area 1 and Area 2 shown on the Paleontological Sensitivity Map [Exhibit CN-7], paleontological monitoring of all projects requiring subsurface excavations will be required once any excavation begins. In Areas 4 and 5, paleontological monitoring will be required once subsurface excavations reach 5 feet in depth, with monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist. (City of Perris 2005:47)

Based on the Paleontological Sensitivity Map (Exhibit CN-7) in the Conservation Element of the City's General Plan (City of Perris 2005), the Case and Goetz Project site is located within Area 5, which is an area of low to high sensitivity with younger alluvium overlying older fan alluvium at depth. Conservation Element Implementation Measure IV.A.4 requires paleontological monitoring when subsurface excavations reach a depth of five feet from the original surface within Area 5. See Section V for more information.

III. GEOLOGY

Regionally, the project site lies within the Perris Block, a structural block bounded on the west by the Elsinore fault zone and on the east by the San Jacinto fault zone (Morton 2003a). The geology mapped underlying the project site and immediate area indicates that the project site is underlain by lower Pleistocene (approximately 1.8 million to perhaps 200,000 to 300,000 years old) very old alluvial fan deposits (brown areas labeled as "$Qvof_a$" on Figure 3) (Morton 2003a, 2003b).

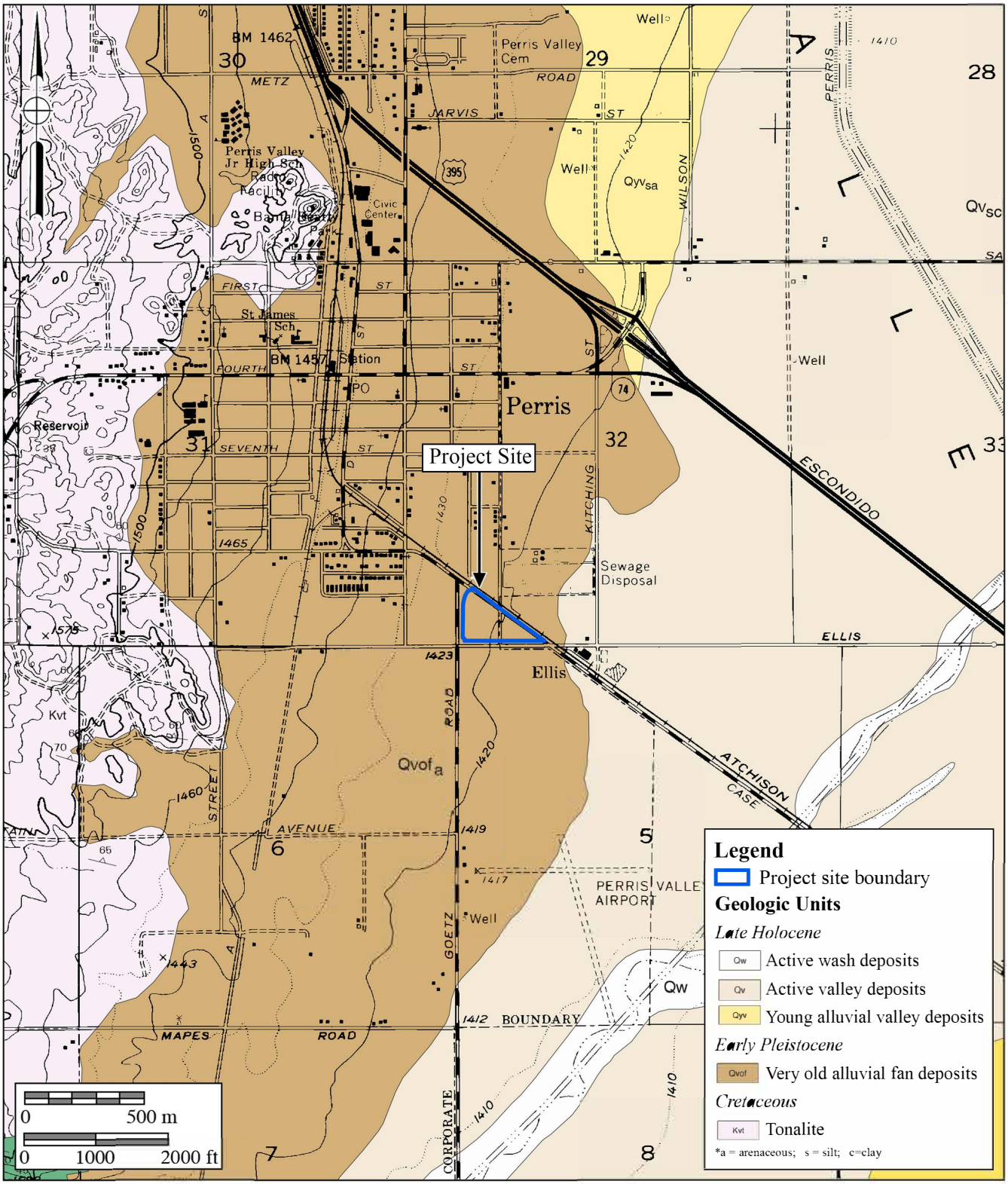

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Figure 3

Geologic Map

The Case and Goetz Project Site

Geology after Morton (2003)

