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July 18, 2023

Tracy Zinn
Principal
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Newport Beach, California 92602
Transmitted via email to tzinn@tbplanning.com

RE: Paleontological Resource Assessment for the Oak Valley North Specific Plan, City of Calimesa, Riverside County, California

Dear Tracy Zinn,

At the request of T&B Planning, Inc. (T&B Planning), acting on behalf of BICM Land Holding, LP (the Project Proponent), PaleoWest, LLC (PaleoWest) conducted a paleontological resource assessment for the proposed Oak Valley North Project (Project), in the City of Calimesa, Riverside County, California. The goal of the assessment is to identify the geologic units that may be impacted by the development of the Project, determine the paleontological sensitivity of geologic units within the Project area, assess potential for impacts to paleontological resources by the Project, and recommend mitigation measures to avoid or mitigate impacts to scientifically significant paleontological resources, as necessary.

This paleontological resource assessment included a fossil locality records search conducted by the Natural History Museum of Los Angeles County (NHMLA), in Los Angeles, California. The NHMLA records search was supplemented by a review of existing geologic maps, online fossil locality databases, and primary literature regarding fossiliferous geologic units within the proposed Project vicinity and region. This technical memorandum, which was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP, 2010), has been prepared to support environmental review under the California Environmental Quality Act (CEQA).

PROJECT LOCATION AND DESCRIPTION

The Project is in the City of Calimesa, immediately east of Interstate 10 (I-10) and south of Singleton Road (Figure 1). The Project encompasses portions of Section 24, Township (T) 2 South (S), Range (R) 2 West (W), and Section 19, T2S, R1W, San Bernardino Baseline and Meridian (SBBM), as depicted on the *El Casco, CA* 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (Figure 2; USGS, 1980). The Project area consists of 110.2 acres of land with 13.7 additional acres proposed for offsite improvements.

The Project entails the proposed development of business park and light industrial uses on 95.6 acres, high-density residential or church land uses on 11.2 acres, and 3.4 acres of roadway. Off-site improvements include proposed improvements to Calimesa Boulevard, Singleton Road, and Beckwith Avenue.

