
Appendix F

Paleontological Resources Desktop Review
Letter Report

October 9, 2024

15211

Kat Marian
California State University Stanislaus
One University Circle, CY600
Turlock, CA 95382

Subject: *Paleontological Resources Desktop Review for the California State University Stanislaus Stockton Campus Master Plan, City of Stockton, San Joaquin County, California*

Dear Kat Marian:

This letter documents the paleontological resources desktop review conducted by Dudek for the California State University (CSU) Stanislaus Project (Project or Proposed Project), located 612 East Magnolia Street, in the City of Stockton, San Joaquin County, California (Attachment A, Project Location). All paleontological resource reporting for this Project was conducted by paleontologists meeting the criteria set forth under the Society of Vertebrate Paleontology (SVP) guidelines for professional qualifications. A records search conducted by the Natural History Museum of Los Angeles County returned negative results within a 1-mile radius buffer of the Project site. However, the Museum of Paleontology at the University of California, Berkeley ([UCMP] 2024) has several fossil localities recorded in the Stockton area (Confidential Attachment B).

1 Project Description

The Proposed Project consists of a Master Plan that would provide space and facility needs to support a planned increase in enrollment to 2,000 full-time-equivalent students at Stockton Center. Stockton Center is an off-campus extension of the CSU, Stanislaus campus located in Stockton, California. Stockton Center offers upper-division college courses, allowing students to complete their degrees without commuting to the main CSU Stanislaus campus in Turlock, California. The proposed Master Plan involves the renovation of 2 existing buildings and construction of 6 new buildings, including new and renovated building space for academics, administration, library, student recreation, shared uses, and parking, for a total net increase of 148,100 gross square feet of building space.

2 Regulatory Context

Paleontological resources are protected on state lands under the California Environmental Quality Act (CEQA) and on City of Stockton lands according to Policy LU-5.2 and Action LU-5.2D of the adopted City of Stockton General Plan (City of Stockton 2018). Although the Project as currently planned is subject only to state and local regulatory conditions, federal regulations are also provided here for reference should they be relevant in the future.

2.1 Federal Regulations

2.1.1 Paleontological Resources Protection Act

The Paleontological Resources Protection Act (PRPA) of 2009 directs the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land using “scientific principles and expertise.” The PRPA incorporates most of the recommendations of the Secretary of the Interior’s report titled Assessment of Fossil Management on Federal and Indian Lands (DOI, 2000) to formulate a consistent paleontological resources management framework. In passing the PRPA, congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. The PRPA codifies existing policies of the U.S. Bureau of Land Management, National Park Service, U.S. Forest Service, Bureau of Reclamation, and the U.S. Fish and Wildlife Service, and provides the following:

- Criminal and civil penalties for illegal sale and transport and theft and vandalism of fossils from federal lands
- Minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants)
- Definitions for “paleontological resources” and “casual collecting”
- Requirements for curation of federal fossils in approved repositories

The PRPA requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land. The PRPA furthers the protection of fossils on federal lands by criminalizing the unauthorized removal of fossils.

2.1.2 Federal Land Policy Management Act

The Federal Land Policy Management Act of 1976 (PL 94-579; 90 Statute 2743, USC 1701–1782) requires that public lands be managed such that the quality of their scientific values is protected. The act recognizes significant paleontological resources as scientific resources and requires federal agencies to manage public lands in a manner that protects scientific resource quality.

2.1.3 National Environmental Policy Act

The National Environmental Policy Act of 1969 (PL 91-190; 31 Statute 852, 42 USC 4321–4327) requires that important natural aspects of national heritage be considered in determining the environmental consequences of proposed projects.

2.2 State of California

2.2.1 California Environmental Quality Act of 1970

Paleontological resources are afforded consideration under CEQA. Appendix G of the State of California CEQA Guidelines (14 CCR 15000 et seq.) includes the following as one of the questions to be answered in the

Environmental Checklist (Appendix G, Section VII, Part f): “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” California Public Resources Code Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for damage to or removal of paleontological resources. California state laws and regulations under California Public Resources Code Section 5097.5 apply to paleontological resources.

2.3 City

2.3.1 City of Stockton General Plan

The City of Stockton General Plan (adopted 2018) Policy LU-5.2 endeavors to “Protect natural resource areas...and other cultural/historic resources from encroachment or destruction by incompatible development. Action LU-5.2D will:

“Require the following tasks by a qualified archaeologist or paleontologist prior to project approval:

- Conduct a records search at the...University of California Museum of Paleontology at Berkeley, or other appropriate historical or archaeological repositories.
- Conduct field surveys where appropriate.
- Prepare technical reports, where appropriate, meeting California office of Historic Preservation or other appropriate standards.
- Where development cannot avoid an archaeological or paleontological deposit, prepare a treatment plan in accordance with appropriate standards...”

Moreover, Action LU-5.2G requires developers to “Comply with appropriate State and federal standards to evaluate and mitigate impacts to ...paleontological resources.”

