

PALEONTOLOGICAL ASSESSMENT FOR THE RIDER AND REDLANDS PROJECT

PERRIS, RIVERSIDE COUNTY

APNs 300-210-001 to -005

Prepared for:

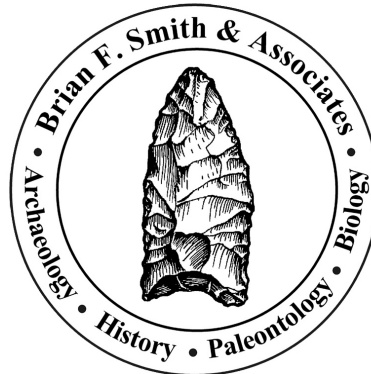
First Industrial Realty Trust, Inc.
c/o Advantage Environmental Consultants, LLC
145 Vallecitos De Oro, Suite 201
San Marcos, California 92069

Submitted to:

City of Perris
Planning and Development
135 North D Street
Perris, California 92570

Prepared by:

Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064



September 25, 2020; Revised March 25, 2021

Paleontological Database Information

Author: Todd A. Wirths, M.S., Senior Paleontologist, California
Professional Geologist No. 7588

Consulting Firm: Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064
(858) 484-0915

Report Date: September 25, 2020; Revised March 25, 2021

Report Title: Paleontological Assessment for the Rider and Redlands Project,
Riverside County (APNs 300-210-001 to -005)

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Poway, California 92064

USGS Quadrangle: *Perris, California (7.5 minute)*

Study Area: 16.26 acres

Key Words: Paleontological assessment; High sensitivity; County of
Riverside; City of Perris.

I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the Rider and Redlands Project (Assessor's Parcel Numbers [APNs] 300-210-001 to -005), located at the southeastern corner of the intersection of Rider Street and Redlands Avenue, in the city of Perris, Riverside County, California (Figures 1 and 2). Based upon Google Earth imagery dated December 2, 2018, APN 300-210-001 is vacant; APNs 300-210-002, -004, and -005 consist of single-family residences as part of a larger lot; and APN 300-210-003 consists of a materials/industrial storage facility. The 16.26-acre project is bounded on the north by a vacant lot, to the northwest by a large warehouse, to the west by a vacant lot followed by another large warehouse, and to the south and east by mostly vacant and/or agricultural lots, with a few residential properties. On the U.S. Geological Survey 7.5-minute, 1:24,000-scale *Perris, California* topographic quadrangle map, the project is located in the northeast quarter of Section 17, Township 4 South, Range 3 West, San Bernardino Base and Meridian.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), patterned after the National Environmental Policy Act, is the overriding environmental document that sets the requirement for protecting California's cultural and paleontological resources. The document 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 Guidelines for the Implementation of CEQA, 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 CCR 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 Environmental Checklist, one of the questions to answer is, "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (Appendix G, Section VII, Part f). California Public Resources Code (PRC) Section 5097.5 states:

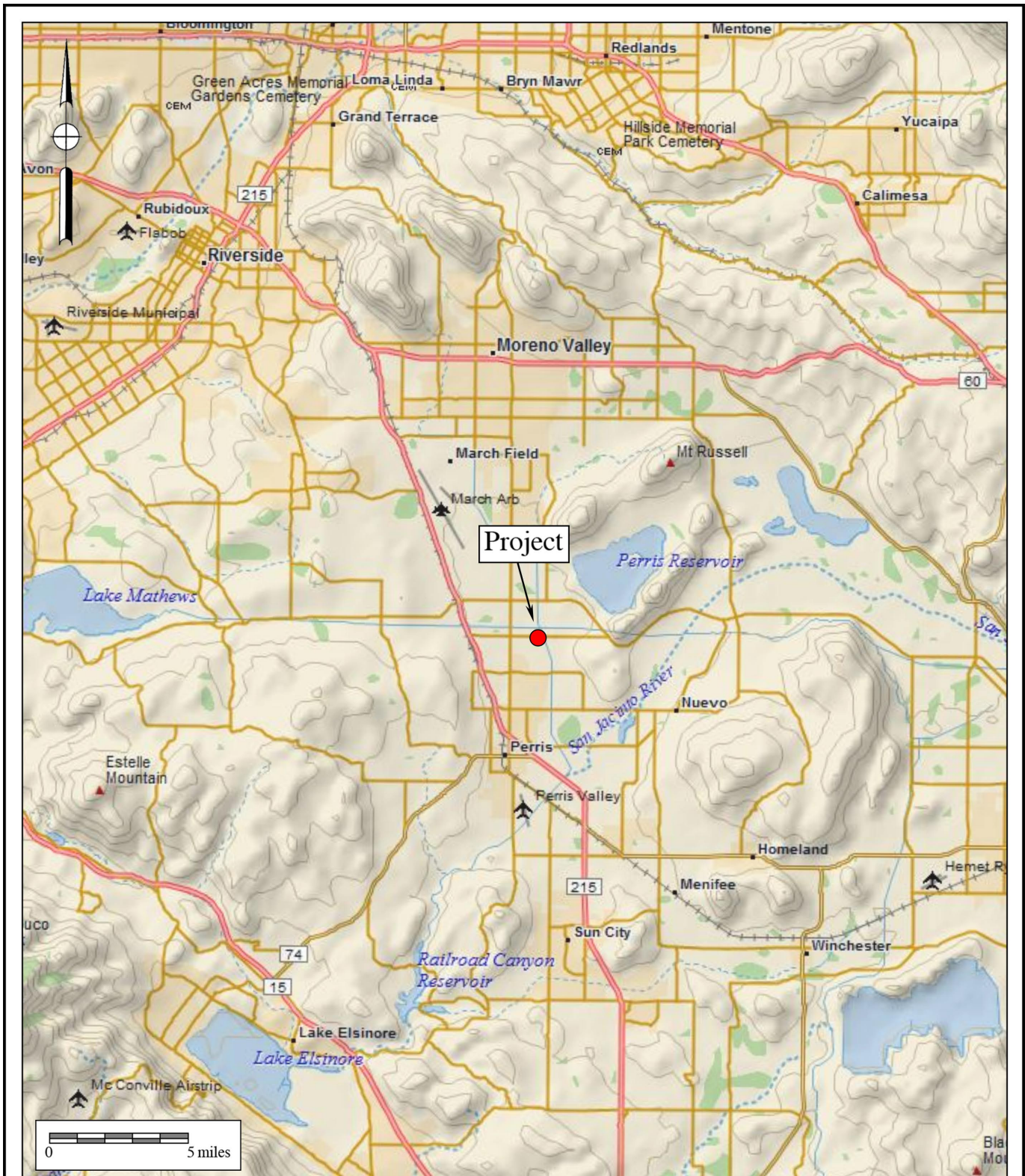


Figure 1

General Location Map

The Rider and Redlands Project

DeLorme (1:250,000)



