ATTACHMENT C

CULTURAL AND PALEONTOLOGICAL RESOURCES IDENTIFICATION MEMORANDUM

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Michael Baker
INTERNATIONAL

We Make a Difference

April 10, 2024

Jeffrey M. Reese
C.J. Segerstrom & Sons
3315 Fairview Road
Costa Mesa, CA 92626

RE: CULTURAL AND PALEONTOLOGICAL RESOURCES IDENTIFICATION MEMORANDUM FOR THE SOUTH COAST TECHNOLOGY CENTER, CITY OF SANTA ANA, ORANGE COUNTY, CALIFORNIA

Dear Mr. Reese:

In support of the South Coast Technology Center Project (project), Michael Baker International completed a South Central Coastal Information Center (SCCIC) records search, literature and historical map review, Sacred Lands File search, archaeological field survey including limited subsurface testing, and buried archaeological site sensitivity analysis to determine if the project area contains historical resources, as defined in California Environmental Quality Act (CEQA) Guidelines Section 15064.5(a), that may be impacted by the project. Additionally, a Natural History Museum of Los Angeles County (NHMLAC) paleontological records search and search of online and published databases were completed to identify paleontological localities. The project is subject to CEQA review; the City of Santa Ana (City) is the lead agency. Methods, results, and recommendations are summarized below.

This memorandum includes an Archaeological Resources Assessment and paleontological sensitivity analysis, and is prepared in compliance with mitigation measures CUL-1, CUL-4, and GEO-3 of the *Santa Ana General Plan Update: Final Recirculated Program Environmental Impact Report* (PlaceWorks 2021).

PROJECT DESCRIPTION

The project site is located at 3100, 3110, and 3120 Lake Center Drive in Santa Ana. The project proposes to demolish three buildings and a parking structure to construct three new Class A industrial buildings for office, manufacturing, and/or warehouse use. The three buildings that would be demolished are located on the eastern portion of the project site and total 178,026 square feet. Two new buildings (Buildings 2 and 3) would be constructed to replace the demolished buildings and one new building (Building 1) would be constructed on the undeveloped field in the western portion of the project site. The total proposed building area for the three buildings would be 313,044 square feet. Each building would have a truck dock and a potential mezzanine located opposite the truck dock. Ancillary improvements include landscaping, monument signage, lighting, and fencing.

PROJECT AREA

The project area is identified as the boundaries of Assessor's Parcel Numbers 414-281-01, 414-272-09, and 414-272-10. This includes the maximum extent of ground disturbance and project activities associated with demolition, site preparation, and construction. The project is mapped within the *Newport Beach, California* US Geological Survey (USGS) 7.5-minute topographic quadrangle map Township 5 South, Range 10 West, Section 34 (see **Attachment 1**).

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CULTURAL RESOURCES IDENTIFICATION METHODS

The methods and results of the SCCIC records search, literature and historical map search, Sacred Lands File search, archaeological field survey, and buried archaeological site sensitivity analysis are presented below.

SOUTH CENTRAL COASTAL INFORMATION CENTER

Michael Baker International staff conducted a records search of the project area and half-mile search radius at the SCCIC on March 13, 2024 (see **Attachment 2**). The SCCIC, as part of the California Historical Resources Information System, California State University, Fullerton, an affiliate of the California Office of Historic Preservation (OHP), is the official state repository of cultural resources records and reports for Orange County. As part of the records search, the following federal and California inventories were reviewed:

- Archaeological Determinations of Eligibility (OHP 2022). The directory includes determinations for eligibility for archaeological resources in Orange County.
- California Inventory of Historic Resources (OHP 2024a).
- California Points of Historical Interest (OHP 2024b).
- California Historical Landmarks (OHP 2024c).
- Built Environment Resource Directory (BERD) (OHP 2024d). The directory includes resources evaluated for listing and listed in the National Register of Historic Places, National Historic Landmarks, California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest in Orange County.

Results

According to SCCIC records, ten studies have been completed within a half-mile search radius of the project area, as identified in **Table 1**. No studies have been previously completed within the project area.

Table 1: Previous Cultural Resource Investigations within 0.5 Miles

Report No.	Author(s)	Date	Title	In Project Area?	Resources in Project Area?
OR-01700	Rosenthal, Jane	1998	Archaeological Monitoring Results for the Jim Thorpe Elementary School Project, City of Santa Ana, Orange County, California	No	No
OR-01763	Bonner, Wayne H.	1998	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: CM 063-34, in the City of Santa Ana, California	No	No

Report No.	Author(s)	Date	Title	In Project Area?	Resources in Project Area?
OR-02230	Duke, Curt	2000	Cultural Resource Assessment for Modifications to Pacific Bell Wireless Facility CM 063-34, County of Orange, California	No	No
OR-02230	Bonner, Wayne H.	1998	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: CM 063-34 in the City of Santa Ana, California	No	No
OR-02550	Duke, Curt	2002	Cultural Resource Assessment Cingular Wireless Facility No. Sc 035-05 Orange County, California	No	No
OR-02623	Sikes, Nancy E. and McCormick, Steven	2003	Cultural Resources Monitoring for the Ikea Costa Mesa Project, Orange County, California -Revised	No	No
OR-02624	Sikes, Nancy E. and Steven McCormick	2003	Cultural Resources Monitoring for the Ikea Costa Mesa Project, Orange County, California	No	No
OR-03071	Herrmann, Robert	2003	Results of Archaeological Monitoring of the Home Ranch Residential Development Project, City of Costa Mesa, Orange County, California	No	No
OR-03977	Futon, Phil and Terri Fulton	2007	Cultural Resource Assessment, Verizon Wireless Services, Calvary Chapel Facility, City of Santa Ana, Orange County, California	No	No
OR-04172	Chasteen, Carrie	2011	Historic Property Survey Report San Diego Freeway (I-405) Improvement Project SR-73 to I-605, Orange and Los Angeles Counties	No	No

A total of five resources are documented within the half-mile search radius of the project area, as detailed in **Table 2**. None of these resources are located within or adjacent to the project area.

The BERD was searched for any resources located within 0.5 miles of the project site on the two roads adjacent to the project site. No built environment resources within the project area were identified in the BERD (OHP 2024d).

Table 2: Previously Recorded Cultural Resources within 0.5 Miles

Primary Number	Trinomial	Description	OHP Status Code/ Eligibility Status	Location in Relation to Project Site
P-30-001617	CA-ORA-001617	Prehistoric shell scatter	Unevaluated	Outside
P-30-001629	CA-ORA-001629H	Home Ranch historic period refuse deposits	Unevaluated	Outside
P-30-100341	None	Isolate – Historic period ceramic fragment	Unevaluated	Outside
P-30-176949	None	Single-family residence	6Z, Found ineligible for National or California Register or local designation through survey evaluation.	Outside
P-30-177411	None	Single-family residence	6Z, Found ineligible for National or California Register or local designation through survey evaluation.	Outside

LITERATURE AND HISTORICAL MAP REVIEW

Michael Baker International staff reviewed literature and historical maps for historical information about the project area and the vicinity. Additionally, Michael Baker International reviewed the *Santa Ana General Plan Update: Final Recirculated Program Environmental Impact Report* for existing information about the project area and the vicinity (PlaceWorks 2021). Below is a list of resources reviewed, followed by a narrative description of the results.

Historical Maps

- Plat of the Santiago de Santa Ana Rancho (Huntington Library 1860)
- *Santa Ana, California*, 1:62,500 topographic map (USGS 1896)
- *Santa Ana, California*, 1:62,500 topographic map (USGS 1901)
- *Newport Beach, California*, 1:31,680 topographic map (USGS 1932)
- *Newport Beach, California*, 1:31,680 topographic map (USGS 1935)
- *Santa Ana, California*, 1:62,500 topographic map (USGS 1942)
- *Newport Beach, California,* 1:24,000 topographic map (USGS 1951)
- *Newport Beach, California,* 1:24,000 topographic map (USGS 1965a)
- *Newport Beach, California,* 1:24,000 topographic map (USGS 1965b)
- *Costa Mesa, California,* 1:24,000 orthophotoquad map (USGS 1974)

Historical Aerial Images

- University of California, Santa Barbara Library (UCSB) Geospatial Collection (2024)
- National Environmental Title Research (NETR) (n.d.)

Literature

- "Gabrielino" (Bean and Smith 1978)
- "One If by Land, Two If by Sea: Who Were the First Californians?" (Erlandson et al. 2007)
- "Agriculture, Drought & Chumash Congregation in the California Missions (1782-1834)" (Jackson 1999)
- *Handbook of the Indians of California* (Kroeber 1925)
- *The First Angelinos: The Gabrielino Indians of Los Angeles* (McCawley 1996)
- "Los Angeles, 1781–1981" (Meyer 1981)
- *California Archaeology* (Moratto 1984)
- *Vineyards and Vaqueros: Indian Labor and the Economic Expansion of Southern California, 1771–1877* (Phillips 2010)
- "The Archaeology of California" (Arnold, Walsh, and Hollimon 2004)
- "Reconceptualizing the Encinitas Tradition of Southern California (Sutton and Gardener 2010)
- "Cultural Tradition and Ecological Adaptation on the Southern California Coast" (Warren 1968)

Results

The earliest habitation of the Los Angeles Basin and Santa Ana River watershed likely occurred in the Paleocoastal or Paleoindian period, which is generally dated between about 13,000 and 8,500 before present (BP) (Arnold Walsh, and Hollimon 2004; Moratto 1984; Erlandson et al. 2007). These earliest inhabitants were highly mobile hunter-gatherers who left behind little in the way of archaeological remains.

The first uncontested evidence of human occupation in this area dates to about 9,000 BP. The archaeological evidence is associated with the Millingstone Cultural Horizon, or as it is also known, the Encinitas Tradition. Millingstone populations established permanent settlements that were located primarily on the coast and in other locations with reliable water sources and a variety of potential foodstuffs. There they relied heavily on shellfish, seeds, and small animals. The period takes its name from the appearance of ground stone artifacts. In the Early Millingstone, these ground stone artifacts are manos and metates, but after approximately 5,000 BP, when acorns become important in the diet, mortars and pestles become an important component of the artifact assemblage (Warren 1968; Sutton and Gardner 2010).

The period between 3,500 BP and 1,500 BP is known as the Intermediate period. Increasing population pressures led to intensified exploitation of existing terrestrial and marine resources. The intensified resource procurement was enabled by technological innovations such as the circular fishhook on the coast, greater use of the mortar and pestle to exploit acorns more efficiently, and the use of the dart and atlatl to diversify hunting (Erlandson et al. 2007). Larger numbers of settlements that are also bigger in size are observed in the archaeological record, suggesting a larger and more sedentary population. Trade networks and greater craft specialization developed during this period.

During the Late Prehistoric, which began approximately 1,500 BP and continued until European intrusion, is the period of the development and florescence of the Native American tribes encountered by the Spanish. Late Prehistoric subsistence consisted of hunting, trapping, fishing, and gathering, and continued the pattern of increased population and sedentism.