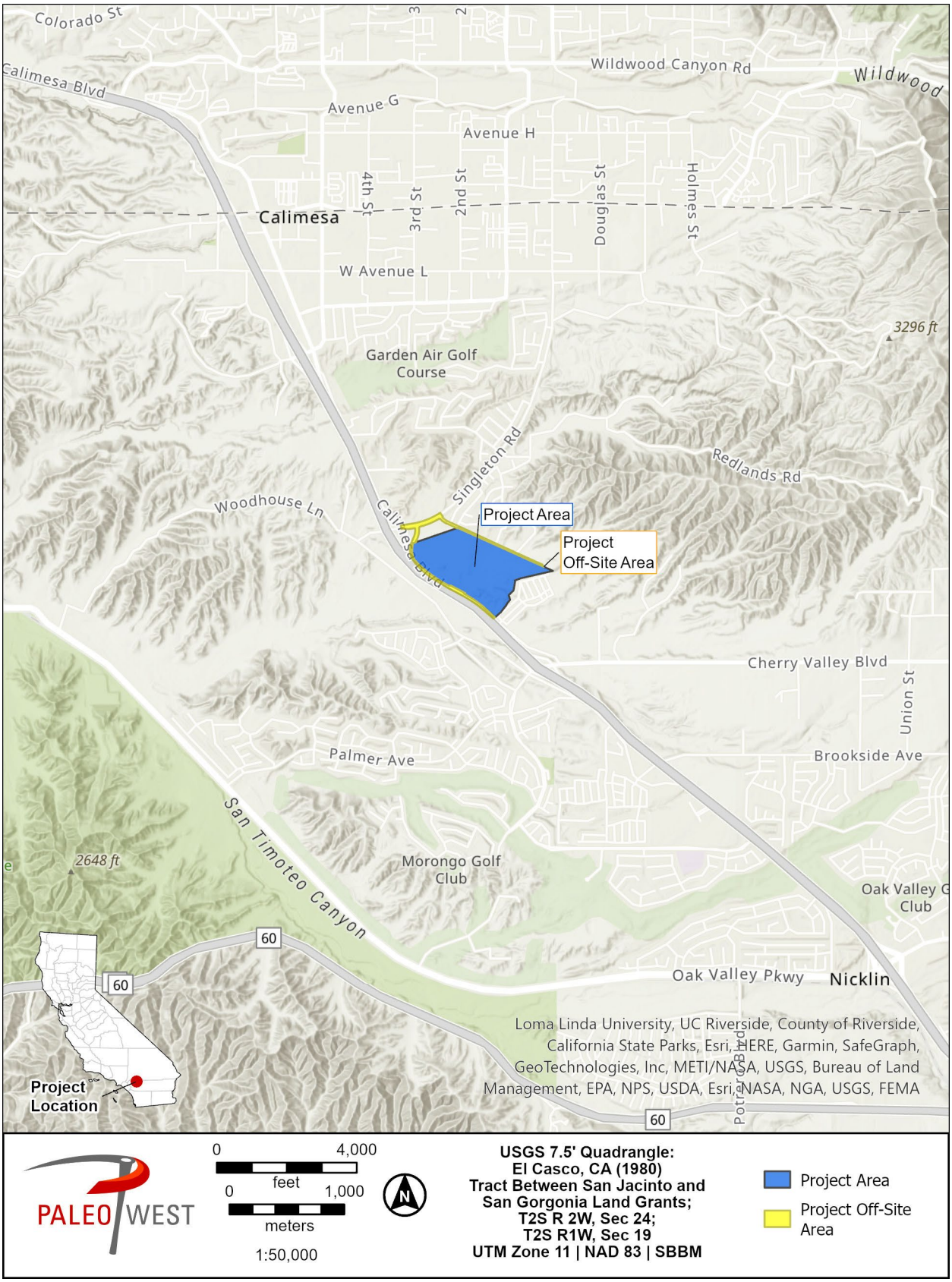

Figure 1. Project vicinity map.