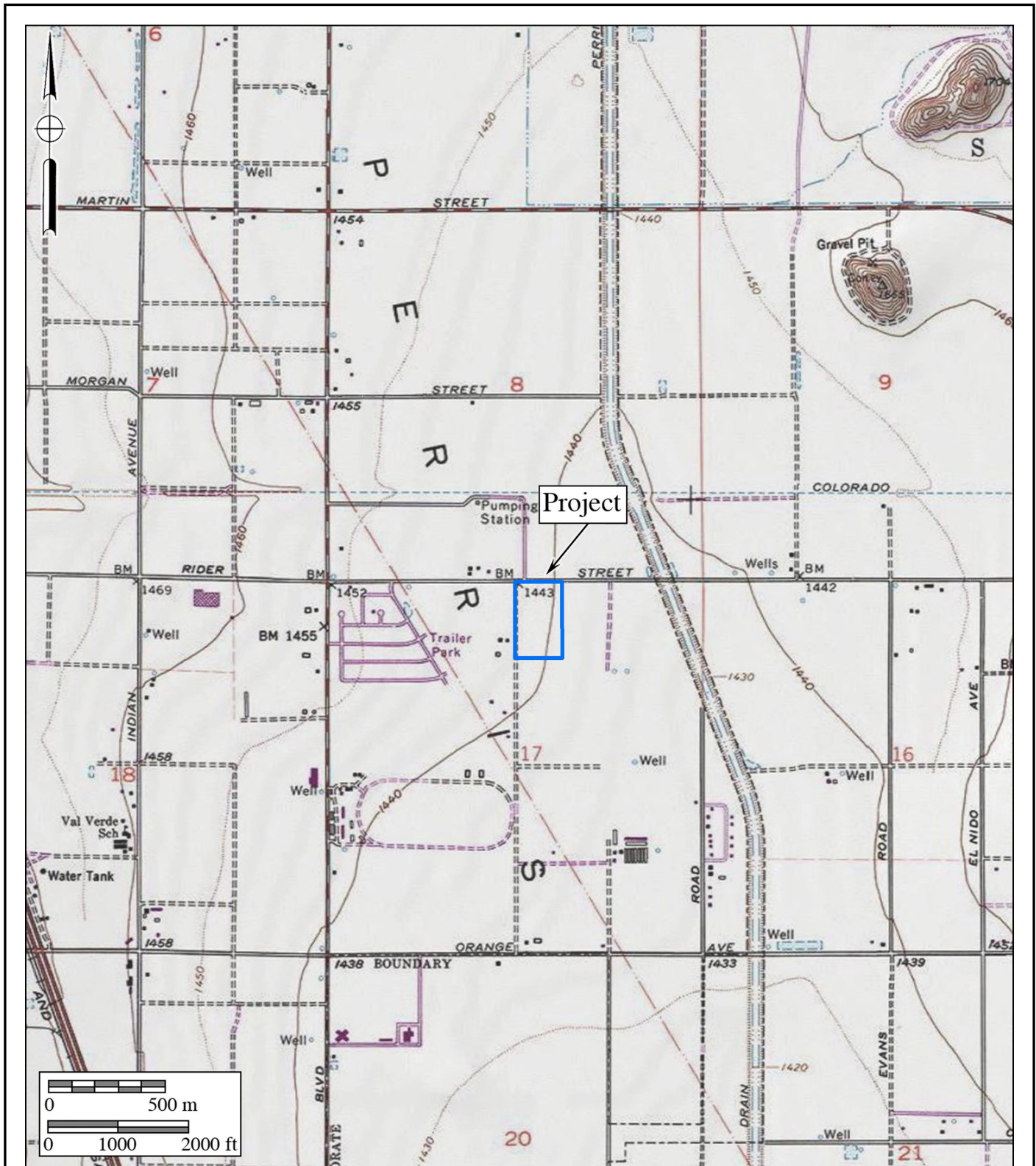


Figure 2
Project Location Map
 The Rider and Redlands Project
 USGS *Perris* Quadrangle (7.5-minute series)



- a) No person shall 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. Violation of this section is a misdemeanor.
- 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.

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 2008, p. 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.” 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 2008, p. 47)

Based upon the Paleontological Sensitivity Map in the Conservation Element of the City’s Comprehensive General Plan (City of Perris 2008, Exhibit CN-7), the Rider and Redlands Project is located within Area 4, which requires paleontological monitoring beginning at a depth of five feet beneath the surface.

Local Area

The site is within the boundaries of a “specific plan” drafted by the City of Perris, called the Perris Valley Commerce Center Specific Plan (PVCCSP) (City of Perris 2011a). The PVCCSP summarizes final environmental impact report (EIR) mitigation measures addressing cultural resource impacts, which includes paleontological resources (City of Perris 2011b). In City of Perris (2011b), *Mitigation Measure (MM) Cultural 1* outlines the requirements for preparation of a Phase I Cultural Resources Study, which have been addressed through the preparation of this paleontological resource assessment. *MM Cultural 5* would be applicable to the proposed Rider and Redlands Project, should a mitigation monitoring and reporting program (MMRP) be proposed

herein (see Section VI).

III. GEOLOGY

The geology of the project and surrounding areas is shown on the published geologic map of the *Perris, California* quadrangle (Figure 3, after Morton 2003). The map indicates that the project site is located on both Holocene and upper Pleistocene young alluvial valley deposits (Qyv_{sa}, shown in light yellow on Figure 3) to the east, and older, lower Pleistocene very old alluvial fan deposits (Qvof_a, shown in light brown on Figure 3) to the west. Alternatively, mapping by Dibblee (2003) shows the entire project to be underlain by Holocene alluvium, consisting mostly of sands and clays.

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) when viewed in the context of local extinction of the organism or habitat, for example. Fossils are considered a non-renewable resource under state and county guidelines (Section II of this report).

Fossil Records Search

A paleontological literature review and collections and records search was performed by the Western Science Center (WSC) for the Rider and Redlands Project (Radford 2021, attached). The record search indicated that the WSC has no fossil localities within the project boundaries or within one mile of the project. Furthermore, Radford (2021), using Dibblee's mapping (2003), indicated the project is underlain by Holocene deposits that are unlikely to yield paleontological resources. In conclusion, "[w]hile the presence of any fossil material is unlikely, if excavation activity disturbs deeper alluvial sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the Rider and Redlands Project area is unlikely to be paleontologically sensitive, but caution during development should be observed" (Radford 2021).

