

5.4 CULTURAL RESOURCES

Cultural resources include places, objects, and settlements that reflect group or individual religious, archaeological, architectural, or paleontological activities. Such resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. This section of the recirculated Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Irvine Business Complex Vision Plan and Overlay Zoning Code to impact cultural resources in the City of Irvine. The analysis in this section is based, in part, upon the following information:

- *Paleontological and Archaeological Evaluation Report and Recommendations for the Irvine Business Complex, City of Irvine, California, 2009, S. Gust and K. Scott, Cogstone.*

A complete copy of this study is included in Appendix I to this Draft EIR

5.4.1 Environmental Setting

Study Methodology

Paleontological records, archaeological and historical records, and sacred lands files were searched for resources in the project area and immediate vicinity. Native American consultation was performed in addition to that completed by the city as required by Senate Bill 18. Historical maps and aerials of the project were obtained to document development changes. Copies of records and reports were obtained for evaluation. Considerable effort was made to communicate with consultants to determine status of completed and ongoing work in this area.

Regulatory Background

State Regulations

California Public Resources Code

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural and paleontological resources are recognized as a nonrenewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code 5020–5029.5 continues the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The Commission oversees the administration of the California Register of Historical Resources, and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- California Public Resources Code 5079–5079.65 defines the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federally and state-mandated historic preservation programs in California and the California Heritage Fund.
- California Public Resources Code 5097.9.–5097.998 provides protection to Native American historical and cultural resources and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.



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California Senate Bill 18

State law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

Senate Bill 18, (SB18) regarding Traditional Tribal Cultural Places (TTCP), was signed into law in September 2004 and went into effect on March 1, 2005. It places new requirements upon local governments for developments in or near a TTCP. Per SB 18, the law requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Final Tribal Guidelines recommends that the NAHC provide written information as soon as possible but no later than 30 days to inform the Lead Agency if the proposed project is determined to be near a TTCP and another 90 days for tribes to respond to a local government if they want to consult to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may or may not include tribes listed by the NAHC who have requested consultation. If the NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, they are included in the project's EIR. If both the City and the tribe agree that adequate mitigation or preservation measures cannot be taken, neither party is obligated to take action.

Per SB 18, the law institutes a new process that would require a city or county to consult with the NAHC and any appropriate Native American tribe for the purpose of preserving relevant TTCP prior to the adoption, revision, amendment, or update of a city's or county's general plan. While SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advises that SB 18 requirements extend to specific plans as well, as state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code § 65453). In addition, SB 18 provides a new definition of TTCP, requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies, or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. Previously, the site was defined to require only an association with traditional beliefs, practices, life ways, and ceremonial activities. In addition, SB 18 law also amended Civil Code Section 815.3 and adds California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

Local Ordinances

The City of Irvine General Plan includes a Cultural Resources Element. It recognizes the importance of historical, archaeological, and paleontological resources in the City and establishes a process for their early identification, consideration, and where appropriate, preservation. It requires assessment of potential resources on projects and uses planning policies, ordinances, approval conditions, and mitigation measures to protect the resources.

Natural Setting

The project area is in alluvial valleys of the Los Angeles basin. The basin is bounded to the north by the Santa Monica Mountains, to the east by the Santa Ana Mountains and associated hills (Puente/Chino, San Jose, and Repetto), to the south by the San Joaquin Hills and the Pacific Ocean, and to the west by the Palos Verdes Hills and the Pacific Ocean. Historically, the project area consisted of open lagoon, estuary, and seasonal freshwater wetlands surrounded by coastal plain. Freshwater sources were natural springs,

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runoff from the Santa Ana Mountains, seasonal flooding of the Santa Ana River, and pooling of rainwater in lowland areas.

Cultural Setting

Historical Resources

Historical use of the project lands involved ranching and agriculture. In 18th and early 19th centuries the project area was part of lands under the control of Mission San Juan Capistrano, founded in 1776. It was most likely used for grazing animals. After 1833, the missions lost ownership of the lands, which were redistributed by the government. The project area lies partially in two large Mexican land grants. The first is Rancho San Joaquin, a land grant issue to Don Jose Sepulveda in 1837, who raised cattle and sheep. The land grant issued by the Mexican government incorporated approximately 50,000 acres of the former San Juan Capistrano mission lands. In 1864 Jose Sepulveda sold the rancho to Flint, Bixby & Co.