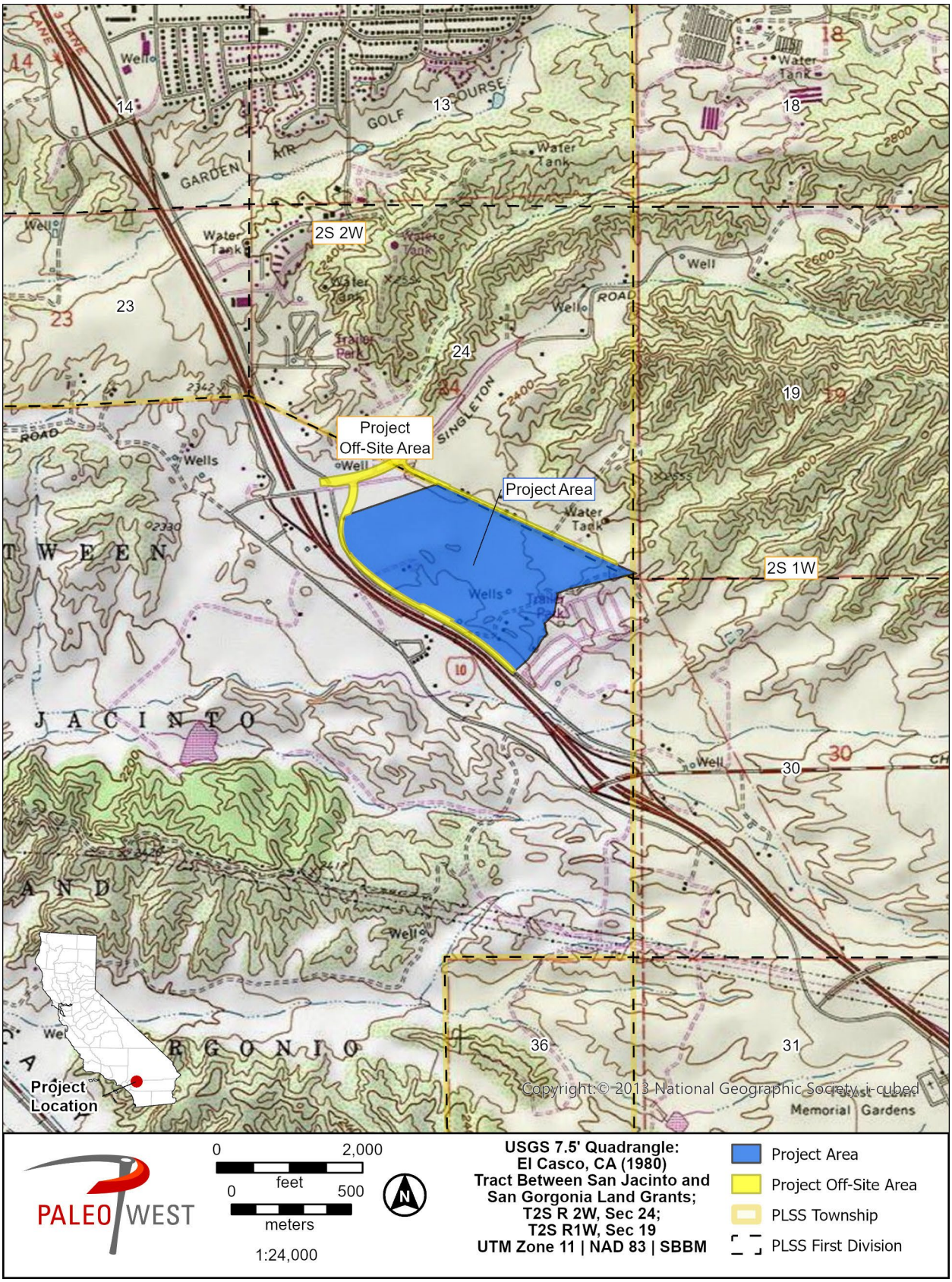

Figure 2. Project location map.

REGULATORY CONTEXT

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws and regulations. Laws pertinent to this Project are discussed below.

STATE LAWS AND REGULATIONS

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their Projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] Section 5020.1 [j]). Appendix G in Section 15023 provides an Environmental Checklist of questions (Section 15023, Appendix G, Section VII, Part F) that includes the following: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?"

CEQA does not define "a unique paleontological resource or site." However, the SVP has provided guidance specifically designed to support state and federal environmental review in absence of agency guidelines. The SVP broadly defines significant paleontological resources as follows (SVP, 2010, p. 11):

> "Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)."

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered significant.

California Public Resources Code

Section 5097.5 of the Public Resources Code (PRC) states:

> "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, 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. As used in this PRC 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."

Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

LOCAL

City of Calimesa

Calimesa has one goal, one policy, and two action items specifically related to paleontological resources in their Resource Management chapter of their General Plan (City of Calimesa, 2014). The following presents the citywide goal, policy, and action items for paleontological resources:

- Goal RM-4: Preserve the city's historical, cultural, archaeological, paleontological, and architectural resources.
  - Policy RM-16: Identify, protect, and preserve the historical and cultural resources of the city.
    - Action Item RM-16.3: Review all proposed development for the possibility of cultural/archaeological/paleontological sensitivity. When existing information indicates that a site proposed for development may contain paleontological resources, a report stating the extent and potential significance of the resources that may exist within the proposed development shall be prepared and include mitigation measures as appropriate.
    - Action Item RM-16.4: The City [of Calimesa] will work with the Native American community and others to adopt an appropriate process and procedure for the monitoring of excavation in cultural and paleontological sensitive areas and adopt a process for ensuring the appropriate curation of any cultural or paleontological resources discovered.

The Land Use chapter of the General Plan also indicates that paleontological resource assessment should be completed before precise determination of any development is completed (City of Calimesa, 2014).