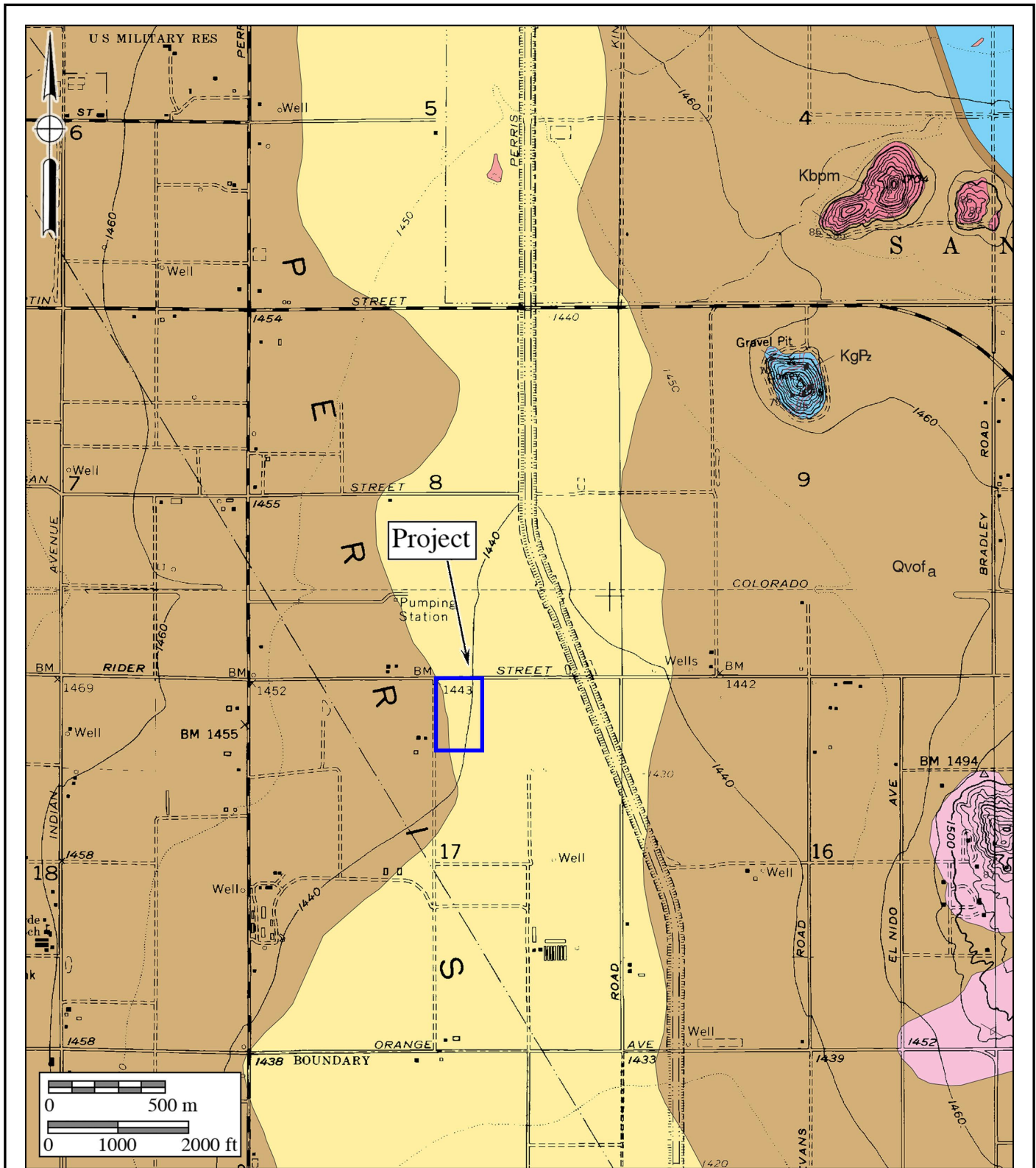


Figure 3
Geologic Map
 The Rider and Redlands Project
 Geology after Morton (2003)



A paleontological literature review and collections and records search for a nearby project in Moreno Valley (the Moreno Valley Logistics Center Project) was conducted by a vertebrate paleontologist in the Division of Geological Sciences at the San Bernardino County Museum (SBCM) in Redlands (Scott 2015, attached). The Moreno Valley Logistics Center Project is located approximately three miles to the north-northwest of the Rider and Redlands Project, and is underlain by the same older sedimentary deposits (Morton 2003). This records search report indicated that older Pleistocene alluvial fan deposits (Qvof_a on Figure 3) have a high potential to contain significant nonrenewable paleontological resources (i.e., fossils), and were thus assigned a “high paleontological resource sensitivity” by Scott (2015). Similar older Pleistocene 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 (see references in Scott 2015), such as mammoths, mastodons, giant ground sloths, dire wolves, short-faced bears, saber-toothed cats, large and small horses, camels, and bison. The collections and records search report, however, did not identify any known fossil localities within the boundaries of the proposed Moreno Valley Logistics Center, nor within at least one mile in any direction of that project.