3 Environmental Setting

The City of Stockton, in San Joaquin County, California, is located within the central San Joaquin Valley, in the Great Valley Geomorphic Province (Great Valley) (Harden 2004, California Geological Survey, 2002). The Great Valley (also known as the Central Valley) is an extensive, relatively flat valley composed of sedimentary deposits that are thousands of feet thick, adjacent to and west of the Sierra Nevada and east of the Coast Ranges Geomorphic Province (Harden, 2004).

3.1 Geological Setting

The Project site is mapped as being underlain by late Pleistocene (approximately 14,000 to 42,000 years) Modesto Formation (map unit Qm), according to published surficial geological mapping at a 1:250,000 scale (Wagner et al., 1991; DWR, 2004). The Modesto Formation has a high paleontological resource sensitivity.

3.2 Records Search Results

The Pleistocene age sedimentary deposits, such as the Modesto Formation, which is characteristically tan and light gray in color, have been known to contain Ice Age mammals as confirmed by the records search results obtained from the UCMP (2024; Confidential Attachment B).

Dudek requested a paleontological resources records search from the UCMP on September 3, 2024, and the results were received on September 12, 2024. Although there are no UCMP localities within the Project area or a 1-mile radius buffer, several paleontological resource (or fossil) localities have been found in the Stockton area. Northwest of the Project area, in the Lincoln Village neighborhood, a late Pleistocene horse (*Equus*) fossil lower jaw was discovered at UCMP V4822 (Confidential Attachment B). Near the Highway 4 and Highway 99 interchange, Pleistocene age fossils found at variable depths below the surface within the Modesto Formation include a bison (*Bison*) lower jaw, a camel (*Camelops*) upper jaw, and postcranial fragments from a large ungulate (hooved mammal). The UCMP also noted in the records search results that fossil Proboscidean (e.g., mammoths and mastodons) remains, housed and on display at the San Joaquin County Administrative Building, were discovered during construction in 2007 (Confidential Attachment B).

4 Review of Paleontological Sensitivity

No paleontological resources were identified within the Project site as a result of the institutional records searches or desktop geological review. However, intact paleontological resources may be present below the surficial deposits. Given the proximity of past fossil discoveries in the surrounding area and the underlying Pleistocene deposits, the Project site is highly sensitive for supporting paleontological resources at depth.

5 Summary and Management Considerations

The Project site is underlain by the Pleistocene age Modesto Formation, approximately 14,000 to 42,000 years old (DWR, 2004), that would require monitoring. In the event that intact paleontological resources are located on the Project site, ground-disturbing activities associated with construction of the Project, such as grading during site preparation, trenching, and large diameter (two feet or greater) drilling, have the potential to destroy unique paleontological resources or sites. Without mitigation, the potential damage to paleontological resources during construction would be a potentially significant impact. However, upon implementation of Mitigation Measure GEO-1 (see below), impacts would be reduced to less than significant. Impacts of the proposed Project would be less than significant with mitigation incorporated during construction.

5.1 Mitigation Measure for Paleontological Resources

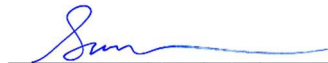
GEO-1 Prior to commencement of any grading activity on site, California State University Stanislaus shall retain a qualified paleontologist meeting the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Project. The PRIMP shall be consistent with the guidelines of the SVP (2010) and include the following elements: project description, preconstruction worker environmental awareness training, frequency of monitoring, salvage protocols, reporting, and collections management. The qualified paleontologist or a qualified monitor meeting the SVP (2010) guidelines

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shall be on site during all rough grading and other significant ground-disturbing activities below a depth of 5 feet below the existing ground surface in previously undisturbed Pleistocene-age deposits and/or Modesto Formation. If excavations below 5 feet are not impacting previously undisturbed Pleistocene-age deposits and/or Modesto Formation, as determined by the qualified paleontologist, spot-check monitoring shall ensue. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of the paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer to document and collect the fossils. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. Costs for processing collected fossils in the laboratory and curation at an accredited museum are the responsibility of California State University Stanislaus. No monitoring is required during excavations that the paleontologist determines are within artificial fill or younger alluvium.

Please contact me at ssiren@dudek.com or (760) 846-9326, or Michael Williams, PhD, at mwilliams@dudek.com or (225) 892-7622, if you have any questions or concerns, or need additional information.

Sincerely,



Sarah Siren, MSc
Paleontologist

Att.: A: *Project Location*
B: *Paleontological Records Search Results (Confidential)*
cc: Brian Grattidge, Dudek

6 References Cited

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UCMP (Museum of Paleontology, University of California, Berkeley). 2024. Unpublished Records Search Results Letter from the University of California Museum of Paleontology, Berkeley, California. Reported by P. Holroyd, Ph.D., September 12, 2024.

Wagner, D.L., E.J. Bortugno, and R.D. McJunkin. 1991. Geologic Map of the San Francisco- San Jose Quadrangle, California. 1:250,000. California Division of Mines and Geology, Regional Geologic Map 5A.

Attachment A

Project Location



Project Boundary
 University Park Boundary

SOURCE: ESRI Imagery 2024; Open Street Map 2019



FIGURE 2-1
Project Location

Stanislaus State University, Stockton Center Project

Attachment B

Paleontological Records Search Results (*Confidential*)