3.9 CULTURAL RESOURCES

3.9.1 AFFECTED ENVIRONMENT

ARCHAEOLOGICAL AND ETHNOGRAPHIC SETTING

The earliest well-documented entry and spread of humans into California occurred at the beginning of the Paleo-Indian Period (10,000–6,000 years Before Present [B.P.]). Social units are thought to have been small and highly mobile. Known sites have been identified within the contexts of ancient pluvial lake shores and coastlines, as evidenced by the presence of such characteristic hunting implements as fluted projectile points and chipped stone crescent forms. Prehistoric adaptations over the ensuing centuries have been identified in the archaeological record by numerous researchers working in the area since the early 1900s, as summarized by Fredrickson (1974) and Moratto (1984). Because of the Central Valley's plentiful resources and temperate climate, the valley was well populated prehistorically and served as the location for some of the more substantial village sites known in California.

Lillard et al. (1939) and others conducted numerous studies that form the core of the current state of knowledge about early archaeology of the upper Central Valley. Little has been found archaeologically that dates to the Paleo-Indian or the Lower Archaic time periods (6,000–3,000 B.P.); however, archaeologists have recovered a great deal of data from sites occupied by the Middle Archaic period (3,000–1,000 B.P.). The lack of sites from earlier periods may be because of high sedimentation rates that have left the earliest sites deeply buried and inaccessible. During the Middle Archaic Period, the broad regional patterns of foraging subsistence strategies gave way to more intensive procurement practices. Subsistence economies were more diversified, possibly including the introduction of acorn processing technology. Human populations were growing and occupying more diverse settings. Permanent villages that were occupied throughout the year were established, primarily along major waterways. The onset of status distinctions and other indicators of growing sociopolitical complexity mark the Upper Archaic Period (1,000–500 B.P.). Exchange systems become more complex and formalized. Evidence of regular, sustained trade between groups was seen for the first time.

Several technological and social changes characterized the Emergent Period (1,800–500 B.P.). The bow and arrow were introduced, ultimately replacing the dart and atlatl. Territorial boundaries between groups became well established. It became increasingly common that distinctions in an individual's social status could be linked to acquired wealth. Exchange of goods between groups became more regularized with more goods, including raw materials, entering into the exchange networks. In the latter portion of this period (1,800–1,500 B.P.), exchange relations became highly regularized and sophisticated. The clamshell disk bead became a monetary unit for exchange, and increasing quantities of goods moved greater distances. Specialists arose to govern various aspects of production and exchange.

Three time periods were well represented in archaeological assemblages in the general vicinity of the project site. These assemblages are discussed in detail in Moratto (1984) and summarized here. The Windmiller Pattern (3,000–1,000 B.P.) of archaeological assemblages included an increased emphasis on acorn use as well as a continuation of hunting and fishing activities. Ground and polished charmstones, twined basketry, baked-clay artifacts, and worked shell and bone were hallmarks of Windmiller culture. Widely ranging trade patterns brought goods in from the Coast Range and trans-Sierran sources as well as from closer trading partners. Distinctive burial practices identified with the Windmiller Pattern also appeared in the Sierra Nevada foothills, indicating possible seasonal migration into the Sierra Nevada. The Berkeley Pattern (1,000–500 B.P.) represented a greater reliance on acorns as a food source than was seen previously. Distinctive stone and shell artifacts distinguished this pattern from earlier or later cultural expressions. The Berkeley Pattern appears to have developed in the San Francisco Bay Area and was spread through the migration of Plains Miwok Indians. The Augustine Pattern (500 B.P. to Historic Era) may have been stimulated by the southern migration of Wintuan people from north of the Sacramento Valley. Their culture was marked by a population increase resulting from more intensive food

procurement strategies, as well as by a marked change in burial practices, increased trade activities, and a well-defined ceramic technology.

Native Americans of the western Sierra Nevada foothills lived in relatively permanent settlements, visiting the higher reaches primarily during the summer months (Moratto 1984). Permanent settlements ranged from a handful of people to several hundred, and tended to be situated near water, preferably on slightly raised ground. A major village might include dwellings, granaries, sweat houses, a headman's house, and dance house, or other ceremonial structures. The people of the villages would gather a wide variety of fruits, nuts, greens, bulbs, roots, and seeds, processing and storing many of them for winter. Fish, birds, deer, small game, and many other animals were hunted.

By virtue of its geographic position, the project site lies within the Nisenan (sometimes referred to as the Southern Maidu) prehistoric sphere of influence. The Nisenan belong to the Penutian linguistic family. Kroeber (1925) recognized three Nisenan dialects—Northern Hill Nisenan, Southern Hill Nisenan, and Valley Nisenan. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River. The Nisenan ranged from the Sierra Nevada crest to nearly sea level at the Sacramento River.

Significant Native American contact with Europeans came late in the vicinity of the project site. Limited encounters with explorers and trappers during the early 19th century left the Nisenan and Washoe relatively unaffected (Wilson and Towne 1978). In 1833 the Valley Nisenan were decimated by a malaria epidemic that did not spread to the Hill tribes. However, Captain John Sutter settled in Hill Nisenan territory in 1839, and the subsequent discovery of gold resulted in the widespread killing and persecution of the Nisenan. By 1860, disease, violence, forced relocation, and environmental destruction had greatly affected Nisenan populations and traditional systems (Moratto 1984).

HISTORIC SETTING

Early European travelers through the region included Gabriel Moraga and a group of Spanish explorers in 1806–1808, and fur trappers and explorers in the 1820s. Jedediah Smith led a group of trappers along the edge of the foothills to the American River in search of a pass over the Sierra Nevada in 1826. Kit Carson and John C. Fremont crossed the mountains near Lake Tahoe and descended to Sutter's Fort traveling along the South Fork of the American River in 1844.

The project site was originally part of the *Rancho Rio de los Americanos* Mexican land grant—more than 35,500 acres granted to William Leidesdorff and purchased by Joseph L. Folsom in 1848 after Leidesdorff's death (Hoover et al. 1990). Nearby White Rock Road was laid out in 1848 as a route between Sacramento and Placerville.

The Pony Express later used the route previously traveled by miners who were departing from Sacramento and heading for the Sierra Nevada foothills, along today's Folsom Boulevard. Several "way stations" appeared along this route through current-day Rancho Cordova. These stations were often named after proprietors or were indicative of their distance from Sacramento (e.g., Fifteen Mile House). The most famous of these was Mills Station, which was constructed in the early 1900s and subsequently used as a post office, a grocery store, and a library (FCUSD 2005). The building was later restored by Sacramento Regional Transit; it is currently used as administrative offices at the light-rail station located near Mather Field Road and Folsom Boulevard.

