4.5 CULTURAL RESOURCES

This section evaluates the cultural resources impacts of the proposed Plan.

4.5.1 EXISTING CONDITIONS

CULTURAL SETTING

Prehistoric Setting

The major cultural developments in the San Diego region before the arrival of Spanish colonists in 1769 are generally discussed within three major periods (Paleoindian, or Paleoamerican; Archaic; and Late Prehistoric), each marked by certain changes in the archaeological record. These archaeological changes appear to reflect a variety of shifts in technology, settlement, and land use.

Of the 109 federally recognized Indian tribes in California, 19 are located in the San Diego region. Additionally, the region is home to four Native American tribes that are not federally recognized. The tribal members of today's bands represent four Indian cultural/linguistic groups who have populated the region for more than 10,000 years, taking advantage of its abundant natural resources and diverse ecological system for their livelihoods. The four nations are the Kumeyaay, Luiseno, Cahuilla, and Cupeno, each of which is discussed in detail in Plan Appendix I.

Paleoamerican Period (12,000 to 7,000 Years Before Present [B.P.])

Despite decades of research, the early prehistory of coastal Southern California remains poorly understood. The archaeological record does reveal that humans had appeared by about 13,000 years ago on the Channel Islands, where they lived primarily by fishing and shellfishing. These early island components are of interest in that they seem to reflect fully developed maritime economies that were distinct from, but roughly contemporaneous with, the Clovis tradition represented throughout much of interior North America. Identified late Pleistocene components are lacking on the mainland coast of Southern California, although several sites have yielded calibrated dates in excess of 9,000 years (Erlandson et al. 2007:58–59). Archaeological complexes represented at these early sites include the San Dieguito complex with its finely worked scrapers and leaf-shaped and stemmed projectile points (Warren 1968, Warren et al. 1993), and the La Jolla complex represented by simple flaked cobble tools, relatively abundant groundstone, and flexed burials. Although the temporal and cultural relationship between San Dieguito and La Jolla continues to be debated, it is increasingly clear that human populations were well established along the coast of Southern California very early in the Holocene.

Archaic Period (7,000 to 1,500 B.P.)

Sea level rise was occurring since the last glacial maximum (about 18,000 years ago) and during the early Holocene sea levels increased. However, by around 8000 B.P., it appears that sea levels had begun to slow to a rate of about 0.25 meter per century, a process that allowed the formation of a complex mosaic of productive lagoon and estuary habitats at many locations along the region’s coastline (Masters and Aiello 2007, Masters and Gallegos 1997). These seem to have supported a significant coastal population during the early Archaic, as numerous coastal components have been found that date to this interval.

Archaeological remains in these components typically represent the La Jolla complex and often contain abundant shellfish and fish remains, along with flaked cobble tools, basin metates, manos, discoidals, stone

balls, and flexed burials. At the same time, it has been suggested that the contemporaneous inland Pauma complex may represent seasonal movements of early Archaic populations between coastal and inland resource areas (True and Pankey 1985, Warren et al. 1961). If so, a relatively broad seasonal range is implied for the early portion of the Archaic.

Although the basic toolkit represented by the La Jolla complex appears to have remained consistent throughout the Archaic, there are some indications of significant shifts in settlement. Compilations of radiocarbon assays for Batiquitos Lagoon (Gallegos 1985, Warren et al. 1961), for example, provide evidence for disuse of this location between about 3000 and 1500 B.P.

This and evidence from some other locations in the region led Warren (1964, 1968; Warren et al. 1961) and others (Gallegos 1985, Masters and Gallegos 1997) to postulate a population movement inland and southward in response to siltation and declining productivity of coastal lagoons in the northern portion of the region. More recent data, however, have demonstrated continued settlement and use of littoral resources throughout the late Archaic period in the region's northern areas (Byrd and Reddy 2002). It may be that, rather than widespread population movement away from the coast, the changing coastal ecology resulted in more localized settlement adjustments.

Late Prehistoric Period (1,500 B.P. to 1769)

In Southern California, the appearance of small, arrowhead-size projectile points and ceramics, and the practice of cremation around 1,300 years ago mark the beginning of the Late Prehistoric period. Projectile points commonly found in Late Prehistoric assemblages include Cottonwood Triangular and Desert Side-notched forms, both thought to mark the introduction of the bow and arrow into the region. Regional populations appear to have been relatively high during the Late Prehistoric, resulting in territorial restrictions, increased sedentism, and subsistence intensification. Villages were relatively stable and occupied for much of the year and were positioned for access to a variety of resource areas. Subsistence is thought to have focused on acorns and grass seeds, along with deer and a variety of small mammals. Along the coast, subsistence focused on the collection of shellfish and nearshore fishing.

Settlement patterns during the Late Prehistoric in the northern section of the San Diego region are not well understood, although the data do suggest some important spatial and temporal variation. The strongest settlement data come from the upper San Luis Rey River drainage system, where investigations by True and Waugh (1982) suggest a transition from a fairly wide-ranging mobility pattern during San Luis Rey I times into a territorially constricted pattern of seasonally bipolar movement between upland and lowland settlements. This interior-upland pattern is seen as distinct from that of the lower San Luis Rey River, where residential mobility is thought to have been even lower, with one principal village per group area.

Ethnographic Background

At Spanish contact, the northern portion of the San Diego region was occupied by speakers of a Takic language related to those dialects spoken in the Los Angeles Basin to the north but distinct from the Yuman language spoken to the south in San Diego. These groups were later known generally as the Juaneño and Luiseño, based on their associations with either Mission San Luis Rey or Mission San Juan Capistrano. The region occupied by the Luiseño and Juaneño extended along the coast roughly between Agua Hedionda to approximately Aliso Creek in present Orange County, and inland approximately to Palomar Mountain (Kroeber 1925, Oxendine 1983, Shipek 1977). The southern coastal portion of the San Diego region was occupied by the Kumeyaay, a Yuman-speaking group also known as the Kamia, Ipai, and Diegueño. Both the Luiseño/Juaneño and

Kumeyaay lived in semi-sedentary, politically autonomous villages that were typically positioned to provide access to a wide variety of resources.

The high population densities achieved by the Kumeyaay and Luiseño during the Late Prehistoric period led to the development of a number of intensive land use practices that are documented ethnographically. These included intensive use of a wide diversity of plant and animal foods as well as a number of land-management techniques that were designed to improve and maintain productivity, such as regular vegetation burning, plant husbandry, and erosion control and irrigation (Anderson 1993, Shipek 1993, White 1963).

HISTORIC SETTING

Spanish Period (1769–1821)

In July 1769, the first Spanish colonists arrived in San Diego. The mission and presidio, strategically located on a prominence overlooking the lower San Diego River valley and the northeastern corner of San Diego Bay, were completed the following year and represented the first permanent settlement by the Spanish in Alta California.

A small community of Hispanic settlers followed, establishing a pueblo about 5 miles north of San Diego's current downtown, in the area at the foot of Presidio Hill later known as Old Town (Engstrand and Brandes 1976, Pourade 1963). The pueblo and Presidio remained in the Old Town area even after the mission was moved to more favorable agricultural land in Mission Valley in 1774 (Pourade 1961). Under Spanish law, every pueblo was entitled to 4 square leagues of land. As a result, downtown San Diego was part of the original pueblo land of San Diego, which totaled over 48,000 acres. Most of this land remained undeveloped until the Anglo-American period (Mayer 1978, Pryde 1992).

Mission San Diego and San Luis Rey both followed a different policy than most California missions in that after baptism and training most neophytes were allowed to return to their villages. This, despite the considerable disruption imposed by the missions, allowed Native American groups to maintain many aspects of their traditional land use practices while still adapting to and integrating with the mission economic system (Shipek 1988). At the same time, many Kumeyaay maintained active resistance to the mission system (Carrico 2008, Luomala 1978, Miskwish 2007), and many interior portions of the San Diego region were only minimally influenced by the Spanish (Shipek 1988).

The land around the California missions and the first pueblos was gradually developed during the Spanish period, as new crops and animals were introduced. The padres and early settlers sought to reproduce the agricultural economy they knew in Spain in north-central Mexico and Alta California, thus creating the Mediterranean style and ambience still associated with the region (Dunmire 2004, Ford 2005, Mayer 1978). The California missions and presidios reflected the Spanish style in their architectural character and layout around courtyard gardens. The gradual introduction of European decorative plants and adaptation of native plants to the casas and courtyards eventually gave the area the Colonial appearance still linked in most people's minds with the region today. The Spanish settlers cultivated grapes for wine, olives, oranges, and lemons, and a variety of vegetables. They created small canal systems for the irrigation of crops; introduced cattle, sheep, and horses; and built in architectural styles derived from Spanish models (Ford 2005, Mayer 1978).

San Diego Bay was used as a port for the fur trade beginning in the early 1800s (Mayer 1978, Pourade 1961). The population of San Diego grew slowly during early 19th century. When the Mexican Revolution began in 1810, the population of the Presidio at San Diego was approximately 350 persons. By the time Mexico gained independence from Spain in 1821, the population of San Diego had risen to approximately 450 persons.

Mexican Period (1821–1846)

The end of Spanish customs regulations and the expansion of trade under Mexico opened California to the world. In 1823, the English firm of McCullough, Hartness, and Co. sent the vessel John Begg to San Diego and established a permanent mercantile house, the first foreign trading house in California. On August 17, 1833, the Mexican Congress passed the Secularization Act, which transferred mission-controlled land to private ownership. This act opened enormous tracts of new land to settlement, and immigration to San Diego began to increase. Concurrently, the mission system began to decline, forcing Native American occupants to seek alternative livelihoods (Carrico 1987, Luomala 1978).

In December 1834, San Diego was organized as a pueblo with the election of its first mayor, Juan Maria Osuna, and the Presidio was abandoned the following year. The main population center during the Spanish period had been the Mission San Diego de Alcalá, located well inland from the port. With enforced secularization, however, settlement around the mission was abandoned. In 1834, the first urban layout of the city, complete with a typical plaza mayor and substantial adobe buildings, arose near the Presidio in the area that later came to be known as Old Town. Large ranchos were established on the vast private land grants carved out of former mission lands. The new ranch owners were far more interested in mercantile commerce than had been the earlier Spanish padres, and actively sought ways to attract foreign, and especially American, traders. Tallow and hides were the main exports in this trade (Dana 1995). By the 1840s, merchants and brokers from the northeastern United States had become a common sight around San Diego Harbor (Ford 2005:8, Mayer 1978).

American Period (1846–Present)

The forces that led to the foundation of downtown San Diego began to become manifest after Alta California was ceded to the United States at the conclusion of the Mexican-American War. In the 50 some years that followed, the economic and political center of the city shifted from Old Town to the present downtown area, and the basic outlines of modern San Diego were established. The process was not straightforward or unilateral, but rather a process of fits and starts.

