

Draft Environmental Impact Report National City Bayfront Projects & Plan Amendments

UPD# EIR-2018-232; SCH# 2018121054



VOLUME III of V

Appendices H through J



September 2021



PORT of
SAN DIEGO
Environment



DRAFT ENVIRONMENTAL IMPACT REPORT

for the

National City Bayfront Projects & Plan Amendments

UPD # EIR-2018-232
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Volume III of V
Appendices H through J

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Appendix H

Marine Biological Resources Report

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National City Bayfront Projects Marine Biological Resources Report

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National City Bayfront Projects Marine Biological Resources Report

January 23, 2020

Introduction

Marine Taxonomic Services (MTS) was contracted by ICF to provide a marine biological survey and Essential Fish Habitat Assessment (EFH) for the National City Bayfront Projects (Project). MTS has completed the survey and analysis of the resources at the Project area and has prepared the following report on the findings. The survey was intended to support the environmental planning associated with the Project's construction and operation. As such the results of the inventory are discussed relative to potential impacts associated with planned construction activities and proposed facilities that are part of the Project plans.

The Project area is located in the south-central portion of San Diego Bay along the northeastern shoreline and immediately north of the Sweetwater River (Figure 1). The Project would require adoption and implementation of the Marina District Balanced Land Use Plan (Balanced Plan). The Balanced Plan covers approximately 60.9 acres within the Port District's jurisdiction (ICF 2018). Major Project components include the following:

- Changes to land and water use designations in the District's Port Master Plan (PMP).
- Amendments to the City's Local Coastal Program (LCP), General Plan, Harbor District Specific Area Plan, and Land Use (Zoning) Code and Bicycle Master Plan that would include changes to jurisdictional boundaries; changes to subarea boundaries; and changes to land use, specific plan, and zone designations (City Program – Planning Amendments).
- Construction and operation of up to four hotels, a recreational vehicle (RV) park, modular cabins, dry boat storage, and an expanded marina (GB Capital Component).
- Construction and operation of a rail connector track and storage track (Pasha Rail Improvement Component).
- Closure of Tidelands Avenue between Bay Marina Drive and West 32nd Street as well as West 28th Street between Tidelands Avenue and Quay Avenue and re-designation of the area to Marine-Related Industrial in the District's PMP (Pasha Road Closures Component).



Figure 1. Project vicinity map for the National City Bayfront Projects site within San Diego Bay. Figure adapted from ICF (2018).

- Construction and operation of Segment 5 of the Bayshore Bikeway (Bayshore Bikeway Component).
- Construction and operation of hotel, restaurant, retail, and/or a combination of tourist/visitor-serving commercial development north of Bay Marina Drive and the potential closure or narrowing of Bay Marina Drive west of Marina Way to through vehicular traffic (City Program - Development).

Specific project elements within the proposed actions that have the highest potential to impact marine biological resources include increased boat docking facilities within the existing Pier 32 Marina, additional boat docking facilities within the Sweetwater River Channel, and aquaculture facilities within the Sweetwater River Channel. The results of the biological assessment are discussed relative to potential impacts from specific Project components.

Methods

This report relies on a combination of previously collected data and literature, previous experience in San Diego bay by Dr. Robert Mooney, and observations made during survey work performed by MTS staff Robert Mooney and Grace Teller on October 8 and 12, 2018.

Data on intertidal habitats, docks and piles, and soft-bottom habitats were collected by swimming the Project water area using SCUBA. Docks and piles were evaluated by observing a random subset of structures in the Pier 32 Marina. Intertidal rip-rap was evaluated by swimming much of the perimeter of the Project area. Soft-bottom habitats were evaluated by swimming transects across portions of the Project area. Side-scan sonar images of the seafloor were collected to complete the eelgrass survey within the Project survey area. Data from diver transects were also used to assess eelgrass density, provide validation of side-scan sonar data, and generally characterize the site and habitats within the Project survey area. The various survey methods are described below.