PALEONTOLOGICAL RESOURCE POTENTIAL

In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the amount of ground disturbances within geological units with a known paleontological resource potential (i.e., "paleontological sensitivity"), the greater the potential for negative impacts to paleontological resources.

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological

sensitivity of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological sensitivity of the geologic unit(s) (or members thereof) underlying a project area can be assigned to one of four categories defined by SVP (2010). Although these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted the following guidelines.

HIGH POTENTIAL

According to the SVP (2010:1-2),

> "[r]ock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have high potential for containing additional significant paleontological resources. Rock units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcaniclastic formations (e.g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographic extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene or older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.). Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential."

UNDETERMINED POTENTIAL

According to the SVP (2010:2),

> "[r]ock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist… to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy."

LOW POTENTIAL

According to the SVP (2010:2),

> "[r]eports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e.g., basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils."

However, as ground disturbances occur, it is possible that significant and unanticipated paleontological resources might be encountered either at the surface or at depth. Therefore, a change of classification from low to high potential may be warranted and monitoring and mitigation may be needed.

NO POTENTIAL

According to the SVP (2010:2),

> "[s]ome rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources."

METHODS

PaleoWest conducted a review of geologic maps and scientific literature, which was supplemented by a search of pertinent local and regional museum repositories for fossil records within the Project area and its vicinity. A formal museum records search was requested from the NHMLA on March 1, 2022, the results of which were received on March 15, 2022. Additionally, fossil locality records and published literature from the University of California Museum of Paleontology (UCMP) online fossil locality database, the online Paleobiology Database (PBDB), and the online Neotoma Paleoecology Database (Neotoma) were reviewed, as well as other published and unpublished geological and paleontological literature of the area.

RESULTS

REGIONAL GEOLOGY

The Project area is in the northern portion of the Peninsular Ranges geomorphic province (referred to herein as the "Peninsular Ranges"). Northwest-trending fault-bound blocks of mountain ranges and valleys oriented subparallel to the San Andreas fault distinguish the Peninsular Ranges from its neighboring provinces. The Peninsular Ranges are bounded on the east by the Colorado Desert geomorphic province, on the north by the Transverse Ranges geomorphic province, whose southern boundary is subparallel to the San Bernardino–Riverside County line, on the west by the submarine continental shelf, and on the south by the California state line (Norris and Webb, 1990).

During the Cretaceous Period (145 to 66 million years ago [Ma]), plutonic basement rocks were emplaced as the Peninsular Ranges Batholith. Later the batholith was uplifted during the Cenozoic (66 Ma to present) to form the Peninsular Ranges mountains in Southern California (Norris and Webb, 1990). Throughout the early Cenozoic, widespread erosion of the uplifted crystalline plutonic ranges contributed to coastal and interior basins (Norris and Webb, 1990). By the Pliocene (5.3 to 2.6 Ma), continuous sedimentation in inland basins and down-dropped blocks resulted in thick sequences of nonmarine sedimentary strata, particularly in the northern Peninsular Ranges (e.g., the Mount Eden Formation and San Timoteo Canyon Formation). By the Pleistocene Epoch (2.6 Ma to 11,700 years ago), inland basins were continuously filled by fluvial, lacustrine, alluvial, and colluvial sediments. During the Pleistocene and continuing through the Holocene Epoch (11,7000 years ago to present), drainage off the neighboring San Bernardino Mountains resulted in deposition of axial-channel and alluvial-fan deposits throughout the Beaumont Plain (Matti et al., 2015).