Old Town San Diego was occupied by U.S. forces during the Mexican-American War (1846–1848). The Treaty of Guadalupe-Hidalgo, which ended the war, ceded Alta California to the United States. The U.S. Boundary Commission Survey team arrived in San Diego in 1849 to survey the new border area. Boundary Commissioner John B. Weller assigned chief surveyor, Andrew B. Gray, to survey San Diego Bay and fix the beginning point of the survey (Scott 1976:21). The new international boundary line was located 1 marine league south of San Diego Bay.

The “port” at San Diego was little more than an off-loading beach, located in present-day Point Loma. Gray and his team camped near the Punto de los Muertos, an area settled by Spanish and Mexican residents 3 miles south of Old Town near the present-day Lindbergh Field, where access to the bay was easier. Gray quickly realized the potential for a new “American” seaport town at that site and switched his efforts toward establishing a “New Town” for San Diego (Newland 1992:30–35, Rolle 1956:90–91, Scott 1976:24–26). In January and February of 1850, Gray and Army Lt. Thomas Johns surveyed and mapped a 160-acre subdivision and port facility adjacent to the Punto de los Muertos.

Gray then attracted successful San Francisco merchant William Heath Davis and several prominent San Diegans, including José Antonio Aguirre, Miguel de Pedrorena, and William C. Ferrell, to help finance the purchase and development of the waterfront land where downtown San Diego now stands (Rolle 1956:91–92, Scott 1976:28).

This “New Town” consisted of the area bounded by present-day Broadway, Front Street, and the waterfront. Establishing New Town had its difficulties, and it was thwarted by the fact that San Diego went bankrupt. San Diego’s fortunes, however, were renewed after the end of the Civil War. By the late 1860s, there were plans for two subdivisions and talk of being the terminus for the transcontinental railroad. That did not come to fruition, but it did attract residents and established New Town for good.

There were periods of boom and bust in the years leading up to the turn of the century. With the dawn of the 20th century, business in San Diego again picked up and the city experienced reinvigorated growth. Between 1900 and 1920, San Diego’s population more than quadrupled from 17,700 to nearly 75,000 (Mills 1960:37, Pryde 1992:73). This growth was due in part to events such as commencement of construction on the Panama Canal; plans to build a railroad to Yuma, Arizona; the Panama-California Exposition of 1915–1916; and the U.S. Navy’s interest in making San Diego a major naval port. There were also significant populations developing in La Jolla, Ocean Beach, Mission Beach, and Point Loma. Smaller populations were in National City, Coronado, Oceanside, Encinitas, Julian, and Chula Vista (Pryde 1992:73). San Diego’s natural harbor also attracted immigrants interested in commercial fishing, and the fishing industry and its associated canneries helped to bolster the city's economy in the 1920s (Cleland et al. 1980). The expansion of the streetcar line in the 1920s began to alter patterns of development and residence. The streetcar allowed many families to move out to suburbs that were rapidly building up on the outskirts of town (Schaefer and Newland 1994).

San Diego suffered like every other city during the Great Depression, but the outbreak of World War II sparked an economic boom in most of the country, particularly in places like San Diego with an established military presence. The military took over large parts of San Diego, expanding existing bases and developing new ones. San Diego’s population stood at 203,341 in 1940; within a year it grew by 50,000 (Mayer 1978). The post-World War II era brought recovery in the form of an increased industrial base, a growing tourist business, and the commercial exploitation of rich agricultural lands. These resources, along with expansive military bases, have continued in importance to San Diego's economic well-being to the present day. The era also brought notable shifts in the local economy and residential patterns. The aerospace industry shifted from aircraft to missiles, and a post-war housing crunch led to a construction boom, which included post-war housing tracts in the suburbs served by massive new shopping centers and smaller shopping malls. More houses farther afield meant more cars, and by 1951 San Diego had four major freeway interchanges (McKeever 1994). The 1960s brought construction of a new sports stadium, expansion of the San Diego Zoo, and the formation of the San Diego Padres major league baseball team. Tourism became one of the leading industries and has remained so to this day.

The 1960s to the 1980s saw a significant increase in populations throughout the region, and cities like Del Mar, Poway, Santee, Vista, San Marcos, and Lemon Grove were established (Pryde 1992:77). Massive housing developments like Mira Mesa and Rancho Peñasquitos were built in the 1970s. Despite setbacks in recent years, the San Diego region has continued to grow and prosper.

The region today is home to 19 federally recognized tribal governments, the most in any county in the United States. Reservations have generally been established by Executive Order, and most of the land within the boundaries of reservations is owned by tribes and held in trust by the federal government. Native American reservations currently cover more than 116,000 acres, or approximately 4 percent of the region's land. Four tribal groupings make up the indigenous peoples of the San Diego region: the Kumeyaay/Diegueno, the Luiseno, the Cupeno, and the Cahuilla (see Plan Appendix I). Tribal economic development has had an influence on the region’s overall development. This is mostly due to casinos (e.g., Barona, Campo, Sycuan, Viejas), which are mainly responsible for creating 10,000 jobs, a $1 billion industry, $263 million in goods and services, and

$500 million in payroll. The tribes without gaming facilities continue to have economic development, transportation, and infrastructure needs (Plan Appendix I).

EXISTING CULTURAL RESOURCES

Cultural resources include historic period buildings, structures, districts, and objects; archaeological sites and districts dating from either prehistoric, ethnographic, or historic times; and tribal cultural resources of importance to local Native American tribes (sites, features, places, cultural landscapes, sacred places, and objects of cultural value). Numerous cultural resources have been documented in the San Diego region, and some areas of the region have not yet been inventoried. The following information provides a context for the types of cultural resources in the region and a general discussion of the range of known cultural resources that may be present.

In California, cultural resources are recorded in the California Historical Resources Information System (CHRIS), which consists of the California State Office of Historic Preservation (OHP), nine Information Centers, and the State Historical Resources Commission. The Information Centers are spread across California and are the repositories for recorded historical resources within their region. In San Diego, the South Coastal Information Center (SCIC) holds the records for historical resources recorded in the region. According to the SCIC, as of August 8, 2018, there are 37,567 cultural resources (including 13,500 isolated finds) in the San Diego region recorded in CHRIS (J. Lennox, pers. comm. 2018). This information is collected by the SCIC when requested.

Archaeological Resources: Historic and Prehistoric

Specific information on the location and description of archaeological resources is generally kept confidential to lessen the potential for vandalism and theft by looters. The specific regulations that provide for this are discussed in Section 4.5.2, *Regulatory Setting*.

Historic archaeological site types that have been encountered in the San Diego region vary according to the time period and activity with which they are associated. They can contain surface material or be buried. Early period, Spanish period, and Mexican period sites include adobe homesteads and presidio and mission-related sites. These include the San Diego Presidio, Mission Dam, the San Diego Mission, and the San Luis Rey Mission. Most of the known sites have undergone data recovery and it would be rare to find any new sites.

In the early American Period up until about 1920, most archaeological sites in an urban environment consist of garbage dumps in wells, cisterns, or trash pits. Building foundations are also common during this period, as are industrial features. The majority of sites already identified from this time period exist in developed areas of San Diego. In the San Diego mountains, mining sites are more prevalent. After the 1920s, the establishment of town dumps and sewer and water systems meant that trash-related archaeological features were less common. Materials commonly found at historic sites include ceramics, glass, metal, and animal bone.

Leather, wood, and cloth do not generally preserve well and are not commonly found in historic sites. Some site types, such as military and farming/ranching complexes, are found throughout the San Diego region and from any time period. Historic buildings and structures are also present throughout the San Diego region and can be found in association with archaeological sites or on their own.

Prehistoric sites tend to fall into distinctive categories that relate to the activities that took place. They are found throughout the region, but tend to be more common in areas close to a water source or resources (such as materials for tool making or readily available food), and on flatter ground. Like historic sites, they can be

found on the surface, or buried. Due to the propensity for settling close to water sources, prehistoric sites that were originally just surficial can be buried over time by alluvial action. The site types and the materials associated with them are summarized below.

- **Habitation sites.** These are seasonal or semi-permanent. Activities at these sites include food preparation, milling, cooking, tool production, ceramic production, leather working, basket weaving, construction, and ritual activities.
- **Temporary camps.** A range of activities took place at these camps. This could include any of the activities performed at a habitation site, but at a temporary camp there would have been a shorter activity period, so less material evidence would be left.
- **Artifact scatter.** An artifact scatter consists of ceramics, flaked stone, or ground stone that is not accompanied by subsurface deposits. Some animal bone or shell may also occur. An artifact scatter could represent a temporary place to stop or somewhere to process a resource from the surrounding area.
- **Lithic scatter.** This is a low-density scatter of lithic material used in tool production. Typically, it is the discard from the process that is left behind, not the actual tools.
- **Bedrock milling.** These are areas of bedrock used to process food such as acorns or seeds. This was done with a pestle (which crushes the food) or mano (which grinds the food).
- **Quarry.** A quarry is where raw stone material was extracted for tool making. These sites were visited only briefly.
- **Shell midden.** This can be an area where shellfish was processed, or it can be associated with a habitation site or temporary camp.
- **Rock art.** This includes petroglyphs (patterns etched into rocks) and pictographs (patterns "painted" on rocks) that are often associated with ritual.

Major coastal villages were known to have existed along the estuaries and lagoons along the San Diego coastline and up the corresponding rivers, such as the village of Kosti or Cosoy near the mouth of the San Diego River (Kroeber 1925) and Ystagua in the Sorrento Valley area. While many historic and prehistoric resources have been identified and documented within the San Diego region, many unidentified resources remain unevaluated. In addition, the exact locations of some of the known sites (such as Cosoy) are yet to be confirmed. Some areas within the San Diego region have a particularly high potential for prehistoric and historic cultural resources.

For example, lagoons and rivers were areas of high traffic and settlement during prehistoric times due, in part, to the abundance of water, food, and other resources, while coastal communities were some of the earliest and heaviest areas of settlement during historic times due to their access to both resources and transportation.

Historic Districts, Registers, and Landmarks

In addition to the thousands of archaeological sites recorded within the San Diego region on the California Historic Resources Inventory, there are numerous historical resources (buildings, sites, structures, objects, or districts) listed on federal, State, and local registers, such as the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks, and County of San Diego Historical Landmarks. For San Diego County, cultural resources information from these inventories and registers are obtained from the South Coastal Information Center, which is part of the California Historical Resources Information System and housed at San Diego State University. Other historic inventories have been prepared by various cities within the San Diego region. Approximately 9,500 historical structures are recorded in the San Diego region (Lennox, pers. comm. August 8, 2018). Some of these are part of larger districts.