Side-Scan Sonar Survey

To detect and map any eelgrass present, a side-scan sonar survey was performed by navigating a small vessel along a series of track lines through the Project survey area. The vessel was fitted with a pole-mounted side-scan sonar operating at 450 kHz. The sonar was set to scan 30 meters on both the port and starboard channels for a total scanning swath of 60 meters. Multiple side-scan sonar survey track lines within close proximity to one another were navigated across the areas surveyed. This allowed for complete coverage of the Project survey area while providing overlapping data that allowed redundancy within the sonar record.

Following the field surveys, the collected side-scan sonar files were geographically registered using the vessel's navigation data collected during the survey. The side-scan files were then compiled to create a contiguous view of the seafloor across the entirety of the survey area. The boundaries of the eelgrass present were then digitized from the compiled dataset using ESRI ArcMap software and plotted on a geographically registered image of the surveyed area.

Scuba and Transect Surveys

The SCUBA surveys were implemented to visually verify the sonar data, provide eelgrass density data, and generally characterize habitats within the Project area. Each habitat type in the survey area was visually inspected for qualitative characterization and to document the dominant flora and fauna present. Notes were made on the occurrence, or potential for occurrence, of sensitive species that could be impacted by the proposed Project. In addition to the visual verification data, this report relies on other existing information and personal observations over numerous past surveys within central San Diego Bay.

The transect data were obtained by swimming multiple transects in the Project survey area. Within the survey area bounds, the diver anchored a fiberglass tape measure to the seafloor and used compass navigation to swim across the survey site. Start and end positions of the transects were obtained using a second MTS staff member, the dive tender, on a small research vessel with a differential global positioning system (dGPS). Upon completion of the diver swimming a given transect, the dGPS waypoints were taken at the start and end locations.

Along each transect, the diver surveyed for eelgrass. The diver noted the portions of the transect that intercepted the eelgrass bed. The diver transects were subsequently plotted in ArcMap. If eelgrass was noted, the data and corresponding GPS positions were used to validate bed outlines described in the side-scan sonar data. Generally, the data were used to help refine the side-scan sonar digitizing. If eelgrass was found by a diver that had not been digitized, the GIS specialist would inspect the sonar record. If the sonar record showed a return in that region, the eelgrass boundary was refined and similar returns in that area were used to refine the eelgrass boundaries. If there was no sonar return that could be justified to represent eelgrass, no attempt was made to draw additional eelgrass patches. The two methods are sampling techniques and so variation with sampling error is considered a valid result.

In addition to the intercept data, the diver used the multiple transects to randomly place a 1/16 square meter (m²) quadrat within the eelgrass beds. The quadrat data were used to calculate eelgrass density by using the diver's counts of leaf shoots, turions, within each quadrat.

Pile Driving Noise

To determine the potential for noise from pile driving to impact sensitive species, an analysis of potential noise levels was performed by ICF with results incorporated into this assessment (refer to Appendix A). The analysis used the compendium of pile driving noise data from Buchler et al. (2015) to establish potential in-water noise levels at the source of pile driving. The potential for generated noise to cause Level A (injury) and Level B (behavioral) Harassment of marine mammals due to in-water noise was then evaluated by calculating isopleths over which noise would attenuate to thresholds established by NOAA (NMFS 2016a and NMFS 2016b). Isopleth calculations for Level A Harassment were performed using the NOAA companion spreadsheet for NMFS (2016a); the isopleths for Level B Harassment were calculated with direct application of the practical spreading loss model (refer to MTS and ICF 2016) and using interim sound thresholds as specified in NMFS (2016b). Analysis of potential impacts to fish used the NOAA developed

spreadsheet and associated thresholds for injury (NOAA et al. 2008) and behavioral effects on fishes (WSDOT 2019).

Noise can also threaten marine mammals while they are hauled out on land. Therefore, the analysis of the potential for Level B Harassment of marine mammals due to in-air noise levels was also conducted as based on thresholds established and published by NOAA (NMFS 2016b). Attenuation rates and the conversions of sound pressure levels known to affect humans to levels relevant to marine mammal, were applied in an acoustic assessment performed by ICF (Appendix A). It should be noted that there are no thresholds provided by NOAA for in-air Level A Harassment of marine mammals. However, because noise levels for Level A take can be assumed to be at a higher threshold than Level B take (behavioral changes due to noise will occur before injury), it can be concluded that avoidance of Level B harassment will automatically yield avoidance of Level A harassment. NOAA's marine mammal acoustic thresholds (NMFS 2016b) were used in conjunction with the project specific noise analysis (Appendix A) to determine safe distances for pinnipeds that may be hauled out during pile driving. All assumptions and calculations are believed to be conservative for planning purposes.