Agriculture was the main industry in the region during the late 19th and the early 20th centuries. In fact, the city would later be named after the Cordova Vineyard, which was located in the center of the *Rancho Rio de los Americanos* land grant (Miller 1990). The property was used primarily for wheat cultivation or grazing until the 1920s (Peak & Associates 1999, 2005). By 1923, most of the property was owned by the Natomas Company. Gold dredging to depths of 80–110 feet took place over most of the project site from 1915 to 1962, leaving behind huge piles of tailings that filled the dredge lines and rose significantly above the landscape.

The Natomas Company began selling parcels of dredged land to Aerojet beginning in 1950 (Peak & Associates 1999, 2005). Aerojet subsequently leased approximately 1,700 acres to McDonnell Douglas Corporation (MDC), which initially constructed rocket-engine test stands, buildings, and other facilities in the Administration, Alpha, and DM-14 areas of the site. Other areas, including the Alpha Complex, Beta Complex, Kappa Complex, Gamma Complex, and Sigma Complex, were subsequently developed. These various facilities were used for assembly and testing of rocket systems through 1969 (Peak & Associates 1999, 2005). Several parcels were leased to the National Aeronautics and Space Administration (NASA) from 1962 to 1972 for rocket engine tests. A more complete description of the static rocket test facilities and their history is provided in the *Draft Historic Buildings and Structures Inventory* (Weitze Research 2004) included as Appendix G of this DEIR/DEIS.

The U.S. Air Force constructed Mills Field, later renamed Mather Field, in 1918 to serve as a flight training school. After World War II, the base was the only aerial navigation school remaining for the U.S. military and its allies. A Strategic Air Command B-52 squadron was assigned to the air force base from 1958 through 1989, when the base was decommissioned under the federal Base Realignment and Closure Act. The closure of the base prompted the County Board of Supervisors to examine the potential for converting the base to a public-use airport facility. The Air Force transferred the base to the County, and in May 1995 Mather Airport was opened. Other parts of the former military base were redeveloped for use as housing and a business park (Sacramento County Airport System n.d.).

The name "Rancho Cordova" was formally applied to the area currently known as the City of Rancho Cordova in 1955 when a post office was established. Efforts by local residents to formally establish a city continued over the next 40 years, until Rancho Cordova was incorporated by voter approval in July 2003. At that time, the newly appointed city included more than 55,000 residents (City of Rancho Cordova 2003).

ARCHAEOLOGICAL RESOURCES

Peak & Associates sent a letter of inquiry to the Native American Heritage Commission (NAHC) in March 2004 asking for information or concerns regarding the project site. The NAHC response indicated that there were no sites found in the Sacred Lands file. The NAHC included a list of 17 individuals and organizations that might have information or concerns regarding the project, with the recommendation that they all be contacted. In 2005, contact letters were sent to everyone on the NAHC list, along with maps of the project site and a request for information (Appendix H). Follow-up telephone calls were conducted in early May 2005. Only one person, Randy Yonemura of the Ione Band of the Miwok, responded. Mr. Yonemura indicated knowledge of cultural resources in two separate locations within the project site (Exhibit 3.9-1). This knowledge is based upon his recollections of being told about sites in the region that are known to other members of his tribe.

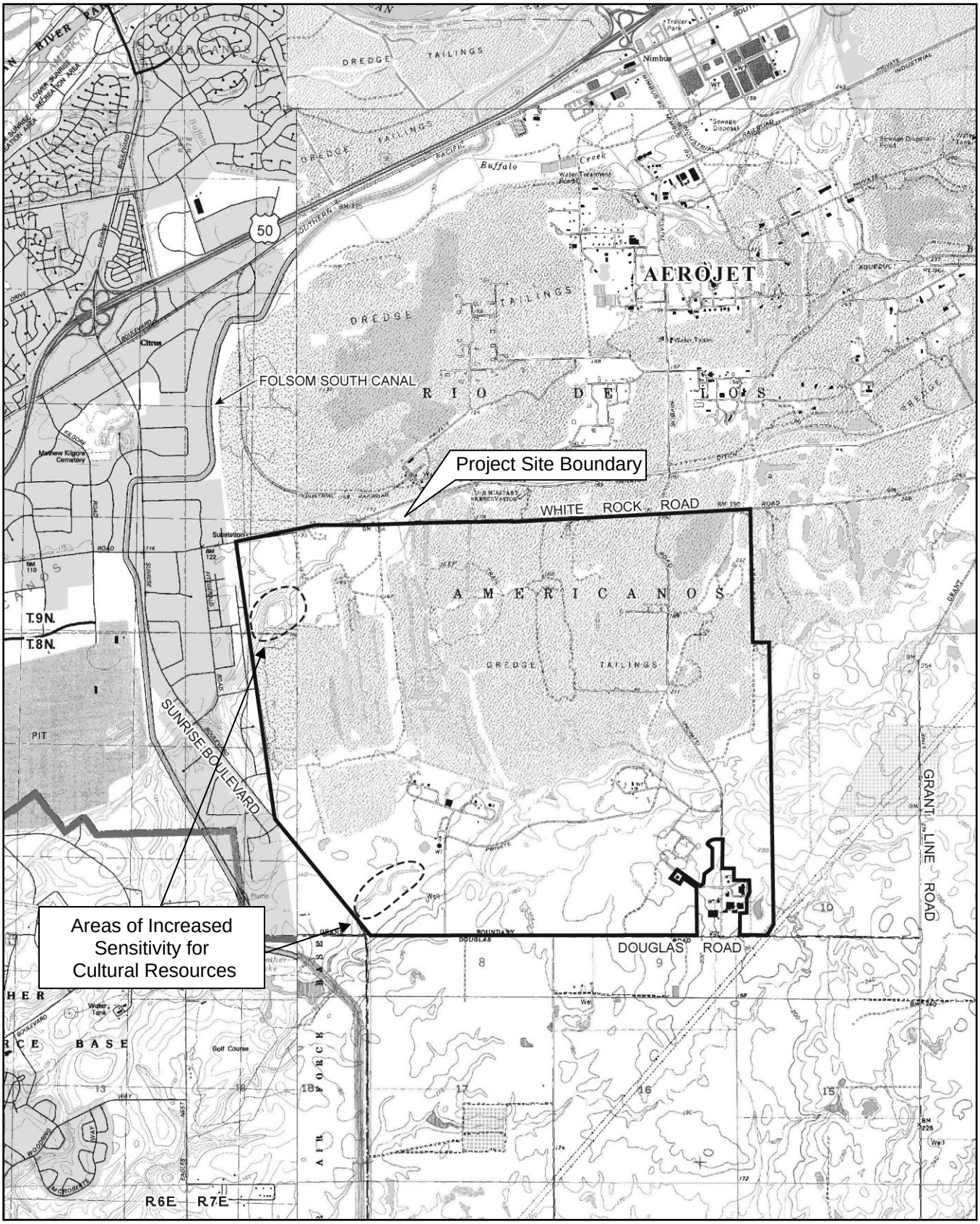
Only one recorded cultural resource is present on the project site. Portions of the dredge tailings, designated site CA-SAC-308H, were evaluated by Lindström and Wells (1989). They were determined to be ineligible for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) because of the numerous other examples of dredge mining found in the region in a similarly intact state of preservation.