The following is a description of the types of other listings that exist in the San Diego region for archaeological and historic architectural resources. These descriptions are adapted from the State of California OHP (2018).

- California Historical Landmarks are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value.
- California Points of Historical Interest are buildings, sites, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value.
- The California Register of Historical Resources includes buildings, sites, structures, objects and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
- The National Register of Historic Places includes buildings, structures, objects, sites, and districts of local, state, or national significance in American history, architecture, archeology, engineering, and culture.

There are 18 historic districts listed in the NRHP within the San Diego region (see Table 4.5-1). This number does not represent those that may be in the process of being listed. Many of the districts are located in more urban areas, specifically in and around the city of San Diego. These include such historical districts as Cabrillo National Monument, Balboa Park, and the Gaslamp Quarter Historic District.

Table 4.5-1
Nationally Designated Historic Districts in the San Diego Region

Historic District	Location
Balboa Park	California Quadrangle 41, San Diego
Cabrillo National Monument	Near southern tip of Point Loma
El Prado Complex	Balboa Park, San Diego
Fages-De Anza Trail-Southern Emigrant Road	Anza-Borrego State Park
Gaslamp Quarter Historic District	Bounded by railroad tracks, Broadway, 4th, and 6th Streets, San Diego
Heilman Villas	Orange Avenue, Coronado
Kuchamaa	Southeast of San Diego at the U.S.-Mexican Border
Marine Corps Recruit Depot Historic District	South of junction of Barnett Avenue and Pacific Highway, San Diego
Naval Air Station, San Diego, Historic District	Naval Air Station, North Island, North Shore, San Diego
Naval Training Station	Barnett Street and Rosecrans Boulevard, San Diego
Old Town San Diego Historic District	Junction of Interstate (I-) 5 and I-8, San Diego
Rancho De Los Kiotes	6200 Flying L.C. Lane, Carlsbad
Rockwell Field	North Island, San Diego
Rosicrucian Fellowship Temple	2222 Mission Avenue, Oceanside
San Diego Civic Center	1600 Pacific Highway, San Diego
San Diego State College	5300 Campanile Drive, San Diego
Table Mountain District	Jacumba, Unincorporated County of San Diego
University Heights Water Storage and Pumping Station Historic District	4236 Idaho Street

Source: NRHP 2017a.

In addition to the NRHP historic districts, 130 individual historical resources in the San Diego region are listed in the NRHP (NRHP 2017a). There are also 17 National Historic Landmarks (NRHP 2017b). Resources listed in the NRHP are automatically listed in the CRHR. Most of these resources within the San Diego region are buildings or structures, such as the Hotel Del Coronado and the Point Loma Lighthouse; however, some archaeological sites are on the list. The State of California Historical Resources Commission has designed the CRHR program in order to identify, evaluate, register, and protect California's historical resources. There are also 72 California State Historical Landmarks in the San Diego region (California OHP 2018).

At the local level, a number of jurisdictions inventory the resources that are present to develop management plans and standards for their protection. This has become more often the case as urban areas are limited in their choices of undeveloped land and instead move toward adaptive reuse of existing buildings and features of the built environment. For example, the City of San Diego Historical Resources Board works to evaluate and preserve resources and has designated over 950 resources of local concern (City of San Diego Historical Resources Board 2018). Several of these resources are also listed in the NRHP either individually or as part of a district. In addition, the County of San Diego and the Cities of Oceanside, Poway, Escondido, Carlsbad, Encinitas, National City, Chula Vista, La Mesa, and El Cajon also maintain historic resource inventories.

Ethnographic Resources and Sacred Sites

Ethnographic resources include sites, areas, and materials important to Native Americans for religious, spiritual, or traditional uses. These can encompass the sacred character of physical locations (mountain peaks, springs, and burial sites) or particular native plants, animals, or minerals that are gathered for use in traditional ritual activities. Villages, burials, rock art, rock features, and traditional hunting, gathering, or fishing sites may also constitute significant Native American cultural resources. Such resources may be eligible for listing in the NRHP as Traditional Cultural Properties and may be included in the California Sacred Lands File maintained by the California Native American Heritage Commission (NAHC). For specific development or transportation projects, the NAHC would provide information to qualified persons conducting cultural resources studies. Although the NAHC does not provide the location of the resources, they would provide a list of Native American tribes that have a traditional and cultural affiliation with the geographic area of the proposed project (PRC 21080.3.1) who can be contacted. Tribal consultation with these tribes is typically done during the AB 52 (Chapter 532, Statutes of 2014) consultation process.

ANTICIPATED EFFECTS FROM CLIMATE CHANGE

Climate change may threaten cultural resources due to sea-level rise submerging coastal lands, more frequent and severe flooding, higher temperatures, and higher incidence of wildfire. The San Diego region is likely to experience sea level rise of up to 1.2 feet by 2050 and up to 4.6 feet by 2100, wetter winters and more intense precipitation that can lead to increased flooding, more intense heat waves and annual average temperatures increases of up to 4.8°F by 2050, and a longer and less predictable fire season. More details on future climate projections are available in Appendix C.

Sea-level rise presents a risk to cultural resources within the San Diego region, although the extent to which this will damage cultural resources is not known. According to a study by Lipps and Pedersen (2015), 4.6 feet of sea-level rise could affect 194 Native American cultural sites in Southern California. Additionally, historic districts could experience more frequent or severe flooding impacts due to sea-level rise; for example, the Cabrillo National Monument could be vulnerable to sea-level rise and increased storm frequency and intensity, although the extent of this risk is not fully understood (Smith 2018).

Changes in temperature and precipitation could also damage cultural resources, although the extent to which these could negatively affect archaeological and cultural resources in the San Diego region has not been quantified. Higher temperatures can cause faster rates of deterioration due to thermal stress and biological activity, more rapid decay of organic materials, heat stress on culturally significant vegetation, and loss of culturally significant habitat and species due to disease and temperature changes (Rockman et al. 2016). Heavy precipitation and flooding could damage cultural resources due to site erosion and destabilization, direct physical damage to the site, loss of artifacts due to flooding, and increased risk of post-flood subsidence (Rockman et al. 2016).

Cultural resources in the San Diego region may also be threatened due to more intense or frequent wildfires as observed from past events. In 2002, the Pines Fire covered nearly 100 square miles in San Diego County. In the process of recovery, archaeologists identified 249 cultural sites within or immediately adjacent to the fire, and another 50 within the area of bulldozer activity, including rock shelters, Native American settlements, and rock art (Waechter 2012). Wildfires can increase damage to archaeologically relevant structures, alter the artifacts exposed to extreme heat, increase susceptibility to erosion and flooding, and exacerbate damages due to firefighting activities (Rockman et al. 2016). Wildfire could also damage historical structures or alter their distinct physical characteristics as older buildings may not have as robust defenses against wildfire as modern buildings (Rockman et al. 2016).

It is possible that sea-level rise, flooding, wildfire, and landslides could reveal or damage human remains. Remains exposed to the environment from climate hazards may then be further damaged by extreme weather; for example, changes in temperature and precipitation could speed deterioration and decay, cause thermal stress, and cause erosion (Rockman et al. 2016).

4.5.2 REGULATORY SETTING

FEDERAL LAWS, REGULATIONS, PLANS, AND POLICIES

Historic Sites, Building, Objects, and Antiquities Act

The Historic Sites, Building, Objects and Antiquities Act (16 United States Code [USC] 461–462, 464–467) was passed in 1935 to preserve American sites, buildings, objects, and antiquities of national significance for public use. This Act created the position of Secretary of the Interior and established an advisory board, members of which are appointed by the Secretary, to aid him or her in implementing the Act. Powers of this Act can be executed by the National Parks Service on both federal and nonfederal Lands. Relying on authority provided by this Act, the National Natural Landmarks (NNL) Program was established in 1962 to recognize and encourage the conservation of outstanding examples of the country's natural history. NNLs are designated by the Secretary of the Interior, with the owner's concurrence, as being of national significance, defined as being one of the best examples of a biological community or geological feature within a natural region of the United States.

National Historic Landmarks Program

The National Historic Landmarks Program, developed in 1982, identifies and designates National Historic Landmarks and encourages the long-range preservation of nationally significant properties that illustrate or commemorate the history and prehistory of the United States. This program sets forth the criteria for establishing national significance and the procedures used by the Department of the Interior for conducting the National Historic Landmarks Program.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) (42 USC 4321 et seq.) directs federal agencies to use all practicable means to "preserve important historic, cultural, and natural aspects of our national heritage" (Section 101[b] [4]). Regulations for implementing NEPA are found in 40 Code of Federal Regulations (CFR) Parts 1500–1508. Consideration of cultural resources is required under NEPA for proposed federal actions.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) (16 USC 470–470b, 470c–470n) was passed in 1966 and set the foundation for much of the more specific legislation that guides cultural resource protection and management in local jurisdictions. The law outlines the responsibilities of federal agencies and specifies guidelines that must be followed when assessing the effects of a project on a historic site. Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council a reasonable opportunity to comment on such undertakings. The goal of the Section 106 process is to identify historic properties potentially affected by the undertaking; assess its effects; and seek ways to avoid, minimize, or mitigate any significant impacts related to historic properties.

National Register of Historic Places

The NRHP is a list of federally recognized historic sites, buildings, and structures that are to be preserved, as they are significant to the history of their community, state, or the country. Established by the NHPA and developed in 1981, the NRHP is an authoritative guide to be used by federal, state, and local governments; private groups; and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment. Sites listed in the NRHP must be considered in the planning of all federal, federally licensed, and federally assisted projects. Listing of private property in the NRHP does not prohibit under federal law or regulation any actions that may otherwise be taken by the property owner with respect to the property.

Eligibility for the NRHP rests on two factors: significance and integrity (National Park Service 1997). In order to be eligible for inclusion in the NRHP, a property must meet one or more of the significance criteria listed below and retain integrity.

- **Criterion A**—Association with "events that have made a significant contribution to the broad patterns of our history."
- **Criterion B**—Association with "the lives of persons significant in our past."
- **Criterion C**—Resources "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."
- **Criterion D**—Resources "that have yielded, or may be likely to yield, information important to history or prehistory."

In addition to significance, the NRHP recognizes a property's integrity through seven aspects or qualities: location, design, setting, materials, workmanship, feeling, and association.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC 3001 et seq.) was passed in 1990 and establishes the rights of Native American lineal descendants for ownership and control of Native

American human remains and cultural objects. NAGPRA requires that an inventory of Native American human remains and funerary objects must be compiled by federal funded agencies and all museums and educational institutions receiving federal funds. Additionally, NAGPRA makes it illegal to traffic in Native American remains and cultural items without the right of possession, whether or not they derive from federal or Native American lands.