Background on Calculation of Pile Driving Noise Impacts

The following sections are adapted from a memorandum prepared by ICF relative to Project related pile driving noise and provide information relative to the varying types of information, assumptions, and calculations necessary to determine potential noise impacts to target species. The memorandum is provided as Appendix A.

Variables

In the case of impact hammer pile driving, there is a peak in sound pressure associated with each single pile strike. The measure of the highest point in sound pressure is expressed in decibels, relative to 1 micro-pascal. This is the Peak Sound Pressure Level (L_{PK}). An alternate way to quantify the sound associated with a pile strike is to sum the total sound energy and normalize this value to 1 second. This value is referred to as the Sound Exposure Level (SEL), indicated by L_E . L_E is typically 25 dB less than L_{PK} . Similarly, there is cumulative SEL ($L_{E,24h}$) which sums all the sound energy accumulated throughout a day, accounting for the total number of strikes within a given 24-hour period. The number of strikes to set each pile and the number of piles to be installed each day are crucial components in determining cumulative SEL. Lastly, there is a root-mean-square sound pressure level (RMS) which gives an average of the sound energy associated with a single strike.

Potential impacts are typically expressed in terms of distance from the construction activity at which respective noise level thresholds would be exceeded. The line delimiting the specific distance where sound level is uniform is called the "isopleth". This is analogous to a "noise-contour" which is often used to describe the distance relative to in-air noise. The isopleth where noise is anticipated to equal the threshold provides the range within which sound exceeds the threshold.

Specifications

Not all details of the project plans relating to specific pile type, size, and installation productivity have been confirmed. However, utilizing anticipated piles dimensions, the analysis of pile driving efficiency from another project within San Diego Bay (the marina expansion at Fifth Avenue Landing) and general knowledge of dock installation methods, the following assumptions were made: installation of a combination of 18-inch and 24-inch piles that would require up to 750 pile strikes per day. This estimate came from data indicating each pile required up to 75 strikes to set and 10 piles were set per day. The number of strikes necessary may be reduced with the use of virtually pile jetting to initially install piles. However, to set piles to the necessary depth, an impact hammer is often required in the final stages.

Existing pile driving sound data for 18-inch and 24-inch concrete piles was obtained from Buchler et al. (2015) for the analysis of in-water noise. In analyzing 18-inch pile data, the sound pressure recorded from driving 3 separate piles in Berkeley Marina were compared relative to L_{PK} , $L_{E,24h}$ and RMS levels. The “worst-case scenario” pile (which reached the highest levels of sound) was chosen and from that dataset, the maximum observed L_{PK} and RMS values were designated as the most conservative representative data. The cumulative SEL, intrinsically a measure of the accumulated average, was assigned the average $L_{E,24h}$ value from the sound pressure data of the selected “worst-case scenario” pile. To determine appropriate sound energy levels associated with the 24-inch concrete piles, data from 6 different pile driving projects reported in Buchler et al. (2015) were analyzed. The maximum of the reported L_{PK} , $L_{E,24h}$ and RMS values across all projects where 24-inch concrete piles were driven were used in the calculations of isopleths relating to 24-inch concrete piles.

In-air noise level data related to the harassment of marine mammals are sparse. With no specific guidelines on the analysis of in-air noise nor a public compendium of information on the resulting levels of airborne noise emitted from driving a range of different sized piles and how it affects marine mammals, the breadth of this analysis was reduced. Data from the Federal Highway Administration (FHWA) Roadway Construction Noise Model (FHWA 2008) is commonly accepted as a reference for noise levels generated by construction activity. However, these levels are presented relative to human analysis and there is no current differentiation between noise levels generated from driving different sized piles. In the project specific noise assessment (Appendix A), the method of converting sounds levels from human relevancy to levels appropriate for marine mammals’ analysis is described.