HISTORIC RESOURCES

Historic Building and Site Inventory

Weitze Research conducted an inventory and NRHP and CRHR evaluation of the project site, formerly known as the Douglas Missile Test Facility.

Dr. Karen J. Weitze served as the principal investigator for the effort. On April 11 and May 31, 2005, Dr. Weitze conducted field analyses at the former test facility and a review of drawings and documents held by the facility's owner, Aerojet. Drawings and documents were reviewed at Aerojet's Rancho Cordova location. Fifty-six existing



Source: USGS Citrus Heights/Carmichael Quads 1992, USGS Folsom/Buffalo Creek Quads 1980, EDAW 2005

Areas of Increased Sensitivity for Cultural Resources

EXHIBIT 3.9-1

Rio del Oro Specific Plan Project DEIR/DEIS
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buildings, structures, and large-infrastructure remnants were inspected during the analysis, and digital photographs were taken of all accessible real property at the site. Dr. Weitze's report, attached as Appendix G, contains historic photographs and a supporting discussion of the Douglas Missile Test Facility with a brief contextual history of similar aerospace test sites in California. A broad overview of the industrial plant program established for the U.S. military is also included, referencing the government-owned, contractor-operated plants; government-owned, government-operated plants; and privately owned and operated sites.

No building (real property) numbers are available for the structures at the Douglas Missile Test Facility. During 1963–1964, when the Douglas Missile Test Facility became the NASA S-IV B Stage Test Facility, MDC produced master plans for each test area within the facility. On these plans, individual buildings and structures are assigned numbers: Units 1–152. Many small ancillary structures remained unnumbered. Summary assessments of the buildings and structures within the Solid Propellant Assembly Area, Sigma Test Area, Alpha Test Complex, Beta Test Complex, Gamma Test Complex, and Kappa Test Complex are provided in Table 3.9-1 below. The locations of the referenced historic site and buildings are shown in Exhibit 3.9-2. Buildings within the Administration Area (now known as the Security Park), which is not part of the project site, are not listed.

Table 3.9-1
Inventory of Historic Sites and Buildings at the Project Site

Name	Description	NRHP/CRHR Eligibility
Solid Propellant Assembly Area	A small, partially fenced compound laid out east-west along a single road in the northern part of the overall historic Douglas test site. The area includes two distinct clusters of buildings that bracket a larger north-south road. The western cluster of buildings lies within a security fence, while those east of the road have open access. The fenced western building group dates to 1956. The unfenced eastern building group dates to 1964–1966. Reviewed materials indicate that MDC constructed the western half of the Solid Propellant Assembly Area to support its early development work on the Nike Hercules interceptor missile, the IM-14. MDC added the eastern cluster of buildings as a part of an expansion of facilities during the early 1960s for NASA.	Yes (western half)
Sigma Test Area	A small compound laid out east-west, approximately one-half mile south of the Solid Propellant Assembly west of the north-south road. The Sigma Test Area is open access, with a security fence surrounding the assembly building. The western half of the Sigma Test Area dates to 1956. In the mid-1960s, MDC added two environmental test chambers to the east of the original construction. A map generated before the construction of the test chambers labels the site "Existing Nike Test Area." The Sigma Test Area is interpreted as complementing the Solid Propellant Assembly Area, first in use for developmental work on the solid-rocket boosters of the Nike Hercules.	Yes
Alpha Test Complex	Aerojet designed the Alpha Test Complex for MDC in late 1956 and early 1957. The Alpha Test Complex included a central control facility and two test stands, with multiple ancillary structures. First used for static firing the Thor IRBM, the Alpha Test Complex was later reused for missile development undertaken by MDC for NASA. Construction of the Alpha Test Complex followed that of the paired Solid Propellant Assembly Area and Sigma Test Area, with initial operations in 1958. A security fence surrounds the Alpha Test Complex.	No

Table 3.9-1
Inventory of Historic Sites and Buildings at the Project Site

Name	Description	NRHP/CRHR Eligibility
Beta Text Complex	Ralph M. Parsons designed the Beta Test Complex for the MDC Missile & Space Systems Division in 1963. The Beta Test Complex included a central control facility and two test stands, with multiple ancillary structures. First used for static firing the Saturn IV-B, the Beta Test Complex was later reused for continued launch stage development undertaken by MDC for NASA. A security fence surrounds the Beta Test Complex.	No
Kappa Text Complex	A small fenced area originally laid out northwest to southeast as a stand-alone site at the terminus of a northeast-to-southwest access road. An equipment remnant in this portion of the Kappa Test Complex carries a date of the late 1950s. Test reports indicate that the location was operational by late July 1958. A map of 1963 labels the site the "Existing E.E.S. Area." The first test area within the EES (the Engineering Evaluation Site) supported IOC 2 for the Thor. In 1961, MDC expanded the Kappa Test Complex to the southwest, creating Test Cells A–E to support tests of the developmental RL-10 A-1 engine for NASA. In 1964, MDC additionally enlarged the Kappa Test Complex to the northeast as an area for subsystem development and production acceptance tests associated with the company's contracts for NASA.	No
Gamma Text Complex	A rectangular fenced area immediately adjacent to the Kappa Test Complex. Added to the Douglas Missile Test Facility in 1964–1965, the Gamma Test Complex accommodated tests of self-igniting fuels, including tests of engines and supply systems. MDC operated the Gamma Test Complex to support its work for NASA.	No

Notes: IOC = initial operational capability; IRBM = Intermediate Range Ballistic Missile; MDC = McDonnell Douglas Corporation; NASA = National Aeronautics and Space Administration
Source: Weitze Research 2005

Results of the Historic Building and Site Inventory

Approximately 40% of the original Units 1–152 of the Douglas Missile Test Facility exist today, with a small number of these no longer in Aerojet ownership and not part of the project site (located in the Security Park). Although many ancillary structures retain their historic exterior appearance, the large test stands in the Alpha and Beta Complexes have lost their NRHP integrity and therefore are ineligible for listing in the NRHP and CRHR. The Gamma and Kappa Test Complexes have also suffered from a substantial loss of infrastructure. These two areas historically contained small individual test facilities, and were supportive sites for the work conducted at the Alpha and Beta Test Complexes.