The second major purpose of NAGPRA is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on federal and tribal lands. All Indian tribes or Native Hawaiian organizations must be consulted whenever archaeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archaeological Resources Protection Act (Section 3 (c)(1)).

Archaeological Resources Protection Act of 1979

The Archaeological Resources Protection Act (16 USC 470aa–47011) was passed in October of 1979 to increase the protection of unique archaeological resources on public and Indian lands. Section 9 of this act provides for the confidentiality of archaeological resource and their locations. This prevents looting and destruction of these resources.

The Department of Transportation Act

Passed in 1966, the Department of Transportation Act (49 USC 303, formerly 49 USC 1651(b)(2) and 49 USC 1653f) includes Section 4(f), which states that the Federal Highway Administration and other United States Department of Transportation agencies cannot approve the "use" of land from certain properties, including public and private historical sites, unless certain conditions apply. These exceptions are the following: "If there is no feasible and prudent avoidance alternative to the use of land, and if the action includes all possible planning to minimize harm to the property resulting from such use; or if The Administration determines that the use of the property will have a *de minimis* impact."

The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation

These standards and guidelines, effective as of 1983, are prepared under the authority of Section 101(f)(g)(h) and Section 110 of the NHPA of 1966, as amended. These standards and guidelines are not regulatory and do not set or interpret agency policy. They provide technical advice for archaeological and historic preservation practices. Their purpose is (1) to organize the information gathered about preservation activities; (2) to describe results to be achieved by federal agencies, states, and others when planning for the identification, evaluation, registration, and treatment of historic properties; and (3) to integrate the diverse efforts of many entities performing historic preservation into a systematic effort to preserve the nation's culture heritage (48 *Federal Register* 44716).

The Secretary of the Interior's Standards for Rehabilitation

These standards were established by the Secretary of the Interior in 1986 as a way to homogenize rehabilitation efforts of nationally significant historic properties and buildings. These standards pertain to actions involved in returning a property to a state of utility through repair or alteration. This allows for the preservation of historic and cultural values of the property, while giving it an efficient contemporary use (36 CFR 67).

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings

The Standards for the Treatment of Historic Properties is a compilation of 34 guidelines to promote the responsible preservation of U.S. historic cultural resources. The standards specifically address preservation, rehabilitation, restoration, and reconstruction of historic materials. The standards are not intended to be the sole basis for decision making in regard to whether a historic property should be saved, but to provide consistency in conservation and restoration practices (36 CFR 68).

STATE LAWS, REGULATIONS, PLANS, AND POLICIES

California Office of Historic Preservation

The OHP is responsible for administering federally and State-mandated historic preservation programs to protect California's historic and archaeological resources. The OHP is guided by the State Historic Preservation Officer and the State Historical Resources Commission. The OHP is responsible for (1) Identifying, evaluating, and registering historic properties; (2) ensuring compliance with federal and State regulations; (3) encouraging adoption of economic incentive programs designed to benefit property owners; and (4) encouraging economic revitalization by promoting historic preservation through education and public awareness, and by demonstrating leadership and stewardship for historic preservation in California.

California Historical Landmarks Program

The Historical Landmarks Program was instated to register buildings or landmarks of historical interest. Historical Landmarks are defined as sites, buildings, or features that have a statewide historical, cultural, anthropological, or other significance. To be designated as a Historical Landmark by the Director of California State Parks, the resource must meet set criteria, be recommended for designation by the State Historical Resources Commission, and be approved by the property owners. The goals of the program include the preservation and maintenance of registered landmarks, most of which include missions, early settlements, battles, and gold rush sites (Public Resources Code [PRC] Sections 5020.4, 5021, 5022, 5022.5, 5031, and 5032).

California Points of Historical Interest Program

Points of Historical Interest are sites, buildings, or features that are of local historical, cultural, or anthropogenic significance. The California Points of Historical Interest Program was established in the effort to accommodate local historic properties unable to meet the restrictive criteria of the California Historical Landmarks Program, so that they may still be given limited protection in regard to development. The Points of Historical Interest Program requires the participation of local governmental officials in the approval process (PRC Sections 5020.4, 5021, 5022, 5022.5, 5031, and 5032).

California Register of Historical Resources

The CRHR program was designed for use by State and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. A historical resource can include any object, building, structure, site, area, or place that is determined to be historically or archaeologically significant. The CRHR is an authoritative guide to the state's significant archaeological and historic architectural resources. The list of these resources can be used for State and local planning purposes, the eligibility determinations can be used for State historic preservation grant funding and listing in the CRHR provides a certain measure of protection under CEQA.

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR per 14 CCR Section 4852, which states that a historical resource must be significant at the local, State, or national level under one or more of the following four criteria:

- **Criterion 1—**It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2—**It is associated with the lives of persons important in our past.
- **Criterion 3—**It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
- **Criterion 4—**It has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a historical resource eligible for listing in the CRHR, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance.

Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR per 14 CCR Section 4852(c).

California Environmental Quality Act

CEQA applies to all discretionary projects undertaken or subject to approval by public agencies (CEQA Guidelines Section 15002[i]). CEQA (PRC Section 21001[b], [c]) states that it is the policy of the State of California to "take all action necessary to provide the people of this state with… historic environmental qualities…and preserve for future generations examples of the major periods of California history." CEQA Guidelines require that historical resources and unique archaeological resources be taken into account during the environmental review process.

CEQA Guidelines Regarding Historical Resources

The CEQA Guidelines (Section 15064.5[a]) define a *historical resource* as including the following:

- A resource listed in, or eligible for listing in, the California Register of Historical Resources;
- A resource listed in a local register of historical resources (as defined at PRC Section 5020.1[k]);
- A resource identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. (Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR; see discussion of the CRHR above.)

A project that causes a "substantial adverse change" in the significance of a historical resource may have a significant effect on the environment (CEQA Guidelines Section 15064.5[b]). The CEQA Guidelines (Section 15064.5[b][1]) define "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." Generally, the significance of a historical resource is "materially impaired" when

a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in or eligibility for the CRHR, or its inclusion in a local register of historical resources (CEQA Guidelines Section 15064.5[b][2]). Mitigation measures are discussed in Section 21084.1 as well as Section 15126.4. Generally, by following the Secretary of the Interior's Standards for the Treatment of Historic Properties or the Secretary of the Interior's Standards for Rehabilitation, impacts can be considered as mitigated to a level less than significant (CEQA Section 15064.5 [b]).

CEQA Guidelines Regarding Archaeological Resources

If the cultural resource in question is an archaeological site, the CEQA Guidelines (Section 15064.5[c][1]) require that the lead agency first determine if the site is a historical resource as defined in Section 15064.5(a). If the archaeological site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (CEQA Guidelines Section 15064.5[c][2]). If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological resource, then the archaeological site is treated in accordance with PRC Section 21083.2 (CEQA Guidelines Section 15064.5[c][3]). In practice, most archaeological sites that meet the definition of a unique archaeological resource also meet the definition of a historical resource.

CEQA (PRC Section 21083.2[g]) defines a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

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

CEQA Guidelines Sections 15064.5(d) and (e)

CEQA Guidelines Sections 15064.5(d) and (e) assign special importance to human remains and specify procedures to be used when Native American remains are discovered. These procedures are detailed further in PRC Section 5097.98 and Health and Safety Code Section 7050.5.

Public Resources Code Sections 5097.5, 622.5, and 5097.9

PRC Section 5097.5 states that a person "shall not knowingly excavate, harm, or destroy any historic or prehistoric ruins or sites on public lands, unless granted permission by the public agency that has jurisdiction over those lands." It goes on to state that if this section is violated, the action is classified as a misdemeanor, punishable by fine and/or imprisonment. The section outlines the specific parameters of addressing the violation. PRC Section 622.5 establishes that any person, who is not the owner thereof, who willfully injures, disfigures, defaces, or destroys an object of archaeological or historical value on private or public lands is guilty of a misdemeanor.

PRC Section 5097.9 requires consultation with the California NAHC whenever Native American graves are found. Pursuant to Health and Safety Code subdivision c of Section 7050.5 (see below), when the NAHC is notified of human remains, it shall immediately notify those persons it believes to be the Most Likely Descendants (MLDs). Section 5097.98 1(b) states: "[u]pon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological

standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment." It also states possible preferences the MLD may have for said treatment, including preservation in place, nondestructive removal and analysis, relinquishment to the MLD, or other appropriate treatment. Conferral or discussion between the MLD and landowner is described in Section 5097.98 2(c) as "meaningful and timely discussion and careful consideration of the views of each party, in a manner that is cognizant of all parties' cultural values, and where feasible, seeking agreement."

Health and Safety Code Section 7050.5 – Human Remains

Health and Safety Code (HSC) Section 7050.5 requires that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlay adjacent remains, until the County Coroner has examined the remains. If the Coroner determines, or has reason to believe, the remains to be those of a Native American, the Coroner shall contact the NAHC by telephone within 24 hours. In addition, any person who mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor.

Health and Safety Code Sections 18950–18961 – State Historical Building Code

HSC Sections 18950 through 18961 provide alternative building regulations and building standards for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of buildings or structures designated as historic buildings. Such alternative building standards and building regulations are intended to facilitate the restoration or change of occupancy so as to preserve their original or restored architectural elements and features, to encourage energy conservation and a cost-effective approach to preservation, and to provide for the safety of the building occupants.

Tribal Consultation Guidelines

Senate Bill (SB) 18 of 2004 (Chapter 905, Statutes of 2002) provides for the protection of Native American cultural lands and places by requiring cities and counties to consult with California Native American Tribes prior to adopting or amending a general plan or specific plan. In 2005, the Governor's Office of Planning and Research (OPR) released the Tribal Consultation Guidelines (California OPR 2005) as a supplement to the General Plan Guidelines to aid cities and counties in implementing the provisions of SB 18.

Assembly Bill 52

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) was passed on September 25, 2014, and applies to all projects that file a notice of preparation or notice of negative declaration or mitigated negative declaration on or after July 1, 2015. The bill requires that a lead agency notify and begin consultation with a California Native American tribe if that tribe has requested, in writing, to be kept informed of proposed projects by the lead agency and has then requested consultation for a particular project, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. The bill also specifies mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. See additional discussion of AB 52 in Chapter 4.17, *Tribal Cultural Resources*, of this EIR.

