

IV. Environmental Impact Analysis

D. Geology and Soils—Paleontological Resources

1. Introduction

This section describes the existing paleontological conditions at and near the Project Site and analyzes the Project's potential impacts in regard to these conditions. Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under State laws and regulations including the California Environmental Quality Act (CEQA). CEQA's provision for paleontological resources covers fossils of signal importance, remains of species of genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group, as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Specifically, this section evaluates the Project's potential to directly or indirectly destroy unique paleontological resources or geologic features/landforms. Geology and soils impacts related to seismic ground shaking, seismic ground failure, unstable geologic units or soil, expansive soil, fault rupture, landslides, erosion, and/or septic tanks and wastewater disposal where found to be less than significant in the Initial Study for the Project. These impacts are discussed in **Section V, Other CEQA Considerations**, of this Draft EIR. The analysis in this section includes a description of the regulatory framework, thresholds for determining if the Project would result in significant impacts, mitigation measures (if found to be required), and the level of significance after mitigation.

This section is based, in part, on information and findings contained in the *Archaeological and Paleontological Resources Assessment for the Morrison Project, City of Los Angeles, Los Angeles County, California* (Paleontological Assessment),¹ which is included as **Appendix E** to this Draft EIR.

¹ Dudek, *Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020, page 7.*

2. Environmental Setting

a) Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding Paleontological Resources at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Society for Vertebrate Paleontology Standard Guidelines
- California Penal Code Section 622.5
- California Public Resources Code (PRC) Section 5097.5
- General Plan Conservation Element

(1) Federal

(a) *Society for Vertebrate Paleontology Standard Guidelines*

The Society for Vertebrate Paleontology (SVP) has established standard guidelines² that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. The Paleontological Resources Preservation Act (PRPA) of 2009 calls for uniform policies and standards that apply to fossils on all federal public lands. All federal land management agencies are required to develop regulations that satisfy the stipulations of the PRPA. As defined by the SVP³, significant nonrenewable paleontological resources are:

Fossils and fossiliferous deposits here are restricted to vertebrate fossils and their taphonomic and associated environmental indicators. This definition excludes invertebrate or paleobotanical fossils except when present within a given vertebrate assemblage. Certain invertebrate and plant fossils may be defined as significant by a project paleontologist, local paleontologist, specialists, or special interest groups, or by lead agencies or local governments.

As defined by the SVP,⁴ significant fossiliferous deposits are:

A rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large

² Society of Vertebrate Paleontology, *Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources, 2010, http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx Accessed January 27, 2021.*

³ Society of Vertebrate Paleontology, *Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources: standard guidelines, Society of Vertebrate Paleontology News Bulletin 163:22-27, 1995.*

⁴ Society of Vertebrate Paleontology, *Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources.*

or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information). Paleontologic resources are considered to be older than recorded history and/or older than 5,000 years BP [before present].

Based on the significance definitions of the SVP⁵, all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

(2) State

(a) California Penal Code Section 622.5

California Penal Code Section 622.5 provides the following: “Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor.”

(b) California PRC Section 5097.5

California PRC Section 5097.5 provides protection for paleontological resources on public lands, where Section 5097.5(a) states, in part, that:

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 the lands.

⁵ *Society of Vertebrate Paleontology, Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources.*

(3) Local

(a) *City of Los Angeles General Plan*

(i) *Conservation Element*

The City's General Plan Conservation Element recognizes paleontological resources in Section 3: "Archeological and Paleontological" and identifies site protection as important, stating, "Pursuant to CEQA, if a land development project is within a potentially significant paleontological area, the developer is required to contact a bonafide paleontologist to arrange for assessment of the potential impact and mitigation of potential disruption of or damage to the site. Section 3 of the Conservation Element, adopted in September 2001, includes policies for the protection of paleontological resources. As stated therein, it is the City's objective that paleontological resources be protected for historical, cultural research, and/or educational purposes. Section 3 sets as a policy to continue the identification and protection of significant paleontological sites and/or resources known to exist or that are identified during "land development, demolition, or property modification activities."