Ethnohistoric and Historic Context

This project is located in a region traditionally important to multiple Native American groups. In particular, these include the Gabrielino (including the Tongva and Kizh), the Juaneño or Acjachemen, and the Luiseño. The terms Tongva, Kizh, and Acjachemen are preferred by many descendant groups over the Spanish words that have historically been used to describe them, while the Luiseño are typically identified by their band (including La Jolla, Pala, Pauma, Pechanga, Rincon, Soboba, and San Luis Rey). Each group is described below.

Spanish explorers first visited the coast of southern California in 1542, but European settlement did not begin in the area until 1769 when Gaspar de Portola led an exploratory mission intended to open up Alta California to settlement. On September 8, 1771, Franciscan friars established Mission San Gabriel Arcángel, approximately 30 miles northwest of the project site. The Franciscans called the local Native Americans Gabrielinos after the mission.

Gabrielino (or Tongva and Kizh)

The term "Gabrielino" is a general term that refers to those Native Americans who were sent by the Spanish to the Mission San Gabriel Arcángel. Two indigenous terms are commonly used by tribal groups to refer to themselves and are preferred by descendant groups: Tongva and Kizh. The term Tongva was recorded by ethnographer C. Hart Merriam in 1903 (Merriam 1905). The term Kizh was first published by ethnologist Horatio Hale, relying on word lists given to him by James Dwight Dana, in 1846 (Hale 1846: 222). Since there are two terms that are used by different groups to refer to themselves, the term Gabrielino is used in this section to encompass both Tongva and Kizh groups.

Prior to European colonization, the Gabrielino occupied a diverse area that included the watersheds of the Los Angeles, San Gabriel, and Santa Ana Rivers; the Los Angeles basin; and the islands of San Clemente, San Nicolas, and Santa Catalina (Bean and Smith 1978). Their neighbors included the Chumash and Tataviam to the north, the Juaneño to the south, and the Serrano and Cahuilla to the east. The Gabrielino are reported to have been second only to the Chumash in terms of population size and regional influence (Bean and Smith 1978). The Gabrielino language was part of the Takic branch of the Uto-Aztecan language family.

Gabrielino villages were most common along the coast and along the region's major rivers, where villages formed of domed semipermanent structures the Spanish likened to half-oranges centered around a temple and the home of the village chief. The project area is located between two known Gabrieleño village locations: *Pasbenga,* approximately 4 miles northeast, and *Lukupa*, approximately 4.5 miles southwest (McCawley 1996). Other villages, the names of which are not recorded, may have also existed in the area. By the early 1800s, as introduced diseases led to population decline, and Spanish use of the land for agriculture and grazing made the Gabrielinos' reliance on their traditional lifestyle increasingly untenable, the majority of California's coastal Native American populations had entered the mission system (Jackson 1999).

The Gabrielino Indians were hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Subsistence consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls and rabbit drives and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps,

spears, and poison (Bean and Smith 1978). The primary plant resources were acorns, gathered in the fall and processed in mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and islay or holly-leafed cherry. Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. The Gabrielino are estimated to have had a population numbering around 5,000 in the pre-contact period (Kroeber 1925).

Juaneño (or Acjachemen)

As the preferred term of the descendant community, the term Acjachemen is used hereafter to refer to the group more widely known to historians and anthropologists as the Juaneño. The Acjachemen spoke a language belonging to the Cupan group of the Takic subfamily of the Uto-Aztecan language family. They were known as Juaneño because of their association with Mission San Juan Capistrano. The term Acjachemen was used by Fray Gerónimo de Boscana to describe the indigenous group associated with the Mission San Juan Capistrano, and according to J. P. Harrington, "informants remembered that the name was used as that of San Juan Capistrano town" (Harrington 1978:103). During his time at San Juan Capistrano, Boscana compiled an ethnographic account of the Acjachemen, including an account of the belief system centered around Chinigchinich.

The Acjachemen were linguistically and culturally related to the neighboring Luiseño (with whom they are often grouped; see Bean and Shipek 1978), Cahuilla, and Cupeño. Twentieth-century anthropologists agreed that Acjachemen territory extended from San Onofre Canyon in the south and inland from the Pacific Ocean to Santiago Peak and the ridges above Lake Elsinore (Bean and Shipek 1978; Kroeber 1925: 636). The northern Acjachemen border has been described as either just above Aliso Creek (Kroeber 1925: 636), or somewhere somewhat further north, possibly the Santa Ana River or somewhere in the vicinity of Newport Beach (O'Neil 1988). However, Acjachemen descendant communities dispute this claim. According to Joyce Stanfield Perry, Cultural Resource Director for the Juaneño Band of Mission Indians, Acjachemen Nation-Belardes, "Our homeland extends from coastal Long Beach to the north, to Camp Pendleton to the south and includes all of Orange County as well as parts of western Riverside County" (Perry 2023:1). Santa Ana is seen by the modern Acjachemen as shared territory with the Gabrielino.

The Acjachemen lived in sedentary autonomous villages located in diverse ecological zones. Each settlement claimed specific fishing and collecting regions. Typically, villages were located in valley bottoms, along coastal strands and streams, and near mountain foothills. Villages were usually sheltered in coves or canyons, on the side of slopes near water and in good defensive spots (O'Neil and Evans 1980).

Trails, hunting sites, temporary hunting camps, quarry sites, and ceremonial and gaming locations were communally owned, while houses, gardens, tools, ritual equipment, and ornamentation were owned by individuals or families. Most groups had fishing and gathering sites along the coast that they visited annually from January to March when inland supplies were scarce. October to November was acorn-gathering time, when most of the village would settle in the mountain oak groves. Houses were conical in form, partially subterranean, covered with thatch, reeds, brush, or bark. Sweathouses were round and earth covered. Each village was enclosed with a circular fence and had a communal ceremonial structure at the center (Bean and Shipek 1978).

Luiseño

The Luiseño are a tribal group located south and west of the Acjachemen. Like the Gabrielino and Acjachemen, they take their English name from the Spanish mission to which most of them were assigned, San Luis Rey de Francia, located in today's Oceanside. Luiseño language and culture are so closely related to those of the Acjachemen that the authors of the Smithsonian Institution's Handbook treat them as a single tribe (Bean and Shipek 1978).

In 1810, Mexican Governor Jose Joaquin de Arrillaga granted the 63,414-acre Rancho Santiago de Santa Ana, including the project area, to Jose Antonio Yorba and his nephew Pablo Peralta. The project area is located within the mapped boundaries of Rancho Santiago de Santa Ana (Huntington Library 1860). Native Americans continued to live on the land grant and made up much of the rancho's work force. California's Native Americans sometimes preferred to live as vaqueros and laborers on the region's vast land grants in order to avoid living more directly under the mission system (Phillips 2010).

Spanish, Mexican, and American Santa Ana

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In 1821, Mexico won its independence from Spain. The new state was secular in nature and moved increasingly towards secularization of the mission and dispersal of the mission properties among politically connected elites. In 1834, the missions began to be secularized and their lands divided up. Little of the missions' lands and wealth went to the Native Americans. More than 600 ranchos were granted between 1833 and 1846 as the Mexican government sought to solidify its authority over Alta California amid fears of intrusion by the United States.

California was captured by the United States during the Mexican American War of 1846–1848. The discovery of gold in California led to a population boom in the 1850s and 1860s. In 1869, William H. Spurgeon purchased approximately 70 acres of land and plotted a townsite, named Santa Ana in the tradition of Rancho Santiago de Santa Ana (ACHP n.d.). On the heels of nearly two decades of growth, hastened by the arrival of the Southern Pacific Railroad to the community in 1877, Santa Ana was officially incorporated as a city in 1886. Santa Ana was chosen as the seat of the newly formed Orange County in 1889 (ACHP n.d.; Goddard and Goddard 1988; OrangeCounty.net n.d.).

Maps indicate that the project area and vicinity remained undeveloped well into the twentieth century. The earliest USGS maps, which date to the late nineteenth and early twentieth centuries, show the project area as undeveloped. Historically, the closest water was the braided channel of the Santa Ana River, approximately 0.6 miles to the northwest (USGS 1896, 1901). The river has since been deepened, channelized, and in the process narrowed; it is now approximately 0.8 miles to the northwest.

Outside the city's historic core, originally bound by First Street, Broadway, Seventh Street, and Spurgeon Street, Santa Ana remained predominantly agrarian and sparsely developed through much of the first half of the twentieth century. Historical maps and aerial photographs depict that the landscape around

the subject property was previously characterized by large agricultural fields interspersed by modest, infrequent residences (USGS 1896, 1901, 1932, 1935, 1942, 1951; Goddard and Goddard 1988).

Like many cities and towns in California, Santa Ana experienced a period of unprecedented growth during and following World War II as a result of wartime mobilization, improvement of regional transportation networks, and an abundance of local recreation opportunities. The population of Santa Ana exploded from 45,433 residents in 1950 to more than 100,000 by 1960. This growth translated into the magnification of the physical footprint of the city. New residential suburbs and commercial centers on the outskirts of Santa Ana were built, and highways were constructed or enhanced to connect them. Near the subject property, California State Route (SR) 55 was completed in 1962, Interstate 405 was completed in 1968, and SR 73 was completed in the late 1970s (Goddard and Goddard 1988; Richardson 1994). The Greenville-Banning Channel, an artificial watercourse, was constructed adjacent to the eastern property boundary in 1958 and has been subsequently modified (US Army Corps of Engineers 2014).

Project Area Development History

The project site was used for agricultural purposes or undeveloped into the 1980s. Between 1980 and 1987, aerial photographs indicate two of the existing buildings were constructed on the project site east of Susan Street. The third building was constructed between 1987 and 1992 (NETR n.d.).

The property west of Susan Street was not built upon, but it was utilized as a soil stockpile yard. Beginning about 1987, aerial photographs show soil disturbances across this property consistent with heavy equipment movement and soil dumping. Notably, in 1998, a large oval track is visible in the center of the property; in 2003, heavy equipment is visible at the north end of the property, and a large soil stockpile can be seen in the center of the property; and in 2010, soil piles are visible in the center and west side of the property. In intervening years, the soil piles disappear, likely because the soil was spread across the property (NETR n.d.). In 2021, a large concrete pile and approximately 200 soil piles, each apparently representing a 10-yard dump truck load, are visible along the west side of the property. Deep furrows are visible throughout the property (Google Earth 2021). Soil dumping led the accumulation of 3 to 4.5 feet of imported fill across the property west of Susan Street (NMG Geotechnical, Inc., 2024). Some of this soil was trucked in from Newport Beach.

NATIVE AMERICAN HERITAGE COMMISSION (NAHC) SACRED LANDS FILE SEARCH

On March 1, 2024, Michael Baker International requested that the NAHC search the Sacred Lands File for any Native American cultural resources that might be affected by the project. The NAHC responded in a letter dated March 18, 2024, that the Sacred Lands File had been searched with negative results. The NAHC correspondence is presented in **Attachment 3**.

FIELD SURVEY

Methods

An archaeological survey of the project area was conducted on February 28, 2024, by Michael Baker International archaeologist Marcel Young.

The developed part of the project site, consisting of that part of the site east of Susan Street, was subjected to a reconnaissance-level survey. The existing buildings and structures were photographed, but as they are not yet historic in age they were not otherwise documented.