REGIONAL AND LOCAL LAWS, REGULATIONS, PLANS, AND POLICIES

County of San Diego Code of Regulatory Ordinances Sections 86.601–86.608, Resource Protection Ordinance

This ordinance requires that cultural resources be evaluated as part of the County's discretionary environmental review process and if any resources are determined significant under the Resource Protection Ordinance (RPO), they must be preserved. RPO prohibits development, trenching, grading, clearing, and grubbing, or any other activity or use damaging to significant prehistoric or historic site lands, except for scientific investigations with an approved research design prepared by an archaeologist certified by the Register of Professional Archaeologists. Sites determined to be RPO significant must be avoided and preserved.

San Diego County Local Register of Historical Resources (San Diego County Administrative Code Section 396.7)

The County of San Diego maintains a Local Register that was modeled after the CRHR (San Diego County Administrative Code Section 396.7). The purpose of the San Diego County Local Register of Historical Resources (Local Register) is to develop and maintain "an authoritative guide to be used by state agencies, private groups, and citizens to identify the County's historical resources and to indicate which properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Sites, places, or objects that are eligible to the NRHP or the CRHR are automatically included in the Local Register. Resources may also be listed if they meet set criteria specified in Section 396.7 of the San Diego County Administrative Code.

Local Jurisdictions' Preservation Policies and Regulations

Every local government in California has the authority to adopt local ordinances that pertain to historic and archaeological resources. These ordinances outline statements of goals, policies and actions that encourage the designation, preservation and protection of existing historical and cultural resources, and foster public awareness and appreciation of a community's cultural resources. The County of San Diego and many cities in the County have cultural resources preservation ordinances, which are listed below in Table 4.5-2.

Table 4.5-2
City and County Cultural Resources Preservation Ordinances

Jurisdiction	Local Government Regulations
City of Carlsbad	Municipal Code, Title 22
City of Chula Vista	Municipal Code, Title 21
City of Coronado	Municipal Code, Title 84
City of Del Mar	Municipal Code, Chapter 30.58
City of El Cajon	Municipal Code, Chapter 17.55
City of Encinitas	Municipal Code, Chapter 30.34.050
City of Escondido	Municipal Code, Chapter 33, Article 40
City of Imperial Beach	None
City of La Mesa	Municipal Code, Title 25
City of Lemon Grove	None
City of National City	Code of Ordinances, Chapter 15.34, Chapter 18.12
City of Oceanside	Code of Ordinances, Chapter 14A
City of Poway	Municipal Code, Chapter 17.45

Jurisdiction	Local Government Regulations
City of San Diego	Municipal Code, Chapter 14, Article 3, Division 2
City of San Marcos	None
City of Santee	Municipal Code, Chapter 15.60
City of Solana Beach	Municipal Code, Title 17.60.160
City of Vista	Municipal Development Code, Chapter 15.12
County of San Diego	County Administrative Code, Article XXII

4.5.3 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines provides criteria for determining the significance of a project's environmental impacts, in the form of Initial Study checklist questions. Unless otherwise noted, the significance criteria specifically developed for this EIR are based on the checklist questions that address the criteria in CEQA Guidelines Appendix G. In some cases, SANDAG has combined checklist questions, edited their wording, or changed their location in the document in an effort to develop significance criteria that reflect the programmatic level of analysis in this EIR, and the unique characteristics of the proposed Plan.

Checklist questions for cultural resources are included in Section V of Appendix G. For purposes of this EIR, the Appendix G questions have been combined and modified. Specifically, Appendix G Section V criterion (a) regarding historical resources and criterion (b) regarding archaeological resources are addressed in CULT-1. Criterion (c) regarding disturbance of human remains is addressed in CULT-2.

The significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in or eligibility for inclusion in (1) the CRHR, (2) a local register, or its identification in a historical resources survey meeting the requirements of PRC Section 5024.1, or (3) as determined by a lead agency for purposes of CEQA (Guidelines Section 15064.5(b)(2).)

For purposes of this EIR, implementation of the proposed Plan would have a significant cultural resources impact if it would:

CULT-1 Cause a substantial adverse change in the significance of a historical resource[1] or unique archaeological resource.[2]

CULT-2 Disturb any human remains, including those interred outside of dedicated cemeteries, in violation of existing laws and regulations protecting human remains.

4.5.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

CULT-1 CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A HISTORICAL RESOURCE OR UNIQUE ARCHAEOLOGICAL RESOURCE

ANALYSIS METHODOLOGY

This analysis examines the impacts on historical and unique archaeological resources that would result from implementation of the proposed Plan. The analysis identifies the general types of proposed Plan related

[1] See definition of *historical resource* in Section 4.5.2, *Regulatory Setting*.

[2] See definition of *unique archaeological resource* in Section 4.5.2.

activities with the potential for impacting historic architectural resources and archaeological resources, then analyzes the impacts.

A substantial adverse change to the significance of a historical resource is defined as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the cultural resource would be materially impaired (CEQA Guidelines Section 15064.5); this definition can also be applied to a substantial adverse change to a unique archaeological resource.

Construction activities are more likely to disturb archaeological resources remains than operational activities because such resources are most likely to be encountered during initial ground disturbance. Impacts of operational activities on archaeological resources are unlikely to be significant, unless there are potential vibration impacts from rail transit operations or visual operational impacts on Tribal Cultural Resources (TCRs).

For forecasted regional growth and land use change projects, as well as planned transportation network improvements and programs, the likelihood of encountering archaeological resources is thus analyzed based on whether projects would require grading, excavation, or other ground-disturbing activities. Even minimal grading activities can encounter resources, as they have been discovered only inches below the surface. Ground-disturbing activities associated with infill, redevelopment, and infrastructure expansion have the potential to unearth these resources.

This analysis clearly distinguishes impacts on archeological resources from those on historic structures. Construction activities are most likely to affect historical resources of an architectural nature ("historic structures"). Impacts of operational activities on historic structures are unlikely to be significant, unless vibration impacts of rail transit operation on historic structures or visual operational impacts on historic structures are possible. Impacts could include demolition (for instance, an interchange reconfiguration may require demolition of structures in that area) or changes to the setting or viewshed of a historic structure (thereby affecting the integrity of its setting and its significance).

During the timeframe of the proposed Plan, climate change effects are likely to result in impacts in the San Diego region including, but not limited to, increased risk of wildfire throughout the region, increased flooding in low-lying areas, and flooding associated with beach loss and sea level rise in coastal areas. These effects are further detailed in Appendix C. The potential exacerbation of climate change effects from past, present, and reasonably foreseeable future projects, when combined with the incremental contribution of the proposed Plan, is discussed further in Chapter 5, *Cumulative Impact Analysis*, of this EIR. The potential for the proposed Plan to exacerbate climate change effects that may result in damage or destruction to cultural resources is evaluated as part of the analysis below.

2025

Regional Growth and Land Use Change

As discussed in Section 4.5.1 *Existing Conditions*, numerous historic architectural and archaeological resources have been documented throughout the San Diego region. These include historic architectural resources (e.g., historic buildings or structures) listed on federal, state, and local registers as well as archaeological sites and ethnographic resources, some of which include human remains. While many of these resources have been identified and documented within the San Diego region, there are likely many more resources that remain undiscovered.

As also discussed in Section 4.5.1, many areas within the San Diego region have a high potential to yield archaeological and historic architectural resources. The location of past discoveries can be useful in determining where unknown t resources are likely encountered. Intact archaeological resources are most likely encountered in previously undeveloped land, but both historic and archaeological resources are likely found in the downtown areas in older neighborhoods. Many of the areas within the County of San Diego, such as Lakeside and Fallbrook, have both large undeveloped areas where resources have been encountered in the past and old downtown areas that contain known historical resources. Lagoons and rivers were resource and transportation areas during prehistoric times, while coastal communities were some of the earliest and heaviest areas of settlement during historic times. For example, the earliest known archaic sites in the San Diego region were found near coastal lagoons and river valleys.

From 2016 to 2025, regional population is forecasted to increase by 161,338 people (5 percent), 97,661 housing units (8 percent), and 115,328 jobs (7 percent). The 2025 regional land use pattern is shown in Figure 2-17. Approximately 79% percent of the forecasted regional population increase by 2025 is in the City of San Diego (58 percent), City of Chula Vista (12 percent), and City of Escondido (9 percent). Those same three jurisdictions accommodate approximately 78 percent of new housing units in the region by 2025, while the City of San Diego, National City, and the City of Chula Vista accommodate more than 70 percent of new jobs in the region by 2025.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include Downtown, Mission Valley, Midway-Pacific Highway, and University Center. The highest proportions of forecasted job increases are in the communities of Downtown, University Center, Otay Mesa, and Kearny Mesa. In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases are Otay and North County Metro. The only significant increase in jobs over that period are in Otay.

Regional growth and land use change would result in a wide range of construction and ground-disturbing activities, such as excavation, grading, and clearing, which remove and/or disturb the upper layer of soils. Because archaeological resources have been found within inches of the ground surface in some areas of the San Diego region, like the downtown area or Otay Mesa, these resources can be encountered even during minor grading and ground-disturbing activities. In addition, redevelopment and intensification of land uses may result in the demolition or substantial alteration of historic resources in or near established urban areas or town centers, where built historic resources are typically located.

As Section 4.5.1 describes, there are many historic districts and built historic resources in the western portion of the region, particularly in the Downtown and Midway-Pacific Highway communities such as the Marine Corps Recruit Depot Historic District, the Naval Training Center, the Old Town San Diego Historic District, the San Diego Civic Center, and the Gaslamp Quarter Historic District. Because this portion of the region is forecasted to experience much of the growth under the proposed Plan, historic resources in these areas would be encountered. Increases in development intensity would also introduce visual, audible, and other effects that indirectly affect built historic resources or alter the setting that contributes to the resources' significance. Construction activities would be more likely to affect both historical and unique archaeological resources than operational activities. Forecasted growth and land use change would also result in indirect physical impacts on open space areas in less developed and unincorporated portions of the San Diego region such as in the Otay and North County Metro communities, and thus increase the likelihood of physical impacts on cultural resources located within those areas. For instance, increased recreational use of open space areas could promote erosion or increase the likelihood of damage to cultural resources through increased traffic (foot or otherwise).

Encountering such resources does not necessarily result in impacts on those resources. For instance, a new development could be constructed near an old neighborhood that has significant resources but not result in direct impacts because no demolition or alteration would occur, nor would the development result in indirect impacts if no changes would occur to the setting or viewshed. An archaeological resource could be encountered by earth-moving activities, but laws and regulations are in place to protect historical resources by avoidance and by requiring feasible mitigation if avoidance is not possible.