The closest recorded fossil localities may be those reported by the SBCM (SBCM localities 5.3.151 and 5.3.153; Scott 2013, attached) from Pleistocene older alluvium near the Lakeview Hot Springs area on the southeast side of the Perris Reservoir. Fossil vertebrates collected from these localities included mammoths, extinct horses, and extinct bison. Another records search report was performed for a project located less than three miles to the northwest of the Rider and Redlands Project (Quinn and Richards 2018). In the report, an attached letter from the WSC indicated that Pleistocene fossils were recovered in similar very old alluvial fan sediments from a locality about nine miles to the northeast, in Moreno Valley. In French Valley and Menifee Valley, vertebrate fossils have been found at depths between 14 and 15 feet below the ground level (Reynolds and Reynolds 1991).

Field Reconnaissance

A pedestrian survey of the subject property was performed by BFSa staff on July 2, 2019. Aerial photographs, maps, and a compass permitted orientation and location of project area boundaries. Where possible, narrow transect paths were employed to ensure maximum lot coverage. All exposed ground was inspected for paleontological resources. During the survey, particular attention was paid to areas with exposed ground surfaces, such as rodent burrows and areas around the base of vegetation. A survey form, field notes, and photographs documented the survey work undertaken.

At the time of the survey, the proposed warehouse project was characterized as a flat, partially developed property comprised of five parcels (APNs 300-210-001 to -005) all exhibiting varying degrees of development. Only APN 300-210-001 and the eastern halves of APNs 300-210-004 and -005 were clear of development. However, ground visibility was generally poor and

limited by dense, non-native weeds and grasses, mainly stinknet, mustard plant, and fiddleneck. In contrast, APN 300-210-002 and the western halves of APNs 300-210-004 and -005 all contained modern prefabricated/modular structures (residences), modern garbage, and maintained landscaping which also limiting ground visibility. Likewise, APN 300-210-003 contains modern prefabricated/modular structures and an industrial yard all associated with a plaster company. No fossils were discovered on the property during the field survey. This is not surprising, since fossils are not usually found on the surface of flat-lying alluvial plains. However, visibility was poor and most of the subject property has been impacted or otherwise disturbed in the past.

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 thus typically assigned a low paleontological sensitivity. Pleistocene (more than 11,700 years old) alluvial and alluvial fan deposits in the Inland Empire, however, often 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 (Scott 2015, attached). These Pleistocene sediments are thus accorded a High paleontological resource sensitivity.

Professional Standard

The Society of Vertebrate Paleontology drafted guidelines outlining procedures that include:

[E]valuating the potential for impacts of a proposed action on paleontological resources and for mitigating those impacts. Impact mitigation includes pre-project survey and salvage, monitoring and screen washing during excavation to salvage fossils, conservation and inventory, and final reports and specimen curation. The objective of these procedures is to offer standard methods for assessing potential impacts to fossils and mitigating these impacts. (Society of Vertebrate Paleontology 2010)

The guidelines 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 upon 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.

County Assessment

A paleontological sensitivity map generated by the Riverside County Land Information System in June 2019 (Figure 4; after Riverside County Land Information System 2019) ranks the entire project area as having a High Paleontological Sensitivity (“High B”), which is:

[E]quivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface. The category High B indicates that fossils are likely to be encountered at or below four feet of depth, and may be impacted during excavation by construction activities.

The category “High B” indicates that potential fossils are likely to be encountered at or below four feet of depth and may be impacted during excavation by construction activities. Alluvial valley sediments and very old alluvial fan sediments with a High Potential/Sensitivity (“High B”) to yield nonrenewable paleontological resources (i.e., fossils) are shown in amber tint on Figure 4.