GEOLOGY AND PALEONTOLOGY OF THE PROJECT AREA

Based on geologic mapping at a scale of 1:24,000 by Matti et al. (2015), Quaternary alluvium (the Quaternary Period occurred 2.6 Ma to present and includes the Pleistocene Epoch and Holocene Epoch) is exposed at the surface of the Project area and offsite improvement areas. The Quaternary alluvium is subdivided into several mapped Holocene to Pleistocene alluvial deposits by Matti et al. (2015), including late Holocene very young wash deposits, modern (Qvywm); late Holocene very young wash deposits, Unit 2 ($Qvyw_2$); late Holocene very young wash deposits, Unit 1 ($Qvyw_1$); late Holocene young axial-valley deposits, Unit 5 (Qya_5); Holocene to late Pleistocene young alluvial-fan deposits, undivided (Qyfu); late to middle Pleistocene old alluvial-fan deposits, Unit 2 (Qof_2); and middle Pleistocene very old alluvial-fan deposits, Unit 3 ($Qvof_3$) (Figure 3).

Several potentially fossiliferous geologic units are present with a 0.25-mile (mi) buffer of the Project area (Figure 3) and may be present within the Project area at shallow depth. These geologic units have previously yielded significant vertebrate fossil localities and they could potentially be encountered at depth in the Project area. The units include late Holocene very young alluvial-fan deposits, undivided (Qvyfu); late to middle Pleistocene old alluvial-fan deposits, Unit 3 (Qof_3); Pleistocene sedimentary deposits of Live Oak Canyon (Qlo); and Pliocene San Timoteo Formation, middle member (Tstm) (Frick 1921; Reynolds and Reeder 1991).

A summary of the geologic units in the Project area is given below and depicted in Figure 3.

Holocene Alluvium

Late Holocene very young wash deposits (Qvywm, $Qvyw_2$, and $Qvyw_1$) are composed of unconsolidated sand and gravel in active channels and along the margins of San Timoteo Creek (Matti et al., 2015). These deposits occur in a variety of physiographic settings, including in channels and arroyos incised into older mapped units; in narrow, anastomosing channels distributed around terraces of older units; and in thin, continuous to discontinuous veneers that mantle older geologic units (Matti et al., 2015). Late Holocene young axial-valley deposits (Qya_5) are composed of poorly consolidated sandy, muddy, and gravelly sediment deposited by streams of axial valleys. Holocene to latest Pleistocene young alluvial-fan deposits (Qyfu) are composed of slightly consolidated sandy, muddy, and gravelly sediment deposited by streams following on alluvial-fan landforms.