As illustrated in Section 4.5.2, numerous federal, State, and local laws, regulations, and programs are in place to protect cultural resources. For example, HSC Sections 18950–18961 and the Secretary of the Interior's Standards for Rehabilitation provide regulations for the restoration or rehabilitation of historic structures to preserve their original or restored architectural elements and features, while providing a safe building for occupants. Local policies and ordinances can provide cultural and historical resources with added protection by requiring surveys and giving them local designations of significance. Additionally, the Secretary of the Interior's Standards for the Treatment of Historic Properties were developed to help protect historical resources by promoting consistent preservation practices. Also, local jurisdictions have responsibilities to identify and mitigate adverse effects on significant cultural resources under CEQA.

Redevelopment and intensification of land uses may also result in the demolition or substantial alteration of historic resources or the removal of a significant archaeological site. Adherence to the existing laws, regulations, and programs discussed above would avoid and reduce impacts on historic architectural resources from construction of development projects associated with regional growth and land change, but there is no assurance that they would reduce impacts to a less-than-significant level for all projects. Therefore, regional growth and land use change would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. This is a significant impact.

Transportation Network Improvements and Programs

Some of the improvements in the proposed Plan from 2016 to 2025 would involve only operational changes that would not include construction of new transportation or transit facilities, such as increasing service frequencies or new transit routes within existing right-of-way. These changes would generally not lead to impacts on cultural resources.

However, the improvements that would involve construction of new infrastructure or facilities could encounter cultural resources. Highway improvements (such as lane expansions), construction of new Managed Lanes as part of the Complete Corridors program, and commuter rail upgrades as part of the Transit Leap program would require grading and other ground-disturbing activities.

These activities would remove and/or disturb the upper layer of soils and have the potential to unearth underlying archaeological and historic architectural resources and would cause a direct disturbance to buried resources. Given that numerous prehistoric sites are known to exist along the shores, estuaries, lagoons, and bluffs of the San Diego coastline, grading and ground-disturbance activities along the rail corridor between Del Mar and Oceanside (for upgrades to Pacific Surfliner, COASTER, and Metrolink, for example) and I-5 from Manchester to Vandergrift in Oceanside (in order to add two new Managed Lanes, for example), have the potential to encounter archaeological resources. Other known and unknown prehistoric and historic sites could be harmed by grading and construction of transportation network improvements. For federally funded projects, Section 106 of the NHPA and Section 4f of the Department of Transportation Act would reduce impacts on cultural resources because both regulations require that properties along the rail or road alignments be identified, and adverse effects to be avoided or mitigated.

In addition, construction of transportation network improvements may result in the demolition or substantial alteration of historic resources in or near established urban areas or town centers. Transportation network improvements would also introduce operational visual, audible, vibrational, and other effects that indirectly affect built historic resources or alter the setting that contributes to the resources' historic value, as well as negatively impact the structures through increased levels of corrosive air contaminates (Inkpen 2004), which may damage the exterior of historic buildings.

Transit improvements from 2016 to 2025, including investment in mobility hubs, upgrades to Pacific Surfliner, COASTER, Metrolink, freight, and Los Angeles-San Diego-San Luis Obispo (LOSSAN) services, and construction of a new station in the Gaslamp Quarter, would result in ground-disturbing activities in downtown San Diego, and north along the coast through to Oceanside. Because unique archaeological materials are routinely identified during excavations and monitoring of construction activities in downtown San Diego, existing unknown resources may be encountered. These are prime locations for the presence of historical or unique archaeological resources. Archaeological resources could also be identified during construction of highway and road improvements such as new toll lanes on SR 11 to the Otay Mesa POE, Interchange and Arterial Operational improvements at SR 94 and SR 125, Otay Mesa Port of Entry, and more than 25 planned improvements to local arterial streets at locations throughout the region, including widenings and extensions of existing roadways, new or replaced bridges, and realignments

Upon implementation of the individual transportation network improvements and programs included as part of the proposed Plan, both known and unknown archaeological and historic architectural resources would be encountered. As discussed above, while adherence to existing laws, regulations, and programs would avoid or reduce impacts on cultural resources when they are encountered during the construction of transportation network improvements, there is no assurance that they would reduce all impacts to a less-than-significant level for all future projects. Implementation of the proposed Plan would result in ground-disturbing activities related to transportation network improvements and programs that would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. This is a significant impact.

2025 Conclusion

Implementation of the proposed Plan would result in regional growth and land use change and transportation network improvements and programs that would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. Therefore, this impact (CULT-1) from 2016 to 2025 is significant.

2035

Regional Growth and Land Use Change

From 2026 to 2035, regional population is forecasted to increase by 149,500 people (4 percent), 121,650 housing units (9 percent), and 159,728 jobs (9 percent). The 2035 regional land use pattern is shown in Figure 2-18. Approximately 80 percent of the forecasted regional population increase between 2025 and 2035 is in the City of San Diego (71 percent), National City (7 percent), and City of Chula Vista (2 percent). Similarly, these three jurisdictions accommodate approximately 76 percent of new housing units and 70 percent of new jobs, respectively, between 2025 and 2035.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include Downtown, Mission Valley, Kearny Mesa, and Midway Pacific Highway. The highest proportions of forecasted job increases are in the communities of Downtown, Kearny Mesa, University and Otay

Mesa. In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases include Lakeside, North County Metro and Otay. The only significant increase in jobs over that period is in Otay.

As discussed in the 2025 analysis, many areas throughout the San Diego region have a high potential to yield archaeological and historic architectural resources. While most growth from 2026 to 2035 would occur in established urban areas such as Downtown San Diego, Chula Vista and National City, new growth in the region may occur in areas such as the Otay and North County Metro communities where archaeological and historic architectural resources are present, as historically or archaeologically significant resources have been found throughout the County (County of San Diego 2011). Built historical resources tend to be concentrated in historical town centers along the urban costal region but are also located in unincorporated areas of the county such as Lakeside, Otay and North County Metro. Built historical resources are also generally located along major roadways, such as I-8 and SR 78. In addition, some built resources exist within the unincorporated County that are historically significant but have not yet been designated (County of San Diego 2011). Regional growth and land use change forecasted to occur throughout the region from 2026 to 2035 would result in additional construction and ground-disturbing activities, such as such as excavation, grading, clearing, demolition, alteration, or structural relocation. Forecasted growth and land use change would also result in indirect physical impacts on open space areas, and thus increase the likelihood of physical impacts on cultural resources located within those areas. For instance, increased recreational use of open space areas could promote erosion or increase the likelihood of damage to cultural resources through increased traffic (foot or otherwise). These ground-disturbing activities, associated with infill, redevelopment, and/or expansion of infrastructure, have the potential to encounter archaeological and historic architectural resources.

As discussed in the 2025 analysis, while adherence to existing laws, regulations, and programs would reduce impacts on archaeological and historic architectural resources upon implementation of the proposed Plan, there is no assurance that they would reduce these impacts to a less-than-significant level for all projects. Given the potential for land use changes to cause substantial adverse changes in the significance of historical and unique archaeological resources coupled with the nonrenewable nature of these resources if disturbed or altered, implementation of the proposed Plan would result in ground-disturbing activities related to regional growth and land use change that would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. This is a significant impact.

Transportation Network Improvements and Programs

As discussed in the 2025 analysis, due to the rich historic and prehistoric background of the San Diego region, the potential for identified and unidentified historical and cultural resources to be found within transportation network improvement and program areas exists. Some of the improvements in the proposed Plan slated for completion between 2026 to 2035 would involve only operational changes that would not include construction of new transportation or transit facilities, such as increasing service frequencies or creating new transit routes, and therefore would have little impact on historical and unique archaeological resources. However, improvements that would involve construction of new infrastructure or facilities could encounter sensitive resources. Transportation construction projects would require grading, and potentially trenching, activities that remove and/or disturb the upper layer of soils and could unearth underlying archaeological resources and cause a direct disturbance to historical resources or unique archaeological resources.

Major rail-related transportation network improvements would include continued double-tracking at certain locations on the LOSSAN rail corridor, construction of the Del Mar Tunnel, new stations at Central Mobility Hub and Camp Pendleton, Anchor Mobility Hub at the San Ysidro Transit Center and grade separation at Leucadia

Boulevard. These improvements have the potential to impact archaeological resources that may be present along the shores, estuaries, lagoons, and bluffs of the San Diego coastline, as well as areas that have not been previously developed. If demolition of buildings is necessary for these projects and improvements, then historic architectural resources could also be disturbed.

Additional major transportation network improvements that could impact archaeological and historic architectural resources include new Managed Lanes and Managed Lane Connectors on SR 15, SR 52, SR 94, SR 78, SR 163, SR 125, I-5, I-8, I-15, I-805. Direct Access Ramps (DARs) are assumed at: I-5/Clairemont Mesa Boulevard; I-5/Voigt Drive; and SR 125/Spring Street/SR 94. Shoulder widening and straightening improvements on SR 67 from Mapleview to Dye Road, and five additional improvements to local arterial streets. These projects also have the potential to impact archaeological and historic architectural resources resulting from ground disturbance or demolition.

Given the magnitude and location of several of the transportation network improvements and programs occurring between 2026 and 2035, and the number of additional transportation network improvements over those previously implemented by 2025, additional ground disturbances are anticipated. As a result, additional archaeological and historic resources would be encountered during construction activities between 2026 and 2035.

As discussed in the 2025 analysis, while adherence to the existing laws, regulations, and programs discussed in Section 4.5.2 would reduce impacts on cultural resources upon implementation of the proposed Plan, there is no assurance that they would reduce these impacts to a less-than-significant level for all future projects. Given the potential for transportation facilities to cause substantial adverse changes in the significance of cultural resources coupled with the nonrenewable nature of these resources if disturbed or altered, implementation of the proposed Plan would result in ground-disturbing activities related to transportation network improvements and programs that would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. This is a significant impact.

2035 Conclusion

Implementation of the proposed Plan would result in regional growth and land use change and transportation network improvements and programs that would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. Therefore, this impact (CULT-1) in between 2026 and 2035 is significant.

2050

Regional Growth and Land Use Change

From 2036 to 2050, regional population is forecasted to increase by 125,725 people (3 percent), 61,433 housing units (4 percent), and 164,843 jobs (8 percent). The 2050 regional land use pattern is shown in Figure 2-19. Approximately 78 percent of the forecasted regional population increase between 2036 and 2050 is in the City of San Diego (37 percent), San Marcos (13 percent), and City of Chula Vista (28 percent). Similarly, these three jurisdictions accommodate approximately 89 percent of new housing units and 72 percent of new jobs, respectively, between 2036 and 2050.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include the Downtown, Midway Pacific Highway, and Uptown. The highest proportions of forecasted job increases are in the communities of Downtown, Otay Mesa, Kearny Mesa, and University City. In

the unincorporated County, the communities with the highest proportion of the forecasted population increases include Lakeside, North County Metro, and Valle de Oro. There are no housing units built in the Unincorporated area after 2035. The only significant increase in jobs over that period are in Otay.