b) Existing Conditions

The buildings that currently occupy the Project Site are likely underlain by fill and/or disturbed sediments to depths of at least 10 feet below the surface. Soils underlying the existing parking area are less disturbed; however, the depth of the recent alluvium and Pleistocene alluvium contact cannot be inferred without geotechnical borings or test pits that extend beyond the contact. Beneath the fill and/or disturbed sediments is recent Quaternary alluvium that is generally too young to contain significant paleontological resources.⁶ There are no recorded fossil localities on the Project Site; however, older Quaternary alluvium, which underlies younger Quaternary alluvium throughout the area, has yielded fossils of numerous Ice Age animals in the Los Angeles area.⁷ The closest fossil locality known to the Natural History Museum of Los Angeles County (LACM) is approximately 0.2 miles east of the Project Site, at the intersection of Hill Street and 12th Street, where a fossil horse (*Equus*) was recovered from 43 feet below the surface. Approximately 2.8 miles west of the Project Site near Gramercy Place along the Santa Monica Freeway (I-10), fossils of mammoth (*Mammuthus*) and bison (*Bison antiquus*) were recovered from an unspecified depth. Approximately 3.2 miles northeast of the Project Site, near the intersection of Mission Road and Daly Street around the Golden State Freeway (I-5), fossil specimens of pond turtle (*Clemmys mamorata*), ground sloth (*Paramylodon harlani*), mastodon (*Mammut americanum*), mammoth (*Mammuthus imperator*), horse (*Equus*), and camel

⁶ Dudek, *Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020, page 18. See Appendix E of this Draft EIR.*

⁷ Dudek, *Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020, page 18. See Appendix E of this Draft EIR.*

(*Camelops*) were recovered from depths of 20 to 35 feet below the surface. Just north of this locality, 3.2 miles northeast of the Project Site, near the intersection of Workman Street and Alhambra Avenue, excavations for a storm drain recovered fossil specimens of turkey (*Meleagris californicus*), saber-toothed cat (*Smilodon fatalis*), horse (*Equus*), and deer (*Odocoileus*) at an unstated depth. Based on the review of scientific literature and geologic mapping, as well as the records search from the LACM, the Paleontological Assessment assigned a moderate sensitivity for soils at depths of 5 feet or more below existing parking areas and 10 feet or below in areas underlying existing buildings.⁸

3. Project Impacts

a) Thresholds of Significance

In accordance with the State *CEQA Guidelines* Appendix G (Appendix G), the Project would have a significant impact related to paleontological resources if it would:

Threshold a) *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.***
- ii) Strong seismic ground shaking?***
- iii) Seismic-related ground failure, including liquefaction?***
- iv) Landslides?***

Threshold b) *Result in substantial soil erosion or the loss of topsoil?*

Threshold c) *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Threshold d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

⁸ Dudek, *Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020, page 19. See Appendix E of this Draft EIR.*

Threshold e) *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

Threshold f) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

For this analysis, the Appendix G Thresholds are relied upon. The analysis utilizes the following factors and considerations identified in the Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions related to paleontological resources:

- *Whether, or the degree to which, the project might result in the permanent loss of, or loss of access to, a paleontological resource; and*
- *Whether the paleontological resource is of regional or statewide significance.*

b) Methodology

CEQA requires the analysis of paleontological resources. The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact.⁹ Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information, and therefore, also result in a significant impact. At the project-specific level, direct impacts can be mitigated to a less-than-significant level through the implementation of paleontological mitigation.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to “directly or indirectly destroy a unique paleontological resource or unique geologic feature.”¹⁰ In general, for project sites that are underlain by paleontologically-sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to unique paleontological resources. For project sites that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on unique paleontological resources unless sensitive geologic units which underlie a non-sensitive geologic unit are also affected.

To evaluate potential impacts to paleontological resources, Dudek conducted a Paleontological Resources Assessment for the Project that included a paleontological records search from the LACM, as well as geologic map and literature reviews. The review of the scientific literature and

⁹ *Dudek, Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020 page 7-8. See **Appendix E** of this Draft EIR.*