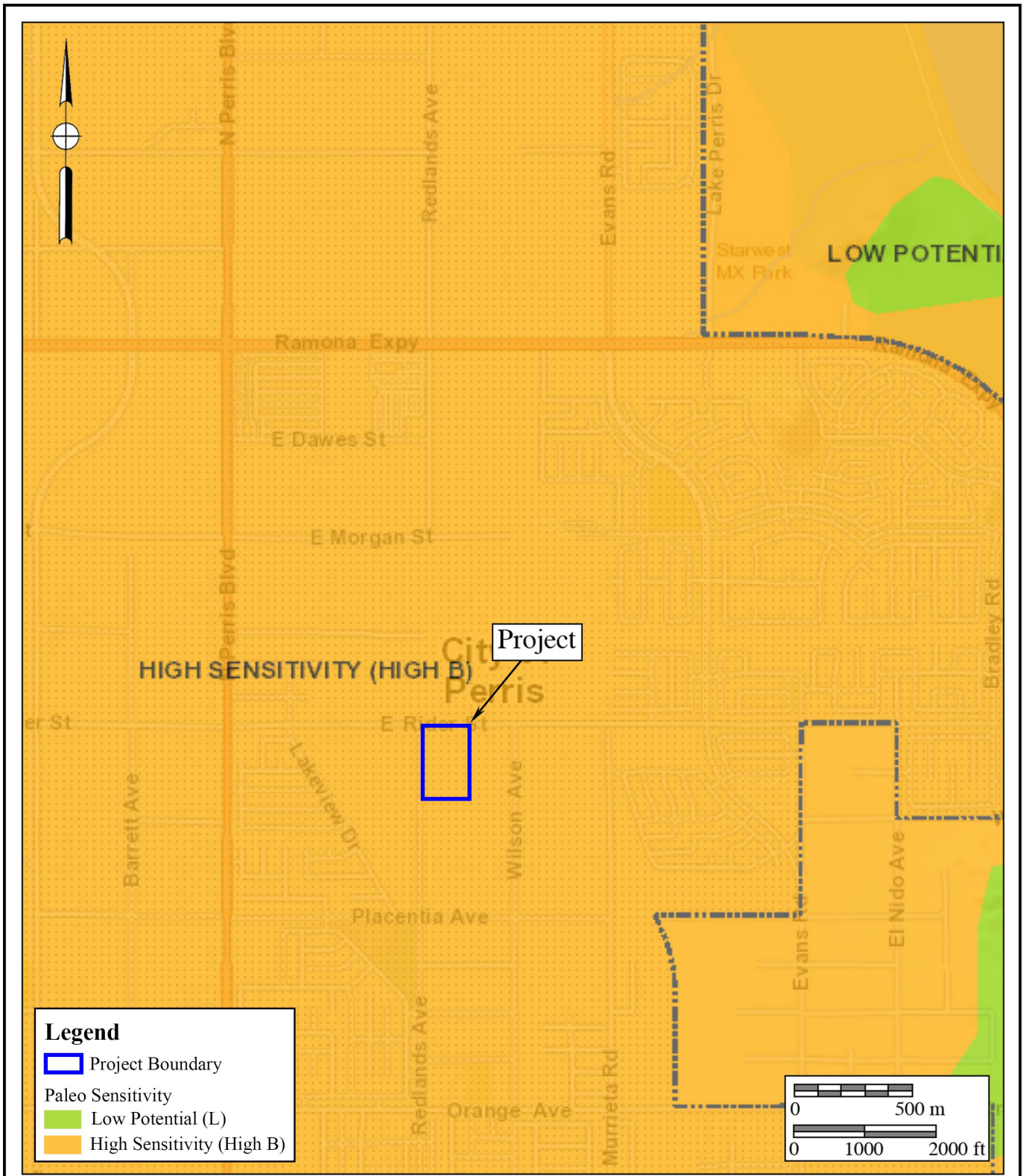


Figure 4
Riverside County Paleontological Sensitivity Map
 The Rider and Redlands Project



City Assessment

Based on the Paleontological Sensitivity Map in the Conservation Element of the City's Comprehensive General Plan (City of Perris 2008, Exhibit CN-7), the Rider and Redlands Project is located within Area 4, which is assigned a "low to high" paleontological sensitivity, based upon the presence of the Pleistocene older valley deposits (high sensitivity) underlying young alluvium at the surface (low sensitivity). Sites located within Area 4 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 2008, Goal *IV.A.4*).

Because the project site is located in an area specified by the City of Perris (2008) that monitoring for paleontological resources commences once excavations reach a depth of five feet ("Area 4"), the draft PVCCSP (City of Perris 2011a) requires an item in a mitigation measure to be implemented to minimize adverse impacts to fossils that might be present. This item is within mitigation measure *MM Cultural 3* in the draft PVCCSP (page 4.4-16, City of Perris 2011a), and repeated in *MM Cultural 5* in the final PVCCSP (page 11.0-27, City of Perris 2011b), and includes the requirement that a city-approved professional paleontologist verify implementation of the mitigation measures identified in the approved Phase 1 report for the project. In addition, the measures outline necessary field and reporting procedures at the project site during excavation activities, and stipulate that monitoring be restricted to areas of older alluvium that might be present below the surface.