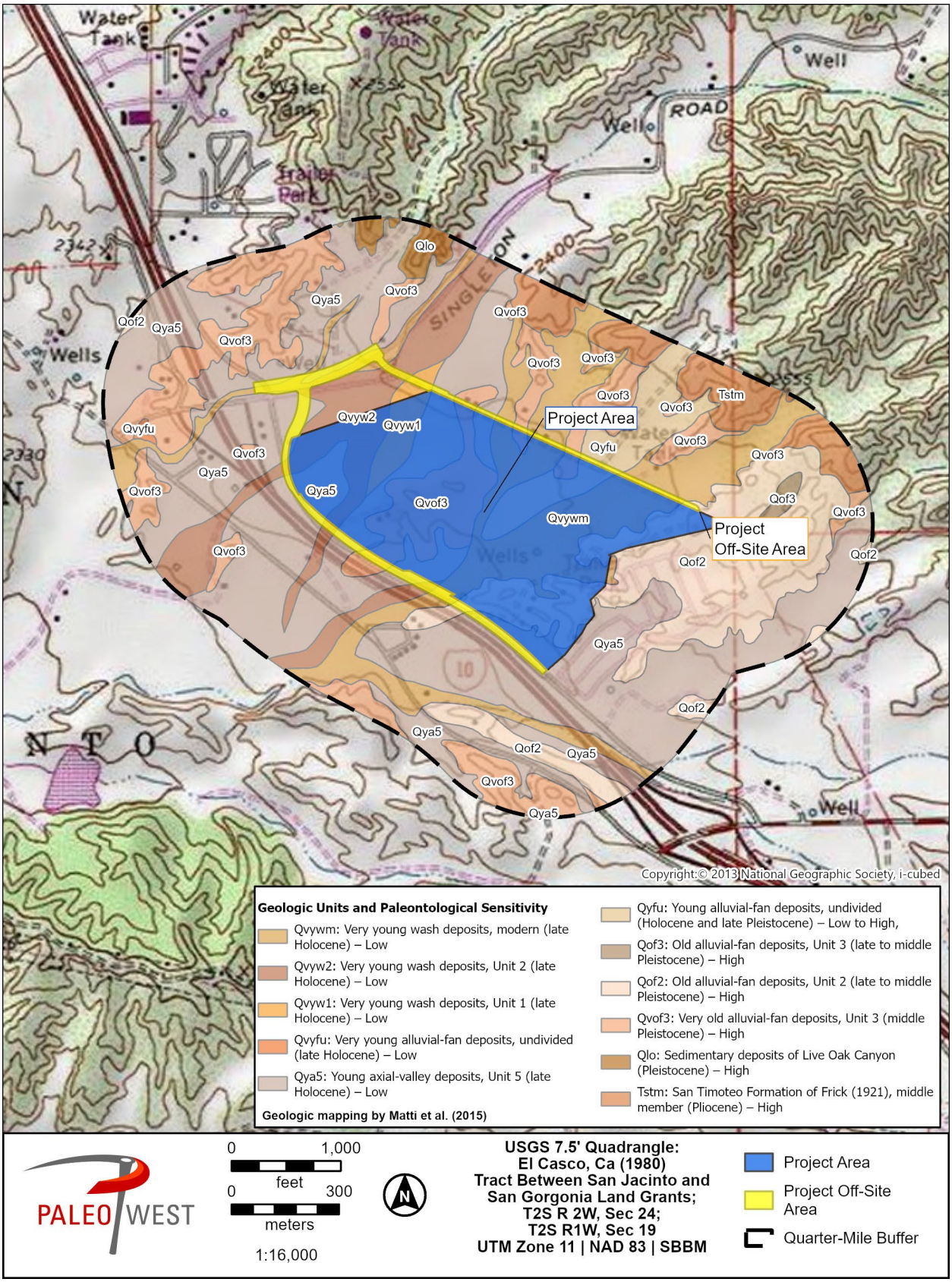

Figure 3. Geologic and paleontological sensitivity map.

According to the SVP (2010), Holocene sedimentary deposits are typically too young to contain scientifically significant paleontological resources but may be underlain by older geologic units of appropriate age to yield fossils. The depth to the underlying older deposits is unknown but possibly less than 5 feet (ft) below ground surface (bgs) based on the presence of older geologic units immediately adjacent to this geologic unit's mappable extent within the Project area.

Pleistocene Alluvium

Late to middle Pleistocene old alluvial-fan deposits (Qof_2) and Middle Pleistocene very old alluvial-fan deposits ($Qvof_3$) are composed of sandy, gravelly, and silty sediments deposited by streams on alluvial fan landforms (Matti et al., 2015). The clast sizes in the alluvial fan deposit vary from coarse to fine, but the fine-grained sediments within these geologic units have the potential to contain paleontological resources (Matti et al., 2015; Morton and Miller, 2006).

Pleistocene surficial sedimentary deposits have yielded numerous significant paleontological resources within the vicinity of the Project area, as well as from other similar deposits from elsewhere within Riverside County. Fossil localities from similarly aged deposits have yielded mammoth, mastodon, ground sloth, horse, bison, deer, camel, saber-toothed cat, rabbit, rodent, bird, reptile, turtle, snake, frog, and bony fish (Dooley et al., 2019; Jefferson, 1991a, 1991b; Miller, 1971; Reynolds and Reynolds, 1991). Most notably, more than 10,000 fossil specimens representing more than 105 vertebrate, invertebrate, and plant taxa from 2,646 fossil localities have been discovered during construction of the Diamond Valley Lake reservoir south of the Project area in Hemet, California (Springer et al., 2009). The UCMP (2022) contains several records of Pleistocene-age fossil localities throughout Riverside County; these localities have yielded fossil mammoth, rodent, tortoise, invertebrate, and plant. The PBDB (2022) and Neotoma (2022) online databases contain no additional fossil locality records in the vicinity of the Project area, beyond those previously noted from the Diamond Valley Lake reservoir described above.

