5.4 - Cultural Resources

5.4.1 - Introduction

Purpose

The purpose of this section is to identify any existing cultural resources and potential impacts to these resources from project implementation. This section also identifies mitigation measures to reduce any potentially significant cultural resources impacts and describes the residual impact, if any, after imposition of the mitigation.

Sources

Information in this section is based on the following sources:

- Cultural Resources Assessment, Ridgeline Equestrian Estates, LSA Associates, Inc., May 27, 2008. The complete report is contained in Appendix D.
- Paleontological Resources Assessment, Ridgeline Equestrian Estates, LSA Associates, Inc., May 16, 2008. The complete report is contained in Appendix E.
- Letter from the Native American Heritage Commission, September 27, 2007. This letter is contained in Appendix A.
- Letter from the Juaneno Band of Mission Indians, Acjachemen Nation, November 21, 2007. This letter is contained in Appendix A.
- Comments received during the public scoping meeting. These comments are included in Appendix A.

5.4.2 - Existing On-Site Setting

The majority of the project site consists of a former golf course and driving range, and existing private tennis and swim club, and clubhouse used for banquets and other social events. The tennis courts, swimming pool, and clubhouse are still in use as of the date the Notice of Preparation was published and work on the Draft EIR began , but the golf course and driving range ceased operations in November 2006. Elevations on the project site ranges approximately 450 to 580 feet above mean sea level (AMSL) and slope upward from the lowest elevation at Handy Creek on the western boundary to the highest elevation along the eastern boundary. The project site is located in the Upper Sonoran Life Zone of California. This zone is represented in cistomontane valleys and low mountain slopes.

Geologic mapping indicates the undifferentiated Ecocene through Early Miocene Sespe and Vaqueros Formations underlie the project site. On the western portion of the project site, the Sespe/Vaqueros is overlain by older Pleistocene alluvium.

Cultural Resource Setting

Prehistory

The description of an overall regional chronology demarcating the major stages of cultural evolution in southern California has been attempted many times. Two principal chronologies have been revised slightly for Orange County. However, as southern California cultural developments occur gradually and have long-term stability, applying a specific chronology is often difficult. Southern California researchers have divided regional prehistory into a four-stage chronology describing changing artifact assemblages and evolving ecological adaptations. The principal chronology defines five chronologically based cultural divisions for southern California. Following are brief summaries of each. Complete descriptions of each chronology are contained in the Cultural Resources Assessment.

Early Period – The Early Period covers the period from the first presence of humans in Southern California until post-glacial times. Although it is not known exactly when the first humans existed in the region, it is generally believed that the terminal portion of the Early Period was approximately 6000-5000 BC. A date of 5750 BC is used to establish the end of the Early Period.

Milling Stone Period – The Early Period antedates the Milling Stone Period. The culture of this period included hunter-gatherers with significant time spent collecting and processing plants.

Intermediate Period – In approximately 3000 BC coastal populations began relying more on marine resources and the remains of near-shore and deep-sea fish. Settlements increased near coastal areas.

Late Prehistoric Period – This period began in approximately 500 AD. During this time changes in tool types occurred reflecting artifact technology and changes in cultural patterns such as substance strategy and ceremonial practices.

Ethnography Setting – The Late Prehistoric Period ended abruptly when Franciscan friars and Spanish soldiers began establishing mission along coastal California, beginning in 1769. Ancient inhabitants in the vicinity of the project site include ancestors of present day Juaneno Band of Mission Indians, Acjachemen Nation and the Gabrieliño Indians.

History

The project site is located within the original historic borders of the Rancho Santiago de Santa Ana, the largest and oldest rancho in Orange County. The rancho was founded in 1801 by Juan Pablo Grijalva.

Due to the Great Depression in combination with a catastrophic freeze and flood in 1937–38, Orange County experienced an economic decline that lasted until the beginning of World War II. With many service people returning to California with their families after the war, Orange County experienced its largest growth boom. The City of Orange (City) grew from 3.8 square miles in 1952 to 8.3 square miles in 1960 and the population more than doubled during this time. Most of the town's expansion has been to the north and east of the original townsite. The project site became part of the City

through an annexation requested by the owner in 1985. By 2003, the population of the City had reached an estimated 132,197 (U.S. Census Bureau 2007). The Cultural Resources Assessment provides a complete history.

Records Search and Literature Review

Data from the South Central Coastal Information Center (SCCIC) indicated that 25 cultural resources studies (22 assessments and 3 testing programs) have been conducted entirely or partially within one mile of the project site. No cultural resources surveys were conducted over the entire project site; however, one was conducted for a point on the project site (OR 2710). Much of the area within the one-mile radius is developed resulting in a relatively low percentage of that area has been previously assessed for cultural resources.

Local cultural resources assessments have shown that nine archaeological sites have been documented within one-mile of the project site. The closest cultural resource to the project site is a prehistoric artifact scatter (archaeological site number CA-ORA-702), approximately one-quarter mile west of the project site's northwest corner. Other sites located in the area indicate that prehistoric people likely made some use of the area's local surface water. This is apparent from nine prehistoric archaeological sites located within a mile of the project site and in near proximity to local drainages, which include Handy Creek, Santiago Creek, and an unnamed creek flowing along the floor of Weir Canyon.

Aerial Photo Review

The historic map and aerial photo review (USGS 1942; USDA 1938) indicated that a historic-age residence and garage were located on the property by 1942, but not prior to 1938. Modern maps of the area show the same structures on remain on the project site. By 1981, two modern-age buildings had been constructed on the project site related to the Ridgeline Country Club were evident from aerial photography. Aerial photos are included in Appendix D (Cultural Resources Assessment) of this document.

Archaeological and Cultural Resources Field Survey

A reconnaissance-level pedestrian field survey of the project site was conducted in August 2007 by LSA Associates, Inc. The survey was conducted by walking parallel transects spaced approximately 30 to 50 feet apart. The survey of the project site indicated that the majority of the ground surface has been impacted by modern landscaping activities and disturbances. Areas with patches of native vegetation and dense cacti and grasses left over from the country club golf course obscured ground visibility to approximately 40 percent.

Architectural Field Survey

Several modern-age buildings, a swimming pool, and tennis courts are associated with activities related to the Ridgeline Country Club. The field survey documented the existence of these structures

identified during the aerial photo review. The historic–age residence and garage also were documented to exist still as determined from the aerial photograph review.

One cultural resource, consisting of a historic residence (a historic house) and associated features (a historic garage and eucalyptus windrow), was identified on the project site. No prehistoric or historic archaeological cultural resources were identified during the field survey.

The historic-age residence is a one-story wood-frame house constructed in a modest interpretation of the Craftsman Style and is used as the residence for the property caretaker and family.

The residence and its associated features are located in the northwest corner of the project site. Although the historic setting of the residence has been altered by the development of the original Lazy B Golf Course and subsequently by the Ridgeline Country Club, the historic residence and its associated features have retained their architectural integrity. The residence and its associated features were documented on a State Department of Recreation (DPR) 523A form.

Paleontological Resource Setting

Geologic Setting

The project site is located in the foothills of the Santa Ana Mountains within the Lomas de Santiago (Lomas Ridge), a set of hills between the Tustin Plain to the south and Santiago Canyon to the north. Geologic mapping indicates that the undifferentiated and interfingering Eocene through Early Miocene Sespe and Vaqueros Formations underlie the project site. On the western portion of the project site, the undifferentiated Sespe/Vaqueros (S/V) is overlain by older Pleistocene alluvium. A complete description of the geological setting is contained in the Paleontological Resources Assessment.

Paleontology Setting

The undifferentiated S/V Formation is known to produce both marine and continental invertebrate and vertebrate fossils that range in age from Late Eocene to Early Miocene. Paleontological resources discovered in the S/V are important because they represent a transitional stage between the terrestrial sequence of the Sespe Formation and the overlying marine sequence of the Vaqueros Formation. Fossil localities in the area of the project site include the taxa Peratherium (marsupial), Microparamys, Simimys, Copemys (rodents), Phlaocyon (canid), Menoceras (small rhino), Merychyus (oreodont), as well as sharks, rays and fish. The mammals date to the Uintan through Hemingfordian North American Land Mammal Ages (NALMAs).

The Pleistocene in the western portion of the project site has produced fossils in areas of southern California. Miller (1971) discusses several fossil localities of Pleistocene Age are located near Costa Mesa and Fullerton that produced Tapirus (tapir), Equus (horse), Camelops (camel), Bison (bison), and Mammuthus (mammoth). A complete description of the paleontological setting is contained in the Paleontological Resources Assessment.

Records Search and Literature Review

Available geological and paleontological literature was reviewed to determine the potential for paleontological resources to occur in sedimentary deposits within the project site.

The project site is underlain by Sespe/Vaqueros (S/V) sediments as well as the very old Pleistocene alluvium. These formations are known to contain significant, nonrenewable paleontological resources. The paleontological sensitivity for sediments on the project site is high. There are 38 known paleontological localities within a six-mile radius of the site. A complete listing of the literature search is contained in the Paleontological Resources Assessment.

Paleontology Field Survey

A paleontological reconnaissance-level foot-survey of the project site was conducted in August 2007 by LSA Associates, Inc. The survey was conducted by walking intuitive transects across the project site and was focused on the visible portions of the ground surface. Visibility on the project site was poor due to the existence of fill, turf, and landscaping related to the development of the former nine-hole golf course. Road cut exposures and rodent back dirt were checked for paleontological remains and stratigraphic profiles.

During the field survey, calcareous greenish-gray silty sandstone was noted in exposures in the eastern portion of the project area. These greenish-gray sediments represent the marine sandstones of the Vaqueros Formation. No vertebrate or invertebrate fossils were located during the field survey.

5.4.3 - Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act (NHPA), as amended, requires federal agencies to consider the effects of proposed federal undertakings on historic properties. NHPA's implementation regulations require federal agencies (and their designees, permitees, licenses, or grantees) to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.

State

State Historic Preservation Programs

The State Office of Historic Preservation oversees four historic preservation programs:

- National Register of Historic Places
- California Register of Historical Resources
- California Historical Landmarks
- California Points of Historic Interest

Each program has its own specific eligibility criteria, though historic resources often overlap on multiple lists.

Resources listed in the National Register and California Historical Landmarks No. 770 and above are automatically listed in the California Register. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission area also listed in the California Register.

Native American Consultation

Due to the proposed general plan amendment, Native American Consultation is required in conformance with the provisions of SB-18. This process has been initiated by LSA on behalf of the City. LSA initiated consultation with Dave Singleton of the Native American Heritage Commission on August 27, 2007. Mr. Singleton conducted a Sacred Lands File Search and provided a list of Native American groups and individuals potentially interested in participating in consultation for projects in the vicinity. LSA sent one mailing to all listed tribes (via certified mail) and made follow-up telephone calls to ensure receipt of project information. The City conducted a consultation meeting with the Juaneno Band of Mission Indians – Acjachemen Nation on December 19, 2007. Additional, the City transmitted copies of the Cultural Resources Assessment and Paleontological Assessment for Ridgeline Equestrian Estates that was prepared by LSA Associates, Inc. A complete record of this consultation is contained in the Cultural Resources Assessment.

Local

Title 17.17 of the City's Municipal Code defines the criteria for establishing a historic district to preserve landmarks and areas exemplary of architectural, archaeological, cultural, economic, social, or historical value. In addition, under Title 17 of the Municipal Code, the City has defined "public interest property" as "any property, privately owned or otherwise, whether developed or undeveloped, which has, because of the presence of certain trees of historical value in such property, become property endowed with a public interest."

5.4.4 - Significance Thresholds

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

a.) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;

b.) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;

c.) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and/or;

d.) Disturb any human remains, including those interred outside of formal cemeteries.

5.4.5 - Project Impacts

Impacts Not Found To Be Significant

The Initial Study did not identify any impacts that were less than significant or no impact. Refer to the Initial Study in Appendix A for a complete discussion.

Potentially Significant Impacts

Potentially significant impacts to cultural resources are associated with the short-term construction-related phase of the project that could result from ground-clearing activities, structure removal, and site grading activities associated with preparing the site for development. Impacts associated with the long-term operational phase of the project are not expected because any resources that occur on the project site would have been uncovered during the short-term construction phase.

Historical Resources

Impact 5.4-1	**The project does not have the potential to cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.** **[CEQA Cultural Resources Threshold 5(a)]**

The historic-age residence is a one-story wood-frame house constructed in a modest interpretation of the Craftsman Style. It has a rectangular shape, a concrete slab foundation, and is topped by a gabled roof with exposed rafter beams and wooden lattice under the gables. The residence is sheathed in clapboard siding and has wood-framed, double-hung wood windows fitted with aluminum-framed screens. The residence has entrances on the west and north elevations, both with single wooden doors on a concrete stoop, sheltered by eaves. The majority of the windows are either single or arranged in pairs along the elevations with the exception of the northwest corner which features a row of wood easement windows that wrap around the north and east elevations. The garage is also of historic-age and is wood-framed with vertical board siding and a metal roof. Both the house and the garage are surrounded by a chain-link fence with a windrow of mature eucalyptus trees to the north.

The residence and its associated features are located in the northwest corner of the project site. Although the historic setting of the residence has been altered, the historic residence and its associated features have retained their architectural integrity. The residence and its associated features were documented on a Department of Recreation (DPR) 523A form.

Although relatively intact, the residence and garage are not eligible for listing in the California Register (California Code of Regulations §4852(b) under any of the four eligibility criteria required for listing:

- It is associated with 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;
- It is associated with the lives of persons important to local, California, or national history;
- 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, and/or;

- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to the above criteria, the California Register requires that sufficient time has elapsed since a resource's period of significance in order to obtain a scholarly perspective on the events or individuals associated with the resource. The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling and association (California Code of Regulations §4852 (c).

Based on the results of the Cultural Resources Assessment, under Criterion 1, they are not associated with any events significant to local, State, or national history.

Under Criterion 2, they are not associated with any individuals who have been notable in local, State, or national history. In 1934, Henry J. and Helen O. Ehlen purchased an undivided one-half interest in a 34-acre parcel containing the subject property from Ludwig and Katharina Ehlen. Orange City and County Directories list both couples as residents of 134 South Center Street in Orange from 1934-1939, alone with Louis Ehlen. Born in Orange in 1901, Henry held various jobs for the L.A. Dickey Furniture Company, including delivery driver, salesman, and linoleum installer. Ludwig Ehlen was likely Henry and Louis' father, as census records show 1865 as his birth year. His occupation was listed as rancher in a 1924 Orange City and County Directory. Though no sources were found to confirm a connection, Ludwig Ehlen and his sons might be related to Peter W. Ehlen, who ran a well-known general store on S. Glassell Street in Orange called Ehlen & Grote. Aerial photographs from 1938 show a rectangular section in the southern half of the Ehlen's parcel planted with a citrus grove. The rest of the parcel remained undeveloped.

Although no original permits are available for the property, City directories show that by 1940 Henry and Helen Ehlen had begun living on or near their property. In 1940, they were listed as residents of Orange Park Acres; in 1941, Henry Ehlen was a rancher living at 1103 E. Chapman; and in 1947, he was a rancher living at 10602 Meads avenue. Ludwig, Katharina, and Louis Ehlen continued to live in Orange until 1947, when Ludwig and Katharina moved to the 10700 block of Meads Avenue. Louis, at that time a bookkeeper, continued to live at 134 South Center Street in Orange. County Assessor's building notes show that by 1951, a residence had been constructed on Henry and Helen Ehlen's property. Henry and Helen Ehlen sold their property in 1963 to A.M. Steintorf, who sold it to an investment company the following year. By 1970, the property had been transformed into the Lazy B Golf Ranch (OC Archives 1970). Based on the foregoing, none of the residents historically associated with the project site were notable in local, State, or national history. Therefore, the eligibility criteria for Criterion have not been met.

Under Criterion 3, the historic house is a modest late Craftsman style residence that is not particularly representative or distinctive.

The residence and associated features were constructed in approximately 1940 by a family who lived in the home and was used as a private residence until approximately 1970 when it became part of the original Lazy B Golf Course. It has a rectangular shape, a concrete slab foundation, and is topped by a gabled roof with exposed rafter beams and wooden lattice under the gables. The residence is sheathed in clapboard siding and has wood-framed, double-hung wood windows fitted with aluminum-framed screens. The residence has entrances on the west and north elevations, both with single wooden doors on a concrete stoop, sheltered by eaves. The majority of the windows are either single or arranged in pairs along the elevations with the exception of the northwest corner which features a row of wood easement windows that wrap around the north and east elevations. The garage is also of historic-age and is wood-framed with vertical board siding and a metal roof. None of these elements are representative or distinctive.

Grain crops were the first agricultural endeavors in the Orange area, followed by grapevine planting for raisin production. A county-wide blight destroyed the vines in 1886 and local farmers shifted their efforts toward planting citrus groves. The competing Southern Pacific and Santa Fe Railroads both built depots in Orange in the 1880s. The Southern Pacific opened the first depot in 1880, and Santa Fe depot opened in 1887. As a city with an area of approximately three square miles and a population of about 600 people, the town experienced a boom resulting in incorporation on April 6, 1888 (Armor 1911). A year later, in 1889, the southern half of Los Angeles County was divided to form Orange County, with Santa Ana chosen as the County Seat.

Local farmers experimented with a variety of crops and fruit-bearing trees; and by 1920, oranges had become the area's most prolific and profitable crop. By 1929, Orange County was producing more than $12 million in oranges annually with a large percentage coming from the City and environs of Orange itself. A portion of Orange County just west of the project site became Orange Park Acres, a rural subdivision developed by Frank Mead in 1928 (Brigandi 1997). Aerial photographs from 1938 show Orange Park Acres and surrounding land as a hilly area devoted to agriculture, primarily citrus groves and chicken ranches.

Aerial photographs from 1955 show the residence at 10604 Meads Avenue in the northwest corner of the property, south of a windrow at the end of a dirt driveway. The citrus grove that had been present in 1938 remained the same size. A reservoir had been added northeast of the residence, and a long row of trees were planted north to south along the ridgeline of the adjacent hills. By 1959, two-thirds of the citrus grove had been removed (OC Archives).

Over the latter half of the 20th century, low-density residential came to replace agriculture as the dominant land use of the area, although incoming residents to Orange Park Acres have retained the subdivision's rural character by focusing the community on horse-related activities. Around this time, the residence became a caretaker's residence for the golf course, and two corrugated metal buildings were added just east of the residence to store maintenance equipment.

Despite the house and garage retaining their original features, neither retain sufficient integrity of setting to be a good example of an agricultural property. This is due to shift in setting from an agricultural setting to one characterized by rural residential development with an emphasis on equestrian activities. Further, the modification of the site from an agricultural orientation to the original development of the Lazy B Golf Course and subsequent development of the Ridgeline Country Club changed the integrity of the setting..

Under Criterion 4, the residence and associated features are not likely to yield information important to the history or prehistory of the area adjacent to the project site as the research already conducted on the project site, analyzed in the Cultural Resources Assessment, and reflects the expert opinion of the report author thereby exhausts the potential for more information.

Therefore, less than significant impacts as determined by the State CEQA Guidelines Section 15064.5 criteria would result from project implementation.

The City does not contain ordinances for the evaluation of individual historic resources but does contain criteria for establishing historic districts. The only established historic district in the City is the Old Towne District, approximately four miles southwest of the project site. The criteria for establishing a historic district is contained in Section 17.17.050 of the Zoning Code of the City Municipal Code and is similar to the California Register criteria. Based on a comparison of the two and the results of the Cultural Resources Assessment, the project site would not meet the criteria for establishment of a City historic district because none of the California Register criteria have been met.

The historic-age residence and associated features are not eligible for listing in the California Register of Historic Resources. Therefore, less than significant impacts related to historical resources would result from project implementation.

Archaeological Resources

Impact 5.4-2	**The project has the potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.** **[CEQA Cultural Resources Threshold 5(b)]**

The development of the proposed project could have a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. Although the majority of the project site was previously graded to allow for the construction of the former golf course, driving range, and other site improvements, the potential for unknown archaeological resources to be encountered during site clearing and grading for the proposed project could uncover resources not previously encountered. The City has a standard policy that requires developers to perform archaeological and paleontological surveys prior to grading in areas known or suspected to contain archaeological and paleontological surveys (Open Space and Conservation Element, Policy

6.1). The qualified archaeologist shall have the authority to stop or divert construction excavation as necessary pending an evaluation and disposition of any significant finds.

Although no archaeological resources were recorded within the project site boundaries, a large number of prehistoric sites in the vicinity combined with low ground visibility within the project boundaries indicates that the project may contain buried archaeological resources. Implementation of Mitigation Measure CR-1 would reduce this impact to a less than significant level.

Paleontological and Unique Geological Resources

Impact 5.4-3	**The project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.** **[CEQA Cultural Resources Threshold 5(c)]**

Although the majority of the project site was previously graded to allow for the construction of the Ridgeline Country Club improvements, there is the potential for unknown paleontological resources to be encountered during site clearing and grading for the proposed project.

The paleontological resource literature review and field survey determined that there is potential for significant paleontological resource to occur in the Oligocene to Miocene Vaqueros sediments and older Pleistocene sediments on the project site. Fossils are known from the same sediments in the surrounding area and the presence of these sediments suggests that there is a high potential for significant, nonrenewable paleontological resources to be encountered by construction excavation associated with the development of the proposed project. This is considered a potentially significant impact to paleontological resources.

A Paleontological Resource Impact Mitigation Monitoring Program (PRIMP) included with the construction and the excavation phase of the development of the project site would mitigate this impact. Compliance with the recommendations in this program will reduce impacts to paleontological resource to below the level of significance. Incorporation of Mitigation Measures CR-2 through CR-6 would reduce these impacts to a less than significant level.

Human Remains

Impact 5.4-4	**The project has the potential to disturb any human remains, including those interred outside of formal cemeteries.** **[CEQA Cultural Resources Threshold 5(d)]**

The development of the proposed project could potentially disturb unknown human remains. There is the potential for human remains to be encountered during site clearing and grading for the proposed project. With the incorporation of Mitigation Measure CR-7, which would halt the disturbance to human remains and determine if the remains are of Native American origin, this potentially significant impact would be reduced to a less than significant level.

5.4.6 - Mitigation Measures

Historical Resources

No mitigations measures are required.

Archaeological Resources

CR-1 Prior to the issuance of any permits, the project applicant shall provide written documentation to the satisfaction of the Community Development Director or designee that a qualified archaeological monitor shall be present during construction activities including clearing and grubbing within the project boundaries. This monitor shall be experienced with Native Americans and Native American resources. The monitor shall be empowered to temporarily halt or redirect construction work in the vicinity of a find until it can by evaluated by the project archaeologist. The qualified archaeologist shall be retained to assess the significance of the find at the time the potential resource is discovered. The qualified archaeologist shall have the authority to stop or divert construction excavation as necessary. Any archaeological resources discovered during project construction shall be processed in accordance with Mitigation Measures CR-5 and CR-7.

Paleontological and Unique Geological Resources

CR-2 Prior to the issuance of any permits, the project applicant shall provide written documentation to the satisfaction of the Community Development Director or designee that a surface inspection by an Orange County Certified Paleontologist shall occur after the vegetation is removed to better determine the impact before grading activities begin.

CR-3 Prior to the issuance of any permits, the project applicant shall provide written documentation to the satisfaction of the Community Development Director or designee that an Orange County Certified Paleontologist shall be present during ground-disturbing activities within the project site. The monitoring for paleontological resources will be conducted on a full-time basis for the entire project site. The Orange County Certified Paleontologist will be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be empowered to retain personnel and equipment to rapidly remove any large fossil specimens and/or matrix samples as they are unearthed in order to avoid construction delays. During monitoring, samples will be collected and processed to recover microvertebrate fossils. Processing will include wet screen-washing and microscopic examination of the residual materials to identify small vertebrate remains. Any paleontological resources discovered during project construction shall be processed in accordance with Mitigation Measures CR-5 and CR-7.

CR-4 Upon encountering a deposit of bone, except for human remains, salvage of all bone in the area will be conducted by an Orange County Certified Paleontologist in accordance with modern paleontological techniques. The Orange County Certified Paleontologist shall provide written notification to the Community Development Director or designee of the deposit within one business day. Any paleontological resources discovered during project construction shall be processed in accordance with Mitigation Measures CR-5 and CR-7.

CR-5 All archaeological and paleontological resources collected during the construction activities for the project will be prepared to a reasonable point of identification by an Orange County Certified Paleontologist or Archaeologist. Excess sediment or matrix will be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of all material collected and identified by an Orange County Certified Paleontologist will be provided to a suitable repository along with the specimens. Curation costs to accession any collections shall be the responsibility of the project applicant. The Orange County Certified Paleontologist shall provide a copy of the itemized catalog to the Community Development Director or designee at the same time the catalog is provided to a repository.

CR-6 A report of the findings with an appended, itemized inventory of specimens will be prepared by an Orange County Certified Paleontologist or Archaeologist. The Orange County Certified Paleontologist or Archaeologist shall provide a report of findings to the Community Development Director or designee within 30 days after the last day of grading operations. Submission of the report and inventory with City approval of the program will signify completion of the program to mitigate impacts to paleontological resources.

Human Remains

CR-7 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendent (MLD) and at the same time provide notification to the Community Development Director or designee. If the remains are deemed non-historic, the Coroner shall notify the Sheriff's Department for investigation. As required by Section 5097.98 of the Public resources Code, with the granting of permission by the landowner or his/her authorized representative, the descendent may inspect the project site of the discovery; however, the MLD is not prohibited from discussing and conferring with other descendants of the human remains as allowed by Public

Resources Code Section 5097.98. The descendent shall complete the inspection within 48 hours of notification by the NAHC consistent with Public Resources Code Section 5097.98. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The MLD will determine the ultimate disposition of the remains and provide written documentation to the Community Development Director or designee of the ultimate disposition of the remains.

5.4.7 - Project Design Features

There are no Project Design Features associated with this environmental issue area.

5.4.8 - Level of Significance after Mitigation

Implementation of the recommended mitigation measures would reduce all potentially significant impacts related to cultural resources below the level of significance associated with the short-term construction-related phase. There are no impacts associated with the long-term operational phase of the project because any resources that occur on the project site would have been revealed during the short-term construction phase.

Historical Resources

Less than significant.

Archaeological Resources

With the implementation of Mitigation Measure CR-1, potentially significant impacts related to the discovery of archaeological resources would be reduced below the level of significance.

Paleontological and Unique Geological Resources

With the implementation of Mitigation Measures CR-2 through CR-6, potentially significant impacts related to the discovery of paleontological resources would be reduced below the level of significance.

Human Remains

With the implementation of Mitigation Measures CR-7, potentially significant impacts related to the discovery of unknown human remains resources would be reduced below the level of significance.