The second is Rancho Santiago de Santa Ana, the oldest Mexican land grant in the region, issued to Jose Antonio Yorba, a soldier with the Portola expedition of 1769, and his nephew Juan Peralta. The land grant was for an area encompassing some 62,516 acres, and stretched west from the eastern flanks of the Santa Ana Mountains to the ocean, with the north and northwestern boundary formed by the east bank of the Santa Ana River. The Yorbas and Peraltas developed the rancho primarily for cattle grazing and crops and eventually the rancho supported at least 33 adobes. In 1866 the Yorbas and Peraltas sold their ranch to Flint, Bixby & Co.

In 1876, James Irvine bought out his partners in Flint, Bixby & Co. and became the sole owner of the Irvine Ranch. It continued to be largely a ranching operation for many years. James Irvine Jr. transitioned the ranch from cattle raising to crops. He drilled wells and developed the Irvine Ranch water system, including Irvine Lake, to support the farming operations. In 1887 the San Bernardino and San Diego Railroad, a subsidiary of Santa Fe, laid rail tracks across the ranch. Buildings to process and pack the ranch agriculture products were built next to the tracks.

The lands were agricultural with sparsely placed farm houses and associated outbuildings through the 1950s. Interstate 405 was constructed in the mid-1960s and urbanization of the area began. For the remainder of the 20th century, urbanization continued, with commercial building dominating the project area. By the beginning of the 21st century, redevelopment was taking place. No significant historical resources are known in the project area.

Archaeological Resources

The prehistoric period is generally divided into four intervals. The first is the Early Millingstone Period, 8,000 to 6,500 years before present (BP). Archaeological evidence suggests a small and highly mobile population foraging on a seasonal basis. Coastal sites of the period have emphasis on protein sources but have higher frequencies of sharks and rays than in lagoons. The abundance of scallops and oysters in these early collections is consistent with relatively open lagoon conditions.

The second is the Late Millingstone Period, 6,500 to 3,000 years BP. Sites from this period appear to be part of an expansion of settlement to take advantage of new habitats and resources that became available as sea levels stabilized between about six to five thousand years ago. Archaeological evidence suggests a continued pattern of small, mobile foraging groups. Sites are dominated by shellfish remains. Gorges were used for fishing and mano/metate pairs were used to process plant materials. Most sites were in coastal areas.



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The third is the Intermediate Period, 3000 to 1000 years BP. Archaeological sites indicate the continuation of small, mobile foraging groups early in this period but later sites were relatively large and contain hearths, mortuary features, and houses. The later sites reflect a much broader strategy that targeted terrestrial mammals and birds from the freshwater marsh and coastal prairies, as well as fish and shellfish. The emergence of venus clam (*Chione*) as the predominant shellfish in almost all collections is consistent with the expansion of mudflats at this time. The first circular fish hooks appear in the tool kit in this period and use of plant grinding tools increases. Hunting tools consist of the atlatl and dart.

The fourth is the Late Period, 1000 years BP to the late 1700s. Environmental change caused constriction of Upper Newport Bay and expansion of freshwater wetlands in the low-lying San Joaquin Marsh area. In this period the atlatl and dart hunting tools are replaced by the bow and arrow. A portion of the mano/metate inventory was gradually replaced by pestle/mortars. Use of other traditional tools continues. Settlement was expanded into the hills and canyons inland.

The nature of Native American cultural systems older than 3000 years BP in southern California remains poorly defined. Recently, it has been proposed that there may have been periodic movement of desert peoples into coastal areas as far back as 8,000 years BP.

The project area was in the territory of the Tongva beginning approximately 3,000 years BP. The name “Gabrielino” is Spanish and was used in reference to the Native Americans associated with the Mission San Gabriel. It is unknown what these people called themselves before the Spanish arrived, but today they call themselves Tongva, meaning “people of the earth.”

The Tongva/Gabrielino language is part of the Takic language family originating in the Great Basin. Their prehistoric tool kit demonstrates strong links to other desert peoples. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all more than 2,500 square miles. At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

Three prehistoric archaeological sites are known within the project boundaries. These sites had cooking features, abundant food refuse, both ground and chipped stone tools, waste from tool creation, ceremonial and ornamental objects, and burials. Archaeological evidence demonstrates that the largest components of the sites date between 5,000 and 1,000 years BP. A portion of one site was preserved from future development with burials intact and preserved. The remainder of the IBC project area does not appear to have any sensitivity for prehistoric resources.