MUSEUM RECORDS SEARCH

The NHMLA does not contain records of fossil localities from within the Project site or offsite improvement areas. However, numerous fossil localities have been recorded in the Project vicinity from the same sedimentary deposits as those mapped on the surface of the Project area, or potentially present in the subsurface (Bell, 2022). Fossil locality records retained by the NHMLA are presented in Table 1.

Table 1. NHMLA Fossil Locality Records from the Project Vicinity, Riverside County

Locality No.	Geologic Unit	Age	Taxa	Depth
LACM VP 7618-7622, CIT132, CIT133	San Timoteo Formation	Pliocene to Pleistocene	Horse (Equidae), camel (Camelidae)	Surface
LACM VP 4540	Unnamed unit	Pleistocene	Horse (Equidae)	Unknown
LACM VP 1653, LACM IP 437	Unnamed unit	Pleistocene	Monkfish (*Squatina*), stickleback (*Gasterosteus*), insect (*Sobobapteron kirkbaye*), brachiopod (*Terebratalia hemphill*)	Unknown
LACM VP 4619	Unnamed unit	Pleistocene	Mammoth (*Mammuthus*)	100 ft bgs

Locality No.	Geologic Unit	Age	Taxa	Depth
LACM VP 7811	Unnamed unit	Pleistocene	Whip snake (*Masticophis*)	9–11 ft bgs
LACM VP 5168	Unnamed unit	Pleistocene	Horse (*Equus*)	Unknown

Source: Bell, 2022.
Notes: LACM = Los Angeles County Museum, VP = vertebrate collections, IP = invertebrate collections.

IMPACT ANALYSIS

In general, the higher the amount of ground disturbances within geologic units of high paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. The extent of ground-disturbing activities within the Project area and offsite improvement areas may involve grading, excavating, and trenching. Therefore, ground disturbances in Pleistocene deposits (Qof_2, $Qvof_3$) may result in impacts to significant paleontological resources. Ground disturbances greater than 5 ft bgs in areas mapped as Holocene alluvium (Qvywm, $Qvyw_2$, $Qvyw_1$, Qya_5, Qyfu) may result in impacts to older geologic units with high paleontological sensitivity, Disturbances to these geologic units may result in impacts to significant paleontological resources.

Destruction of scientifically important fossils during Project-related earthwork activities would be considered a significant impact under CEQA. Paleontological mitigation would be required to reduce potential impacts to less-than-significant levels. The paleontological sensitivity of the geologic units that may be impacted by ground-disturbing activities and the recommended mitigation measures to reduce potential impacts to less than significant levels is summarized in Table 2.

Table 2. Paleontological Sensitivity and Mitigation Recommendations Summary for the Project

Paleontological Sensitivity	Geologic Units	Mitigation Recommendation
Low at the surface; high below 5 ft bgs	Late Holocene very young wash deposits, modern (Qvywm); late Holocene very young wash deposits, Unit 2 ($Qvyw_2$); late Holocene very young wash deposits, Unit 1 ($Qvyw_1$); late Holocene young axial-valley deposits, Unit 5 (Qya_5); Holocene to latest Pleistocene young alluvial-fan deposits, undivided (Qyfu)	Paleontological monitoring recommended for ground disturbances greater than 5 ft bgs.
High	Late to middle Pleistocene old alluvial-fan deposits, Unit 2 (Qof_2); middle Pleistocene very old alluvial-fan deposits, Unit 3 ($Qvof_3$)	Paleontological monitoring recommended for ground disturbances.

RECOMMENDATIONS

Ground disturbing activities in the Project area have the potential to impact geologic units with high paleontological sensitivity and may result in significant impacts to paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. Therefore, a Qualified Paleontologist (the "Project Paleontologist") who meets the SVP (2010) standards, should be retained to develop and implement the measures recommended below. A review of the grading and excavation plans, when available, should help inform the need for the measures below. These

measures have been developed in accordance with SVP guidelines; if implemented, these measures will satisfy the requirements of CEQA to reduce potential impacts to less than significant levels.