The undeveloped portion of the project site, constituting that part of the project site west of Susan Street, was subjected to a pedestrian survey. The entire parcel was walked over in transects spaced 15 meters apart.

Results

The unbuilt-upon portions of the project site in the developed area are covered with lawns and landscaping; there was no surface visibility of undisturbed soils (Photo 1). These improvements would have resulted in substantial subsurface disturbances. No archaeological resources were identified within this part of the project site.

Photo 1: The developed part of the project site east of Susan Street, showing pond and buildings; view southeast.

The project's footprint within the undeveloped survey area is heavily disturbed by heavy machinery, including vegetation management discing. The project site is relatively flat. No debris or soil piles were stockpiled on the site at the time of visit, but cement and asphalt fragments, PVC fragments, rusted metal fragments, and other recent refuse was observed throughout the project site. This debris is in a secondary context and not historically diagnostic. The middle swath of the site has been freshly disturbed by heavy machinery and there are zones with puddled water and muddy spots within that swath. Imported gravels are also dispersed throughout the site. Vegetation includes bur clover, common ramping-fumitory, invasive thistles, and short pod mustard.

Photo 2: The undeveloped portion of the project site, west of Susan Street; view east.

Two marine shell scatters were identified along the northeast of the project area's undeveloped lot. These were numbered Shell Scatter 1 and Shell Scatter 2 (Figure 4). Both shell scatters consisted primarily of scallop and clam. One marine snail shell was also observed. Additionally, a large clam shell was identified in the south-central project site. None of the shell observed on-site showed any sign of burning or other cultural modification. No prehistoric artifacts were observed, either within or outside the shell scatters anywhere on the project site.

SUBSURFACE TESTING

Based on the results of the field survey, the project site was visited by Michael Baker International Principal Investigator Marc Beherec, PhD, RPA, on March 25, 2024, for the purpose of further documenting the shell scatters and conducting limited subsurface testing. The purpose of the testing was to understand their origin and determine whether the shell is an archaeological resource.

During the site visit, it was observed that the majority of the project site is elevated above the surrounding area, suggesting the probability that the entire site is built up with imported fill.

Previous subsurface geotechnical investigations indicate that most of the project site is covered with a layer of artificial fill. The results of those investigations are appended as **Attachment 4.** Those investigations included Trench 2, which was excavated between the two shell scatters (Figure 4). Trench 2 was found to include artificial fill to a depth of approximately 3 feet, beneath which Quaternary alluvium was encountered (NMG Geotechnical, Inc., 2024). No shell was encountered in Trench 2 (Markouizos 2024).

Two shovel test pits (STPs) were excavated within the shell scatters. The STPs were excavated in 10-centimeter (cm) levels, with all soil sieved through quarter-inch metal screen. Excavations ceased after two sterile levels.

STP 1 was excavated within the boundary of Shell Scatter 2. The STP was placed at a high point that appeared to be undisturbed, and excavated to a depth of 30 cm. Sediment in this STP was found to be a hard-packed clayey silt with a small amount of gravel. No shell or artifacts were encountered.

STP 2 was excavated within the boundary of Shell Scatter 1. The STP was placed toward the south end of the shell scatter, in a location where shell was visible on the ground surface. One complete scallop shell, one complete oyster shell, one scallop shell fragment, and three clam shell fragments were observed on the surface. The top 10 cm of the STP consisted of loose silty sand. Two complete scallop shells, three scallop shell fragments, four clam shell fragments, and one oyster shell fragment were recovered from the top 10 cm beneath the surface. One cobble-sized asphalt fragment and three small concrete fragments were also encountered in the top 10 cm. Two small shell fragments, one scallop and one clam, were encountered between 10 cm and 20 cm in depth. No shell or artifacts were recovered between 20 cm and 40 cm in depth. The STP was backfilled and the shell reburied.

The collective evidence from the geotechnical trenching and the archaeological STPs is that the shell scatters do not constitute an archaeological site. All the observed shell is unmodified. All the documented shell was located at or within 10 cm of the surface, within artificial fill. No shell was encountered during geotechnical trenching, so the shell was not brought up from below the surface by the trenching activities. No prehistoric artifacts were observed anywhere in the project site. The collective evidence is that this shell was brought in with imported fill and dumped at the site relatively recently. The shell scatters are not part of a prehistoric deposit and are not historical resources as defined by CEQA Section 15064.5(a).

Photo 3: Marine shell and concrete and asphalt debris recovered from STP 2, 0-10 cm in depth. The shell is representative of the shell scatters.

ARCHAEOLOGICAL SITE SENSITIVITY ANALYSIS

Sensitivity for cultural resources consisting of archaeological sites is considered low at and near the surface, but increases to moderate with depth.

Geologic and soils maps indicate that the project area contains surficial deposits of younger Quaternary alluvial sediments. These sediments have the potential to contain buried archaeological deposits. The late nineteenth to early twentieth century bed of the Santa Ana River was located approximately 0.6 miles to the northwest and would have provided abundant resources to area inhabitants. As the river meandered and changed its course, it or its tributaries may have been located closer to the project area at times. These conditions heighten the sensitivity of the project area for buried cultural resources.

However, the project area has an extensive history of recent disturbances. East of Susan Street, the project site is entirely developed by the construction of multi-storied office buildings, a pond, and parking lots. Building methods at the time, and the installation of associated utilities, would have resulted in the disturbance of archaeological sites buried at shallow depths. West of Susan Street, geotechnical testing indicates that a layer of imported fill, ranging from 3 to 4.5 feet thick, covers the entire project site. However, buried resources may remain in areas where developments such as parking

lots or structures with shallow foundations have required only minimal ground disturbance, or below the existing imported fill.

Therefore, the sensitivity of the project area at the surface and near surface is low due to past disturbances. However, excavations for the project are anticipated to disturb a large part of the project area to points below the level of existing fill and other disturbances. The sensitivity for potential buried prehistoric archaeological sites is moderate in these undisturbed soils.

PALEONTOLOGICAL RESOURCES IDENTIFICATION METHODS

The records search results, literature review, and paleontological sensitivity analysis are presented below.

RECORDS SEARCHES AND LITERATURE REVIEW

California is divided into eleven geomorphic provinces, each defined by unique geologic and geomorphic characteristics. The project area is located in the northwestern portion of the Peninsular Ranges geomorphic province. The province consists of series of ranges separated by northwest-trending valleys with geology typified by granitic rock intruding into older metamorphic rocks (CGS 2002).

The geology of Santa Ana has been mapped by Rogers (1965) at a scale of 1:250,000 and by Langenheim et al. (2006), Morton and Miller (2006), and Bedrossian et al. (2012) at a scale of 1:100,000. Geologic units underlying the project area have been mapped as Holocene alluvial deposits (Qal of Rogers 1965), late Holocene to late Pleistocene-age young Quaternary deposits (Qya of Langenheim et al. 2006), Holocene to late Pleistocene-age young axial-channel deposits (Qya_s of Morton and Miller 2006), and Holocene to late Pleistocene-age young alluvial deposits (Qya of Bedrossian 2012). Deposits from the Holocene epoch (less than 11,700 years ago) can contain remains of animals and plants; however, only those from the middle to early Holocene (older than about 5,000 radiocarbon years) are considered scientifically important or significant (Society of Vertebrate Paleontology 2010). Holocene-age deposits may overlie older alluvium of Pleistocene age at unknown but potentially shallow depths. Pleistocene-age alluvial deposits are also potentially present in the project area and have yielded scientifically important fossils elsewhere in the region, including horses, camels, reptiles, birds, marine mammals, and fish at various depths below current ground surface (**Tables 3** and **4**).

Soils of the project area are mapped as Bolsa silt loam, drained (NRCS n.d.). Bolsa series soils are deep, somewhat poorly drained soils that formed in mixed alluvium, in flood plains and basins. The mean annual precipitation is about 13 inches (USDA 1997). The project geotechnical study confirms that alluvial deposits of clays, sands, and silts extend from approximately 3 to 4.5 feet below the surface down to the maximum depth required for excavations for the proposed project.

The NHMLAC completed a paleontology collection records search for locality and specimen data on March 3, 2024. The results of that search are included in **Attachment 5**. The records search identified ten known fossil localities within the NHMLAC's collection in the vicinity of the project site (**Table 3**). Pleistocene-age alluvial deposits have yielded scientifically important fossils such as identifiable freshwater invertebrate fossils, including clams and bryozoans, and vertebrate fossils, such as camels, horses, and elephants, within 5 miles of the project.

Table 3: NHMLAC Paleontological Records Search Results

Locality Number	Distance to Project Area	Formation	Taxa	Depth
LACM IP 4695	< 2 miles SE	Palos Verdes Sand	Invertebrates - clam (*Saxidomus*), bryozoan (*Bryozoa indet.*, *Conopeum*)	Unknown
LACM VPP 4219; LACM IP 31322, 5062	~ 3 miles S	Palos Verdes Sand (coarse poorly sorted friable sand)	Camel family (Camelidae), sea turtle (Cheloniidae); uncatalogued fish and birds; invertebrates (*Entobia, Lottia, Caesia, Volvania, Ala, Eulithidium, Chama, Glossaulax, Agathistoma, Sinum, Chlorostoma, Calianax, Ophidiodermella, Serpulorbis, Argopecten*, and others)	30 feet bgs
LACM VP 6370-6371	~ 3 miles S	Terrace deposits (Pleistocene, silty sandstones)	Horse (*Equus*), other unspecified mammals; invertebrates: clam (*Tivela, Donax, Lucinisca*), scaphopod (*Dentalum, Antalis*), marine gastropods (*Glossaulax, Chlorostoma*)	Unknown (found during grading for parking lot construction)
LACM VP 7657-7659	~ 4 miles W	Unknown formation (Pleistocene; gray siltstone)	School shark (*Galeorhinus*), eagle ray (*Myliobatus*), goby (*Lepidogobius*, *Leptocottus*), midshipmen (*Porichthys*), croaker (*Seriphus*), flatfish (*Citharichthys*), cusk-eel (*Otophidium*), skate (*Raja*), angelshark (*Squatina*), sculpin (Cottidae)	150-350 feet bgs
LACM VP 3267	~ 4 miles S	Unknown formation (Pleistocene)	Elephant clade (Proboscidea)	Unknown

Additionally, Michael Baker International conducted a supplemental investigation within 5 miles of the project area using the following online sources:

- University of California Museum of Paleontology Locality Search (UCMP n.d.)
- San Diego Natural History Museum Collection Database (SDNHM n.d.)
- The Paleobiology Database (PBDB n.d.)

The supplemental investigation resulted in the identification of three additional fossil localities within 5 miles of the project area (**Table 4**).

Table 4: Supplemental Paleontological Records Search

Locality Number	Formation	Taxa	Depth
187072 (PBDB)	Fernando Formation (Pliocene to Pleistocene)	Invertebrates - (*Chlamys rubida)*	Unknown
190889 (PBDB)	Palos Verdes Sand Formation (Pleistocene)	Turtles (*Emys marmorata*), loons (*Gavia*), murres (*Uria aalge*), albatrosses (*Diomedea*), shearwaters (*Puffinus*), otters (Enhydra lutris), sea lions (*Eumetopias jubata* and *Zalophus californianus*), horses (*Equus*), camels (*Camelops hesternus*), bison (*Bison*), rabbits (Lagomorpha), sharks and rays, bony fish	Unknown
4447 (SDNHM)	Palos Verdes Sand Formation (Pleistocene)	Sharks, rays, bryozoans, corals, worms, snails, bivalves, scaphopods, barnacles, chitons, crabs, sea stars, bony fish, birds, seals, camels, even-toed ungulates	Unknown

PALEONTOLOGICAL RESOURCES SENSITIVITY ANALYSIS

The Holocene-age deposits in the project area have low sensitivity, but Pleistocene-age alluvial sediments may underlie these younger sediments at a relatively shallow depth. The NHMLAC records search results indicate that potentially fossil-bearing units may underlie the project area, since Pleistocene-age deposits outside of the project area have contained fossils. Therefore, sediments in the project area are considered to have paleontological sensitivity increasing with depth, or Low-to-High Sensitivity.

FINDINGS AND RECOMMENDATIONS

CULTURAL RESOURCES

The SCCIC records search, literature and historical map review, NAHC consultation, and field survey identified no historical or archaeological resources, as defined by CEQA Section 15064.5(a), within the project area. Three buildings will be demolished for the project, but they are not historic in age and so were not recorded, and no further work is recommended for these resources.

Sensitivity for buried archaeological resources is low at the surface but increases to moderate in undisturbed deposits. There is a potential for disturbing previously unknown archaeological resources during excavation into native soil. Project excavations have the potential to destroy or otherwise adversely impact significant buried archaeological resources.

Consistent with the General Plan EIR, impacts may be avoided through the implementation of the following measure provided in the General Plan EIR:

CUL-7 If an Archaeological Resources Assessment does not identify potentially significant archaeological resources but the site has moderate sensitivity for archaeological resources (Mitigation Measure CUL-4), an archaeologist who meets the Secretary's Standards shall be retained on call. The archaeologist shall inform all construction personnel prior to construction activities about the proper procedures in the event of an archaeological discovery. The pre-construction training shall be held in conjunction with the project's initial on-site safety meeting and shall explain the importance and legal basis for the protection of significant archaeological resources. In the event that archaeological resources (artifacts or features) are exposed during ground-disturbing activities, construction activities in the immediate vicinity of the discovery shall be halted while the on-call archaeologist is contacted. The resource shall be evaluated for significance and tribal consultation shall be conducted, in the case of a tribal resource. If the discovery proves to be significant, the long-term disposition of any collected materials should be determined in consultation with the affiliated tribe(s), where relevant.

With the implementation of General Plan EIR Mitigation Measure CUL-7, potential impacts to significant archaeological resources would be reduced to a less than significant level.

PALEONTOLOGICAL

No significant fossils have been previously recovered from the project area, but several vertebrate and invertebrate fossils have been recovered from nearby (within 5 miles of the project area) exposures of rock formations anticipated to underlie the project area. The project area's geology may include Pleistocene-age deposits at unknown depths. The project area has Low-to-High Sensitivity, suggesting that project-related ground-disturbing activities have the potential to destroy or otherwise adversely impact significant paleontological resources below young Holocene-age soils at unknown depths within the project area.

Consistent with the General Plan EIR, impacts may be avoided through the implementation of the following measures provided in the General Plan EIR:

GEO-2 **Low-to-High Sensitivity.** Prior to issuance of a grading permit for projects involving ground disturbance in previously undisturbed areas mapped with "low-to-high" paleontological sensitivity (see Figure 5.6-3), the project applicant shall consult with a geologist or paleontologist to confirm whether the grading would occur at depths that could encounter highly sensitive sediments for paleontological resources. If confirmed that underlying sediments may have high sensitivity, construction activity shall be monitored by a qualified paleontologist. The paleontologist shall have the authority to halt construction during construction activity as outlined in Mitigation Measure GEO-3.

GEO-3 **All Projects**. In the event of any fossil discovery, regardless of depth or geologic formation, construction work shall halt within a 50-foot radius of the find until its significance can be determined by a Qualified Paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology (2010). The most likely repository is the Natural History Museum of Los Angeles County (NHMLAC). The repository shall be identified, and a curatorial arrangement shall be signed, prior to collection of the fossils.

Because the project area is immediately underlain by Holocene sediments (low sensitivity) and the depth of these sediments is unknown, spot-check monitoring is recommended to identify potential fossils and the lithological transition to Pleistocene sediments. If Pleistocene-aged sediments are discovered at depth, pursuant to General Plan EIR Mitigation Measure GEO-2, monitoring must transition to full-time as ground-disturbing activities occur at or below this identified depth because these Pleistocene units have been identified as high sensitivity for paleontological resources.

PREPARER QUALIFICATIONS

This document was prepared by Marc Beherec, PhD, principal investigator for archaeology, and Peter Kloess, PhD, principal investigator for paleontology. The field survey was conducted by Marcel Young, BA. Kholood Abdo, MA, RPA, reviewed the document for quality assurance.

MARC BEHEREC, PHD, RPA, PRINCIPAL INVESTIGATOR/SENIOR ARCHAEOLOGIST

Dr. Beherec has more than 20 years of experience in prehistoric and historical archaeology and cultural resources management. His experience includes writing technical reports, including National Environmental Policy Act, National Historic Preservation Act, and CEQA compliance documents. He has supervised and managed all phases of archaeological fieldwork, including survey, Phase II testing and evaluations and Phase III data recovery, and archaeological construction monitoring at sites throughout Southern California. Dr. Beherec meets the Secretary of the Interior's Professional Qualification Standards for prehistory and historical archaeology and is listed in the Register of Professional Archaeologists.

MARCEL YOUNG, BA, ARCHAEOLOGIST

Marcel Young has worked in various capacities in cultural resource management since 2013. He is experienced in surveying and conducting recording and evaluations of historic and prehistoric archaeological sites in California. Mr. Young is versed in conducting fieldwork within frameworks of Section 106 of the National Historic Preservation Act, National Environmental Policy Act, and CEQA. He has participated in projects in several phases of archaeology: Phase I pedestrian, Extended Phase I testing, shovel test surveys, buried site testing, Phase III data recovery, and construction monitoring.

PETER KLOESS, PHD, SENIOR PALEONTOLOGIST/PRINCIPAL INVESTIGATOR

Dr. Kloess has over 20 years of experience in paleontology, with eight years in paleontology mitigation working as a project paleontologist, project coordinator, and principal investigator. His experience includes public and private consultation, field monitoring, excavation, and laboratory research on projects across the western United States, predominantly in California. He has consulting experience

with a range of projects, including construction, transportation, utility, transmission, monitoring, and surveys, as well as experience recovering a diversity of fossils from project sites, such as marine invertebrates, microfossils, plants, small mammals and birds, large marine and terrestrial mammals, and dinosaurs. Dr. Kloess also has extensive experience in paleontological museum collections and lab settings. He has worked on and co-led scientific excavations of large mammals and dinosaurs in California, Utah, New Mexico, and Montana. Dr. Kloess has served as a lab preparator and assistant curator for paleontology museums in California and Montana where his duties included manual preparation of specimens, casting, jacketing, public outreach, cataloguing, and curation. In addition to extensive field and curation work, Dr. Kloess has researched, written, and published articles for paleontology publications. Several of his research projects have relied on paleontology and modern comparative collections housed in institutions across California, spanning geologic time from the Cretaceous period to present. He meets the Society of Vertebrate Paleontology Standards for Qualified Professional Paleontologist.

KHOLOOD ABDO, MA, RPA, SENIOR ARCHAEOLOGIST

Kholood Abdo has worked as an archaeologist in cultural resource management since 1999. She meets the Secretary of the Interior's Professional Qualification Standards for prehistory and historical archaeology. She has completed projects in all phases of archaeology: Phase I pedestrian and shovel test surveys, extended Phase I survey, buried site testing, archaeological sensitivity assessments, Phase II testing and evaluations, Phase III data recovery, and Phase IV monitoring in California. Ms. Abdo has written and contributed to scores of technical reports, including the National Environmental Policy Act, National Historic Preservation Act, and CEQA compliance documents. Her project responsibilities include project management, oversight of archaeological studies, phases of archaeological fieldwork, and tribal consultation and coordination. Ms. Abdo works to ensure that the quality of analysis and reporting meets or exceeds appropriate local, state, and federal standards.

Sincerely,

Marc Beherec, PhD, RPA
Senior Archaeologist

Peter Kloess, PhD
Paleontologist

Attachments:
Attachment 1 – Figures
Attachment 2 – SCCIC Records Search Results
Attachment 3 – NAHC Sacred Lands File Search Results
Attachment 4 – Geotechnical Boring and Trenching Logs
Attachment 5 – Paleontological Record Search Results

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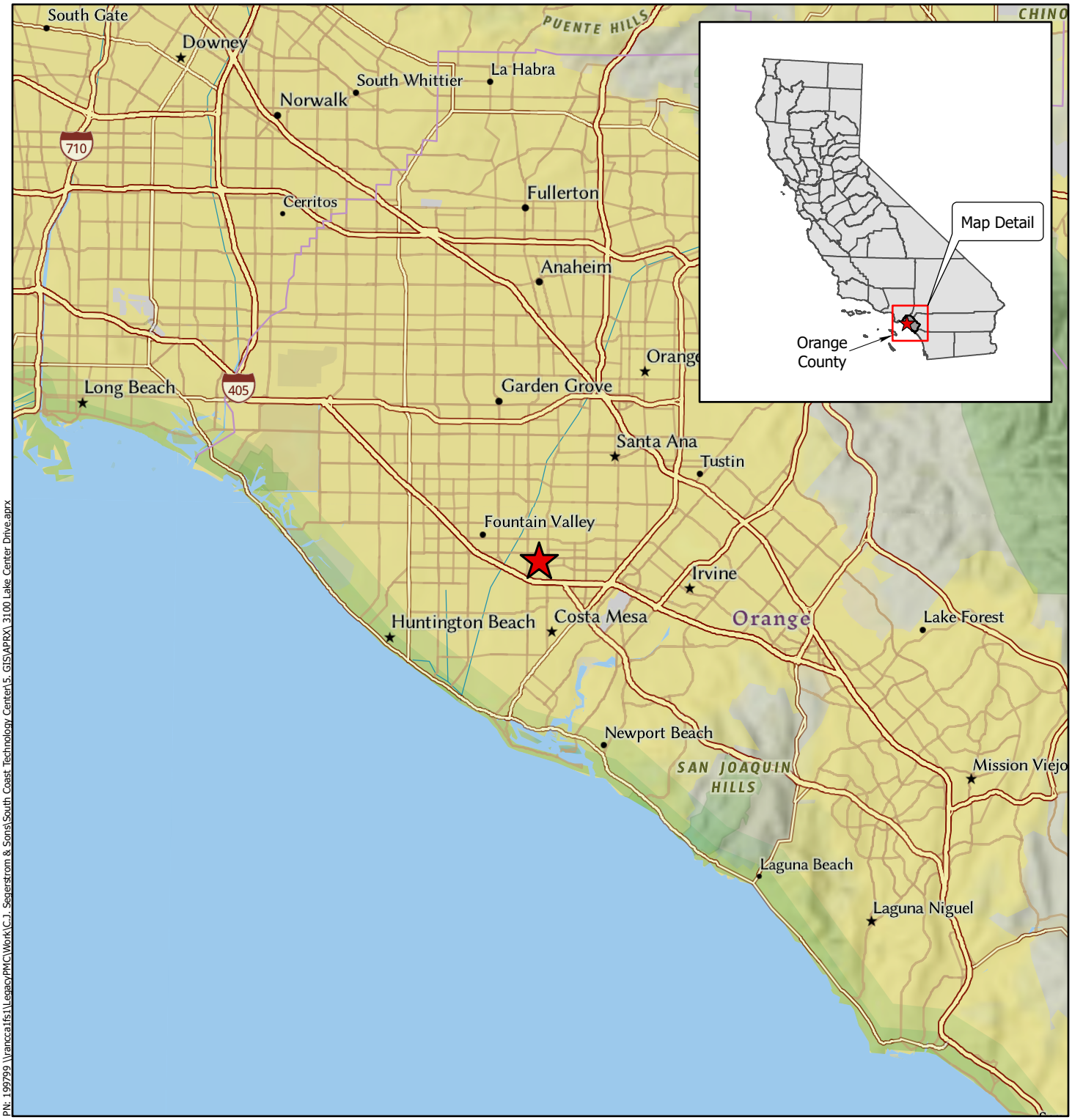
Attachment 1

Figures



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Legend

Project Location

Michael Baker INTERNATIONAL

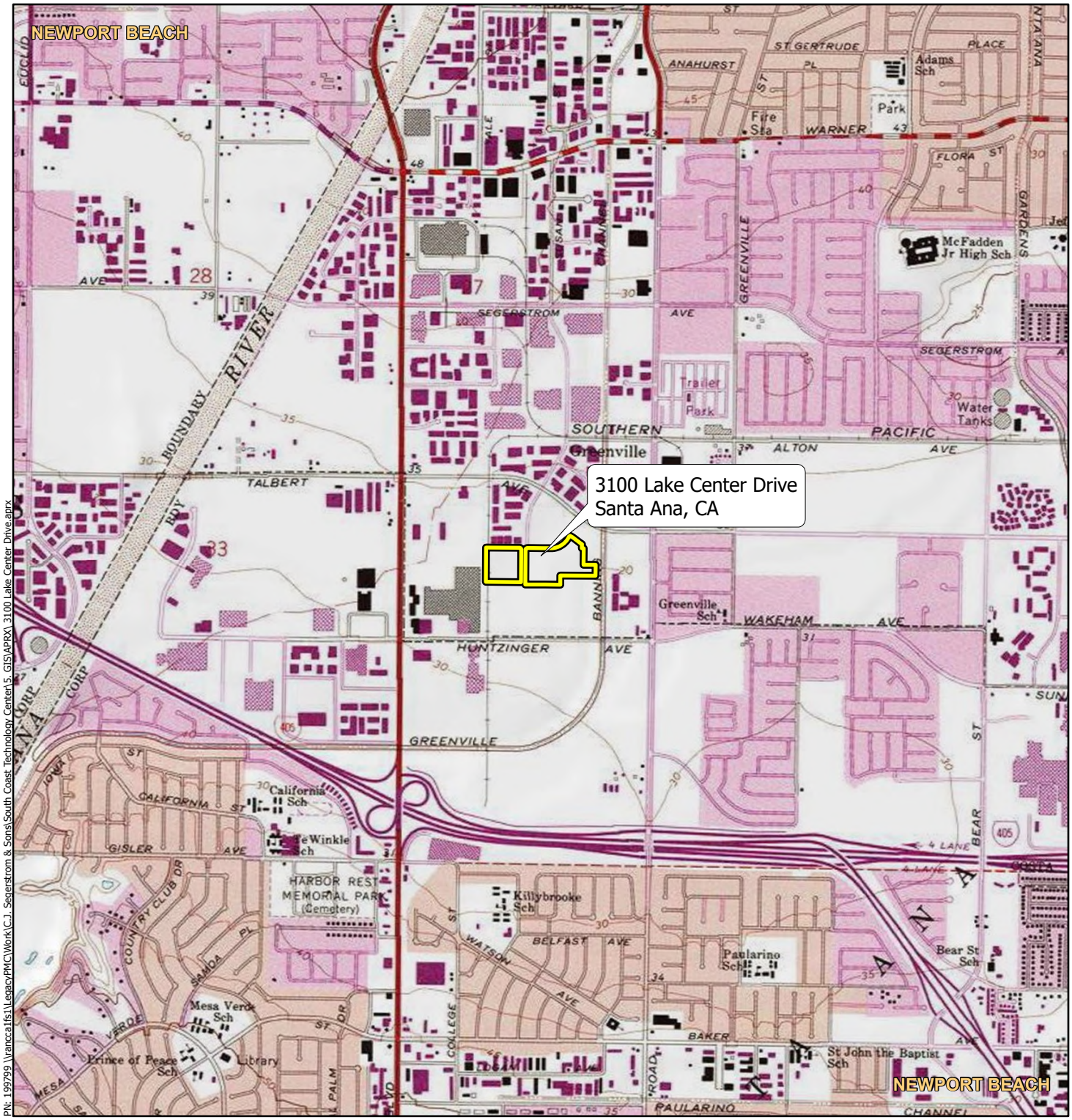
0 2.5 5 Miles

Source: Esri, ArcGIS Online, National Geographic World Map: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Regional Vicinity

Figure 1



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Legend

Project Site

Michael Baker INTERNATIONAL

0 0.25 0.5 Miles

Source: Esri, ArcGIS Online, Newport Beach USGS 7.5-Minute topographic quadrangle maps: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Project Vicinity

Figure 2

PN: 199799 \\ranccaa1fs1\LegacyPMC\Work\C.J. Segerstrom & Sons\South Coast Technology Center\5. GIS\APRX\ 3100 Lake Center Drive.aprx

Legend

Project Site

Michael Baker INTERNATIONAL

0 190 380 Feet

Source: Esri, ArcGIS Online, 2023 Nearmap Imagery: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Project Site

Figure 3

PN: 199799 \\rancca1fs1\LegacyPMC\Work\C.J. Segerstrom & Sons\South Coast Technology Center\5. GIS\APRX\ 3100 Lake Center Drive.aprx

Legend

- Project Site
- Marine Shell Scatter
- Trench 2
- Clam Shell
- Shovel Test Pit

Michael Baker INTERNATIONAL

0 50 100 Feet

Source: Esri, ArcGIS Online, 2023 Nearmap Imagery: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Shell Scatter Locations

Figure 4

Attachment 2

SCCIC Records Search Results

CONFIDENTIAL — NOT FOR PUBLIC DISTRIBUTION

Contains information exempt from public disclosure pursuant to CEQA Guidelines Section 15120(d). Information is on file with the City.

Attachment 3

NAHC Sacred Lands File Search Results

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: South Coast Technology Center

County: Orange

USGS Quadrangle Name: Newport Beach, CA

Township: 5S **Range:** 10W **Section(s):** 34

Company/Firm/Agency: Michael Baker International

Street Address: 801 S. Grand Ave., #250

City: Los Angeles **Zip:** 90017

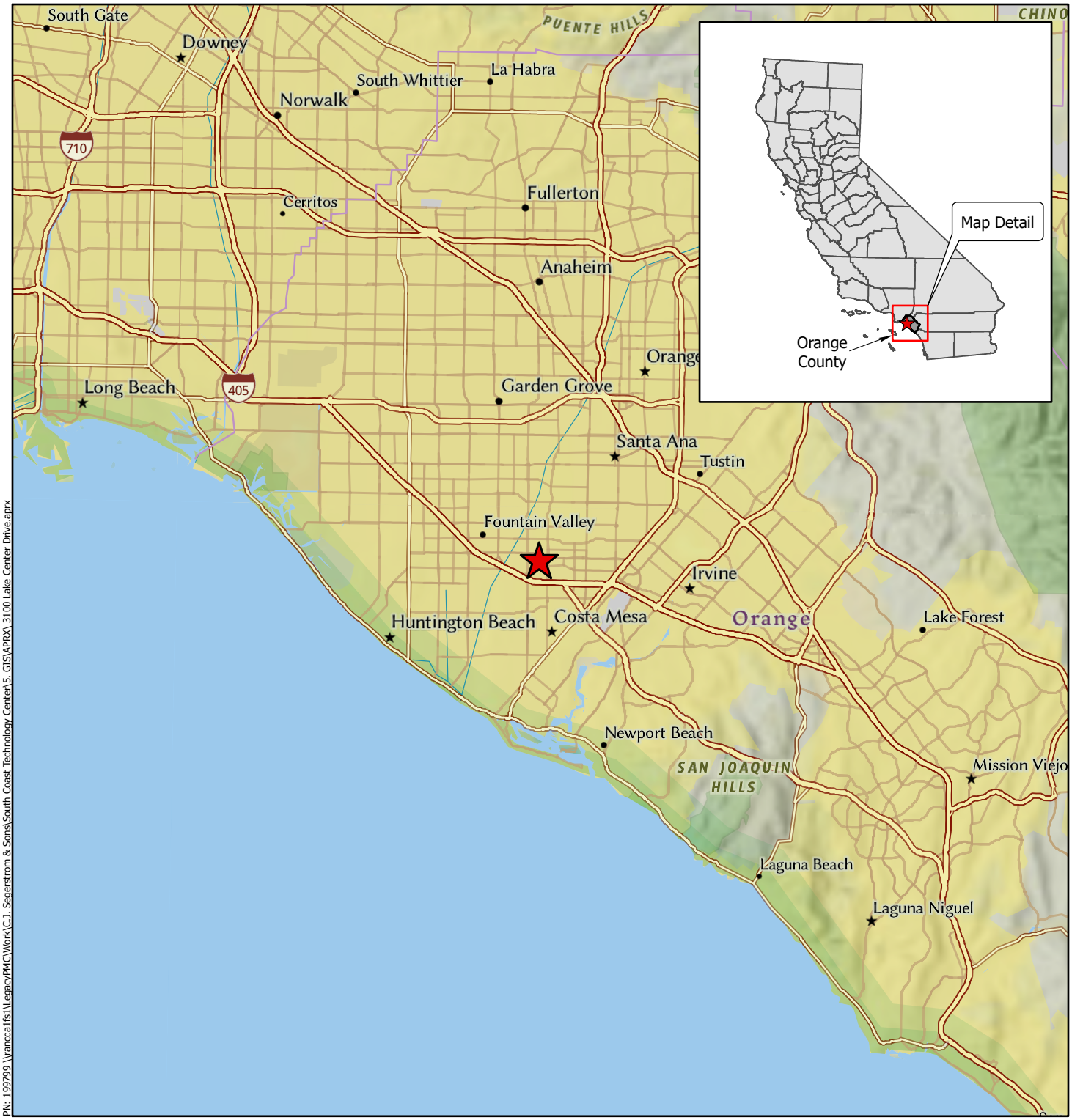
Phone: (951) 296-7561

Fax:

Email: marc.beherec@mbakerintl.com

Project Description:

The project is located at 3100, 3110, and 3120 W. Lake Center Drive, Santa Ana, CA 92704. The project proposes to demolish three buildings and a parking structure to construct three new Class A industrial buildings for office, manufacturing, and/or warehouse use.