VI. FINDINGS AND RECOMMENDATIONS

The existence of potentially fossiliferous lower Pleistocene very old alluvial fan deposits beneath the Holocene and upper Pleistocene young alluvial valley deposits (Qy_v_{sa} on Figure 3); the known occurrence of terrestrial vertebrate fossils at shallow depths from Pleistocene old and very old alluvial fan sediments across the Inland Empire of western Riverside County; and the High paleontological sensitivity typically assigned to Pleistocene old and very old alluvial fan sediments for yielding paleontological resources all support the recommendation that paleontological monitoring be required during mass grading and excavation activities in undisturbed lower Pleistocene very old alluvial fan sediments in order to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Monitoring is recommended full time starting at a depth of five feet below the surface during earth disturbance activities, as specified by the site's position within Area 4 of Exhibit CN-7 of the Conservation Element of the General Plan of the City of Perris (2008), and that the project paleontologist may revise the level of monitoring at the project site as subsurface conditions potentially change during the course of excavation activities. Mitigation measure *MM Cultural 5* of the PVCCSP (City of Perris 2011b), presented below, is proposed as a part of implementing the MMRP. When implemented with the provisions of CEQA, Scott (2015, attached), the City of Perris (2008), and

those of the guidelines of the Society of Vertebrate Paleontology (2010), this MMRP would mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources (fossils), if present, to a level below significant.

MM Cultural 5

Prior to grading for projects requiring subsurface excavation that exceeds five (5) feet in depth, proponents of the subject implementing development projects shall retain a professional paleontologist to verify implementation of the mitigation measures identified in the approved Phase I Cultural Resources Study and to monitor the subsurface excavation that exceed five (5) feet in depth. Selection of the paleontologist shall be subject to the approval of the City of Perris Planning Manager and no grading activities shall occur at the site until the paleontologist has been approved by the City.

Monitoring should be restricted to undisturbed subsurface areas of older alluvium, which might be present below the surface. The paleontologist shall be prepared to quickly salvage fossils as they are unearthed to avoid construction delays. The paleontologist shall also remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontologist shall have the power to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.

Collected samples of sediments shall be washed to recover small invertebrate and vertebrate fossils. Recovered specimens shall be prepared so that they can be identified and permanently preserved. Specimens shall be identified and curated and placed into an accredited repository (such as the Western Science Center or the Riverside Metropolitan Museum) with permanent curation and retrievable storage.

A report of findings, including an itemized inventory of recovered specimens, shall be prepared upon completion of the steps outlined above. The report shall include a discussion of the significance of all recovered specimens. The report and inventory, when submitted to the City of Perris Planning Division, would signify completion of the program to mitigate impacts to paleontological resources.

VII. CERTIFICATION

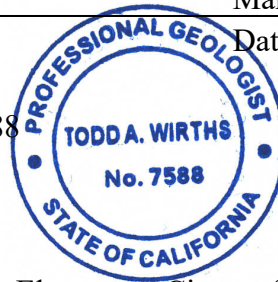
I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief, and have been compiled in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



March 25, 2021

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

Date



VIII. REFERENCES

City of Perris. 2008. Conservation Element, City of Perris General Plan <https://www.cityofperris.org/home/showpublisheddocument?id=449>.

City of Perris. 2011a. Perris Valley Commerce Center Specific Plan Draft EIR. <http://www.cityofperris.org/city-hall/specific-plans/PVCC/PVCC-DEIR%2007-20-11.pdf>.

City of Perris. 2011b. Perris Valley Commerce Center Specific Plan Final EIR. http://www.cityofperris.org/city-hall/specific-plans/PVCC/PVCC_MMRP_11-30%2011_rev.pdf.

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Quinn, H.M., and Richards, M.D. 2018. Paleontological resources assessment report, Canyon Steel Industrial Building project. Unpublished consulting report for Carter Group Architects, Inc., San Clemente, Calif., by CRM Tech, Colton, Calif.

Reynolds, R. E., and Reynolds, R. L. 1991. The Pleistocene beneath our feet: Near-surface Pleistocene fossils from inland southern California basins. San Bernardino County Museum Association Quarterly, 38(3&4): 41-43.

Scott, E. G. 2013. Paleontology literature and records review, Ecos Nuevo project, Lakeview Hot Springs region, Riverside County, California. Unpublished report prepared for Brian F.