However, two of the original test areas of the Douglas Missile Test Facility appear to be eligible for listing in the NRHP and CRHR: the 1956–1957 western half of the Solid Propellant Assembly Area and the 1956–1957 component of the Sigma Test Area. These two test areas are highly intact and are associated with early developmental testing of solid-propellant rocket boosters for the Nike Hercules (DM-14), Nike Zeus (DM-15), and Skybolt (DM-20) missiles. The Solid Propellant Assembly Area has previously been misidentified as an assembly site for the MB-1 Genie missile. Documentation and analysis do not indicate that work on the MB-1 Genie occurred in the Solid Propellant Assembly Area. The evaluation results for each historic site are summarized below.

Source: Aerojet 2005, Weitze Research 2005, Sacramento County 2002

Historic Sites

EXHIBIT 3.9-2

Rio del Oro Specific Plan Project DEIR/DEIS
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- **Solid Propellant Assembly Area:** Four buildings constructed in 1956—Units 102 (storage building), 103 (assembly building), 104 (motor storage building), and 109 (paint shed)—are interpreted as eligible for the NRHP and CRHR as a district under Criteria A and C, defined below under Section 106 of the National Historic Preservation Act, for their association with the developmental Nike Hercules missile. The distinctive earthen bermwork surrounding Units 103 and 104 is included as a contributing feature of the property. This portion of the Solid Propellant Assembly Area complements a second developmental Nike Hercules test site, the Sigma Test Area to the south. Two additional buildings, Unit 106 (A.S.V. building) and Unit 105 (Quonset hut), are ancillary buildings constructed in 1964 and are not considered part of the district and are not eligible for NRHP and CRHR listing.

- **Sigma Test Area:** Four buildings constructed in 1956—Units 93 (assembly building), 94 (test control center), and 95 (support building), and an unnumbered personnel bunker—are interpreted as eligible for the NRHP and CRHR as a district under Criteria A and C for their association with the developmental Nike Hercules missile. The distinctive earthen bermwork surrounding Unit 93 is included as a contributing feature of the property. Two additional buildings (Units 91 and 92, both conditioning chambers) were built in 1964, are not part of the historic district, and are not eligible for NRHP and CRHR listing. This portion of the Sigma Test Area complements a second developmental Nike Hercules test site, the Solid Propellant Assembly Area to the north.

- **Alpha Test Complex:** Fourteen buildings and large structural remnants were present in the Alpha Test Complex in May 2005. None of these buildings retains the integrity or important associations, either as a group or individually, to be eligible for NRHP and CRHR listing.

- **Beta Test Complex:** Twenty-two buildings and large structural remnants were present in the Beta Test Complex in May 2005. None of these buildings retains the integrity or important associations, either as a group or individually, to be eligible for NRHP and CRHR listing.

- **Kappa Test Complex:** Four buildings and large structural remnants were present in the Beta Test Complex in May 2005. Also present on-site were free-standing power poles, lights, fire hydrants, fire cannons (deluge water systems), concrete pads, and one piece of derelict equipment from the late 1950s. No buildings and structures in the Kappa Test Complex are eligible for NRHP and CRHR listing, either individually or as a district.

- **Gamma Test Complex:** Four buildings and large structural remnants were present in the Gamma Test Complex in May 2005. No buildings and structures in the Gamma Test Complex are eligible for NRHP and CRHR listing, either individually or as a district.

Dr. Weitze's assessment of the remaining facilities at the project site (Appendix G) concluded that they were a good example of facilities developed for the rocket test programs of the 1950s and 1960s, but were ineligible for listing in either the NRHP or the CRHR because of their poor condition, caused by decommissioning and extensive vandalism.

3.9.2 REGULATORY FRAMEWORK

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Section 106 of the National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into consideration the potential effects of proposed undertakings on cultural resources listed on or determined potentially eligible for inclusion in the NRHP, and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to

comment on the proposed undertaking. The regulations implementing Section 106 are promulgated by the Secretary of the Interior, as codified in Code of Federal Regulations (CFR) Title 36, Part 800 (36 CFR Part 800).

This site is not located on federal land and is not federally funded, but does require a federal action authorizing a permit under Section 404 of the Clean Water Act; therefore, compliance with the requirements of Section 106 is required. Section 106 requirements apply to properties that are not formally determined eligible, but that are considered by the State Historic Preservation Officer to meet eligibility requirements. The intensity of impacts on archaeological resources relates to the importance of the information they may contain and/or the extent of disturbance or degradation that may be caused by the impacts.

Determining the NRHP eligibility of a site or district is guided by the specific legal context of the site's significance as set out in 36 CFR Part 60.4 (see below). The NHPA authorizes the Secretary of the Interior to maintain and expand a National Register of districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. A property may be eligible for listing in the NRHP if it meets criteria for evaluation as defined in 36 CFR 60.4, as follows:

> 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:
>
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history;
>
> (b) that are associated with the lives of persons significant in our past;
>
> (c) that 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
>
> (d) that have yielded, or may be likely to yield, information important in prehistory or history.

There is also a requirement for a map of the Area of Potential Effects (APE), as described in Section 106 and codified in 36 CFR 800.4(a)(1). The project boundary, as depicted in Exhibit 2-2 of this DEIR/DEIS, has been used as the project APE.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Environmental Quality Act

CEQA offers directives regarding impacts on historical resources and unique archaeological resources. The State CEQA Guidelines define a "historical resource" to include more than one category of resources. The first category is "resource(s) listed or eligible for listing on the CRHR." (California Code of Regulations [CCR] Section 15064.5[a][1]; see also Public Resources Code Sections 5024.1 and 21084.1.) A historical resource may be eligible for inclusion in the CRHR, as determined by the State Historical Resources Commission or the lead agency, if the resource:

- is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
- is associated with the lives of persons important in our past; or
- 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.