These sediments are described as "mostly well dissected, well-indurated, reddish-brown sand deposits. Commonly contains duripans and locally silcretes" (Morton 2003a). According to Woodford et al. (1971), the alluvium overlying the granitic bedrock below the project site is roughly 75 feet thick.

IV. PALEONTOLOGICAL RESOURCES

Definition

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology 2010), but may include younger remains (subfossils), for example, when viewed in the context of local extinction of the organism or habitat. Fossils are considered a nonrenewable resource under state and local guidelines (see Section II of this report, above).

Fossil Locality Search

A prior fossil locality records search was performed for the nearby Perris Airport Project, located approximately one-half mile south of the Case and Goetz Project site, by the Western Science Center (WSC) (Radford 2021). According to the records search, no fossil localities are known within a one-mile radius of either project site. The records search report indicated that older Pleistocene alluvial fan deposits (including deposits of $Qvof_a$ mapped on Figure 3) have a high potential to contain significant nonrenewable paleontological resources (*i.e.*, fossils) and were therefore assigned a "high paleontological sensitivity" by Radford (2021). Similar sediments throughout the lowland (valley) areas of western Riverside County and the Inland Empire have been reported to yield significant fossils of extinct terrestrial mammals from the last Ice Age, such as mammoths, mastodons, giant ground sloths, dire wolves, short-faced bears, saber-toothed cats, and extinct horses (Radford 2021).

According to published literature, late Pleistocene vertebrate and invertebrate fossils were recovered from ancient fluvial sediments of Salt Creek, from a locality approximately six miles to the south. The locality, dated at approximately 11,340 years old, yielded multiple small reptile and mammal remains, as well as freshwater snails and bivalves (Rugh and Roeder 2018).

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based on a number of factors, including the documented presence of fossiliferous resources on a site or in nearby areas, the presence of documented fossils within a particular geologic formation or lithostratigraphic unit, and whether or not the original depositional environment of the sediments is one that might have been conducive to the accumulation of organic remains that might have become fossilized over time. Holocene alluvium is generally considered to be geologically too young to contain significant nonrenewable paleontological resources (*i.e.,* fossils), and is therefore typically assigned a low paleontological sensitivity. However, Pleistocene (greater than 11,700 years old) alluvial and alluvial fan deposits in western Riverside County and the Inland Empire can yield important Ice Age terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, and camel, saber-toothed cats, and others (Jefferson 1991). Therefore, these Pleistocene sediments are accorded a high paleontological resource sensitivity.

Professional Standard

The Society of Vertebrate Paleontology has drafted guidelines that include four categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- *High Potential:* Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- *Undetermined Potential:* Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment, and that further study is needed to determine the potential of the rock unit.
- *Low Potential:* Rock units that are poorly represented by fossil specimens in institutional collections or based on a general scientific consensus that only preserve fossils in rare circumstances.
- *No Potential:* Rock units that have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks and plutonic igneous rocks.

Using these criteria, based on the age of the geologic formation mapped at the project site and the fossil record of the formation, the very old alluvial fan deposits at the project site may be assigned a high potential to yield significant paleontological resources.

City of Perris Paleontological Sensitivity Assessment

On the Paleontological Sensitivity Map in the Conservation Element of the City's General Plan (City of Perris 2005 [Exhibit CN-7]), the Case and Goetz Project site is located within Area

5 and assigned a "low to high" paleontological sensitivity based on the reputed presence of the Pleistocene older alluvial deposits (high sensitivity) underlying young alluvium at the surface (low sensitivity). Sites located within Area 5 require that paleontological monitoring be initiated once subsurface excavations reach five feet below the surface, with a stipulation that monitoring "levels" be reduced at the discretion of the project paleontologist, if appropriate (City of Perris 2005 [Measure IV.A.4]).