Paleontological Resources

The surface of the project area consists of recent alluvial sediments deposited by streams and other water sources. Lying at variable depth below the surface, but generally more than 6 and less than 30 feet deep, is a complex of sand, silt, and clay containing Late Pleistocene (50–10 thousand year old) fossils. Underlying the Pleistocene strata are Middle to Early Pleistocene (1.8 million to 50,000 years old) sands of the San Pedro Formation, containing fossils.

Fossils associated with IBC residential projects include herbivores, carnivores, rabbits, rodents, birds, reptiles, and amphibians. The herbivores include mammoth, mastodon, giant ground sloth, bison, camel, llama, horse, tapir, peccary, deer, pronghorn, and dwarf pronghorn. The carnivores include bear, saber-toothed cat, jaguar, bobcat, dire wolf, coyote, gray fox, raccoon, weasel, badger, skunk, and sea otter. Known birds are turkey vulture and duck. The smaller animals include many types of rabbits, rats, mice,

gophers, wood rats, moles, shrews, lizards, snakes, and salamanders. The known fossils are all from the Pleistocene Epoch and represent the last Ice Age (50–10 thousand years ago).

5.4.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852), including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, or is not included in a local register of historical resources, does not preclude a lead agency from determining that the resource may be an historical resource.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- C-1 Cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5
- C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- C-3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- C-4 Disturb any human remains, including those interred outside of formal cemeteries.

These impacts are addressed in the following analysis.

5.4.3 Environmental Impacts

Existing Plans, Programs, and Policies

The following measures are existing plans, programs, or policies (PPPs) that apply to the proposed project and will help to reduce and avoid potential impacts related to geology and soils:

- PPP 4-1 Prior to the issuance of the first preliminary or precise grading permits for each planning area, and for any subsequent permit involving excavation to increased depth, the applicant shall provide letters documenting retention of an archaeologist and a paleontologist for the project. The letters shall state that the applicant has retained these individuals, and that the consultants



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will be on call during all grading and other significant ground-disturbing activities. These consultants shall be selected from the roll of qualified archaeologists and paleontologists maintained by the County of Orange. The archaeologist and/or paleontologist shall meet with Community Development staff, and shall submit written recommendations specifying procedures for cultural/scientific resource surveillance. These recommendations shall be reviewed and approved by the Director of Community Development prior to issuance of the grading permit and prior to any surface disturbance on the project site. Should any cultural/scientific resources be discovered, no further grading shall occur in the area of the discovery until the Director of Community Development is satisfied that adequate provisions are in place to protect these resources. Unanticipated discoveries shall be evaluated for significance by an Orange County Certified Professional Archaeologist/Paleontologist. If significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates, and other special studies; submit materials to a museum for permanent curation; and provide a comprehensive final report including catalog with museum numbers. Persons performing this work shall be Orange County Certified Professional Archaeologists/Paleontologists (City of Irvine Modified Standard Subdivision Condition 2.1).

PPP 4-2 In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, one of the following steps shall be taken (City of Irvine Standard Conditions 2.1 and A-6):

- a. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Orange County Coroner is contacted to determine if the remains are prehistoric and that no investigation of the cause of death is required. If the coroner determines the remains to be Native American, then the coroner shall contact the Native American Heritage Commission within 24 hours, and the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendent from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.
- b. Where the following conditions occur, the land owner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the property in a location not subject to further subsurface disturbance:
 - The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - The identified descendent fails to make a recommendation; or
 - The landowner or his/her authorized representative rejects the recommendation of the descendent, and mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. (CEQA Guidelines Section 15064.5[e])

Project Design Features

There are no specific Project Design Features that relate to potential cultural resources impacts.

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in parentheses after the impact statement.

IMPACT 5.4-1: DEVELOPMENT OF THE PROJECT COULD IMPACT PREHISTORIC ARCHAEOLOGICAL SITES WITH BURIALS. [THRESHOLD C-1 AND C-2]

Impact Analysis: As noted above, there are no known historical resources in the project area. The portions of IBC bounded by Interstate 405, Jamboree, Michelson, and Harvard and by Michelson, Jamboree, Campus, and Carlson have known prehistoric resources. Most of these resources have been destroyed by previous development but projects north of Michelson and west of Harvard could impact intact prehistoric resources. Implementation of PPP 4-1 would include retaining a qualified archaeologist to address the monitoring of site grading for potential archaeological/historical resources and in the event that such resources are discovered, no further grading shall occur in the area of the discovery until the Director of Community Development is satisfied that adequate provisions are in place to protect/recover those resources. Therefore, potential impacts to undiscovered historical or archaeological resources, if any, are expected to be less than significant.

IMPACT 5.4-2: THE PROPOSED PROJECT COULD DESTROY PALEONTOLOGICAL RESOURCES OR A UNIQUE GEOLOGIC FEATURE. [THRESHOLD C-3]

Impact Analysis: The project area is sensitive, at variable depths below six feet, for significant paleontological resources. Impacts above 30 feet may adversely affect Late Pleistocene fossils and those below 30 feet may adversely affect Middle to Early Pleistocene fossils. Each fossil is a unique individual, often extinct, and any damage or destruction is adverse. Implementation of PPP 4-1 would include retaining a qualified paleontologist to address the monitoring of site grading with full-time monitoring at depths below eight feet. In the event that any paleontological resources are discovered, appropriate measures would be taken to protect/recover those resources. Therefore, potential impacts to undiscovered paleontological, if any, are expected to be less than significant.

IMPACT 5.4-3: GRADING ACTIVITIES COULD POTENTIALLY DISTURB HUMAN REMAINS. [THRESHOLD C-4]

Impact Analysis: Most burials previously impacted were removed or the area where they were found was permanently preserved. However, the parking lot north of Michelson and west of Harvard may cap intact prehistoric resources, including burials. It is possible, but not likely, that buried human remains are present in the project site boundaries. Implementation of PPP 4-2 would provide the measures necessary to appropriately address such a situation by stopping further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Orange County Coroner is contacted. The Orange County Coroner would in turn contact the appropriate persons or groups who have the authority to determine treatment or disposing of the human remains as provided in Public Resources Code Section 5097.98. Therefore, the proposed project's potential to impact human remains, if any, would be reduced to a level less than significant.



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5.4.4 Cumulative Impacts

As described above, potential impacts related to historical, archaeological, and paleontological resources would be reduced to a level that is less than significant through the implementation of existing requirements (PPP 4-1 and PPP 4-2).

Future construction projects in the area that increase local population will lead to accelerated degradation of the cultural and paleontological resources. However, each development proposal received by the City undergoes additional discretionary review and is subject to the same resource protection requirements as this proposed project. If there is a potential for significant impacts on cultural or paleontological resources, an investigation will be required to determine the nature and extent of the resources and identify appropriate mitigation measures, including existing requirements such as PPP 4-1 and PPP 4-2.

Neither the proposed project nor other cumulative development in accordance with the General Plan are expected to result in significant impacts to cultural or paleontological resources provided site-specific surveys and test and evaluation excavations are conducted to determine whether the resources are unique archaeological resources or historical resources, and appropriate mitigation is implemented, including, but not limited to, compliance with existing requirements. Therefore, no significant cumulative impacts to cultural resources are expected to occur from the project.

5.4.5 Level of Significance Before Mitigation

Impact 5.4-1

PPP 4-1 would require retaining a qualified archaeologist to address the monitoring of site grading for potential archaeological/historical resources and in the event that such resources are discovered. Therefore, potential impacts to undiscovered historical or archaeological resources, if any, are expected to be less than significant.

Impact 5.4-2

PPP 4-1 would also require retaining a qualified paleontologist to address the monitoring of site grading with full-time monitoring at depths below eight feet. In the event that any paleontological resources are discovered, appropriate measures would be taken to protect/recover those resources. Therefore, potential impacts to undiscovered paleontological, if any, are expected to be less than significant.

Impact 5.4-3

PPP 4-2 would provide the measures necessary to appropriately address such a situation by stopping further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Orange County Coroner is contacted. Therefore, the proposed project's potential to impact human remains, if any, would be reduced to a level less than significant.

5.4.6 Mitigation Measures

No mitigation measures are necessary.

5.4.7 Level of Significance After Mitigation

No significant impacts have been identified and no mitigation measures are necessary.