In addition, a resource is presumed to constitute a "historical resource" if it is included in a "local register of historical resources" unless "the preponderance of evidence demonstrates that it is not historically or culturally significant." (CCR Section 15064.5[a][2])

Another category of "historical resources" is those deemed significant pursuant to criteria set forth in Public Resources Code Section 5024.1(g), as follows:

> [a] *resource identified as significant in an historical survey may be listed in the California Register if the survey meets all of the following criteria:*
>
> *(1) The survey has been or will be included in the State Historic Resources Inventory.*
>
> *(2) The survey and the survey documentation were prepared in accordance with . . . procedures and requirements* [of the State Office of Historic Preservation].
>
> *(3) The resource is evaluated and determined by the* [State Office of Historic Preservation] *to have a significance rating of Category 1 to 5 on* [the Department of Parks and Recreation Historic Resources Inventory Form].
>
> *(4) If the survey is five years or more old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historic resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.*

Resources identified by such surveys are presumed to be historically or culturally significant unless the preponderance of the evidence demonstrates otherwise.

The final category of "historical resources" is an optional one, which a lead agency may opt to consider or not consider. According to the State CEQA Guidelines (CCR Section 15064.5[a][3]):

> *Any object, building, structure, site, area, place, record, or manuscript which 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.*

In addition to the obligation to consider impacts on "historical resources," CEQA and the State CEQA Guidelines require consideration of unique archaeological sites (Public Resources Code Section 21083.2, 14 CCR Section 15064.5). A "unique archaeological resource" is defined in CEQA (Public Resources Code Section 21083.2[g]) 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:*
>
> *(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
>
> *(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.*

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If data recovery through excavation is the only feasible mitigation, a data recovery plan that makes provisions for adequately recovering the scientifically consequential information from and about the historical resource shall be prepared and adopted before any excavation is undertaken (CCR Section 15126.4[b][3][C]). Other acceptable methods of mitigation under the State CEQA Guidelines (CCR Section 15126.4) include excavation and curation or study in place without excavation and curation (if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource).

The State CEQA Guidelines (CCR Section 15064.5[e]) require that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the State CEQA Guidelines (CCR Section 15064.5[d]) direct the lead agency to consult with any appropriate Native Americans as identified by the NAHC in a timely manner, and direct the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

Rancho Cordova General Plan

Goals and policies of the *Rancho Cordova General Plan* (City General Plan) relating to cultural resources that the City has found to be applicable to the proposed project and alternatives under consideration are provided in Appendix F.

3.9.3 ENVIRONMENTAL CONSEQUENCES

THRESHOLDS OF SIGNIFICANCE

A cultural resources impact is considered significant if implementation of the proposed project or alternatives under consideration would do either of the following:

- cause a substantial adverse change in the significance of a unique archaeological resource or an historical resource as defined in Section 21083.2 of CEQA and Section 15064.5 of the State CEQA Guidelines, respectively; or
- disturb any human remains, including those interred outside of formal cemeteries.

The State CEQA Guidelines (CCR Section 15064.5) define “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Under the NHPA, if it is determined that historic properties may be affected by an undertaking, the agency proceeds with the Section 106 process, assessing adverse effects. The criteria of adverse effects are found in Section 800.5(a)(1) of the regulations of the NHPA. According to the criteria, an adverse effect occurs when the integrity of the historic property may be diminished by the undertaking through alteration of the characteristics that qualify the property for the NRHP. Such alteration can be caused directly as a result of the undertaking or be an indirect consequence. The criteria of adverse effect state:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials,

workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

Adverse effects on historic properties include, but are not limited to:

- physical destruction of or damage to all or part of the property;
- alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with *The Secretary of Interior's Standards for the Treatment of Historic Properties* (36 CFR part 68) and applicable guidelines;
- removal of the property from its historic location;
- change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

ANALYSIS METHODOLOGY

The analysis of cultural resources presented herein is based upon a background record search and research in the Sacramento Archives and Museums Collection Center conducted by Peak & Associates in 1999, field studies of the area conducted by various sources in the 1980s and 1990s, a Native American contact program, examination of Aerojet maps and documents in 2005, and the *Draft Historic Buildings and Structures Inventory* (Appendix G) prepared by Dr. Karen Weitze, an archaeological historian with qualifications that meet the Secretary of the Interior's standards and guidelines. In addition, on May 25, 2005, EDAW archaeologists, accompanied by Mr. Yonemura, visited the areas within the project site that he had identified as previously known resource locations. Exhibit 3.9-1 depicts general areas of increased cultural resource sensitivity based on those discussions (Yonemura, pers. comm., 2005). At the time of the EDAW field visit, spring grasses were so high and dense that there was no surface soil visibility in any of the sensitive regions.

IMPACT ANALYSIS

Effects that would occur under each alternative development scenario are identified as follows: PP (Proposed Project), HD (High Density), IM (Impact Minimization), NF (No Federal Action), and NP (No Project). The impacts for each alternative are compared relative to the PP at the end of each impact conclusion (i.e., similar, greater, lesser).

The impacts and mitigation measures below are generally discussed using CEQA language such as "historical resources." This discussion also includes consideration of resources under the NHPA, but without offering the confusion of using two sets of similar terminology. Where impacts or mitigation measures under NEPA differ from those of CEQA, they are called out separately.

Program Level Impacts and Mitigation Measures

IMPACT 3.9-1

Loss or Damage to Recorded Cultural Resource Sites. *Construction activities during project implementation could result in the loss of known cultural resources.*

PP, HD, IM, NF

Development of the project site would result in construction activity over approximately 3,000–3,300 acres (depending on the size of the wetland preserve). One previously recorded cultural resources site consisting of dredge tailings (CA-SAC-308H) is located on the project site. However, this resource has been informally evaluated and found to be ineligible for listing in the NRHP and CRHR, with the result that the resource is not "historical" within the meaning of CEQA. Therefore, this would be a **less-than-significant, indirect** impact. **No direct** impacts would occur. ***[Similar]***

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. As stated above, one recorded cultural resources site consisting of dredge tailings is located on the project site. Although found not to be eligible for listing in the NRHP or CRHR, the loss would occur as a result of mining activities.

Because the project would not be implemented under the No Project Alternative, no development-related construction activities would occur that could affect known cultural resources. **No direct** or **indirect** impacts would occur under this alternative. ***[Lesser]***

Mitigation Measure: No mitigation measures are required.

IMPACT 3.9-2

Loss of or Damage to Historic Sites, Buildings, and Structures. *Construction activities during project implementation would result in the loss of known historic sites, buildings, and structures.*

PP, HD, IM, NF

Two of the original test areas of the Douglas Missile Test Facility are potentially eligible for listing in the NRHP and CRHR: the 1956–1957 western half of the Solid Propellant Assembly Area and the 1956–1957 component of the Sigma Test Area (Exhibit 3.9-2). These two test areas are highly intact and are associated with early developmental testing of solid-propellant rocket boosters for the Nike Hercules (DM-14), Nike Zeus (DM-15), and Skybolt (DM-20) missiles. The remaining facilities at the project site (Kappa Complex, Gamma Complex, and Alpha Complex), while providing good examples of facilities developed for the rocket test programs of the 1950s and 1960s, are ineligible for listing in either the NRHP or the CRHR because of their poor condition, caused by decommissioning and extensive vandalism. Project implementation would result in the demolition of all existing aerospace facilities within the project site.

Avoidance of the potentially eligible Solid Propellant Assembly Area and Sigma Test Area is not feasible because of the planned alignment of Americanos Boulevard. Americanos Boulevard is contained within the City General Plan and is shown as a Major Roadway on the City's Circulation Plan. Major roads provide for major cross-town and regional travel and carry larger volumes of traffic. They are roadways of four or six lanes and may have a median that can accommodate a turning lane or landscaping. Their primary purpose is to connect land uses together. The planned alignment of Americanos Boulevard has thus been determined to be independent of Rio del Oro Specific Plan project planning, and reflects citywide transportation

needs and concerns. The future alignment of Americanos Boulevard would bisect the Solid Propellant Assembly Area and Sigma Test Area. Although the planned alignment of this major roadway would not necessarily have a direct impact on any of the buildings, it would substantially degrade the visual character of these two sites. Also, Americanos Boulevard would most likely have a direct impact on associated berms that are listed as part of the sites. A substantial realignment of this major roadway is not feasible because of the close proximity of other major roadways such as Sunrise Boulevard and Rancho Cordova Parkway, and because of conflicts with the function of the City's master roadway system as set forth in the City General Plan. Therefore, avoidance of these potentially eligible properties is not feasible.

Furthermore, relocation of the Solid Propellant Assembly Area and Sigma Test Area is not appropriate because of the nature of the sites. The integrity of these two sites includes the spatial relationship of the buildings and berms to one another as a functioning complex. This relationship is further defined in a site-specific way to the GenCorp property in Rancho Cordova. Relocation of the buildings would destroy this relationship and substantially degrade the character of the sites.

Loss of these historic structures would be a **direct, significant** impact. **No indirect** impacts would occur. ***[Similar]***

NP Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. Mining activities would not affect the on-site historic structures.

Because the project would not be implemented under the No Project Alternative, no development-related construction activities would occur, and none of the historic sites, buildings, or structures would be demolished. Thus, there would be **no direct** or **indirect** impacts. ***[Lesser]***

Mitigation Measure 3.9-2: Record Eligible Historic Resources to Historic American Building Survey Standards and on Appropriate State Forms.

PP, HD, IM, NF If the Solid Propellant Assembly Area and the Sigma Test Area structures and their earthen berms must be demolished for project implementation, built elements of the eligible districts shall be documented by the project applicant(s) according to Historic American Building Survey (HABS) standards and recorded as cultural resources on California Department of Parks and Recreation (State Parks) Series 523 Primary and Archaeological Site records, and other appropriate forms from State Parks. The project applicant(s) shall have this documentation completed before approval of demolition permits for any of the historic structures or features.

Timing: Before approval of demolition permits for the historic structures.

Enforcement: City of Rancho Cordova Planning Department.

NP No mitigation measures are required.

Implementation of Mitigation Measure 3.9-2 would help to mitigate the loss of historic sites, buildings, and structures under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives. The implementation of mitigation would reduce the impact associated with loss of historical resources to a **less-than-significant** level under the NEPA, but the impact would remain **significant and unavoidable** under CEQA, as described below.

36 CFR 800.6 ("Resolution of Adverse Effects") states that consulting parties to an undertaking may use standard treatments established under Section 800.14(d) as a basis for a Memorandum of Agreement (MOA) to deal with known "historic properties" or a Programmatic Agreement (PA) to deal with as-yet-undiscovered "historic properties." Thus, under NEPA, an executed MOA or PA may include avoidance, limiting the magnitude of the undertaking, rehabilitation of some historic properties, preservation in place, relocation of historic properties, documentation, or data recovery to mitigate the effects of an undertaking to a less-than-significant level.

However, the State CEQA Guidelines (CCR Section 15064.5) state that a project that may cause a substantial adverse change in the significance of an historical resource (such as damaging or destroying the qualities that make it significant) may have a significant effect on the environment. The City conservatively treats the "may," as found in that formulation, as being "will" where an EIR has been prepared for a project. The 1956–1957 western half of the Solid Propellant Assembly Area and the 1956–1957 component of the Sigma Test Area appear to be eligible for listing in the NRHP and the CRHR. Implementation of Mitigation Measure 3.9-2 would substantially lessen the significant effect by ensuring that the Solid Propellant Assembly Area and the Sigma Test Area structures and their earthen berms are documented and recorded according to HABS standards. However, under CEQA (Public Resources Code Section 15064.5), demolition constitutes a substantial adverse change in the significance of a historic resource, and therefore recordation would not mitigate to a less-than-significant level the loss of historic sites, buildings, and structures. Thus, project implementation would result in a significant and unavoidable impact on NRHP- and CRHR-eligible structures. As such, even after Mitigation Measure 3.9-2 is implemented, impacts on the resources would remain significant and unavoidable under CEQA.

IMPACT 3.9-3

Potential Damage to As-Yet-Undiscovered Prehistoric Sites or Native American Burials. *Construction and other earthmoving activities during project implementation could result in damage to as-yet-unknown cultural resources, including prehistoric sites or Native American burials.*

PP, HD, IM NF

As-yet-undiscovered or unrecorded cultural resource sites may be uncovered by project-related construction activities. This is true in particular for the areas of increased cultural sensitivity identified in Exhibit 3.9-1. The potential exists for previously unidentified archaeological sites to be identified during preconstruction or construction-related ground-disturbing activities. If such resources were to represent "historical resources" or "unique archaeological resources" as defined by CEQA, any substantial adverse change in the significance of those resources or destruction of these resources would be considered a significant impact. Therefore, impacts on as-yet-undiscovered cultural resources are considered **direct** and **potentially significant**. **No indirect** impacts would occur. ***[Similar]***

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. No damage to as-yet-undiscovered resources would occur because mining would not involve excavation, but would remove the aggregate.

Because the project would not be implemented under the No Project Alternative, no development-related construction activities would occur that would affect as-yet-undiscovered cultural resources. **No direct** or **indirect** impacts on as-yet-undiscovered cultural resources would result under this alternative. ***[Lesser]***

Mitigation Measure 3.9-3: Provide Preconstruction Worker Education and Stop Potentially Damaging Work if Human Remains are Uncovered During Construction.

PP, HD, IM, NF

Before initiation of construction or ground-disturbing activities associated with the project, the project applicant(s) for all project phases shall require all construction personnel to be alerted to the possibility of buried cultural resources. The general contractor and its supervisory staff shall be responsible for monitoring the construction project for disturbance of cultural resources. Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work shall be suspended and the City shall be notified immediately. The project applicant(s) shall retain a City-approved qualified archaeologist who shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any cultural resource concluded by the archaeologist to represent historical resources or unique archaeological resources. The City shall be responsible for approval of recommended mitigation if it is determined by the City to be feasible in light of approved land uses. The project applicant(s) shall implement the approved mitigation before the resumption of construction activities at the construction site.

In accordance with the California Health and Safety Code, if human remains are uncovered during construction at the project site, work within 50 feet of the remains shall be suspended immediately, and the City and the County Coroner shall be notified immediately. If the remains are determined by the County Coroner to be Native American, the NAHC shall be notified within 24 hours of that determination (Health and Safety Code Section 7050[c]), and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The NAHC will then assign a Most Likely Descendant (MLD) to serve as the main point of Native American contact and consultation. Following the coroner's findings, the MLD and the archaeologist shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The project applicant(s) shall be required to implement any feasible, timely-formulated mitigation deemed necessary for the protection of the burial remains. Construction work in the vicinity of the burials shall not resume until the mitigation is completed.

This measure shall be included in all grading and improvement plans for all project phases.

Timing: Before the approval of grading plans and during all ground-disturbing activities for all project phases.

Enforcement: City of Rancho Cordova Planning Department.

NP

No mitigation measures are required.

Implementation of Mitigation Measure 3.9-3 would reduce damage to as-yet-undiscovered or unrecorded cultural resources during construction-related and other ground-disturbing activities under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level, as described below.

36 CFR 800.6 ("Resolution of Adverse Effects") states that consulting parties to an undertaking may use standard treatments established under Section 800.14(d) as a basis for an MOA to deal with known "historic properties" or a PA to deal with as-yet-undiscovered "historic properties." Thus, under NEPA, an executed MOA or PA may include avoidance, limiting the magnitude of the undertaking, rehabilitation of some historic properties, preservation in place, relocation of historic properties, documentation, or data recovery to mitigate the effects of an undertaking to a **less-than-significant** level.

However, CEQA states that a project that may cause a substantial adverse change in the significance of a historical resource (i.e., an archeological resource meeting the definition of "historical resource"), such as damaging or destroying the qualities that make it historical, is a project that has a significant effect on the environment. As such, if a significant historic resource is discovered during project implementation and cannot feasibly be avoided, then even after Mitigation Measure 3.9-6 is implemented, impacts on historical resources would remain significant and unavoidable under CEQA. Impacts on any resources that do not qualify as "historical," however, would be mitigated to less-than-significant levels even if avoidance is not feasible.

Surveys conducted for the project site did not conclude that the project site or vicinity as highly sensitive for archaeological resources. There have been no such discoveries of sensitive resources in the project site and vicinity. The project site has been heavily disturbed from dredging and rocket testing activities, therefore, the likelihood of encountering as-yet-undiscovered resources is low. For these reasons, implementation of Mitigation Measure 3.9-3 would reduce potential impacts to as-yet-undiscovered resources to a **less-than-significant** level.

Project Level (Phase 1) Impacts and Mitigation Measures

IMPACT 3.9-4

Loss of or Damage to Recorded Cultural Resource Sites. *Construction activities during development Phase 1 could result in the loss of known cultural resources.*

Impacts would be the same under Phase 1 as under the program (entire project site) level analysis for all alternatives. Refer to Impact 3.9-1 for further discussion of this impact.

IMPACT 3.9-5

Loss of or Damage to Historic Sites, Buildings, and Structures. *Construction activities during development Phase 1 could result in the loss of known historic sites, buildings, and structures.*

PP, HD, IM, NF

Because there are no historic sites or structures located within the Phase 1 development area, construction activities associated with implementation of the Proposed Project, High Density, and Impact Minimization Alternatives would not entail demolition of any of these structures. Therefore, there would be **no direct** or **indirect** impacts. ***[Similar]***

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. Because there are no historic sites or structures located within the Phase 1 development area, mining activities would not affect these resources.

Because the project would not be implemented under the No Project Alternative, no development-related construction activities would occur, and there would be no loss of or damage to historic sites, buildings, or structures. Thus, there would be **no direct** or **indirect** impacts. ***[Lesser]***

Mitigation Measure: No mitigation measures are required.

IMPACT 3.9-6

Potential Damage to As-Yet-Undiscovered Prehistoric Sites or Native American Burials. *Construction and other earthmoving activities during development Phase 1 could result in damage to as-yet-unknown cultural resources, including prehistoric sites or Native American burials.*

PP, HD, IM, NF

As-yet-undiscovered cultural resources may be identified during development Phase 1, particularly because two areas have been identified near the northwest and southwest corners of the project site as having a higher potential to contain prehistoric archaeological resources. Dense grasses precluded any surface visibility in these areas; however, although no evidence of prehistoric or early historic interments was seen at the project site in surface contexts, unmarked and undocumented subsurface human remains could still be present at the site. Therefore, impacts on as-yet-undiscovered or unrecorded archaeological sites or human remains are considered a **potentially significant, direct** impact. **No indirect** impacts would occur. ***[Similar]***

NP

Under the No Project Alternative, mining activities at the project site, which are not part of the Rio del Oro project, would continue under existing Conditional Use Permits—one originally issued by the County, and the other issued by the City—and possibly under one or more future individual Implementation Permits expected to be issued by the City. No damage to as-yet-undiscovered resources would occur because mining would not involve excavation, but rather remove the aggregate.

Because the project would not be implemented under the No Project Alternative, no development-related construction activities would occur that would affect as-yet-undiscovered cultural resources. **No direct** or **indirect** impacts would occur under implementation of this alternative. ***[Lesser]***

Mitigation Measure 3.9-6: Monitor Construction in Culturally Sensitive Areas and Stop Potentially Damaging Work if Archaeological Sites or Human Remains are Uncovered during Construction.

PP, HD, IM, NF

Because areas of increased cultural sensitivity have been identified as a result of Native American contacts, the project applicant(s) of Phase 1 shall retain a City-approved qualified professional archaeologist to provide on-site monitoring during construction activities in these sensitive areas, as depicted in Exhibit 3.9-1. If the archaeologist notes unusual amounts of bone, stone, shell, burned soils, or other possible indications of buried archaeological resources, construction in the vicinity shall be halted until the find can be assessed. The archaeologist shall conduct a field investigation of the specific site and shall recommend mitigation deemed necessary for the protection or recovery of any cultural resource concluded by the archaeologist to represent historical resources or unique archaeological resources. The City shall be responsible for approval of recommended mitigation if it is determined by the City to be feasible in light of approved land uses. The project applicant(s) shall implement the approved mitigation before the resumption of construction activities at the construction site.

In accordance with the California Health and Safety Code, if human remains are uncovered during construction at the project site, work within 50 feet of the remains shall be suspended immediately, and the City and the County Coroner shall be notified immediately. If the remains are determined by the County Coroner to be Native American, the NAHC shall be notified within 24 hours of that determination (Health and Safety Code Section 7050[c]), and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The NAHC will then assign an MLD to serve as the main point of Native American contact and consultation. Following the coroner's findings, the MLD and the archaeologist shall determine the ultimate treatment and disposition of the remains and shall take appropriate steps to ensure that additional human interments are not disturbed. The project applicant(s) of Phase 1 shall be required to implement any feasible, timely-formulated mitigation deemed necessary for the protection of the burial remains. Construction work in the vicinity of the burials shall not resume until the mitigation is completed.

Implementation of Mitigation Measure 3.9-3 discussed above will help reduce potential impacts to cultural resources.

Timing: Before the approval of grading plans and during all ground-disturbing activities in the sensitive areas of development Phase 1.

Enforcement: City of Rancho Cordova Planning Department.

NP No mitigation measures are required.

Implementation of Mitigation Measure 3.9-6 would reduce damage to as-yet-undiscovered or unrecorded cultural resources during construction-related and other ground-disturbing activities under the Proposed Project, High Density, Impact Minimization, and No Federal Action Alternatives to a **less-than-significant** level, as described below.

36 CFR 800.6 ("Resolution of Adverse Effects") states that consulting parties to an undertaking may use standard treatments established under Section 800.14(d) as a basis for an MOA to deal with known "historic properties" or a PA to deal with as-yet-undiscovered "historic properties." Thus, under NEPA, an executed MOA or PA may include avoidance, limiting the magnitude of the undertaking, rehabilitation of some historic properties, preservation in place, relocation of historic properties, documentation, or data recovery to mitigate the effects of an undertaking to a **less-than-significant** level.

However, CEQA states that a project that may cause a substantial adverse change in the significance of a historical resource (i.e., an archeological resource meeting the definition of "historical resource"), such as damaging or destroying the qualities that make it historical, is a project that has a significant effect on the environment. As such, if a significant historic resource is discovered during project implementation and cannot feasibly be avoided, then even after Mitigation Measure 3.9-6 is implemented, impacts on historical resources would remain significant and unavoidable under CEQA. Impacts on any resources that do not qualify as "historical," however, would be mitigated to less-than-significant levels even if avoidance is not feasible.

Surveys conducted for the project site did not conclude that the project site or vicinity as highly sensitive for archaeological resources. There have been no such discoveries of sensitive resources in the project site and vicinity. The project site has been heavily disturbed from dredging activities and rocket testing activities, therefore, the likelihood of encountering as-yet-undiscovered resources is low. For these reasons, implementation of Mitigation Measure 3.9-6 would reduce potential impacts to as-yet-undiscovered resources to a **less-than-significant** level.

CUMULATIVE IMPACTS

Cultural resources in the project region generally consist of prehistoric sites, isolated artifacts, mining features, and structures from rocket testing facilities. During the 19th and 20th centuries, intensive mining in the region likely resulted in the destruction or disturbance of prehistoric sites, as well as earlier, smaller scale mining sites. Since this period, the creation and enforcement of various regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts; however, even with these regulations, cultural resources are still degraded or destroyed as development in the region proceeds.

The results of the cultural resources record searches and inventories conducted for the project indicate that the project site contains a portion of one previously recorded historic cultural resource, site CA-SAC-308H, which consists of dredge tailings. The site, however, was found to not be eligible for listing in the NHRP or CRHR. Piles of tailings from dredge mining in the region are relatively common, and continued removal of some of these features does not significantly reduce or eliminate the resource in the region.

No new archaeological sites were identified within the project site during field surveys, although two areas were identified as having the potential to contain prehistoric resources. As-yet-undiscovered subsurface cultural resources might also underlie the project site.

The Rio del Oro project would not contribute to any cumulatively considerable impacts on as-yet-undiscovered resources because surveys conducted for the project site did not conclude that the project site or vicinity as highly sensitive for archaeological resources and there have been no such discoveries of sensitive resources in the project site and vicinity. However, undiscovered cultural resources may underlie one or more of the other related project sites. Mitigation Measures 3.9-3 and 3.9-6 would reduce the project's impacts on as-yet-undiscovered site-specific cultural resources to a less-than-significant level, but other projects may not incorporate such mitigation. It is unknown whether the related project sites contain historic resources, or whether the related projects would implement appropriate mitigation. Furthermore, even after mitigation is implemented, it may be impossible to avoid the historic resource, and a substantial adverse change in the significance of the historical resource (such as damaging or destroying the qualities that make it significant) could result. Therefore, the cumulative projects could result in potentially significant cumulative impacts on undocumented historic resources within the project vicinity.

The structures in the Solid Propellant Assembly Area and Sigma Test Area would be demolished as a result of project implementation, but implementation of Mitigation Measure 3.9-2 would result in the detailed recordation of these structures before demolition. As documented in the *Draft Historic Building and Structures Inventory* (Appendix G), they may be considered potentially eligible for the NRHP and CRHR. Under CEQA, demolition constitutes a substantial adverse change in the significance of these historic resources that cannot be mitigated to a less-than-significant level; therefore, the project would contribute to cumulatively considerable impacts on known historic sites, buildings, and structures in the project vicinity.

3.9.4 RESIDUAL SIGNIFICANT IMPACTS

The 1956–1957 western half of the Solid Propellant Assembly Area and the 1956–1957 component of the Sigma Test Area appear to be eligible for listing in the NRHP and the CRHR. Implementation of Mitigation Measure 3.9-2 would ensure that the Solid Propellant Assembly Area and the Sigma Test Area structures and their earthen berms are documented and recorded according to HABS standards. However, under the State CEQA Guidelines (CCR Section 15064.5), demolition constitutes a substantial adverse change in the significance of a historic resource, and therefore recordation would not mitigate the loss of historic sites, buildings, and structures. Thus, project implementation would result in a significant and unavoidable impact on NRHP- and CRHR-eligible structures.