Results

The results below present the findings of the side-scan sonar survey, SCUBA surveys of the marine habitat survey area, the analysis of essential fish habitat, and noise impact analysis.

Marine Habitats

The natural and man-made habitats observed and surveyed within the survey area were unvegetated soft bottom, vegetated soft bottom, docks and pilings, shallow-subtidal riprap,

intertidal riprap, and open water. Each marine habitat is discussed below and the benthic habitat map is provided as Figure 2.

Unvegetated Soft Bottom

The majority of the surveyed area is soft bottom, ranging in depth from intertidal to approximately -11-feet mean lower low water (MLLW). Most of the intertidal is rock riprap. There are minor amounts of soft-bottom intertidal at the toe of the riprap on the south side of the Sweetwater River Channel. For the purpose of this evaluation, unvegetated soft bottom occurred in the Pier 32 Marina and in the Sweetwater River Channel.

The most common invertebrate observed over unvegetated soft bottom areas was the tube-dwelling anemone (*Pachycerianthus fimbriatus*). Additionally, the mud showed evidence of numerous burrowing invertebrates, likely including bivalves, burrowing anemones, annelid worms and crustaceans. Additionally, the exotic colonial bryozoan, *Zoobotryon verticillatum* was found in occasional clumps over soft bottom. The most common motile invertebrates observed on the mud bottom included California aglaja (*Navanax inermis*), cloudy bubble snails (*Bulla gouldiana*), and large sponges (Porifera).

Fish species observed over unvegetated soft bottom included numerous round stingrays (*Urobatis halleri*). Fleeing flatfish were observed that were difficult to identify but likely included diamond turbot (*Hypsopsetta guttulata*) and California halibut (*Paralichthys californicus*). Barred sand bass (*Paralabrax nebulifer*) and spotted sand bass (*Paralabrax maculatofaciatus*) were also observed over unvegetated soft bottom.

Vegetated Soft Bottom

Eelgrass occurs in the Sweetwater River Channel. Most of the eelgrass was mapped west of Interstate 5 and east of the entrance to the Pier 32 Marina. There was another small eelgrass bed at the southwest portion of the survey area along the southern bank of the Sweetwater River Channel. This later eelgrass bed is the beginning of a larger bed that runs along the south side of the Sweetwater River Channel adjacent to the San Diego National Wildlife Refuge. There was no eelgrass identified within the Pier 32 Marina.

Mapping of the side-scan sonar record identified 17,052 square meters (4.21 acres) of eelgrass and 18,066 square meters (4.46 acres) of unvegetated eelgrass habitat within the survey area. Unvegetated eelgrass habitat is the area within close proximity to eelgrass where the beneficial aspects of eelgrass presence extend and influence benthic communities (NMFS 2014).

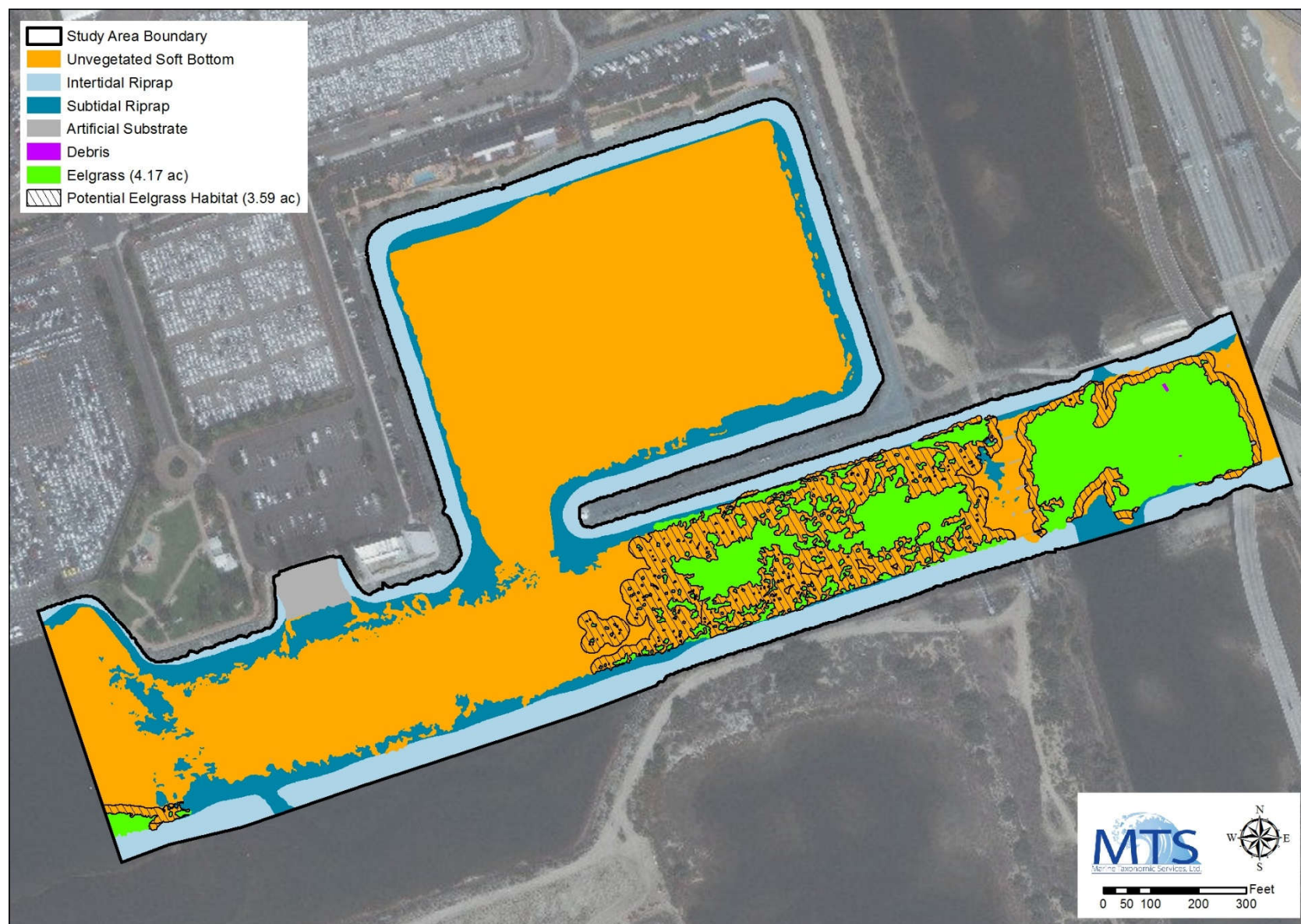


Figure 2. Project survey area and results of marine habitat mapping within the survey area.

The eelgrass occurred in moderate density across much of the observed area. The measured density from 55 sampled quadrats was 73.3 ± 6.4 (mean ± 1 standard error of the mean). The eelgrass generally appeared to be healthy with minimal epiphyte loading. Blade length was generally moderate to long.

In addition to eelgrass, gracilarioid red alga (Family Gracilariaceae) was observed within eelgrass beds. There were also minor amounts of the exotic bryozoan, *Zoobotryon verticillatum*, other algae species, native bryozoans and sponges found within eelgrass beds.

Fish observed within the eelgrass included round stingrays, barred sand bass, and spotted sand bass. It is likely that the eelgrass beds support numerous other fish species not observed during the survey.

The most common invertebrate observed within eelgrass was the tube-dwelling anemone. The soft bottom associated with eelgrass was generally similar to unvegetated areas with evidence of numerous burrowing invertebrates, likely including bivalves, burrowing anemones, amphipods, and annelid worms. Common motile invertebrates observed included the California aglaja and cloudy bubble snails. The bioturbation (signs of burrowing invertebrates) was noticeably higher in eelgrass vegetated areas in the Sweetwater River Channel relative to the unvegetated areas in the Pier 32 Marina.

Docks and Piles

A portion of the surveyed area is covered by existing floating docks and their associated piles. The upper reaches of the piles (approximately +2 to -2-feet MLLW) were generally colonized by a fouling community dominated by barnacles (*Balanus glandula* and *Chthamalus* sp.) and foliose species of red algae. Moving down the piles, foliose red algae, sponges, and Pacific oyster (*Ostrea lurida*) were common. The dock floats were similar to the upper portions of the piles however, there was less disturbance (piles get rubbed by the dock as the tide changes) and the fouling community was more complex. The dock floats were dominated by tunicates (*Styela clava*, *Ciona* sp. *Botrylloides* spp., and others), various sponges (Porifera), *Z. verticillatum*, and encrusting bryozoans (*Eurystomella* sp.). There were minor amounts of algae associated with the dock floats including *Corallina* spp., *Dictyota flabellata*, sea lettuce (*Ulva lactuca*), *Mazzaella splendens*, and various foliose red algae (Rhodophyta).

Fish observed around the piles and dock floats included kelp bass (*Paralabrax clathratus*), opaleye (*Girella nigricans*), and barred sand bass. Schools of topsmelt (*Atherinops affinis*), anchovy (most likely northern anchovy; *Engraulis mordax*), and California halfbeak (*Hyporhamphus rosae*) were observed nearby while inspecting the docks.

Shallow Subtidal Riprap

A portion of the surveyed area includes subtidal rock riprap which armors the Sweetwater River Channel banks and the perimeter of the Pier 32 Marina. This riprap extends from above the high tide line to the soft-bottom seafloor. It therefore includes intertidal and shallow subtidal areas.

The subtidal riprap supported many invertebrates including tunicates, sponges, various nudibranchs (Nudibranchia), dorid nudibranch (*Doriopsilla albopunctata*), and California aglaja. There were a few observed rock scallops (*Crassodoma gigantea*), and Pacific oyster were numerous. Fishes observed included round stingray, kelp bass, and barred sand bass. Also noted amongst the rocks was the non-native sailfin molly (*Poecilia latipinna*). This popular aquarium fish has been introduced to multiple habitats in California and can survive in freshwater, brackish water and saltwater habitats. Algae observed included the invasive *Sargassum muticum*, dead man's fingers (*Codium fragile*), *Dictyota dichotoma*, *Chaetomorpha spiralis*, *Ulva lactuca*, *U. intestinalis*, and various foliose red algae. In general, the rocky community supported by the subtidal riprap was diverse and appeared healthy.

Intertidal Rip

The intertidal portion of the riprap revetment was generally similar to the subtidal portions in the low intertidal. Moving upward from the low intertidal, desiccation stress during low tides restricts the type and abundance of organisms. Pacific oyster were common in the mid to low intertidal. In the mid intertidal barnacles were also common.

Open Water

As mentioned above, schools of topsmelt, anchovy, and halfbeak were observed in the open water around and between the boat docks. It is likely that other schooling bait fish frequent the open waters of the marina, including slough anchovy (*Anchoa delicatissima*) and deepbody anchovy (*Anchoa compressa*) (Pondella and Williams 2009a). These fish are important prey items for sea birds that can be expected to forage in the Project area, including brown pelicans (*Pelecanus occidentalis californicus*), double-crested cormorants (*Phalacrocorax auritus*), grebes, and terns. Double-crested cormorants were observed during the survey.

Also noted in the open water habitat was the invasive white-spotted jellyfish (*Phyllorhiza punctata*). This species was abundant; approximately 20 individuals of various size classes were observed during the survey. This Australian species has been observed in San Diego Bay since the 1980s (Gavidor 2015).

Sensitive Species

Protected, rare, threatened, or endangered species that may occur within the region include east Pacific green sea turtle (*Chelonia mydas*) (Federal Threatened), California least tern (*Sternula antillarum browni*) (State Endangered and Federal Endangered), and California brown pelican (California Department of Fish and Wildlife Fully Protected). Mammals protected under the Marine Mammal Protection Act and that occur in San Diego Bay and might occasionally be observed in south San Diego Bay include harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus californianus*), common dolphin (*Delphinus spp.*), and coastal bottlenose dolphin (*Tursiops truncatus*). None of the above species were observed during the survey, though their likelihood of occurrence is as follows.