As discussed in the 2025 and 2035 analyses, many areas throughout the San Diego region have a high potential to contain prehistoric and historic cultural resources. In addition to the resource-sensitive areas mentioned in the 2025 and 2035 analyses, the additional growth forecasted in both the unincorporated County and western portion of the region between 2036 and 2050 would result in new development in areas such as Otay and redevelopment in established urban areas such as Downtown, Kearny Mesa, and Midway-Pacific Highway. Additional construction and ground-disturbing activities, such as excavation, grading, clearing, demolition, alteration, or structural relocation, would occur. Forecasted growth and land use change would also result in indirect physical impacts on open space areas, such as in the Otay planning area, and thus increase the likelihood of physical impacts on cultural resources located within those areas. For instance, increased recreational use of open space areas could promote erosion or increase the likelihood of damage to cultural resources through increased traffic (foot or otherwise). These ground-disturbing activities, associated with infill, redevelopment, and/or expansion of infrastructure, have the potential to impact archaeological and historic architectural resources. With additional growth, and increased development intensities, and increased use of open space areas, the extent of impacts on archaeological and historic architectural resources by 2050 would be greater than that experienced by 2025 and 2035 as more resource-sensitive land would be disturbed over time.

As more land is disturbed and altered for new development and redevelopment between 2036 and 2050, the possibility of irreversible losses of significant archaeological and historic architectural resources becomes greater. As discussed in the 2025 and 2035 analyses, while adherence to the existing laws, regulations, and programs would reduce impacts on archaeological and historic architectural resources upon implementation of the proposed Plan, there is no assurance that they would reduce these impacts to a less-than-significant level. Given the potential for land use changes to cause substantial adverse changes in the significance of cultural resources, coupled with the nonrenewable nature of these resources if disturbed or altered, implementation of the proposed Plan would result in ground-disturbing activities related to regional growth and land use change that would cause a substantial adverse change in the significance of a historical or archaeological resource. This is a significant impact.

Transportation Network Improvements and Programs

As true in the 2025 and 2035 analysis, potential exists for identified and unidentified archaeological and historic architectural resources to occur in transportation network improvement and program areas. Some of the improvements in the proposed Plan that would be implemented between 2036 and 2050 would include only operational changes that would not include construction of new transportation or transit facilities, such as increasing service frequencies or new transit routes within existing right-of-way. However, those that would involve construction of new infrastructure or facilities could result in impacts. Major rail projects and improvements such as continued double-tracking along certain LOSSAN corridor locations, construction of Sorrento Mesa and UTC tunnels and a new station at Balboa Avenue, and three new commuter rail lines between Downtown San Diego and El Cajon; National City to U.S. Border, and Central Mobility to the U.S. Border have the potential to impact archaeological and historic architectural resources resulting from ground disturbance or demolition. Highway improvements such as Managed Lane construction along I-5, I-8, I-15, I-805, SR 52, SR 54, SR 56, SR 125, and SR 905 would require grading and, potentially, trenching activities that remove and/or disturb the upper layer of soils, and could encounter underlying archaeological and historic architectural resources. Shoulder widening and road straightening along rural highways such as SR 76, SR 78,

SR 79, SR 94 and I-8 would occur in areas that have seen relatively little development would disturb new ground. Various rail improvements to the Trolley, SPRINTER and COASTER lines have the potential to encounter historical resources since historic period archaeological materials are routinely identified during excavations and monitoring of construction activities in downtown San Diego and the coastal region.

Any ground disturbances associated with these transportation network improvements may unearth underlying archaeological and historic architectural resources and cause a direct disturbance to buried resources. Given the magnitude and location of several of the transportation network improvements occurring between 2036 and 2050, and the number of additional transportation network improvements over those previously implemented by 2020 and 2035, additional significant ground disturbances are anticipated. It is possible that more archaeological and historic architectural resources would be disturbed between 2036 and 2050.

As discussed in the 2025 and 2035 analyses, while adherence to the existing laws, regulations, and programs would reduce impacts on archaeological and historic architectural resources upon implementation of the proposed Plan, there is no assurance that they would reduce these impacts to a less-than-significant level for all future projects. Implementation of the proposed Plan would result in ground-disturbing activities related to transportation network improvements and programs that would cause a substantial adverse change in the significance of the resource. Given the potential for transportation facilities to cause substantial adverse changes in the significance of archaeological and historic architectural resources coupled with the nonrenewable nature of these resources if disturbed or altered, this is a significant impact.

2050 Conclusion

Implementation of the proposed Plan would result in regional growth and land use change and transportation network improvements and programs that would cause a substantial adverse change in the significance of a historical resource or unique archaeological resource. Therefore, this impact (CULT-1) between 2036 and 2050 is significant.

Exacerbation of Climate Change Effects

Implementation of the proposed Plan may result in ground disturbances and increased foot activity due to construction, demolition, and increased recreational use of open spaces. These effects could result in increased erosion or disturb the upper layer of soils, unearthing underlying archaeological and historic architectural resources and causing a disturbance to buried resources. Climate change effects may be exacerbated by this impact. Climate change is likely to result in increased erosion due to more wildfires, which burn vegetation and destabilize soil; more flooding, which results in runoff that increases erosion; and sea-level rise, which can worsen coastal erosion. Thus, the proposed Plan's impact on increased erosion may exacerbate climate change impacts that also increase erosion and thus affect cultural resources.

Increased coastal development can especially affect cultural resources. As the San Diego region used to hold numerous coastal villages, coastal areas may have abundant cultural resources of historic and archaeological importance. Climate change impacts, such as increased sea-level rise, storm surge, and coastal erosion, can result in flooding and wave damage to cultural resources. Thus, the proposed Plan's impact on increased disturbance to coastal areas may exacerbate climate change impacts that also threaten coastal cultural resources.

MITIGATION MEASURES

CULT-1 SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A HISTORICAL RESOURCE OR UNIQUE ARCHAEOLOGICAL RESOURCE

2025, 2035, and 2050

CULT-1a Develop Project-Level Measures for Development Projects and Transportation Network Improvements. During project-level CEQA review of development projects or transportation network improvements that would cause a substantial adverse change in the significance of a CEQA-defined historical resource or significantly affect a unique archaeological resource, the County of San Diego, cities, and other local jurisdictions can and should, or SANDAG shall, and other transportation project sponsors can and should, develop project-level protocols and mitigation measures, consistent with CEQA Guidelines Section 15126.4(b) and in consultation with the State Historic Preservation Officer (SHPO) as needed, to avoid substantial adverse changes to CEQA-defined historical resources and unique archaeological resources. The local lead agency can and should, SANDAG shall, and other transportation project sponsors can and should allow for adequate resources to identify (through survey, consultation, or other means) cultural resources in order to develop minimization and avoidance methods where possible, and will/can and should consult with appropriate Native American representatives to provide necessary input as to resources that are of concern. These may include natural areas that contain resources of importance to tribes if they are historical resources or unique archaeological resources. Project-level mitigation measures include, but are not limited to, the following:

Archaeological Resources

- Where feasible, avoid impacts on archaeological resources by preservation in place by:
    - Avoiding archaeological sites
    - Deeding archaeological sites into permanent conservation easements
    - Capping or covering archaeological sites with a layer of soil before building on the sites
- If preservation in place is not feasible, reduce impacts on archaeological sites by completing a data recovery program conducted in compliance with CEQA Guidelines Section 15126.4(b). (A data recovery program for archaeological sites consists of excavation of a percentage of the site—determined in consultation with the lead agency—to provide information necessary to answer significant research questions.)

Historic Architectural Resources

- Conduct maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction to reduce impacts on historic structures, and have a qualified architectural historian or historic architect review mitigation plans to review consistency with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
- If avoidance of a built historic resource is not feasible, apply additional mitigation options including, but not limited to, specific design plans for historic districts, or plans for alteration or adaptive reuse of a historical resource that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings.
- If demolition of a historic structure must occur, apply mitigation options such as recordation including a building description, historical narrative, and photographic documentation of the building and

appropriate as-built drawings similar to the Historic American Building Survey documentation outlined by the National Park Service (National Park Service 2015).

CULT-1b Implement Monitoring and Data Recovery Programs for Development Projects and Transportation Network Improvements. During project-level CEQA review and during construction of development projects, the County of San Diego, cities, and other local jurisdictions can and should, or during construction of transportation network improvements, SANDAG shall, and other transportation project sponsors can and should, implement monitoring and data recovery measures to reduce impacts on both known and undiscovered CEQA-defined historical resources and unique archaeological resources, including but not limited to the following:

- Require areas identified in any required monitoring and mitigation plan to be monitored during the grading phase of individual projects by a qualified archaeologist and tribal monitor if needed.
- Should an archaeological deposit and/or feature be encountered during construction activities that is determined to be a historical resource or unique archaeological resource by a qualified archaeologist, stop ground-disturbing activities and prepare and/or implement an Archaeological Data Recovery Program (ADRP) in consultation with SHPO and/or, when applicable, qualified local agency staff with technical expertise in archaeological and cultural resources management.
- Integrate curation of archaeological and/or historical artifacts and associated records in a regional center focused on the care, management, and use of archaeological collections if the artifact must be excavated. This does not include Native American human remains and associated burial items, the disposition of which should be determined in consultation with the MLDs (see Impact CULT-2).

SIGNIFICANCE AFTER MITIGATION

2025, 2035, and 2050

Implementation of the proposed Plan would result in significant impacts on historical and unique archaeological resources through construction and ground-disturbing activities in 2025, 2035, and 2050. Implementation of mitigation measures CULT-1a and CULT-1b would reduce impacts through proper resource handling, surveys, regulatory compliance, and mitigation monitoring. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less-than-significant level. Therefore, this impact (CULT-1) would remain significant and unavoidable.

CULT-2 DISTURB ANY HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF DEDICATED CEMETERIES, IN VIOLATION OF EXISTING LAWS AND REGULATIONS PROTECTING HUMAN REMAINS

ANALYSIS METHODOLOGY

Both forecasted regional growth and land use change, and planned transportation network improvements and programs have the potential to encounter buried remains during grading, excavation, and other ground-disturbing activities. Construction activities are more likely to disturb human remains than operational activities because human remains are most likely to be encountered with initial ground disturbance.

Impacts of the proposed Plan are analyzed in combination with existing laws and regulations, such as HSC Section 7050.5, PRC Section 5097.98, and local ordinances, to determine significance. For forecasted regional growth and land use change projects, as well as planned transportation network improvements, the likelihood of encountering human remains is analyzed based on whether projects would require grading, excavation, or

other ground-disturbing activities. Even minimal grading activities can encounter remains, as they have been discovered only inches below the surface. Ground-disturbing activities associated with infill, redevelopment, and infrastructure expansion have the potential to unearth remains.