Smith and Associates, Inc., Poway, by the Division of Geological Sciences, San Bernardino County Museum, Redlands; attached.

Scott, E. G. 2015. Paleontology literature and records review, Moreno Valley Logistics Center, City of Moreno Valley, Riverside County, California. Unpublished report prepared for Brian F. Smith and Associates, Poway, by the Division of Geological Sciences, San Bernardino County Museum, Redlands; attached.

Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources; by the SVP Impact Mitigation Guidelines Revision Committee: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

Brian F. Smith and Associates, Inc.

14010 Poway Road • Suite A •

Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: twirths@bfsa-ca.com



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 Resource Impact Mitigation Program (PRIMP) for the Speedway TPM 37676 Project, Temescal Valley, Riverside County, California.* Prepared for Speedway Development. 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.

APPENDIX B

Paleontological Records Search Results



Brian F. Smith and Associates
Todd Wirths
14010 Poway Road,
Poway, CA 92064

March 24, 2021

Dear Mr. Wirths,

This letter presents the results of a record search conducted for the Rider and Redlands Project (19-127) in the city of Perris, Riverside County, California. The project site is located at the south east intersection of Redlands Avenue and Rider Street in Section 17 of Township 4 South and Range 3 West on the Perris, CA USGS 7.5 minute topographic quadrangle. The geologic units underlying this project are mapped entirely as alluvial sand and clay dating to the Holocene (Dibblee, 2003). While Holocene alluvial units are considered to be of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Late Pleistocene alluvial sediments could increase. The Western Science Center does not have localities within the project area or within a one mile radius.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper alluvial sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the Rider and Redlands Project area is unlikely to be paleontologically sensitive, but caution during development should be observed. If you have any questions or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

A handwritten signature in black ink, appearing to read 'Darla Radford', written in a cursive style.

Darla Radford
Collections Manager



Museum

Leonard X. Hernandez
Interim Museum Director

12 March 2015

Brian F. Smith and Associates
attn: George L. Kennedy, Ph.D., Senior Paleontologist
14010 Poway Road, Suite A
Poway, CA 92064

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, MORENO VALLEY LOGISTICS CENTER, CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA**

Dear Dr. Kennedy,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named project in the City of Moreno Valley, Riverside County, California. Specifically, the proposed study area is located in the southwestern quadrant of section 30, Township 3 South, Range 3 West, San Bernardino Base and Meridian, as seen on the Perris, California and the Sunnymead, California 7.5' United States Geological Survey topographic quadrangle maps (1967 editions, photorevised 1973 and 1980, respectively).

Previous mapping of the proposed property (Rogers, 1965; Morton and Matti, 2001; Morton, 2003) indicates that the study area is situated entirely upon surface exposures of early Pleistocene alluvial fan deposits (= unit **Qvof_a**). These Pleistocene fan deposits may have high paleontologic sensitivity, depending upon their lithology. Pleistocene alluvium elsewhere throughout Riverside County and the Inland Empire has repeatedly been reported to yield significant fossils of extinct animals from the Ice Age (Jefferson, 1991; Reynolds, 1991; Anderson and others, 2002; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds, 1991; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010), as well as plant macro- and microfossils (Anderson and others, 2002). If not previously disturbed by development, and depending upon the lithology exhibited, these sediments have high potential to contain significant nonrenewable paleontologic resources.

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no previously-recorded fossil resource

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localities from Pleistocene older alluvium are present within the boundaries of the proposed development property, nor from at least within one mile in any direction.

Recommendations

The results of the literature review and the search of the RPLI at the SBCM demonstrate that the proposed study area is situated upon Pleistocene older alluvial deposits that, if not previously disturbed by development and depending upon their lithology, have high potential to contain paleontologic resources. Excavation in this older alluvium therefore has high potential to impact paleontologic resources. A qualified vertebrate paleontologist must develop a program to mitigate impacts to nonrenewable paleontologic resources. This mitigation program must be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of Riverside. This program should include, but not be limited to:

1. Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. Areas requiring monitoring include all previously-undisturbed Pleistocene older alluvial sediments present, at the surface or at depth, within the boundaries of the property. Paleontologic monitors should be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced or eliminated if the potentially-fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.
2. Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts to the resources (Scott and others, 2004).
3. Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not complete until such curation into an established, accredited museum repository has been fully completed and documented.
4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum

repository, would signify completion of the program to mitigate impacts to paleontologic resources.

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Please do not hesitate to contact us with any further questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Scott". The signature is stylized with a large, sweeping loop at the top and a smaller, more intricate loop at the bottom.

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum