

IV.D.2 Archaeological Resources

1.0 INTRODUCTION

This section addresses the potential direct, indirect, and cumulative impacts of the Proposed Project on archaeological resources. This section incorporates information contained in the Archaeological Resources Inventory and Impact Assessment Technical Report prepared by Statistical Research, Inc., in 2009 for Loyola Marymount University (LMU) and included as **Appendix IV.D.2**.¹

2.0 REGULATORY FRAMEWORK

2.1 Federal Regulations

2.1.1 National Historic Preservation Act

The National Historic Preservation Act, established in 1966, created the legislation for the creation of the National Register and the Advisory Council on Historic Preservation (Advisory Council). Section 106 of the National Historic Preservation Act (Code of Federal Regulations Title 36, Part 800) requires federal agencies to take into account the effects of an undertaking on historical properties, defined as cultural resources included in or eligible for listing in the National Register of Historic Places (National Register).

The National Historic Preservation Act is the key to the evaluation of cultural resources within the United States federal regulatory frameworks. The National Register, established by the National Historic Preservation Act, includes districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture. The National Historic Preservation Act also created the Advisory Council, appointed by the president, to advise the president and the Congress on matters related to historic preservation. The Advisory Council is authorized to secure information it may need from federal agencies in order to carry out its responsibilities.

There have been several amendments to the National Historic Preservation Act. The 1980 amendments require that the Secretary of the Interior is directed to (1) certify local historic preservation programs; (2) promulgate curation regulations, standards, and guidelines for the preservation of historic and archaeological properties; (3) develop an appeals process for nominations to the National Register; (4) develop a direct grants program for the preservation of National Register properties; and (5) develop a loan guarantee program to finance historic preservation projects. The structure of the Advisory Council was also revised to include local government and private participation. Federal agencies were also

¹ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, (2009). (Provided in **Appendix IV.D.2**.)

directed to inventory their lands and nominate eligible properties to the National Register (a reiteration of Executive Order 11593).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings, licensed or executed by the agency, on historic properties listed or eligible for listing in the National Register, and affords the Advisory Council a reasonable opportunity to comment on such undertakings. The Section 106 process seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation among the lead agency and other parties with an interest in the effect of the undertaking on historic properties, commencing at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess the effects of the undertaking, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. The Section 106 process includes the following five steps:

1. Identify and evaluate the National Register eligibility of historic properties;
2. Assess the effects of a proposed action on any historic property;
3. Consult with the State Historic Preservation Officer, interested parties and, when appropriate, the Advisory Council;
4. Treat impacts, as necessary; and
5. Proceed with the action.

2.1.2 National Register of Historic Places

The National Register of Historic Places (National Register) is the country's master inventory of known historic resources and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Title 36, Part 60 of the Code of Federal Regulations is a series of regulations that cover the National Register. Specifically, Title 36, Part 60.4 of the Code of Federal Regulations specifies the criteria applied to evaluate properties eligible for inclusion in the National Register. National Register eligibility for cultural resources is determined according to the following criteria:

- The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history; or

Criterion B: Are associated with the lives of persons significant in our past; or

Criterion C: Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.²

There is also a general stipulation that the property be at least 50 years old, although there are exceptions to that rule (see Title 36, Part 50.4 of the Federal Code of Regulations, Criteria Considerations a–q). The eligibility of a cultural resource for nomination to the National Register may be based on any of the above four criteria together with their integrity. Historical period properties are best evaluated and supported by historical research, whereas Criterion (d) is typically documented by archaeological investigation. A property need not actually be listed on the National Register to be protected by the National Historic Preservation Act, but must be considered eligible for listing on the National Register. Archaeologists assess sites based on all four criteria, but prehistoric sites are primarily considered under Criterion (d). If cultural resources do not meet the above criteria, they are not considered historical properties and are not further included in the Section 106 process.

2.2 State Regulations

2.2.1 California Register of Historical Resources

The California Register of Historical Resources (California Register)³ is the authoritative guide to the state's significant historical and archeological resources. It serves to identify, evaluate, register, and protect California's historical resources. The California Register program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for historic preservation grant funding, and affords certain protections under the California Environmental Quality Act (CEQA). All resources listed on or formally determined eligible for the National Register are eligible for the California Register. In addition, properties designated under municipal or County ordinances are also eligible for listing in the California Register.

² Code of Federal Regulations Title 36 Part 60.4

³ Public Resource Code Section 21084.1

The California Register criteria are modeled on the National Register criteria discussed above. An historical resource must be significant at the local, state, or national level under one or more of the following criteria:

- Criterion 1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
- Criterion 2. It is associated with the lives of persons important to local, California, or national history; or
- Criterion 3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
- Criterion 4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, state or the nation.⁴

The California Register automatically includes the following:

- California properties listed or formally determined eligible for listing in the National Register of Historic Places
- California Registered Historical Landmarks from #0770 onward
- California Points of Historical Interest that have been evaluated by the Office of Historic Preservation and have been recommended to the State Historical Resources Commission for inclusion in the California Register

Other resources may be nominated for listing in the California Register based on the criteria stated above.

Additionally, a resource must retain historic architectural integrity in terms of location, design, setting, materials, workmanship, feeling, and association. The California Register procedures include language similar to the National Register criteria (discussed above) with regard to integrity.

As with the National Register, the minimum age criterion for the California Register is 50 years. Properties less than 50 years old may be eligible for listing on the California Register “if it can be demonstrated that sufficient time has passed to understand its historical importance.”⁵

⁴ State CEQA Guidelines Section 15064.5(a)(3)

⁵ California Code of Regulation, Chapter 11, Title 14, Section 4842(d) (2).

2.2.2 California Environmental Quality Act

Section 21084.1 of the Public Resources Code provides the framework for determining whether a property is an historic resource for CEQA purposes. A lead agency must consider a property a historic resource under CEQA if it is listed in, or determined to be eligible for listing in, the California Register. Historical resources included in a local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, are presumed to be historically or culturally significant for purposes of CEQA, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not identified in an historical resources survey meeting the criteria of subdivision (g) of Section 5024.1, shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of CEQA.⁶

Section 15064.5(a) of the State *CEQA Guidelines* specifies that for purposes of CEQA compliance, the term “historical resources” include the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or identified as significant in an historical resource survey meeting the requirements in Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register.
- The fact that a resource is not listed, or determined to be eligible for listing, in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource, as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

⁶ Public Resource Code Section 21084.1.

The term “historical resource” may also apply to archaeological sites. However, for an archaeological site that does not meet the criteria for consideration as a “historical resource,” a determination must be made as to whether it qualifies as a “unique archaeological resource.” The CEQA statute defines “unique archaeological resource” as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric event or person.⁷

In addition to having significance, resources must have integrity for a period of significance, the date, or span of time within which significant events transpired at a site or the period in which significant individuals made their important contributions to a site. Integrity is the ability of a property to convey its significance. The seven primary aspects of integrity are location, design, setting, materials, workmanship, feeling, and association. Simply stated, resources must retain enough of their historical character or appearance to be recognizable as historical resources and to convey the reasons for their significance.⁸

If historical resources are found to be significant and unique, then the lead agency must determine whether the project may involve a substantial adverse change to the significance of a historical resource to the point where its significance is materially impaired.⁹ Additionally, a substantial change to resource should also be considered. A “substantial adverse change” means “demolition, destruction, relocation, or alteration of the resource such that the significance of an historical resource would be materially impaired.”¹⁰ Material impairment occurs when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources;
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

⁷ Public Resources Code 21083.2[g]

⁸ California Code of Regulations Title 14 Section 4852

⁹ California Code of Regulations Title 14 Section 15064.5

¹⁰ Public Resources Code 5020.1(q); *State CEQA Guidelines* Section 15064.5(b)(2)

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.¹¹

The setting of a resource should also be taken into account in that it too may contribute to the significance of the resource, as impairment of the setting could affect the significance of a resource.

According to the *State CEQA Guidelines*,

[p]ublic agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archaeological site:

- (A) *Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.*
- (B) *Preservation in place may be accomplished by, but is not limited to, the following:*
- (1) *Planning construction to avoid archaeological sites;*
 - (2) *Incorporation of sites within parks, greenspace, or other open space;*
 - (3) *Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site; or*
 - (4) *Deeding the site into a permanent conservation easement.*
- (C) *When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared, and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.*
- (D) *Data recovery shall not be required for an historical resource if the Lead Agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center.¹²*

¹¹ *State CEQA Guidelines*, 15064.5(b)(2)

¹² California Code of Regulation 15126.4[b][3]

2.2.3 Senate Bill 18

Senate Bill 18 requires cities and counties to contact, notify, and consult with California Native American Tribes about proposed local land use planning decisions prior to amending or adopting a general plan or specific plan, or designating land as open space. The purpose of this local and Tribal intergovernmental consultation is to protect, preserve, or mitigate impacts to Native American Cultural Places. For this purpose, the Native American Heritage Commission created a new list of Tribal consultants that is specific for Senate Bill 18. This list is made up of entities that are considered “Tribal Governments,” which includes all federally recognized Tribes and non-federally recognized Tribes that meet minimum criteria set forth by the Native American Heritage Commission.

According to Senate Bill 18, Native American Cultural Places refers to places, features, and objects including Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines on private lands, and Native American historic, cultural, or sacred site on public lands that are listed or may be eligible for listing in the California Register pursuant to Public Resources Code Section 5024.1, including any historic or prehistoric remains, any burial ground, or any archaeological or historic site.¹³

2.3 Local Regulations

2.3.1 City of Los Angeles Historic-Cultural Monument

The Los Angeles City Council designates Historic-Cultural Monuments at the recommendation of the City of Los Angeles Cultural Heritage Commission. These designations recognize the historic or cultural significance of specific sites and the unique architectural value of specific structures. These include sites in which “the broad cultural, economic, or social history of the nation, state, or community is reflected or exemplified, or which are identified with historic personages or with important events in the main currents of national, state, or local history or which embody the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period style or method of construction, or a notable work of a master builder, designer, or architect whose individual genius influenced his age.”¹⁴

¹³ Public Resources Code Sections 5097.9 and 5097.993

¹⁴ City of Los Angeles Administrative Code, Article 4, Section 22.130

2.3.2 City of Los Angeles General Plan – Conservation Element

The City of Los Angeles General Plan – Conservation Element (adopted 2001) contains the following objective and policy applicable to the Proposed Project:

Objective: Protect the City’s archaeological resources for historical, cultural, research, and/or educational purposes.

Policy: Continue to identify and protect significant archaeological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.

3.0 ENVIRONMENTAL SETTING

3.1 Prehistory and Cultural Background

3.1.1 Environment

The LMU campus is located at the edge of the Westchester Bluffs above a once extensive estuary, the Ballona Wetlands, adjacent to Santa Monica Bay. Now fed by the Ballona and Centinela creeks, the wetlands once served as the mouth of the Los Angeles River, which followed the Ballona Creek channel throughout much of prehistory. The estuary was one of many dotting the Southern California Bight, the broad coastal indentation extending from Point Conception just past San Diego Bay and encompassing the coastline, Channel Islands, and nearshore Pacific Ocean.

Global sea-level rise at the end of the Pleistocene, beginning approximately 18,000 years B.P., was the major factor in the formation of the Ballona. Initially, as the ice caps melted, the inundation of the preexisting shoreline created an inlet at the edge of Santa Monica Bay. For 6,000 years, continued rises in sea level were offset by tectonic activity that raised the land, leading to a long period of relative stability of the shoreline. This stability continued until about 5,000 years B.P., when the rate of sea-level rise tapered off and other factors, such as the rate of sedimentation, became more significant in establishing the shoreline.

It has been suggested that there was also a dramatic increase in both annual temperature and precipitation between 8000 and 7000 B.P., an event that corresponds to the establishment of a rich marsh at the base of the bluffs. Drainage off the bluffs also cut side canyons, depositing alluvial fans that created well-drained land surfaces at the edge of the marsh, such as the Lincoln Gap (a gap eroded into the Westchester Bluffs and now occupied by Lincoln Boulevard).

By 5000 B.P., sediments were starting to fill in around the fringes of the inlet, creating marshes that flanked a large lagoon. As sediment infilling continued, more-extensive marshes were created at the

expense of the lagoon. By 4000 B.P., the lagoon had shrunk significantly, and a coastal plain probably began to form at the eastern end of the Ballona. By 1000 B.P., the Ballona Lagoon was confined to a small remnant of its former size, with the lagoon edge retreating from the Ballona Escarpment along all or most of its length. The lagoon at this time was probably quite shallow, and marshes may have formed along the landward side of the barrier.

Estuaries such as the one formed in the Ballona during most of its life span are among the most productive ecozones in the world. The mixture of open lagoon, tidal flats, saltwater and freshwater marshes, and freshwater streams provides a variety of distinct habitats within a restricted space. The availability of oceanic, riverine, and terrestrial plants and animals in proximity to one another have made the Ballona and other estuaries of the Southern California Bight some of the most favored locales for human occupation since people arrived in North America. In the 1870s, the Ballona Lagoon was home to a dense population of fish and waterfowl and was renowned for its hunting and fishing.

3.1.2 Prehistoric Background

Prehistory in the Ballona is generally divided into three broad periods: Millingstone, Intermediate, and Late. Each is briefly described below.

3.1.2.1 Millingstone Period (10,000–3,500 B.P.)

Based on radiocarbon dates, humans first appeared in the Ballona Wetlands area beginning around 8000 B.P. This early occupation is called the Millingstone period and is marked by evidence of human adaptation to estuarine and bay-shore environments along coastal California. This evidence suggests that a small and highly mobile foraging population occupied the Ballona on a short-term, seasonal basis. Initially, the Millingstone occupation was restricted to the bluff tops near the Lincoln Gap, although older sites may have been present in now inundated areas offshore; after 6500 B.P., the Baldwin Hills and the alluvial fan at the base of the Lincoln Gap were also settled, albeit occupied only seasonally.

3.1.2.2 Intermediate Period (3000–1000 B.P.)

Between approximately 3000 and 1000 B.P., a time referred to as the Intermediate Period, most of the raised, well-drained landforms in the wetlands and the bluffs hosted residential sites. Twelve occupied sites from this period have been identified in the Ballona Wetlands, including LAN-61¹⁵, a site on the present LMU campus. Unlike Millingstone and early Intermediate period sites, later sites were relatively

¹⁵ The California Historical Resources Information System (CHRIS) serves as the official repository of information regarding historical resources in California, and is administered by the State Office of Historic Preservation. In accordance with the CHRIS Operations Manual, CHRIS assigns a unique “trinomial” to each identified archaeological site. Each trinomial includes the two-letter code CA (for California), a County code (the County of Los Angeles is “LAN”), and a sequentially assigned site number that indicates the number of sites assigned numbers in a given County.

large and contained many features indicative of a stable settlement, including houses, hearths, and mortuary features. Three archaeological sites west of LMU near West Bluffs (LAN-63, LAN-64, and LAN-206A) have yielded evidence of highly structured settlements, segregated into communal refuse areas, resource procurement and processing areas, ritual space, and burial areas and it is believed that groups occupied these sites for extended periods of time after 3000 B.P.

Occupation roughly between 2100 and 1900 B.P. coincides with a known period of high precipitation; and sites on the bluffs would have been well situated to procure resources from the Ballona Wetlands and vernal pools of the coastal prairie to the south. Owing to the increased rainfall during this brief period, resources in both the wetlands and the coastal prairie would have been at their peak, making the area attractive to settlement.

3.1.2.3 Late Period (beginning in 1000 B.P.)

The Late period, beginning about 1000 B.P., was a time of intense population growth along the Southern California coast. There are more sites along the coast from this period and a greater variety of sites with greater internal differentiation than at any other time in prehistory. Villages with complex site layouts and burial grounds with variable mortuary treatments first appeared, suggesting the development of social differentiation.

Settlement also changed in the Ballona Wetlands; the lagoon became a sediment-choked estuary and the wetlands were abandoned except at the lagoon edge. For a short time, the only occupied area of the Ballona was the sandy knoll on which the “Admiralty” site (LAN-47) was situated. Eventually, however, the area’s population was concentrated in a single large community, extending 1.5 km along the base of the Westchester Bluffs and occupying two sites near the mouth of Centinela Creek, LAN-62, and LAN-211. While nearly every habitable location on the bluffs and along Centinela Creek supported human activity at about 2000 B.P., less than a thousand years later, occupation was concentrated in one small area. It is believed that this change in settlement patterns is related to a return to drier climatic conditions and perhaps movement of the Los Angeles River away from the Ballona Creek channel between 2000 and 1000 B.P., which may have reduced freshwater inputs, dried up the coastal prairie, and allowed expansion of the less fertile salt marshes, rendering the area less biologically productive and therefore less attractive to humans.

3.1.3 Historical Background

The recent history of Southern California begins with the arrival of Europeans and includes the Mission period and later historical periods leading up to the present time. These are discussed below in turn.

3.1.3.1 Mission Period

Although Juan Rodriguez Cabrillo first explored Southern California in 1542, it was not until 1769 that the Spanish presence was felt in the Los Angeles Basin. At that time, Portolá first made contact with the group of Indians that later came to be known as the Gabrieleno, but were known as Tongva in their language. Portolá reported stopping at an Indian village called Yang'na on the Los Angeles River near present-day downtown Los Angeles before heading northwest into the San Fernando Valley; his route, however, did not cross the Ballona.

Mission San Gabriel was founded in 1771. The clerical leaders of the mission encouraged and then forced natives from the Los Angeles area to congregate at Mission San Gabriel, from which they acquired the name Gabrieleno. The two published maps produced by the missionaries do not show any Gabrieleno settlements in the Ballona area. The most-consistent documentary evidence available for the existence of a village, or *ranchería*, in the Ballona derives from mission records, most importantly baptismal records. Handwritten entries in the baptismal records at Mission San Gabriel between 1790 and 1815 and in the records from Mission San Fernando after 1788 list a village called Guaspet, or one of its named variants, as the place of origin for over 100 natives associated with the Mission system. The name Guaspet, or its variants, is a current theme in the Ballona region. It is used in various maps and other documents for the area during the historical period. The baptismal and marriage records also showed that many of the individuals from Guaspet had marriage relationships with other Gabrieleno from the Channel Islands and the Santa Monica Bay area, supporting the evidence that Guaspet was located in the vicinity of the Ballona.

Intensive excavations at LAN-62 and LAN-211, located at the base of the bluffs below the LMU campus, were recently completed. Although extensive evidence of early historical-period occupation was found at both sites, including a large burial area and a dense deposit of domestic refuse, no clear evidence of a historical-period village or *ranchería* was found at either site. Portions of both sites were destroyed, however, during the 20th century construction and use of the Howard Hughes Culver City plant, which could have removed evidence of possible living areas. Glass trade beads dating to the Mission period have also been discovered on the tops of the bluffs at LAN-61 and LAN-63. Thus, there is clear evidence of Mission period occupation or use in the Ballona. The exact location of the village of Guaspet, however, is unclear.

3.1.3.2 Later Historical Periods

As the native Gabrieleno were moved out of the west Los Angeles area by the missionaries, Spanish cattlemen moved in. In 1839 members of the Machado and Talamantes families were granted Rancho La Ballona. The rancho lasted until 1865, when Machado, by that time one of the wealthiest men in Los Angeles, died. The rancho was divided and numerous heirs were granted small parcels, most of which were sold to Americans within a decade.

The Westchester Bluffs area underwent a slightly different transformation. In 1822, the area, including what was to become the LMU campus, was granted to Antonio Ignacio Avila as part of the Rancho Sausal Redondo. Avila's claim was challenged and the resulting civil records provide insights into the Rancho of Guaspita, revealing that Guaspita referred to a corral or place for gathering cattle on the northern edge of the bluffs near the LMU campus. Although the rancho was surveyed many times, no description of a Gabrieleno village called Guaspita was found and no mention of Indians or other residents was made. Guaspita does not appear to have represented a settlement of any permanence; the name, however, lends further credibility to the association of the Gabrieleno place-name of Guaspit and the Ballona region.

Commercial and industrial interest in the area began in the 1880s, with speculative schemes and recreational use of the Ballona for hunting and fishing. These activities were followed by the founding of Venice just after the turn of the century. In the early twentieth century, the oil industry took an interest in the Ballona Wetlands and by 1931 there were 325 wells in operation in the area. Truck farming also developed as an industry in the area.

3.1.4 Archival Records Search

The archival records search of archaeological site maps, records, and files indicate numerous previous investigations have been conducted on the LMU campus and in the surrounding area since 1906. Specifically, archaeological searches for lesser villages, prehistoric campsites, and refuse heaps, and "Early Man" sites have been conducted in the area. Items found in the area include human skeletal remains; metate fragments (a metate is portable stone slab used to grind seeds and other grains) and manos (loaf-shaped stones used for grinding seeds and pigments on a metate); mortars (stone or wooden bowl-like artifacts in which seeds, berries, meat, and other products were ground or pulverized) and pestles (an elongate, cylindrical stone used to grind or pulverize seeds, berries, meat or other products in a mortar); shells; projectile points (sharp stone tips typically affixed to the end of a spear, lance, dart, or arrow); arrowheads; knives; charred stones; steatites and steatite vessels (i.e., soapstone objects)¹⁶;

¹⁶ Fiedel, Stuart J. (1992) *Prehistory of the Americas*, Edition: 2. Cambridge University Press, Cambridge, MA. p. 110.

granitic bowl fragments; cog stones;¹⁷ stone scrapers and tools; smoothing stones coated with asphaltum;¹⁸ hammer stones; tarring pebbles; worked shells; and other artifacts.¹⁹

3.1.5 Loyola Marymount University Campus

There are three recorded archaeological sites on LMU's campus. CA-LAN-61 is located primarily on Leavey Campus, but now appears to extend onto Burns Campus. CA-LAN-212 is located in Burns Campus. CA-LAN-1018 is located on Leavey Campus.²⁰ Each is described below. The relationship between the three sites on the campus, and with other sites in the Ballona area, is not fully understood. Grenda and Altschul (1994) proposed that the sites may be part of a dynamic, interdependent settlement system, with variable uses and populations associated with individual sites. Some sites, therefore, would have been used intermittently for resource procurement and processing while others represented more or less permanent occupations.²¹ Van Horn and Murray stated that much of the subsistence at LAN-61 was related to deer, rabbit, and milled seeds and grains, as well as a focus on lagoonal fish.²² This conclusion remains under debate.

3.1.5.1 CA-LAN-61

CA-LAN-61 (also known as Farmer Site #3) was first identified by a local resident in 1936 and was later documented in 1939; site records were updated in 1950, 1963, and 1964. The site once contained a large number of artifacts on the surface as a result of plowing, however the artifacts were reportedly "collected" by locals for many years. The site underwent formal evaluation and subsequent data recovery in the 1980s by David Van Horn and his firm, Archaeological Associates, in advance of planned construction by the Hughes Aircraft Company. Whereas there were artifacts and several radiocarbon dates recovered that suggested a component of the site dated to the Millingstone period, the majority of

¹⁷ Cog., or coggod, stones are so named because of their indentations that give them the appearance much like that of a cogwheel. (The Bowers Museum Collection, *Objects of the Week: Cog Stones*, <http://bowersmuseum.blogspot.com/2008/01/objects-of-week-cog-stones.html>) Researchers have suggested that the cog stone/wheel was used to manufacture rope, for religious purposes (such as an incense burner), a net sinker, to crush nuts and seeds, manufacture fishing line, and used in games. (Koerper, Henry C., and Mason, Rodger. *A Red Ochre Coggod Stone from Orange County*, Pacific Coast Archaeological Society Quarterly, Volume 34, Number 1, Winter 1998.)

¹⁸ Native Americans living in California used the asphaltum from natural oil seeps to hold together hunting weapons and baskets and to caulk canoes. (USGS, *Native American Uses for Asphaltum*, http://geomaps.wr.usgs.gov/seeps/native_uses.html)

¹⁹ California Native American Heritage Commission, Glossary of Archaeological Terms, <http://www.ceres.ca.gov/nahc/glossory.html>

²⁰ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.3–5.4.

²¹ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.10.

²² Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.10.

the evidence suggests occupation during the Intermediate period. There also is some limited evidence of use of the site during the Mission period. Subsequent to data recovery, a portion of CA-LAN-61 was controlled-graded as part of construction activities under the archaeological monitoring of Archaeological Associates. Recent radiocarbon dating of the site concurs with previous data collected in 1985, suggesting that the primary occupation of the site occurred during the Intermediate period (3000-1000 B.P.).²³

3.1.5.2 CA-LAN-212

CA-LAN-212 was first documented in 1953 and was described as a small (presumably) prehistoric site. No map was provided as part of the site record and therefore it is unclear how the site's boundaries were defined. The site's records have not been updated since, although in the 1950s the University of California Los Angeles (UCLA) Archaeological Information Center mapped the site in the northern area of the LMU campus, including parts of the Sacred Heart Chapel and Sunken Gardens. This site, like LAN-61, generally lacks marine shell and large faunal bone, thus making it difficult to date using radiocarbon methods. However, a single portion of a projectile point which dates between 5000 to 1500 B.P. was recently recovered from the site. It is likely that this site dates to roughly the same time periods as LAN-61.

3.1.5.3 CA-LAN-1018

Like LAN-61, CA-LAN-1018 (also known as Farmer Site #4) was first documented by a local resident in 1936. It was formally recorded in 1979 and was described as a shell midden on a terrace containing historical-period artifacts. Located near where Hughes constructed a helipad, LAN-1018 was tested again in 1990 by Peak & Associates for AT&T. Shovel testing at CA-LAN-1018 revealed large quantities of shell associated with historical-period artifacts. Peak and Associates concluded that the deposit was highly disturbed, but recommended archaeological monitoring of the construction.²⁴ It is possible that this site is not prehistoric in nature, but rather a natural Pleistocene-aged shell deposit. Additionally, several archeologists that surveyed the area in the 1980s concluded that the site had been destroyed by grading and discing and that no archaeological material remained at the site.²⁵

3.1.6 Early Archaeological Investigations in the Ballona

Until the latter half of the 20th century, amateur collectors undertook archaeological work in the Ballona. The first professional archaeological overview of sites in the Ballona was undertaken in 1912 by

²³ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 6.3.

²⁴ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.4.

²⁵ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.5.

Nels Nelson. Nelson undertook a survey of prehistoric “campsites” and “refuse heaps” between Topanga Canyon and the southern limits of San Diego Bay. In the Ballona area, he surveyed at the base of the Westchester Bluffs, but did not go as far east as the Lincoln Gap. Although interest in “Early Man” sites brought scientists to the upper Ballona in the 1920s, little archaeological exploration took place west of the Baldwin Hills.

For many years, and continuing through the 1930s, local doctor F. H. Racer of Lomita made collections from sites along the coast. An unpublished manuscript by Racer documented the sites he explored in what he called the Harbor District, which included the Ballona area and the bluff top and bluffs in the vicinity of the LMU campus. The sites described by Racer have been identified as LAN-63 and LAN-64, at the base of the bluffs, but may also refer to sites close to or on LMU’s campus, such as LAN-61.

During this period, Malcolm Farmer, a local resident, began a survey of sites in Playa del Rey, along the bluff tops, and in the Baldwin Hills area along Ballona Creek, looking for evidence of Early Man. Farmer identified LAN-61 and LAN-1018, both located on the bluff tops on LMU’s campus. Farmer did not believe that the latter was an archaeological site but rather was a bed of fossil shells. As previously stated, test excavations at LAN-1018 led to a similar conclusion. This site is currently developed.

William Deane was another avid collector who created a large artifact collection from the Ballona area during the 1940s. In the 1950s, Hal Eberhart at the UCLA Archaeological Information Center plotted several of the sites Deane described. Eberhart mapped Dean’s LAN-212 in the northern area of the LMU campus, including parts of the Sacred Heart Chapel and Sunken Gardens.

In 1950, two graduate students at UCLA, Charles Rozaire and Russell Belous, visited the Ballona area to obtain information for a term paper on Ballona Creek archaeology. Rozaire and Belous formally recorded many archaeological sites in the Ballona. Rozaire and Belous produced the first site records for many sites in the region, including LAN-59, LAN-60, LAN-61, LAN-63, LAN-64, and LAN-65.

In a 1964 undergraduate paper, George Schofield described artifacts he and associates collected in the 1960s. Although the locational information is contradictory, the collection appears to have been taken from several sites on top of the bluffs, possibly including LAN-61, LAN-63, LAN-64, LAN-65, LAN-206, and LAN-212. Artifacts found included manos, metates, projectile points, flaked stone tools (especially scrapers), tarring pebbles, worked shell, and some steatite objects.

3.1.7 Recent Archaeological Research (1979–2009)

Professional archaeologists returned to the area in 1979; projects headed by David M. Van Horn and his associates took place primarily in the 1980s in the areas above and below the bluffs and a large number of surveys, testings, and data recovery projects have been conducted in the area surrounding LMU in the past 20 years.

On top of the bluff, Van Horn and his associates performed testing at LAN-1018 and testing and data recovery work at LAN-61 in advance of construction by the Hughes Aircraft Company and LMU. Only a very small number of artifacts were found at LAN-1018 and Van Horn concluded that the site had been destroyed by grading and discing. Dillon later confirmed that no archaeological material remained on the site.

Van Horn's testing and data recovery excavations at LAN-61 begun in 1984 produced many artifacts and numerous features including hearths, artifact scatters, a single burial, caches, earth ovens, and features of unknown use. Many of the features found were associated with subsistence and production activities at the site, although several clusters of human bone were also found. Based on differing styles of some of the artifacts, Van Horn proposed that LAN-61 encompassed three different loci of different ages: LAN-61A, the Marymount Site; LAN-61B, the Loyola Site; and LAN-61C. All three LAN-61 loci were apparently abandoned prior to A.D. 1000.

Van Horn's report claimed that their sample from the site was representative and offered important information on the prehistoric inhabitants and activities at LAN-61. The report further noted that it was possible that other important finds could be identified during future grading in the area. Consequently, they recommended that grading operations for future development at the site of LAN-61 be monitored by a qualified archaeologist who could distinguish redundant material from new finds meriting further investigation.

In June 2007, Statistical Research, Inc., was contracted by Loyola Marymount University to conduct archaeological testing and data recovery on a northeast portion of LAN-61 in preparation for construction of the William H. Hannon Library. Between June and August 2008, Statistical Research, Inc., conducted testing, data recovery, and mechanical stripping²⁶ of the area within and surrounding the former location of the West Hall and West Hall Annex buildings, located east of the planned William H. Hannon Library to ensure as much information was collected as possible related to the prehistoric inhabitants of this

²⁶ Mechanical stripping involves the use of a flat-bladed excavator or similar heavy equipment, under the oversight of an archaeologist, to remove in a controlled manner the archaeological deposit, in preparation for and prior to construction.

portion of LAN-61. This included excavation of two units on the south side of LMU Drive, immediately south of the former location of the West Hall and West Hall Annex buildings. During hand excavation and subsequent mechanical stripping, a total of three prehistoric features, all designated as rock clusters that were apparently made by prehistoric peoples, were identified and recorded, although they lacked obvious indications of thermal alteration of the surrounding soil, but may have been related to the use of fire. These finds generally appear similar to discoveries by Van Horn and Murray in 1985. A portion of LAN-61 south of LMU Drive was left intact after data recovery and is currently an open space area with concrete walkways and new plantings. Generally, the area to the north of LMU Drive had a higher artifact density than the area excavated to the south, indicating that the area to the south was more peripheral to the main portion of the site. Primary occupation of the site dates to the Intermediate period (3000–1000 B.P.). Macrobotanical analysis of seeds indicates that the upper reaches of the site contain burned domesticated wheat and burned native seeds; this may indicate independent evidence for a Mission period component to the site. In addition to data recovery excavation, archaeological and paleontological monitoring occurred as necessary in these areas related to the construction of the William H. Hannon Library.²⁷

Excavation and subsequent monitoring occurred at LAN-212 during the summer of 2008. A portion of this area is currently an open-space area with a path, benches, and new plantings. After testing revealed that intact site material was present, data recovery was conducted. Less excavation was conducted at LAN-212 compared to LAN-61 because there were minimal impacts to the archaeological site associated with development of this area as open space. While there were a few shells and bone present, the flaked stone density was the highest, compared to the two portions excavated of LAN-61. The lack of shell and large faunal bone did not allow radiocarbon dating to be conducted, but a portion of a Vandenberg Contracting Stem projectile point was found during excavating, tentatively dating the site to between the 5000 and 1500 B.P., corresponding to the Millingstone and Intermediate periods, similar to the time period of LAN-61. Analysis of the collected remains from both LAN-61 and LAN-212 continued through July 2009.

Statistical Research, Inc. also conducted a field survey at Loyola Marymount University in June 2007. Several areas of campus, including areas adjacent to LAN-61 and LAN-212, contained dark, sandy soil which may represent archaeological site material. Archaeological monitoring and data recovery in the northern portion of LAN-61 extended the recorded site boundaries to the east. Given the terrain in the area of LAN-212 along the edge of the bluff, as well as dark, sandy soil exposed on the surface, it was thought during the field survey that LAN-212's site boundary extends to the north, along the edge of the

²⁷ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.7.

bluff, behind Sacred Heart Chapel. Subsequent testing, data recovery, and monitoring in this area in 2008 confirmed that the site boundary extends along the edge of the bluff.

Archaeological investigations were also conducted in four areas of Burns Campus in 2007 and 2008. In three cases, mechanical trenching and screening of a representative sample of soil from trenches excavated with a backhoe produced negative findings; that is, no archaeological deposits were present. In the fourth instance, several unrelated prehistoric artifacts were identified during initial trenching and subsequent hand excavation. The soils in this area did not appear to be created by human activity, and no prehistoric midden deposit was identified.

3.1.8 The Tongva Memorial

Subsequent to the data recovery work in the 1980s and the controlled grading of portions of LAN-61 in the 1990s, a Tongva Memorial was created just west of the O'Malley Residence Hall on the bluff side of LMU Drive, within the recorded site boundaries of LAN-61. This memorial was created, in part, as a tribute to the Gabrieleno/Tongva, the Native Americans who lived in the Los Angeles Basin for thousands of years prior to the arrive of Europeans. The memorial consists of a paved flagstone inner circle and centerpiece surrounded by benches and native plantings. A small ethnobotanic garden accompanies the memorial. The memorial's inner circle and centerpiece were designed by Mathew Dorame, a member of the Gabrieleno/Tongva community.

4.0 IMPACT ANALYSIS

4.1 Methodology

This section incorporates information contained in the *Archaeological Resource Inventory and Impact Assessment Technical Report* prepared for the Proposed Project by Statistical Research, Inc., in 2009. The purpose of the report is to evaluate the potential for the Proposed Project to adversely affect archaeological resources. As part of the study, Statistical Research, Inc., performed background studies of published and unpublished articles, books, manuscripts, maps, drawings, and photographs to establish the prehistory and history of the Proposed Project area and determine whether sites had been previously recorded or were known to exist on the campus or in its vicinity. Background research was supplemented by consultation with California State University, Fullerton Archaeological Information Center concerning archaeological site files for recorded sites within a 1-mile radius of the campus. The technical report also sets forth measures for identifying and evaluating any previously unknown cultural resources in the Proposed Project area and mitigating direct and indirect impacts to any resources that may be caused by implementation of the Proposed Project. The technical report is provided in **Appendix IV.D.2**.

4.2 Significance Thresholds

The *Los Angeles CEQA Thresholds Guide* states that a project would normally have a significant impact upon archaeological resources if it could disturb, damage, or degrade an archaeological resource or its setting that is found to be important under the criteria of CEQA because it:

- ARCH-1 Is associated with an event or person of recognized importance in California or American prehistory or of recognized scientific importance in prehistory;
- ARCH-2 Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions;
- ARCH-3 Has a special or particular quality, such as the oldest, best, largest, or last surviving example of its kind;
- ARCH-4 Is at least 100 years old²⁸ and possesses substantial stratigraphic integrity; or
- ARCH-5 Involves important research questions that historical research has shown can be answered only with archaeological methods.

Appendix G of the State *CEQA Guidelines* provides sample questions for use in an initial study to determine a project's potential for environmental impacts. According to the sample questions²⁹ included in Appendix G under Section V, Cultural Resources, a project would have a potentially significant impact if it would:

- V.b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- V.d) Disturb any human remains, including those interred outside of formal cemeteries.

The thresholds used in the *Los Angeles CEQA Thresholds Guide* to determine significant archaeological impacts are inclusive of those provided in Appendix G of the *State CEQA Guidelines*. Therefore, thresholds **ARCH-1** through **ARCH-5**, above, are used for the following analysis of the Proposed Project's potential impacts.

²⁸ Although the CEQA criteria state that "important archaeological resources" are those, which are at least 100-years-old, the California Register provides that any site found eligible for nomination to the National Register will automatically be included within the California Register and subject to all protections thereof. The National Register requires that a site or structure be at least 50 years old.

²⁹ The remainder of the Appendix G Cultural Resources sample questions (V.a and -c) pertain to paleontological and historic resources and are addressed in **Sections IV.D.1** and **IV.D.3**, respectively.

4.3 Project Design Features

Several portions of campus are designated as an Open Space Planning Area by the proposed LMU Specific Plan, significantly limiting the potential for any construction activity in those areas.

4.4 Project Impacts

4.4.1 Construction

- ARCH-1 Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that is associated with an event or person of recognized importance in California or American prehistory or of recognized scientific importance in prehistory?
- ARCH-2 Would the proposed project disturb, damage or degrade an archaeological resource or its setting that can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions?
- ARCH-3 Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that has a special or particular quality, such as the oldest, best, largest, or last surviving example of its kin?
- ARCH-4 Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that is at least 100 years old³⁰ and possesses substantial stratigraphic integrity?
- ARCH-5 Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that involves important research questions that historical research has shown can be answered only with archaeological methods?

As previously discussed, the campus contains three recorded archaeological sites: LAN-61, LAN-212 and LAN-1018. The potential for impacts to these sites and to areas outside of the boundaries of these sites is described below. The Native American Heritage Commission stated that there are no sacred sites in the immediate vicinity of the LMU campus.³¹ Should human remains be discovered, **MM-ARCH-7** would reduce impacts to a less than significant level.

³⁰ Although the CEQA criteria state that "important archaeological resources" are those that are at least 100 years-old, the California Register provides that any site found eligible for nomination to the National Register will automatically be included within the California Register and subject to all protections thereof. The National Register requires that a site or structure be at least 50 years old.

³¹ Statistical Research, Inc., *Archaeological Resource Inventory and Impact Assessment Technical Report*, 5.11.

4.4.1.1 LAN-61

As discussed above, LAN-61 is recorded as a large, prehistoric archaeological site primarily located on Leavey Campus. Previous research on this site by Van Horn and Murray (1985) indicated that this was a multicomponent site containing complex archaeological features, human burials and isolated human remains, and substantial stratigraphic integrity. Recent field survey, testing, and data recovery work indicates that the site is larger than previously thought, extending farther north and east. Portions of this tentatively extended site boundary extend into Burns Campus. Much of this archaeological site underwent data recovery and subsequent controlled grading as part of the development of Leavey Campus. However, while the majority of the site is likely no longer intact, recent archaeological work by Statistical Research, Inc. indicates that portions of the site (including some located to the east on Burns Campus) are still present. This site is important, as it is one of the last remaining prehistoric archaeological sites on the Westchester bluff tops and can offer scientific information useful for the reconstruction of prehistoric lifeways in the Ballona and Westchester areas. In addition, artifacts and/or features that may be present may have importance to Native Americans and archaeologists.

Implementation of the Proposed Project has the potential to disturb, damage, or degrade archaeological resources or their settings in and around LAN-61, which may be able to address scientifically consequential and reasonable archaeological questions, as defined in the thresholds above. As a result, implementation of the Proposed Project could have a potentially significant impact on archaeological resources or their settings. However, implementation of mitigation measures **MM-ARCH-1** through **MM-ARCH-12** would reduce the impacts to a less than significant level.

4.4.1.2 LAN-212

As discussed above, little is currently known about LAN-212. Originally recorded by Deane (an amateur archaeologist) in the 1950s, this site's record at the South Central Coastal Information Center has not been updated since it was created. Original site boundaries indicate the site is immediately to the south of Sacred Heart Chapel, in Burns Campus. Recent field survey, testing, and data recovery work by Statistical Research, Inc., suggests that the site boundary may extend farther than previously recorded, extending to the north along the edge of the bluff, to the north of Sacred Heart Chapel. As with LAN-61, this site is important, in part because it is one of the last remaining prehistoric archaeological sites on the Westchester bluff tops and can offer scientific information useful for the reconstruction of prehistoric lifeways in the Ballona and Westchester areas. In addition, artifacts and/or features that may be present may have importance to Native Americans and archaeologists. Because so little is known about this prehistoric site, radiocarbon dating of samples from the midden could offer important information regarding when this site was occupied in relation to other sites in the region. However, a single portion of

a projectile point which dates between 5000 to 1500 B.P, was recently recovered from the site. It is likely that this site dates to roughly the same time periods as LAN-61.

Proposed Project implementation has the potential to disturb, damage, or degrade archaeological resources or their settings in and around LAN-212, which can address scientifically consequential and reasonable archaeological questions, as defined in the thresholds above. As a result, implementation of the Proposed Project could have a potentially significant impact on archaeological resources or their settings. However, implementation of mitigation measures **MM-ARCH-1** through **MM-ARCH-12** would reduce the impacts to a less than significant level.

4.4.1.3 LAN-1018

The discussion of LAN-1018 above indicates that this site may have been heavily disturbed. This site was first documented in 1936 (known then as Farmer Site #4) but was not formally recorded until 1979 by Pence. Whereas there are site boundaries recorded for this site at the South Central Coastal Information Center, the apparent disturbance to the site over the years makes the exact boundaries of the site difficult to discern at this point in time. Various testing by previous archaeologists has identified prehistoric, historical period, and modern artifacts at this location. Recent testing in 1990 at this site revealed large quantities of shell associated with historical-period artifacts, as well as assorted modern refuse. A single prehistoric artifact was recovered during this testing. Generally, this site is thought to be disturbed but may contain important scientific information. If intact portions of the site are found, radiocarbon dating of the midden could offer important information on when this site was occupied. In addition, artifacts and/or features that may be present may have importance to Native Americans and archaeologists.

The Proposed Project implementation has the potential to disturb, damage, or degrade archaeological resources or their settings in and around LAN-1018, which can address scientifically consequential and reasonable archaeological questions, as defined in the thresholds above. As a result, implementation of the Proposed Project could have a potentially significant impact on archaeological resources or their settings. However, implementation of mitigation measures **MM-ARCH-1** through **MM-ARCH-12** would reduce impacts to a less than significant level.

4.4.1.4 Areas Outside of Known On-Site Archaeological Site Boundaries

As discussed above, it is clear that there is the potential for archaeological deposits outside of the known site boundaries for LAN-61, LAN-212, and LAN-1018. Recent research by Statistical Research, Inc., has tentatively extended the site boundaries of LAN-61 and LAN-212, based either on testing or on a recent field survey of the campus conducted by Statistical Research, Inc. Additionally, during the recent field survey, which was designed to be preliminary, certain areas of campus were found to have dark, sandy

soil that may represent archaeological site material. Intact archaeological material may be present on the surface or under a layer of soil (also called fill) in open areas of campus and areas underneath standing buildings. For example, in urban areas, it is not unusual to find that there is intact archaeological material directly underneath the slabs of older building that did not have substantial soil preparation prior to construction. In these cases, the buildings and fill may be capping, and thus protecting, archaeological resources. Although the oldest buildings on campus are more likely to cap archeological deposits, this is a possibility on the entire campus, depending on construction techniques historically used.

For these reasons, implementation of the Proposed Project has the potential to disturb, damage, or degrade archaeological resources or their settings in and around the remainder of the LMU campus that could address scientifically consequential and reasonable archaeological questions, as defined in the thresholds above. As a result, implementation of the Proposed Project could have a potentially significant impact on archaeological resources or their settings. Implementation of the recommended mitigation measures **MM-ARCH-1** through **MM-ARCH-12** would reduce impacts to a less than significant level.

4.4.2 Operation

- | | |
|--------|---|
| ARCH-1 | Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that is associated with an event or person of recognized importance in California or American prehistory or of recognized scientific importance in prehistory? |
| ARCH-2 | Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions? |
| ARCH-3 | Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that has a special or particular quality, such as the oldest, best, largest, or last surviving example of its kin? |
| ARCH-4 | Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that is at least 100 years old ³² and possesses substantial stratigraphic integrity? |
| ARCH-5 | Would the proposed project disturb, damage, or degrade an archaeological resource or its setting that involves important research questions that historical research has shown can be answered only with archaeological methods? |

³² Although the CEQA criteria state that "important archaeological resources" are those that are at least 100-years-old, the California Register provides that any site found eligible for nomination to the National Register will automatically be included within the California Register and subject to all protections thereof. The National Register requires that a site or structure be at least 50 years old.

Project operation—that is, LMU operations following Proposed Project buildout—would not normally require grading, excavation, or other ground-disturbing activities. Routine maintenance activities, such as replacement of underground pipes requiring ground disturbing activities, could have a potentially significant impact on archaeological resources or their settings. However, implementation of mitigation measures **MM-ARCH-1** through **MM-ARCH-12** would reduce impacts to a less than significant level.

4.5 Project Design Features and Mitigation Measures

PDF-ARCH-1 The Proposed Project shall be consistent with the open space land use regulations established by the proposed LMU Specific Plan.

The mitigation measures presented below are required to reduce impacts on archaeological resources to a less than significant level.

MM-ARCH-1: Archaeological resources shall be avoided, or unavoidable disturbance shall be mitigated through data recovery, documentation, analysis, and curation. Archaeological treatment plans shall be developed and implemented, as applicable. All materials and records resulting from implementation of the archaeological treatment plans shall be curated in accordance with 36 Code of Federal Regulations, Part 79 (Curation of Federally Owned and Administered Archaeological Collections).

MM-ARCH-2: Prior to starting ground-disturbing activities such as construction work on campus, LMU shall retain a Project archaeologist who meets the Secretary of the Interior’s guidelines and is listed in the Register of Professional Archaeologists. In addition, a Native American member of the Gabrieleno/Tongva Tribal community shall be retained under contract as a monitor.

MM-ARCH-3: Before beginning the planned ground-disturbing activities (such as material grading and excavation activities), LMU shall consult with the archaeologist to determine if any potential exists as a result of the planned ground-disturbing activities for disturbance or damage to archaeological resources. The Proposed Project archaeologist shall conduct a preliminary archaeological evaluation (which may include subsurface evaluation) to determine if there are archaeological resources present. If none are determined to be present within the area of planned ground-disturbing activity, then the archaeologist shall determine there is no potential for disturbance or damage to archaeological resources and the area may be cleared for construction work without the need for further archaeological work.

- MM-ARCH-4: If the archaeologist determines there is potential for damage to archaeological resources due to planned ground-disturbing activities, all ground-disturbing activities shall be monitored by the Proposed Project archaeologist and a Native American member of the Gabrieleno/Tongva Tribal community and mitigation for any potential adverse effects to archaeological resources from construction, as identified in Mitigation Measures **MM-ARCH-4** through **MM-ARCH-12** (below), shall be conducted.
- MM-ARCH-5: If based on a preliminary archaeological evaluation the archaeologist determines there are no archaeological resources present, but archaeological resources are encountered, work shall halt and LMU shall consult again with the archaeologist to determine if any potential exists as a result of the planned ground-disturbing activities for disturbance or damage to archaeological resources (see Mitigation Measure **MM-ARCH-3**).
- MM-ARCH-6: If archaeological discoveries are identified during monitoring of ground-disturbing activity, the archaeologist may order the temporary diversion of work outside a 200-foot radius around the discovery until the archaeologist has evaluated the nature and significance of the find.
- MM-ARCH-7: If potential human remains are encountered during ground-disturbing activities, all work shall halt, and the Los Angeles County Coroner's Office shall be notified, as prescribed in Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, and as required by the CEQA Guidelines (Section 15126.4(b)(3) of the California Code of Regulations). If the Coroner determines that the remains are of Native American origin, the Coroner shall proceed as directed in Section 15064.5(e) of the *State CEQA Guidelines*. LMU shall follow all guidelines outlined in Public Resources Code Section 5097.98 and Section 5097.94(k).
- MM-ARCH-8: If significant archaeological resources are encountered, a data recovery plan to mitigate potential adverse effects of construction to a less than significant level shall be developed and implemented. This data recovery plan shall include methods for hand-excavation, analysis, and report writing and also shall provide procedures for the curation of any collected material at a facility meeting professional standards.
- MM-ARCH-9: After the archaeologist determines that potential impacts to archaeological resources have been mitigated, where necessary, work may resume in the area where the archaeological resources were encountered.

MM-ARCH-10: Any artifacts uncovered shall be recorded and removed for storage at a location to be determined by the archaeologist.

MM-ARCH-11: If archaeological resources are encountered outside of presently recorded site boundaries of CA-LAN-61, CA-LAN-212, and CA-LAN-1018, the site shall be recorded in accordance with requirements of the State Office of Historic Preservation (i.e., using Department of Parks and Recreation [DPR] 523 forms) and evaluated.

MM-ARCH-12: Draft reports on archaeological findings shall be prepared by the Proposed Project archaeologist for submission to the City of Los Angeles for review. Final versions of these reports shall be submitted to the City of Los Angeles, LMU, and the South Central Coastal Information Center at California State University, Fullerton. The report shall outline the data recovery plan in place for mitigation and shall describe the history of the Proposed Project area, research questions, the field and laboratory methods and results, and how these findings coincide with both the project research questions and the broader context of archaeology in the region. Collected material and project paperwork shall be curated at a facility meeting professional standards.

4.6 Level of Impact After Mitigation

With implementation of the recommended mitigation measures **MM-ARCH-1** through **MM-ARCH-12** Proposed Project impacts would be less than significant; however, contributions to cumulatively significant impacts on archaeological resources would be significant, as is discussed in **Section 4.7**.

4.7 Cumulative Impacts

Development of the related projects identified in **Section III, General Description of Environmental Setting** may also require grading and excavation that could potentially affect archaeological resources. Related Projects Nos. 21, 22, and 23, all located within Playa Vista, are being developed in an area where archaeological resources are known to be present. Recent monitoring during grading activities within Playa Vista has uncovered a variety of cultural resources, including human remains, which are being dealt with in accordance with the mitigation measures adopted for that project and applicable federal and state regulations. Other related projects in the area, including West Bluffs and MDR Towers, have been or will be developed in areas where unique archaeological resources are located. In some cases, projects will impact only a portion of the archaeological sites (Playa Vista) whereas others will remove the entire recorded site for development (West Bluffs and MDR Towers). The cumulative effect of these projects could contribute to the loss of subsurface cultural resources if these resources are not protected upon discovery. CEQA requirements for protecting archaeological resources are applicable to

development of related projects. Mitigation measures are required that would reduce the Proposed Project's impacts on archaeological resources to less than significant levels. However, the cumulative total of all related development and the Proposed Project creates the potential for cumulative impacts to archaeological resources. Although each project must develop adequate mitigation measures to substantially lessen or avoid impacts on an individual basis, the incidental loss of portions of numerous archaeological resources in the Proposed Project area may constitute a significant cumulative impact. Consequently, the Proposed Project's contribution to cumulatively significant impacts would be cumulatively considerable and, therefore, the Proposed Project's contribution to cumulative impacts would be significant.