¹⁰ *California Code of Regulations, Title 14, Division 6, Chapter 3, Appendix G.*

geologic mapping, as well as the records search from the LACM, were used to assign paleontological sensitivities following the guidelines of the SVP to the geologic units that are present at the surface or in the subsurface of the Project Site that would be impacted by ground-disturbing activities associated with the Project. The data provided in Dudek's report was used to inform the environmental setting at the Project Site for paleontological resources as well as the probability of potential impacts to paleontological resources from implementation of the Project. Dudek's findings, in addition to the thresholds of significance enumerated below, formed the basis of the impact determination. The Paleontological Assessment, including a review of paleontology collection records for previously recorded fossil localities from LACM, is attached as **Appendix E** of this Draft EIR. It should be noted that the City may in its discretion permit an 86 percent parking reduction in connection with the Zone Variance to reduce parking at the Project Site from 233 vehicular parking spaces to 52 vehicular parking spaces, which would require one subterranean parking level instead of three levels as proposed by the Project.¹¹ The analysis in this section assumes the construction of the proposed 3-level subterranean parking structure, which would therefore result in a more conservative analysis if the 86 percent parking reduction is permitted by the City for the Project because less grading would be required and the depth of the subterranean parking lot would be reduced from approximately 36 feet to approximately 12 feet.

(1) Society of Vertebrate Paleontology Survey Guidelines

The Society for Vertebrate Paleontology (SVP) has established standard guidelines that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most State regulatory agencies with paleontological resource-specific laws, ordinances, regulations, and standards accept and use the professional standards set forth by the SVP.

As defined by the SVP, significant nonrenewable paleontological resources are:

Fossils and fossiliferous deposits here restricted to vertebrate fossils and their taphonomic and associated environmental indicators. This definition excludes invertebrate or paleobotanical fossils except when present within a given vertebrate assemblage. Certain invertebrate and plant fossils may be defined as significant by a project paleontologist, local paleontologist, specialists, or special interest groups, or by lead agencies or local governments.¹²

¹¹ The parking reduction would support the anticipated parking requirements in DTLA 2040, the City's joint update of the Central City Community Plan and Central City North Community Plan. In the current draft of DTLA 2040, the Project Site is proposed to have no parking minimums as part of the Transit Core.

¹² Society of Vertebrate Paleontology, Society of Vertebrate Paleontology News Bulletin, volume 163, Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources—Standard Guidelines, page 26.

As defined by the SVP, significant fossiliferous deposits are:

A rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information). Paleontologic resources are considered to be older than recorded history and/or older than 5,000 years BP [before present].¹³

Based on the significance definitions of the SVP, all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

Fossils are contained within surficial sediments or bedrock, and are therefore not observable or detectable unless exposed by erosion or human activity. A geologic unit known to contain significant fossils is considered to be “sensitive” to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb or destroy fossil remains.¹⁴ Paleontological sites indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case.

c) Project Design Features

Construction and operation of the Project would be implemented in accordance with applicable regulatory and code requirements. No specific Project Design Features are proposed with regard to paleontological resources.

d) Analysis of Project Impacts

Threshold a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

¹³ Society of Vertebrate Paleontology, *Society of Vertebrate Paleontology News Bulletin*, volume 163, *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources—Standard Guidelines*, page 26.

¹⁴ Society of Vertebrate Paleontology, *Impact Mitigation Guidelines Revision Committee, Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010)*, pages 1-2.

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not directly or indirectly exacerbate existing potential for fault rupture as the Project Site is not located within a designated Alquist-Priolo Earthquake Fault Zone. **Therefore, the Project would have a less than significant impact with respect to directly or indirectly increasing risk of loss, injury, or death by exacerbating existing environmental conditions related to ground rupture from known earthquake faults. As such, no further analysis is required.**

ii) Strong seismic ground shaking?

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not exacerbate existing potential impacts with respect to risk of loss, injury, or death involving strong seismic ground shaking as the Project Site is not located in an area with greater risk than other sites and seismic hazard would not be higher than in most areas of the City or elsewhere in the region. **Therefore, the Project would have a less than significant impact with respect to directly or indirectly increasing risk of loss, injury, or death involving strong seismic ground shaking. As such, no further analysis is required.**

iii) Seismic-related ground failure, including liquefaction?

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not exacerbate existing potential impacts with respect to seismic-related ground failure including liquefaction as the Project Site is not located within an area identified as having potential for liquefaction.¹⁵ **Therefore, the Project would have a less than significant impact with respect to directly or indirectly increasing risk of loss, injury, or death due to seismic-related ground failure including liquefaction. As such, no further analysis is required.**

iv) Landslides?