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. HSC 7050.5 addresses the protection of human remains discovered in any location other than a dedicated cemetery. These, together with the provisions in the CEQA Guidelines, provide specific guidance for addressing such remains before resuming excavation or disturbance of the project site. The HSC and PRC sections provide consultation and treatment options as well as outline appropriate communication protocols and discuss the need to maintain respect for and dignity of the remains and associated materials.

IMPACT ANALYSIS

2025

Regional Growth and Land Use Change

The likelihood of encountering human remains is greatest for projects that include grading and/or excavation of areas on which past grading and/or excavation activities have been minimal. Because human remains have been found within inches of the ground surface throughout the San Diego region, even minimal grading activities can impact these resources. Excavation and soil removal of any kind, irrespective of depth, have the potential to yield human remains. While new development and redevelopment occurring by 2025 in the region would mostly result in the intensification of previously developed areas, ground-disturbing activities associated with infill, redevelopment, and/or expansion of infrastructure have the potential to unearth and impact buried human remains.

Given the regional growth and land use change forecasted by 2025, implementation of the proposed Plan would result in the intensification of land uses along established transportation corridors and waterways where human remains may be located. For instance, human remains have been found in the San Diego River valley. As discussed in Section 4.5.2, Native American human burials have specific provisions for treatment in PRC Section 5097.98 and HSC 7050.5 as well as other laws and regulations. By halting all construction activities if human remains are found, impacts on those remains or any other remains or associated burial items also in that area can be avoided. NAGPRA also establishes procedures to be followed in the event of a discovery of Native American human remains on federal lands, stipulates that Native American cultural items must be returned to affiliated tribes and lineal descendants, and prevents the illegal trafficking of these items. This law provides additional protection and allows for proper handling of Native American human remains and associated burial items.

Regional growth and land use changes projects implementing the proposed Plan would be required to adhere to the laws and regulations discussed above and listed in Section 4.5.2. These laws outline appropriate treatments and the protocols for discussions regarding treatment options with MLDs; therefore, impacts associated with the disturbance of human remains would be less than significant.

Transportation Network Improvements and Programs

Some of the transportation network improvements and programs in the proposed Plan completed by 2025 would involve only operational changes that would not include construction of new transportation or transit facilities, such as increasing service frequencies or operation of new transit routes within existing rights-of-

way. These operational changes would have minimal impact on human remains. However, transportation improvements that would involve construction of new infrastructure or facilities could encounter human remains.

The likelihood of encountering human remains is greatest for projects that include grading and/or excavation of areas where past grading and/or excavation activities have been minimal; however, there is the potential to encounter human remains in previously developed areas. Because human remains have been found within inches of the ground surface in some areas of the San Diego region, even minimal grading activities can encounter these resources. Excavation and soil removal of any kind, irrespective of depth, have the potential to yield human remains. For example, upgrades to Pacific Surfliner, COASTER, Metrolink, freight, and LOSSAN services, including construction of a new station in the Gaslamp Quarter, would result in ground-disturbing activities in downtown San Diego, and north along the coast through to Oceanside. Because historic period archaeological materials are routinely identified during excavations and monitoring of construction activities in the Old Town and downtown areas, existing unknown resources, including buried human remains, may be encountered within these rail improvement areas. Additionally, numerous prehistoric sites are known to exist along the shores, estuaries, lagoons, and bluffs of the San Diego coastline. For example, rail improvements along coastal San Diego County would occur in prime locations for early historic transportation and trade activities, as well as for prehistoric habitation.

The transportation network improvements have the potential to uncover previously undiscovered human remains because some would take place in previously undisturbed or minimally disturbed areas. As discussed above, future transportation network improvements implemented by the proposed Plan would be required to adhere to existing laws and regulations. Therefore, impacts associated with the disturbance of human remains would be less than significant because those laws and regulations would ensure the appropriate handling of any human remains that are encountered.

2025 Conclusion

Implementation of the proposed Plan has the potential to uncover buried human remains through ground-disturbing activities in 2025. The requirement to follow existing laws and regulations ensures that any human remains encountered are treated appropriately. Therefore, this impact (CULT-2) in the year 2025 is less than significant.

2035

Regional Growth and Land Use Change

The likelihood of encountering human remains is greatest for projects that include grading and/or excavation of areas on which past grading and/or excavation activities have been minimal. This would include areas of expansion in unincorporated portions of the region where there has previously been less development.

Although the majority of regional growth and land use change will occur in the more densely populated coastal region, between 2036 and 2050 it is expected that some development will also increase in unincorporated portions of the region. Because archaeological resources have been found within inches of the ground surface throughout the San Diego region, even minimal grading activities can impact these resources. Excavation and soil removal of any kind, irrespective of depth, have the potential to yield human remains. While most new development and redevelopment would mostly result in the intensification of previously developed areas, ground-disturbing activities associated with infill, redevelopment, and/or expansion of infrastructure have the potential to unearth buried human remains.

As discussed in the 2025 analysis above, the types of activities that would result in significant impacts on human remains (i.e., excavation, grading, soil removal associated with infill, redevelopment, and/or expansion of infrastructure) would continue to occur into 2035 as development intensities would increase to accommodate the forecasted growth. With more construction anticipated to occur within previously unearthed areas, there is an increased potential to discover archaeological deposits or buried human remains.

By 2035, the extent of impacts on archaeological deposits or buried human remains would be greater than that experienced by 2025 as more land would be disturbed over time during development and redevelopment activities. As discussed in the 2025 analysis, if human remains were to be encountered during construction, work would halt in that area and the procedures set forth in PRC Section 5097.98 and HSC Section 7050.5 would be undertaken. Impacts associated with the disturbance of human remains would be less than significant because existing laws and regulations would ensure the appropriate handling of any human remains that are encountered.

Transportation Network Improvements and Programs

Some of the transportation network improvements and programs in the proposed Plan completed by 2035 would involve only operational changes that would not include construction of new transportation or transit facilities, such as increasing service frequencies or new transit routes within existing rights-of-way. These changes would have minimal effects on human remains. However, transportation improvements that would involve construction of new infrastructure or facilities could result in impacts as the likelihood of encountering human remains is greatest for projects that include grading and/or excavation of areas on which past grading and/or excavation activities have been minimal. Construction of transportation network improvements, such as Next Gen Rapid Transit, shoulder widening along SR 67, and road straightening along SR 67, SR 78, and SR 78 would likely disturb new ground areas. Because human remains have been found within inches of the ground surface in some areas of the San Diego region, even minimal grading activities can impact these resources. Excavation and soil removal of any kind, irrespective of depth, have the potential to yield human remains.

As with the 2025 analysis, any ground disturbances associated with transportation network improvements and programs may expose buried human remains. Given the magnitude and location of several of the transportation network improvements occurring by 2035, and the number of additional transportation network improvements over those previously implemented by 2025, additional ground disturbances are anticipated, and it is possible that, as more land is disturbed, buried human remains may be unearthed, and the extent of these impacts would increase over time. As discussed above, if human remains were encountered during construction, work would halt in that area and the procedures set forth in PRC Section 5097.98 and HSC Section 7050.5 would be undertaken. Impacts associated with the disturbance of human remains would be less than significant because existing laws and regulations would ensure the appropriate handling of any human remains that are encountered.

2035 Conclusion

Implementation of the proposed Plan has the potential to uncover buried human remains through ground-disturbing activities in 2035. The requirement to follow existing laws and regulations ensures that any human remains encountered are treated appropriately. Therefore, this impact (CULT-2) in the year 2035 is less than significant.

2050

Regional Growth and Land Use Change

While most new development and redevelopment associated with the proposed Plan would result in the intensification of previously developed areas, ground-disturbing activities associated with infill, redevelopment, and/or expansion of infrastructure have the potential to unearth human remains. As with 2025 and 2035, by 2050 there would be increasing development in areas farther inland, for example, in Escondido and San Marcos. These areas have previously experienced less ground disturbance relative to the coastal region. As with the 2025 and 2035 analyses, when more is disturbed and altered for new development and redevelopment anticipated as part of the proposed Plan, the possibility for encountering human remains becomes greater.

As discussed in the 2025 and 2035 analyses, if human remains were to be encountered during construction, work would halt in that area and the procedures set forth in PRC Section 5097.98 and HSC Section 7050.5 would be undertaken. Impacts associated with the disturbance of human remains would be less than significant because existing laws and regulations would ensure the appropriate handling of any human remains that are encountered.

Transportation Network Improvements and Programs

As with the 2025 and 2035 analyses, due to the rich historic and prehistoric background of the San Diego region, the potential for human remains to occur within the transportation network improvement and program areas associated with the proposed Plan exists. Some of the improvements in the proposed Plan implemented by 2050 would involve only operational changes that would not include construction of new transportation or transit facilities, such as increasing service frequencies or new transit routes within existing rights-of-way. These improvements should have no impact on human remains as they would be in previously disturbed areas. However, transportation improvements that would involve construction of new infrastructure or facilities could result in impacts on buried human remains. For example, widening of the highways or construction of new Managed Lanes and Next Gen Rapid Transit would require grading and possibly other ground-disturbing activities that remove and/or disturb the upper layer of soils, which could unearth underlying buried resources, including human remains.

Any ground disturbances associated with these transportation network improvements and programs may unearth underlying human remains. Given the magnitude and location of several of the transportation network improvements and programs occurring by 2050, and the number of additional transportation network improvements over those previously implemented by 2025 and 2035, additional significant ground disturbances are anticipated. It is, therefore, possible that more buried human remains would be encountered by 2050.

As discussed in the 2025 and 2035 analyses, if human remains are encountered during construction, work would halt in that area and the procedures set forth in PRC Section 5097.98 and HSC Section 7050.5 would be undertaken. Impacts associated with the disturbance of human remains would be less than significant because existing laws and regulations would ensure the appropriate handling of any human remains that are encountered.

2050 Conclusion

Implementation of the proposed Plan has the potential to uncover buried human remains through ground-disturbing activities in 2050. The requirement to follow existing laws and regulations ensures that any human remains encountered are treated appropriately. Therefore, this impact (CULT-2) in the year 2050 is less than significant.

Exacerbation of Climate Change Effects

While the proposed Plan may result in activities that uncover human remains, laws and regulations in place to ensure appropriate handling make this impact less than significant. Climate change impacts of sea-level rise, flooding, wildfire, and landslides could potentially reveal or damage human remains, and these remains could then become exposed to climate hazards such as extreme heat and precipitation. However, due to existing laws and regulations, the proposed Plan is unlikely to exacerbate the effects of climate change.