WORKER'S ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

Prior to the start of the Project activities, all field personnel should receive a Worker's Environmental Awareness Program (WEAP) training on paleontological resources. The WEAP training will provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the paleontological monitor, outline steps to follow in the event that a fossil discovery is made and provide contact information for the Project Paleontologist retained to implement the monitoring program of the Project. The WEAP training will be developed by the Project Paleontologist and can be delivered concurrent with other training including cultural, biological, safety, etc.

PALEONTOLOGICAL RESOURCES MITIGATION AND MONITORING PLAN

Prior to the commencement of ground disturbing activities, a Project Paleontologist will be retained to prepare and implement a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) for the Project. The PRMMP will describe the preconstruction meeting attendance and WEAP training requirements, identify where monitoring is required within the Project area, Paleontological monitoring methods (including necessary monitoring equipment, methods for treating fossil discoveries, fossil recovery procedures, and sediment sampling for microvertebrate fossils), and final reporting. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted based on the geologic conditions at depth, then the Project Paleontologist may reduce or cease paleontological monitoring in consultation with the Lead Agency and the Project Proponent.

FOSSIL DISCOVERIES

If a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the Project. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

2. Fossil Preparation and Curation. The PRMMP will identify the museum that has agreed to accept the fossils that may be discovered during Project-related excavations. Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility of the Project Proponent.

FINAL PALEONTOLOGICAL MITIGATION REPORT

Upon completion of ground disturbing activities (and curation of fossils if necessary), the Project Paleontologist should prepare a final paleontological mitigation report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration, and methods of the monitoring; geologic and/or stratigraphic descriptions; and the salvage, evaluation, and curation of significant fossils.

Thank you for contacting PaleoWest for this Project. If you have any questions, please do not hesitate to contact us.

Sincerely,

Heather Clifford, M.S. | Senior Paleontologist
PALEOWEST

Attachments:
Attachment A: Confidential Natural History Museum of Los Angeles County, Museum Records Search Results

REFERENCES

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Attachment A: CONFIDENTIAL Natural History Museum of Los Angeles County, Records Search Results

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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

March 15, 2022

PaleoWest
Attn: Mathew Carson

re: Paleontological resources for the Birtcher Oak Valley Commerce Center Project

Dear Mathew:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Birtcher Oak Valley Commerce Center project area as outlined on the portion of the El Casco USGS topographic quadrangle map that you sent to me via e-mail on March 1, 2022. 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 7618 - 7622, CIT132, CIT133	San Timoteo Badlands; E of Moreno & NW of Eden Hot Springs	San Timoteo Formation	Horse family (Equidae); Camel family (Camelidae)	Surface
LACM VP 4540	Junction of Jackrabbit Trail & Gilman Springs Road, San Jacinto Valley	Unnamed Formation (Pleistocene, gravel pit)	Horse Family (Equidae)	Unknown
LACM VP 1653, LACM IP 437	Saboba Indian Reservation; five miles east of San Jacinto	Unknown Formation (Pleistocene)	Monkfish (*Squatina*), Stickleback (*Gasterosteus*); insect (*Sobobapteron kirkbaye*); brachiopod (*Terebratalia hemphili*)	Unknown
LACM VP 4619	Wineville Ave, Eastvale, CA	Unknown Formation (Pleistocene)	Mammoth (*Mammuthus*)	100 feet bgs
LACM VP 7811	W of Orchard Park, Chino Valley	Unknown formation (eolian, tan silt; Pleistocene)	Whip snake (*Masticophis*)	9-11 feet bgs
LACM VP 5168	Point Marina Drive in East Bay Section of	Unknown formation (Pleistocene; clay)	Horse (*Equus*)	Unknown

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,

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

enclosure: invoice