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not exacerbate existing potential impacts with respect to landslides as the Project Site is flat and is not located within an area identified by the City as having a potential for landslides, or of a known landslide. **Therefore, the Project would have a less than significant impact with respect to directly or indirectly increasing risk of loss, injury, or death by exacerbating existing environmental conditions related to landslides. As such, no further analysis is required.**

Threshold b) Result in substantial soil erosion or the loss of topsoil?

¹⁵ City of Los Angeles Department of City Planning, Zone Information & Map Access System, website: <http://zimas.lacity.org>, accessed: July 2018.

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not result in significant impacts to substantial soil erosion or the loss of topsoil as Project grading and excavation would expose relatively low amounts of soil for a limited time during the grading and excavation processes and substantial erosion is unlikely to occur. Following construction, the Project Site would be fully covered by buildings and landscaping and would not be subject to erosion. **Therefore, the Project would have a less than significant impact with respect to substantial soil erosion or the loss of topsoil. As such, no further analysis is required.**

Threshold c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not exacerbate existing potential impacts with respect to unstable geologic unit or soil that would result in landslide, lateral spreading, subsidence, liquefaction, or collapse as the Project Site is not located within an area of known ground subsidence and no large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the Project Site or in the general Project Site vicinity. **Therefore, the Project would have a less than significant impact with respect to instability as a result of the Project that could result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. As such, no further analysis is required.**

Threshold d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not be located on expansive soil and consequently would not create direct or indirect risks to life or property. **Therefore, the Project would have a less than significant impact with respect to creating substantial direct or indirect risks to life or property. As such, no further analysis is required.**

Threshold e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

As discussed in **Section V, Other CEQA Considerations**, and in the Initial Study (**Appendix A**), the Project would not use septic tanks or alternative wastewater disposal systems as the Project Site is located in a developed area of the City, which is served by a wastewater collection, conveyance, and treatment system operated by the City. **Therefore, the Project would have a less than significant impact with respect to having soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems. As such, no further analysis is required.**

Threshold f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

(1) Impact Analysis

(a) *Paleontological Resources*

As detailed above, surface deposits throughout the Project Site and vicinity consist of surficial younger alluvium on top of older Quaternary alluvium, which has yielded fossils of numerous Ice Age animals in the Los Angeles area. Based on Paleontological Assessment for the Project, there are no known fossil records associated with the Project Site.¹⁶ Shallow excavations in the younger Quaternary alluvium are unlikely to uncover significant fossil vertebrate remains.¹⁷ However, deeper excavations that extend down into older Quaternary deposits have the potential to encounter significant vertebrate fossils. Accordingly, based on the findings of the paleontological resource records search from the LACM, the Paleontological Assessment concluded that the likelihood for paleontological resources to be impacted within the Project Site is considered moderate in depths of 5 feet or more below existing parking areas and 10 feet or below in areas underlying existing buildings.

The Project would require excavation to a maximum depth of approximately 36 feet below the existing ground surface to construct the three levels subterranean parking, building foundations, and infrastructure and utility improvements (e.g., sewer, electrical, water, and drainage systems). If the City permits the 86 percent parking reduction option, excavation would be reduced to approximately 12 feet to construct one subterranean parking level instead of three levels, which would reduce the probability of inadvertent discovery of a paleontological resource. Still, the possibility exists that Project excavation within moderate sensitivity sediments could significantly impact paleontological resources that were not encountered during prior construction or other human activity. **Therefore, impacts to a unique paleontological resource or site would be potentially significant.**

(b) *Unique Geologic Features*

The Project Site is a flat parcel and currently developed. Nearly the entire Project Site is paved with concrete and asphalt. No distinct and/or prominent geologic or topographic features, such as hilltops, ridges, slopes, canyons, ravines, rock outcrops, water bodies, streambeds, or wetlands, currently exist on the Project Site. **Therefore, no impact would occur with respect to destruction of distinct and prominent geologic or topographic features.**

¹⁶ Dudek, *Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020, page 19. See Appendix E of this Draft EIR.*

¹⁷ Dudek, *Archaeological and Paleontological Resources Assessment for the Morrison Project, for APNs 5139-022-003, 5139-022-004, 5139-022-020, 5139-022-006, and 5139-022-02, 1220-1246 South Hope Street and 427-435 Pico Boulevard, Los Angeles, California, 90015, June 5, 2020, page 18. See Appendix E of this Draft EIR.*

(2) Mitigation Measures

The following mitigation measure would reduce potentially significant impacts to paleontological resources:

MM GEO-1 A Qualified Paleontologist meeting the Society of Vertebrate Paleontology (SVP) Standards shall be retained by the Applicant or its Successor prior to the approval of demolition or grading permits. The Qualified Paleontologist shall provide technical and compliance oversight of all work as it relates to paleontological resources, shall attend the Project kick-off meeting and Project progress meetings on a regular basis, and shall report to the Project Site in the event potential paleontological resources are encountered.