VI. CONCLUSIONS AND RECOMMENDATIONS

Research has confirmed the existence of potentially fossiliferous Pleistocene alluvial fan deposits mapped as underlying the Case and Goetz Project site ($Qvof_a$ on Figure 3), and the occurrence of terrestrial vertebrate fossils at shallow depths from Pleistocene older alluvial fan sediments across the Inland Empire and western Riverside County has been documented. The "high" paleontological sensitivity typically assigned to Pleistocene alluvial fan sediments for yielding paleontological resources supports the recommendation that paleontological monitoring be required during mass grading, trenching, and excavation activities in undisturbed Pleistocene alluvial fan sediments in order to mitigate any potentially adverse impacts (loss or destruction) to nonrenewable paleontological resources.

A Paleontological Resource Impact Mitigation Program (PRIMP) is recommended for the project. The PRIMP must be consistent with the provisions of CEQA, the guidelines and requirements of the City of Perris (2005), and the guidelines of the SVP (2010). If implemented, the PRIMP would mitigate any adverse impacts (loss or destruction) to potentially nonrenewable paleontological resources (fossils), if present, to less than significant. The PRIMP should include methods for:

- Attendance by a qualified paleontologist at the preconstruction meeting to consult with the grading and excavation contractors.
- On-site presence of a paleontological monitor to inspect for paleontological resources during the excavation of undisturbed deposits.
- Salvage and recovery of paleontological resources by the qualified paleontologist or paleontological monitor.
- Preparation (repair and cleaning), sorting, and cataloging of recovered paleontological resources.
- Donation of prepared fossils, field notes, photographs, and maps to a scientific institution with permanent paleontological collections.
- Completion of a final summary report that outlines the results of the mitigation program.

All mitigation programs shall be performed by a qualified professional paleontologist, defined as an individual with a Master's or Doctorate in paleontology or geology who has proven

experience in Riverside County paleontology and who is knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.

VII. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief and have been compiled in accordance with CEQA criteria.

February 14, 2025

Todd A. Wirths
Senior Paleontologist
California Professional Geologist No. 7588

Date

VIII. REFERENCES

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APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

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BFSA Environmental Services
A Perennial Company

Education

Master of Science, Geological Sciences, San Diego State University, California **1995**

Bachelor of Arts, Earth Sciences, University of California, Santa Cruz **1992**

Professional Certifications

California Professional Geologist #7588, 2003
Riverside County Approved Paleontologist
San Diego County Qualified Paleontologist
Orange County Certified Paleontologist
OSHA HAZWOPER 40-hour trained; current 8-hour annual refresher

Professional Memberships

Board member, San Diego Geological Society
San Diego Association of Geologists; past President (2012) and Vice President (2011)
South Coast Geological Society
Southern California Paleontological Society

Experience

Mr. Wirths has more than a dozen years of professional experience as a senior-level paleontologist throughout southern California. He is also a certified California Professional Geologist. At BFSA, Mr. Wirths conducts on-site paleontological monitoring, trains and supervises junior staff, and performs all research and reporting duties for locations throughout Los Angeles, Ventura, San Bernardino, Riverside, Orange, San Diego, and Imperial Counties. Mr. Wirths was formerly a senior project manager conducting environmental investigations and remediation projects for petroleum hydrocarbon-impacted sites across southern California.

Selected Recent Reports

2019 *Paleontological Assessment for the 10575 Foothill Boulevard Project, City of Rancho Cucamonga, San Bernardino County, California*. Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the MorningStar Marguerite Project, Mission Viejo, Orange County, California.* Prepared for T&B Planning. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report for the Nimitz Crossing Project, City of San Diego.* Prepared for Voltaire 24, LP. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Program (PRIMP) for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California.* Prepared for JRT BP 1, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Oceanside Beachfront Resort Project, Oceanside, San California.* Prepared for S.D. Malkin Properties. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Nakase Project, Lake Forest, Orange County, San California.* Prepared for Glenn Lukos Associates, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Sunset Crossroads Project, Banning, Riverside County*. Prepared for NP Banning Industrial, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Ortega Plaza Project, Lake Elsinore, Riverside County*. Prepared for Empire Design Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Record Search Update for the Green River Ranch III Project, Green River Ranch Specific Plan SP00-001, City of Corona, California*. Prepared for Western Realco. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Cypress/Slover Industrial Center Project, City of Fontana, San Bernardino County, California*. Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Imperial Landfill Expansion Project (Phase VI, Segment C-2), Imperial County, California*. Prepared for Republic Services, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Manitou Court Logistics Center Project, City of Jurupa Valley, Riverside County, California*. Prepared for Link Industrial. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Resource Impact Mitigation Program for the Del Oro (Tract 36852) Project, Menifee, Riverside County*. Prepared for D.R. Horton. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Alessandro Corporate Center Project (Planning Case PR-2020-000519), City of Riverside, Riverside County, California*. Prepared for OZI Alessandro, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Monitoring Report for the Boardwalk Project, La Jolla, City of San Diego*. Prepared for Project Management Advisors, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.