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Legend

Project Location

Michael Baker INTERNATIONAL

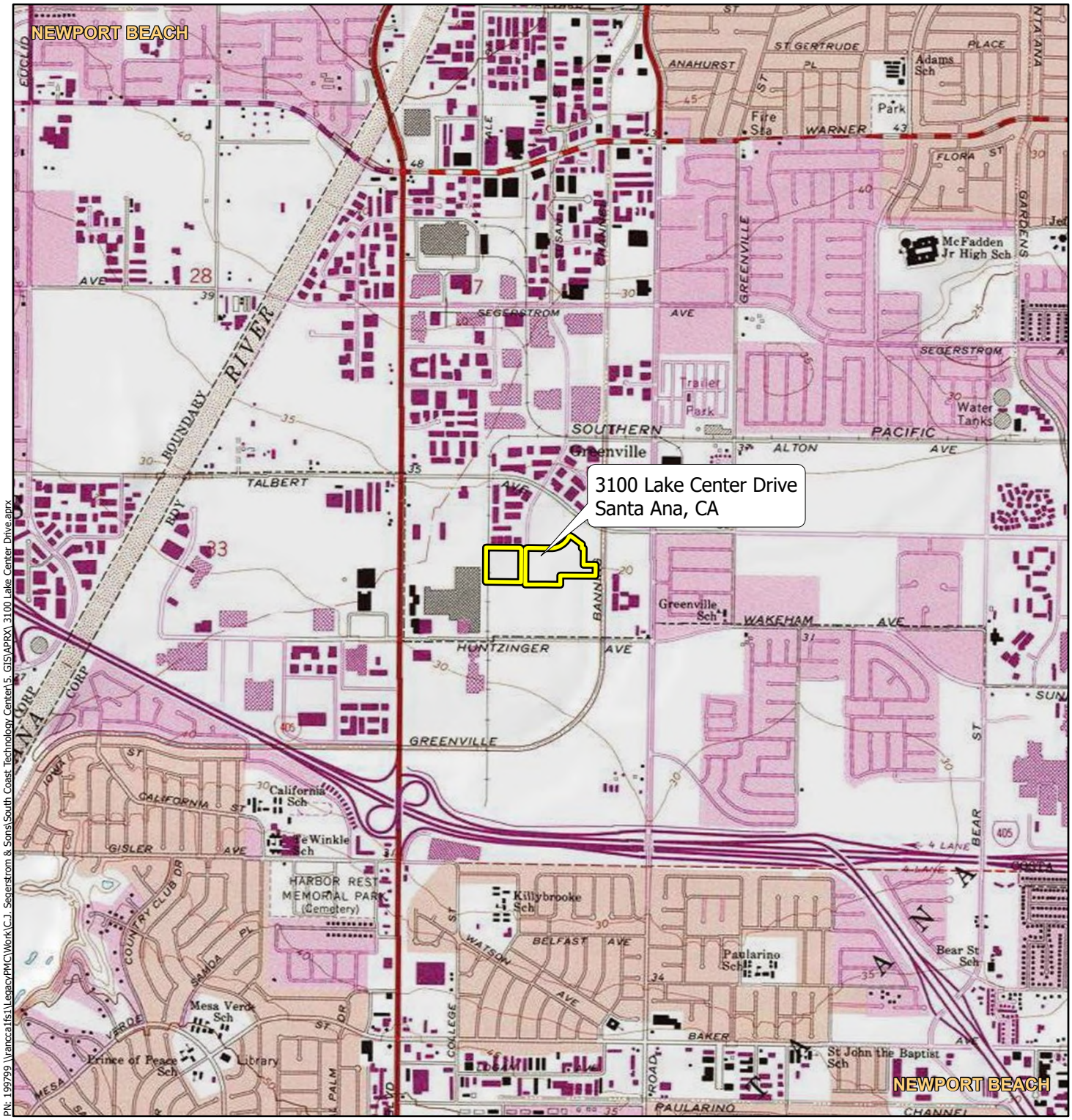
0 2.5 5 Miles

Source: Esri, ArcGIS Online, National Geographic World Map: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Regional Vicinity

Figure 1



PN: 199799 \\ranccaIfs1\LegacyPMC\Work\C.J. Segerstrom & Sons\South Coast Technology Center\5. GIS\APRX\ 3100 Lake Center Drive.aprx

Legend

Project Area

Michael Baker INTERNATIONAL

0 0.25 0.5 Miles

Source: Esri, ArcGIS Online, Newport Beach USGS 7.5-Minute topographic quadrangle maps: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Project Vicinity

Figure 2

PN: 199799 \\ranccaa1fs1\LegacyPMC\Work\C.J. Segerstrom & Sons\South Coast Technology Center\5. GIS\APRX\ 3100 Lake Center Drive.aprx

Legend

Project Area

Michael Baker INTERNATIONAL

0 190 380 Feet

Source: Esri, ArcGIS Online, 2023 Nearmap Imagery: *Santa Ana, California*

3100 LAKE CENTER DRIVE
SANTA ANA, CA

Area of Potential Effects

Figure 3

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 18, 2024

Marc Beherec
Michael Baker International

Via Email to: marc.beherec@mbakerintl.com

Re: South Coast Technology Center Project, Orange County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #
Gabrieleno Band of Mission Indians - Kizh Nation	N	Christina Swindall Martinez, Secretary	P.O. Box 393 Covina, CA, 91723	(844) 390-0787
Gabrieleno Band of Mission Indians - Kizh Nation	N	Andrew Salas, Chairperson	P.O. Box 393 Covina, CA, 91723	(844) 390-0787
Gabrieleno/Tongva San Gabriel Band of Mission Indians	N	Anthony Morales, Chairperson	P.O. Box 693 San Gabriel, CA, 91778	(626) 483-3564
Gabrielino /Tongva Nation	N	Sandonne Goad, Chairperson	106 1/2 Judge John Aiso St., #231 Los Angeles, CA, 90012	(951) 807-0479

Gabrielino Tongva Indians of California Tribal Council	N	Robert Dorame, Chairperson	P.O. Box 490 Bellflower, CA, 90707	(562) 761-6417
Gabrielino Tongva Indians of California Tribal Council	N	Christina Conley, Cultural Resource Administrator	P.O. Box 941078 Simi Valley, CA, 93094	(626) 407-8761
Gabrielino-Tongva Tribe	N	Sam Dunlap, Cultural Resource Director	P.O. Box 3919 Seal Beach, CA, 90740	(909) 262-9351
Gabrielino-Tongva Tribe	N	Charles Alvarez, Chairperson	23454 Vanowen Street West Hills, CA, 91307	(310) 403-6048
Juaneno Band of Mission Indians Acjachemen Nation - Belardes	N	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522
Juaneno Band of Mission Indians Acjachemen Nation 84A	N	Heidi Lucero, Chairperson, THPO	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884

Pala Band of Mission Indians	F	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537
Pala Band of Mission Indians	F	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515
Pala Band of Mission Indians	F	Christopher Nejo, Legal Analyst/Researcher	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3564
Santa Rosa Band of Cahuilla Indians	F	Lovina Redner, Tribal Chair	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279

Soboba Band of Luiseno Indians	F	Isaiah Vivanco, Chairperson	P.O. Box 487 San Jacinto, CA, 92581	(951) 654-5544
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment f

Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
	admin@gabrielenoindians.org	Gabrieleno	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	8/18/2023
	admin@gabrielenoindians.org	Gabrieleno	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	8/18/2023
(626) 286-1262	GTTribalcouncil@aol.com	Gabrieleno	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	12/4/2023
	sgoad@gabrielino-tongva.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	3/28/2023

(562) 761-6417	gtongva@gmail.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	3/16/2023
	christina.marsden@alumni.usc.edu	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	3/16/2023
	tongvatcr@gmail.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	5/30/2023
	Chavez1956metro@gmail.com	Gabrielino	Los Angeles,Orange,Riverside,San Bernardino,Santa Barbara,Ventura	5/30/2023
	kaamalam@gmail.com	Juaneno	Los Angeles,Orange,Riverside,San Bernardino,San Diego	3/17/2023
	jbmian.chairwoman@gmail.com	Juaneno	Los Angeles,Orange,Riverside,San Bernardino,San Diego	3/28/2023

	awallick@palatribe.com	Cupeno Luiseno	Orange,Riverside,San Bernardino,San Diego	11/27/2023
	sgaughen@palatribe.com	Cupeno Luiseno	Orange,Riverside,San Bernardino,San Diego	11/27/2023
	cnejo@palatribe.com	Cupeno Luiseno	Orange,Riverside,San Bernardino,San Diego	11/27/2023
(951) 659-2228	lsaul@santarosa-nsn.gov	Cahuilla	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	
(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023

(951) 654-4198	ivivanco@soboba-nsn.com	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023
(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno	Imperial,Los Angeles,Orange,Riverside,San Bernardino,San Diego	7/14/2023

5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

or the proposed South Coast Technology Center Project, Orange County.

Record: PROJ-2024-001552
Report Type: List of Tribes
Counties: Orange
NAHC Group: All

Attachment 4

Geotechnical Boring and Trenching Logs

LAKE CENTER DR

SUSAN ST

CPT-1
T.D.50.3'

T-2
T.D.15'
Qal@4.5'

H-2
T.D.26.5'
Qal@5'
▼@12,9' Next Day

Afu

Qal

T-3
T.D.16'
Qal@5,5'

T-1
T.D,15'
Qal@3'

H-1
T.D,51,5'
Qal@5'
▼@25' During Drilling

T-4
T.D.16'
Qal@6'
▼@16'

Date(s) Drilled	2/29/24	Logged By	DDK
Drilling Company	2R Drilling, Inc	Drill Bit Size/Type	10"
Drill Rig Type	CME 75 Hollow Stem	Hammer Data	140 Lbs @ 30 Inch Drop
Sampling Method(s)	California Modified, SPT		
Approximate Groundwater Depth:	Groundwater Encountered at 25 Feet.		
Comments			

H-1

Sheet 1 of 2

Total Depth Drilled (ft)	51.5
Approximate Ground Surface Elevation (ft)	38.0 msl

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0					ML-CL	Surface: Stockpile, locally ponded water. **Artificial Fill, Undocumented (Afu)**			
			D-1	5			@ 2.5' : Upper: Mottled dark yellowish brown to yellowish brown sandy SILT and silty CLAY, moist, soft.	17.8	105.5	
	5		D-2	22		ML	**Alluvium (Qal)** @ 5' : Dark yellowish brown sandy SILT, , moist, stiff, micaceous.	12.3	104.6	
						SM	Lower: Dark yellowish silty fine SAND, moist, medium dense, micaceous.			
-30										
	10		D-3	15		ML	@ 10' : Yellowish brown to dark yellowish brown sandy/clayey SILT, wet, stiff.	30.9	86.2	
	15		D-4	10			@ 15' : Yellowish brown brown to olive brown clayey SILT, saturated, medium stiff, gray silt in tip.	32.2	87.5	
-20										
	20		D-5	10		CH	@ 20' : Very dark gray CLAY, saturated, medium stiff, decayed rootlets, highly plastic.	35.3	83.5	
	25									

LOG OF BORING

Segerstrom - Lake Center Office Park
Santa Ana, CA
PROJECT NO. 23111-01

NMG

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	25	D	6	9			@ 25' : Very dark gray CLAY, saturated, medium stiff, decayed rootlets, highly plastic.	38.6	81.5	
10										
	30	D	7	26		SC	@ 30' : Reddish brown clayey fine to medium SAND, saturated, medium dense.	13.2	122.0	
	35	SPT	1	22		SM	@ 35' : Reddish brown silty fine to medium SAND, saturated, medium dense.	18.5		
0										
	40	SPT	2	5		SM-ML	@ 40' : Yellowish brown silty fine SAND and yellowish brown SILT, saturated, medium stiff.	24.6		
	45	SPT	3	27		SM	@ 45' : Yellowish brown silty medium SAND, saturated, dense.	14.3		
-10										
	50	SPT	4	17			@ 50' : Yellowish brown silty medium to coarse SAND, saturated, medium dense.	16.6		Bottom 5" of sample missing.
							Notes: Total Depth 51.5 Feet. Groundwater Encountered at 25 Feet During Drilling. Backfilled with Tremie Pipe and Cement-Bentonite Grout.			
	55									

LOG OF BORING

Segerstrom - Lake Center Office Park
Santa Ana, CA

PROJECT NO. 23111-01

NMG

Date(s) Drilled	2/29/24	Logged By	DDK
Drilling Company	2R Drilling, Inc	Drill Bit Size/Type	10"
Drill Rig Type	CME 75 Hollow Stem	Hammer Data	140 Lbs @ 30 Inch Drop
Sampling Method(s)	California Modified		
Approximate Groundwater Depth:	12.9 Feet After 24 Hours.		
Comments			

H-2

Sheet 1 of 2

Total Depth Drilled (ft)	26.5
Approximate Ground Surface Elevation (ft)	39.0 msl

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0					ML	Surface: Stockpile. **Artificial Fill, Undocumented (Afu)**			
			D-1	21			@ 2.5' : Mottled dark yellowish brown to yellowish brown SILT to sandy SILT, damp, stiff.	15.4	112.3	
	5		D-2	24		SP	**Alluvium (Qal)** @ 5' : Light gray fine SAND, damp, medium dense, friable.	2.4	95.6	
30	10		D-3	10		ML	@ 10' : Dark gray SILT with clay, wet, medium stiff, more clayey in upper rings.	36.4	84.6	
	15		D-4	9		CH/ML	@ 15' : Light olive brown silty CLAY and dark gray SILT, saturated, medium stiff, clay is moderately plastic.	35.8	82.7	
20	20		D-5	7		CH	@ 20' : Dark gray silty CLAY, saturated, medium stiff, pores, decayed rootlets, highly plastic.	32.9	87.9	
	25									

LOG OF BORING

Segerstrom - Lake Center Office Park
Santa Ana, CA
PROJECT NO. 23111-01

NMG

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	25		D-6	15		ML	@ 25' : Gray to dark gray to light olive brown clayey SILT, saturated, stiff.	40.0	80.5	
10	30						Notes: Total Depth 26.5 Feet. Groundwater First Encountered at 24.3 Feet. Groundwater Rose to 12.9 Feet Day After Drilling. Backfilled with Tremie Pipe and Cement-Bentonite Grout.			
0	35									
	40									
	45									
-10	50									
	55									

LOG OF BORING

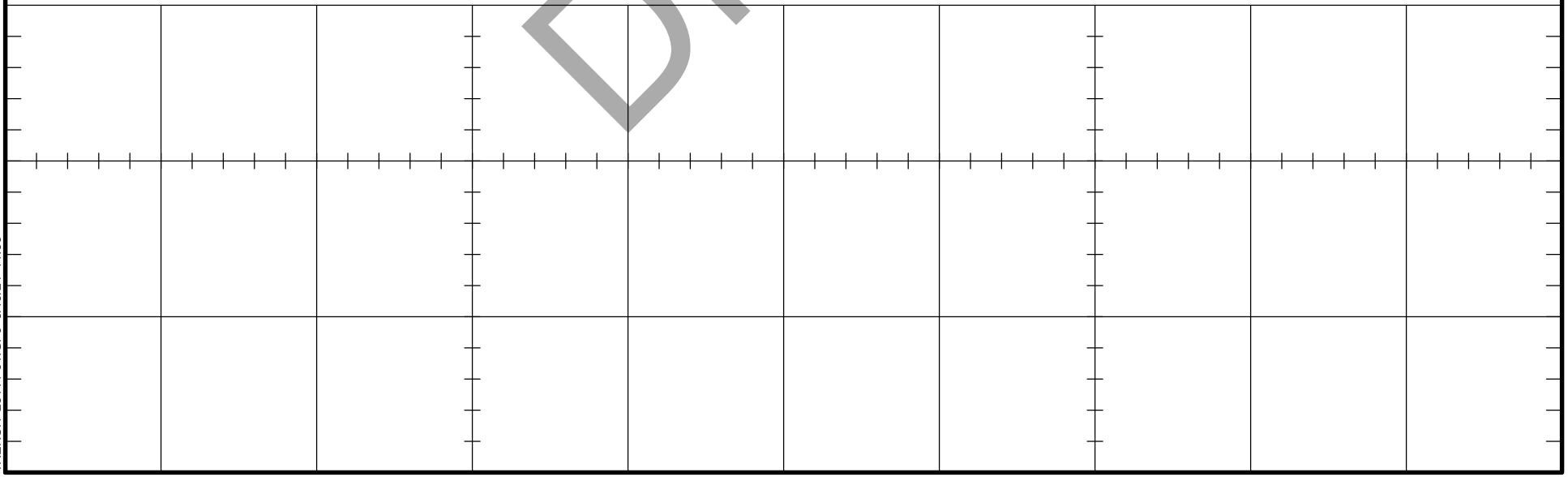
Segerstrom - Lake Center Office Park
Santa Ana, CA

PROJECT NO. 23111-01

NMG

Project Name: Segerstrom - Lake Center Office Park		Logged By: DDK		TRENCH NO.:	ENGINEERING PROPERTIES			
Project Number: 23111-01		Elevation:		**T-1**	U.S.C.S.	SAMPLE NO.	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
Equipment: John Deere 310SL HL		Location:						
GEOLOGIC ATTITUDES	DESCRIPTION:	DATE: 3/12/24	GEOLOGIC UNIT					
	Artificial Fill, Undocumented (Afu) @ 0'-3': Mottled brown gravelly silty medium to coarse SAND and gray brown sandy gravelly CLAY, moist to wet, medium dense, scattered chunks of concrete.		**Afu**		SM-CL	B-1	9.8	
	Alluvium (Qal) @ 3'-7': Mottled dark yellowish brown to dark brown SILT, trace sand, moist, medium stiff, pinhole pores, trace rootlets, micaceous.		**Qal**		ML			
	@ 4.5' : Yellowish brown silty fine sand layer 2" thick.							
	@ 7' : Gray SILT with fine sand, moist, medium stiff, pencil tip pores, iron staining.				ML	B-2	14.4	
	@ 13' : Dark gray silty CLAY, moist, medium stiff, slightly plastic.				CL			
	Notes: Total Depth 15 Feet. No Groundwater Encountered. Backfilled with Cuttings and Tamped.					B-3	29.0	

GRAPHIC REPRESENTATION: SCALE: 1" = 5' SURFACE SLOPE: TREND:



NMG Geotechnical, Inc.

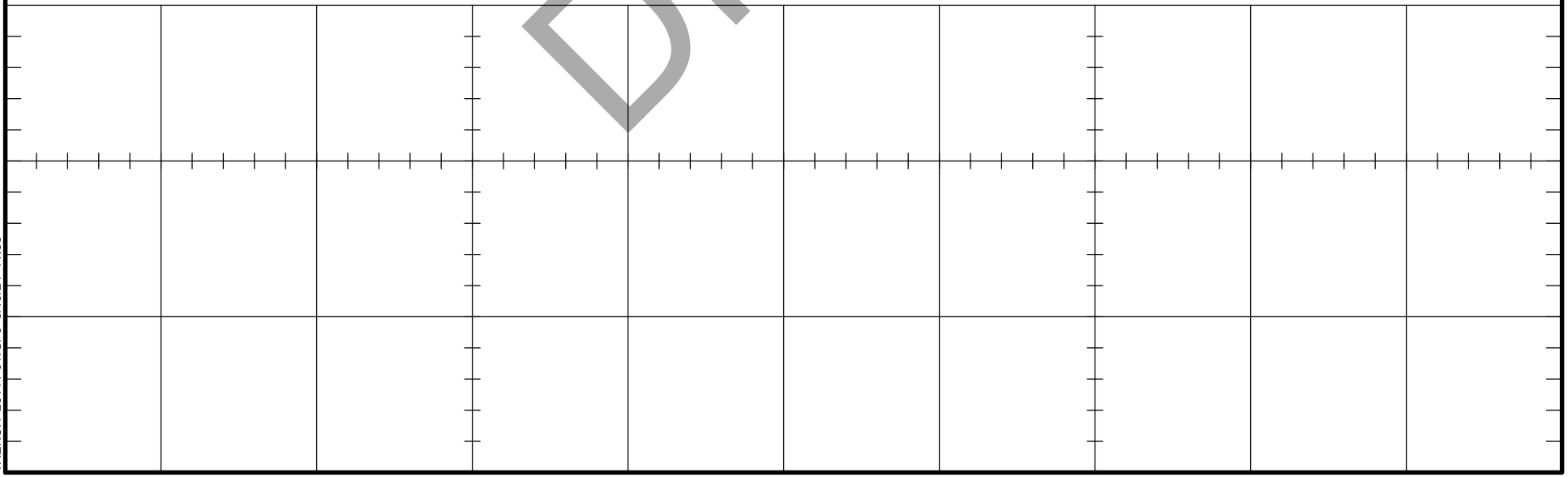
LOG OF TRENCH NO: T-1

TRENCH 23111-01.GPJ 3/19/24 11:56

Project Name:	Segerstrom - Lake Center Office Park	Logged By:	DDK	TRENCH NO.:	**T-2**
Project Number:	23111-01	Elevation:			
Equipment:	John Deere 310SL HL	Location:			

GEOLOGIC ATTITUDES	DESCRIPTION: DATE: 3/12/24	GEOLOGIC UNIT	ENGINEERING PROPERTIES: U.S.C.S.	SAMPLE NO.	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
	Artificial Fill, Undocumented (Afu) @ 0': Mottled dark brown clayey sandy SILT with gravel, moist, stiff, rootlets, scattered fragments of concrete.	**Afu**	ML	B-1	16.4	
	Alluvium (Qal) @ 4.5': Light grayish brown fine SAND with silt, moist, medium dense, friable, micaceous.	**Qal**	SM			
	@ 11' : Gray clayey SILT, moist to wet, medium stiff, pinhole pores.		ML			
	@ 14' : Grayish brown silty fine SAND, wet, medium dense, micaceous.		SM			
	Notes: Total Depth 15 Feet. No Groundwater Encountered. Backfilled with Cuttings and Tamped.					

GRAPHIC REPRESENTATION: SCALE: 1" = 5' SURFACE SLOPE: TREND:



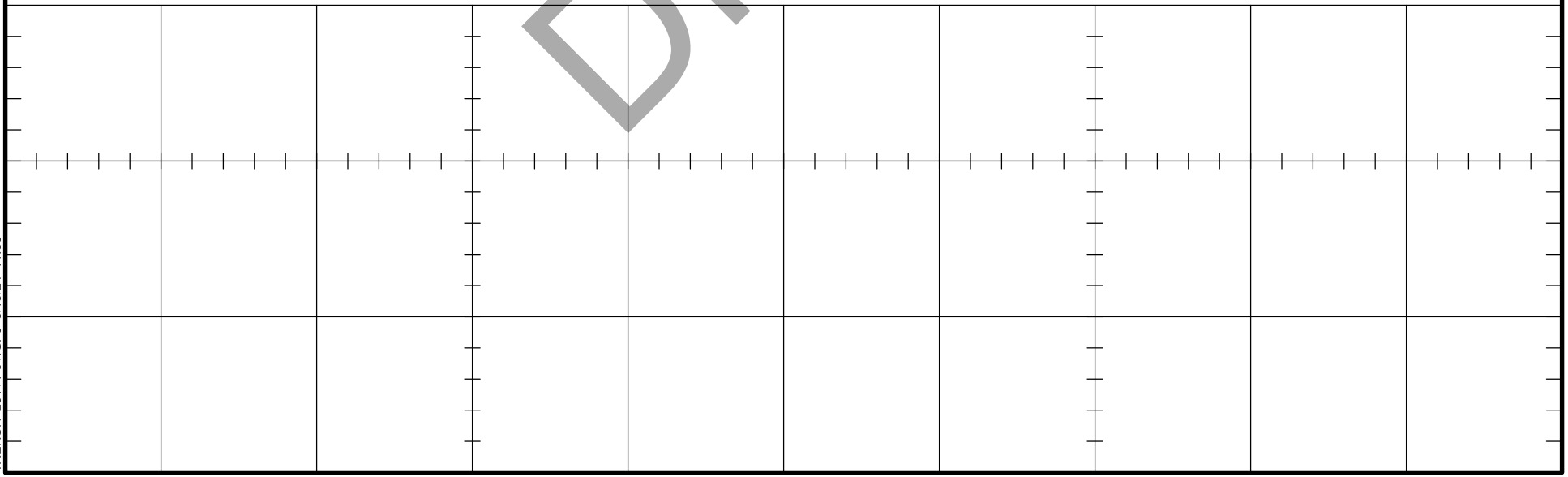
NMG Geotechnical, Inc.

LOG OF TRENCH NO: T-2

TRENCH 23111-01.GPJ 3/19/24 11:56

Project Name: Segerstrom - Lake Center Office Park		Logged By: DDK		TRENCH NO.:	ENGINEERING PROPERTIES			
Project Number: 23111-01		Elevation:		**T-3**	U.S.C.S.	SAMPLE NO.	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
Equipment: John Deere 310SL HL		Location:						
GEOLOGIC ATTITUDES	DESCRIPTION:	DATE: 3/12/24	GEOLOGIC UNIT					
	Artificial Fill, Undocumented (Afu) @ 0': Mottled dark brown to reddish brown sandy CLAY with gravel, medium stiff, wet, local seepage, scattered fragments of concrete.		**Afu**	CL				
	@ 4.5' : Reddish brown clayey medium to coarse SAND, medium stiff, moist.			SC				
	Alluvium (Qal) @ 5.5' : Light grayish fine SAND with silt, moist, medium dense, micaceous.		**Qal**	SM				
	@ 11' : Olive gray to gray SILT, medium stiff, moist.			ML				
	@ 14' : Gray SILT and yellowish brown CLAY, moist to wet, medium stiff, clay is highly plastic.			ML-CH				
	Notes: Total Depth 16 Feet. Seepage at 4 Feet. No Static Groundwater Encountered. Backfilled with Cuttings and Tamped.							

GRAPHIC REPRESENTATION: SCALE: 1" = 5' SURFACE SLOPE: TREND:



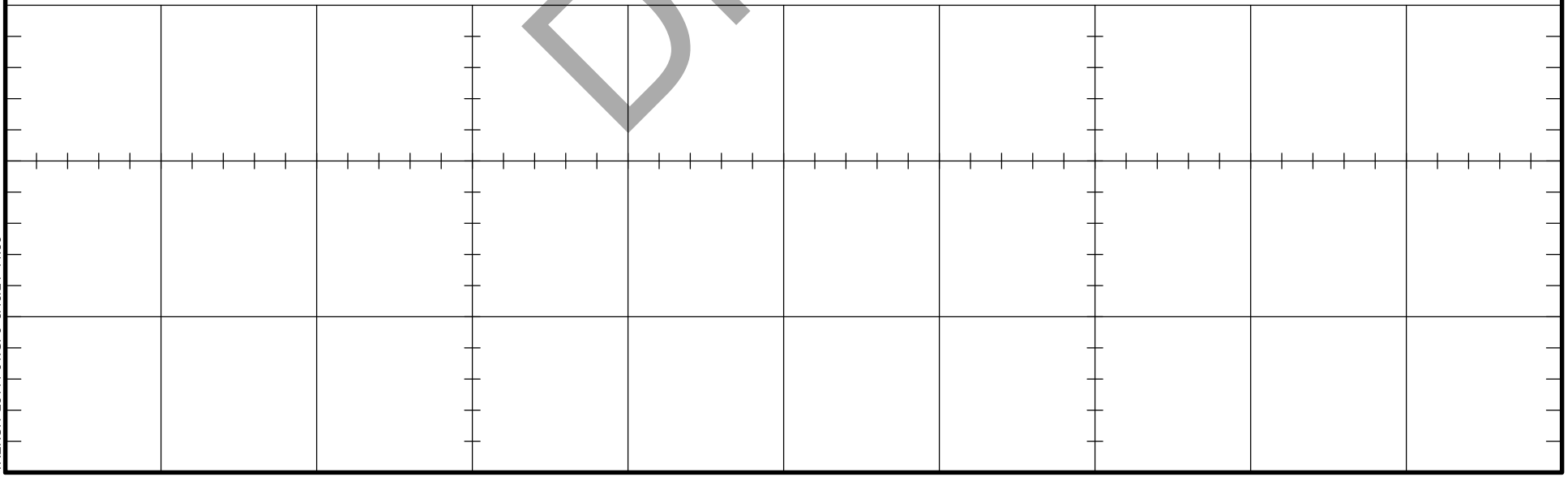
NMG Geotechnical, Inc.

LOG OF TRENCH NO: T-3

TRENCH 23111-01.GPJ 3/19/24 11:56

Project Name: Segerstrom - Lake Center Office Park		Logged By: DDK		TRENCH NO.:	ENGINEERING PROPERTIES			
Project Number: 23111-01		Elevation:		**T-4**				
Equipment: John Deere 310SL HL		Location:						
GEOLOGIC ATTITUDES	DESCRIPTION:	DATE: 3/12/24	GEOLOGIC UNIT		U.S.C.S.	SAMPLE NO.	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
	Artificial Fill, Undocumented (Afu)		**Afu**		ML			
	@ 0': Dark brown SILT with sand gravel and clay, moist, medium stiff, rootlets.							
	@ 1.5' : Reddish brown sandy CLAY, stiff, moist.				CL	B-1	16.8	
	@ 3' : Dark brown SILT with trace gravel, moist, medium stiff, micaceous.				ML			
	@ 4' : Mottled yellowish brown SILT, moist, medium stiff, caliche.				ML			
	Alluvium (Qal)		**Qal**		SM			
	@ 6': Gray fine SAND with silt, moist, medium stiff.							
	@ 9' : Very dark gray clayey SILT, moist, medium stiff, micaceous.				ML			
	@ 12' : Olive gray and yellowish brown clayey SILT, wet, medium stiff, micaceous.				ML			
	Notes: Total Depth 16 Feet. Groundwater Encountered at 16 Feet. Backfilled with Cuttings and Tamped.							

GRAPHIC REPRESENTATION: SCALE: 1" = 5' SURFACE SLOPE: TREND:



NMG Geotechnical, Inc.

LOG OF TRENCH NO: T-4

TRENCH 23111-01.GPJ 3/19/24 11:56

Attachment 5

Paleontological Record Search Results

Natural History Museum
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 3, 2024

Michael Baker International
Attn: Marc Beherec

re: Paleontological resources for the South Coast Technology Center Project, # 199799

Dear Marc:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the South Coast Technology Center project area as outlined on the portion of the Newport Beach USGS topographic quadrangle map that you sent to me via e-mail on February 29, 2024. 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 may 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 IP 4695	Bristol St. and Paularino Ave.	Palos Verdes Sand	Invertebrates - clam (*Saxidomus*), bryozoan (Bryozoa indet., *Conopeum*)	Unknown
LACM VPP 4219; LACM IP 31322, 5062	SW end of the Newport Fwy between Santa Isabel Ave & 23rd St	Palos Verdes Sand (coarse poorly sorted friable sand)	Camel family (Camelidae), sea turtle (Cheloniidae); uncatalogued fish and birds; invertebrates (*Entobia, Lottia, Caesia, Volvania, Ala, Eulithidium, Chama, Glossaulax, Agathistoma, Sinum, Chlorostoma, Calianax, Ophidiodermella, Serpulorbis, Argopecten*, and others)	30 feet bgs
LACM VP 6370-6371	near the intersection of Superior Avenue & Pacific Coast Highway; Newport Beach	Terrace deposits (Pleistocene, silty sandstones)	Horse (*Equus*), other unspecified mammals; Invertebrates: clam (*Tivela*, *Donax*, *Lucinisca*), scaphopod (*Dentalum*, *Antalis*), marine gastropods (*Glossaulax*, *Chlorostoma*)	Unknown (found during grading for parking lot construction)
LACM VP	Ellis Avenue &	Unknown formation	School shark (*Galeorhinus*),	150 - 350

Locality Number	Location	Formation	Taxa	Depth
7657-7659	Patterson Lane, Huntington Beach	(Pleistocene; gray siltstone)	eagle ray *(Myliobatus*), goby (*Lepidogobius, Leptocottus*), midshipmen (*Porichthys*), croaker (*Seriphus*), flatfish (*Citharichthys*), cusk-eel (*Otophidium*), skate (*Raja*), angelshark (*Squatina*), sculpin (Cottidae)	feet bgs
LACM VP 3267	Near intersection of 19th & Anaheim in Costa Mesa	Unknown formation (Pleistocene)	Proboscidea	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 Federal (43 Code of Federal Regulations Part 49.110) or Society of Vertebrate Paleontology standards.

Sincerely,

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

enclosure: invoice