The Qualified Paleontologist shall conduct construction worker paleontological resources sensitivity training prior to the start of ground disturbing activities (including vegetation removal, pavement removal, etc.). In the event construction crews are phased, additional trainings shall be conducted for new construction personnel. The training session shall focus on the recognition of the types of paleontological resources that could be encountered within the Project Site and the procedures to be followed if they are found. Documentation shall be retained by the Qualified Paleontologist demonstrating that the appropriate construction personnel attended the training.

The Qualified Paleontologist shall conduct an initial spot-check once excavations extend beyond five feet below the surface to determine when and where paleontological monitoring shall be required. Paleontological resources monitoring shall be performed by a qualified paleontological monitor (meeting SVP standards) under the direction of the Qualified Paleontologist. Monitors shall prepare daily logs detailing the types of activities and soils observed, and any discoveries.

In the event that paleontological resources (sites, features, artifacts, or fossilized remains) are exposed during construction activities, the City of Los Angeles Department of Building and Safety shall be notified immediately and all work shall cease within a 50-foot radius of the discovery. The Qualified Paleontologist shall determine whether additional study shall be warranted. Construction activity may continue unimpeded on other portions of the Project Site. Personnel of the Project shall not collect or move any paleontological materials and associated materials. The found deposits shall be treated in accordance with Federal, State, and local guidelines, including those set forth in PRC Section 21083.2. Any significant fossils collected during project-related excavations shall be prepared to the point of identification and curated into an accredited repository with retrievable storage.

The Qualified Paleontologist shall prepare a final monitoring and mitigation report for submittal to the City in order to document the results of the monitoring effort and any discoveries. If there are significant discoveries, fossil locality information

and final disposition shall be included with the final report which shall be submitted to the appropriate repository and the City.

(3) Level of Significance After Mitigation

With implementation of mitigation measure **MM GEO-1**, impacts related to paleontological resources would be reduced to a less-than-significant level.

e) Cumulative Impacts

The study area for the paleontological resources cumulative impacts analysis is the Related Project sites, as listed in **Section III, Environmental Setting**, and shown in **Figure III-5** of this Draft EIR.

(1) Impact Analysis

The potential for an individual project to affect significant paleontological resources is unknown, but given the number of Related Projects, development of these projects could expose or damage paleontological resources resulting in their loss. The paleontological resource records search for the Project Site and vicinity concluded that very shallow excavations in younger Quaternary alluvium would be unlikely to uncover significant vertebrate fossils. However, deeper excavations in depths of 5 feet or more below existing parking areas and 10 feet or below in areas underlying existing buildings may encounter paleontological resources, potentially including significant vertebrate fossils. It is expected that many of the Related Projects would be located on similar geologic deposits; therefore, development of the Related Projects could have impacts if paleontological resources were found during construction activities. However, it is unknown whether or not significant resources will be found. Additionally, similar to the Project, it is anticipated that these Related Projects would comply with the existing CEQA requirements to identify their potential to significantly impact paleontological resources. In addition, as part of the environmental review process for Related Projects, like the Project, it is expected that regulatory compliance measures and, if necessary, mitigation measures would be implemented to address the potential for uncovering paleontological resources. This includes monitoring, recovery, treatment, and deposit of fossil remains in a recognized repository should a previously unknown paleontological resource be discovered at the sites during construction activities. **Therefore, Project impacts to paleontological resources would not be cumulatively considerable, and the cumulative impact would be less than significant.**

(2) Mitigation Measures

Cumulative impacts to paleontological resources would be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Cumulative impacts related to paleontological resources were determined to be less than significant. Therefore, no mitigation measures are required or included, and the impact level remains less than significant.