Individuals from the green sea turtle population that live in San Diego Bay are typically observed in south San Diego Bay. They are found throughout San Diego Bay and individuals have been tracked between San Diego and Mexico. Thus, animals may occasionally be found in the project footprint and have been observed (Robert Mooney personal observation) in the Sweetwater River Channel in the past.

The California least tern is seasonally present in San Diego Bay, from April to September. There are multiple breeding areas in and surrounding San Diego bay. The D-Street Fill nesting site is immediately adjacent to the Project area. Other nest sites within 3 miles of the Project area include Delta Beach, Silver Strand State Beach, and Chula Vista Wildlife Preserve. Estimates of foraging distance vary by location and have been summarized by Harvey and Associates (2012). Atwood and Minsky (1983) found that 60% of foraging trips were limited to within 2 miles of nesting sites. Steinbeck et al. (2005) found 91% of surveyed birds within 3.5 miles of the colony and 98% within 4 miles. Due to the proximity of the Project area to local nesting sites in California least tern management area V (refer to USFWS 2006) it is likely that least terns forage within the Project area during nesting season.

California brown pelicans do not nest in San Diego Bay, but frequently loaf and forage in marina habitats. Harbor seals and California sea lions do not breed in San Diego Bay, but forage in the bay year-round. Harbor seals and California sea lions are generally found in central and northern San Diego bay and are only occasionally observed in south San Diego Bay. The dolphin species are commonly observed transiting through central San Diego Bay, observations in south San Diego Bay are rare.

Essential Fish Habitat Assessment

The following assessment of Essential Fish Habitat (EFH) for the Project area is provided in accordance with the 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (Code of Federal Regulations (CFR) Title 50, Chapter VI, Part 600). The amendments require the delineation of “essential fish habitat” for all managed species. Federal action agencies which fund, permit, or carry out activities that may adversely impact EFH are required to consult with the National Marine Fisheries Service (NMFS) regarding the potential effects of their actions on EFH and respond in writing to the NMFS’s recommendations.

The CFR defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. For the purpose of interpreting the definition of essential fish habitat: “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle.” A healthy ecosystem is defined under the CFR as, “an ecosystem where ecological productive capacity is maintained, diversity of the flora and fauna is preserved, and the ecosystem retains the ability to

regulate itself. Such an ecosystem should be similar to comparable, undisturbed ecosystems with regard to standing crop, productivity, nutrient dynamics, trophic structure, species richness, stability, resilience, contamination levels, and the frequency of diseased organisms.”

NMFS Managed Ichthyofauna Present in San Diego Bay

To adequately address EFH at the project site, the federally managed fish species that are known or expected to exist at the project site need to be identified. The means of determining the presence of managed fish species in this document is through evaluation of the fish species identified during fisheries inventories of San Diego Bay. The San Diego Bay ichthyofauna have been thoroughly studied (Allen 1999, Pondella et al. 2006, Pondella and Williams 2009a, 2009b, Williams and Pondella 2012, Williams et al. 2015, 2016). Of the species identified within San Diego Bay during fisheries inventories, six are managed by the NMFS under two Fishery Management Plans (FMPs)-the Coastal Pelagics and Pacific Groundfish Management Plans (Table 1; Pacific Fishery Management Council 2014, 2018). The fish species managed under the Coastal Pelagics FMP include northern anchovy, Pacific sardine, Pacific mackerel, and jack mackerel. The fish managed under the Pacific Groundfish FMP and found in San Diego Bay include California scorpionfish and English sole.

Table 1. The federally managed coastal pelagic fish species and pacific groundfish species previously identified in San Diego Bay.

Common Name	Scientific Name
Coastal Pelagics FMP	
Northern Anchovy	<i>Engraulis mordax</i>
Pacific Sardine	<i>Sardinops sagax</i>
Pacific Mackerel	<i>Scomber japonicus</i>
Jack Mackerel	<i>Trachurus symmetricus</i>
Pacific Groundfish FMP	
California Scorpionfish	<i>Scorpaena guttata</i>
English Sole	<i>Parophrys vetulus</i>

Henderson and Mooney (2001) developed life histories relative to evaluation of EFH for the managed fish species found in San Diego Bay using available literature. The following descriptions of the life histories of the six-managed species listed above provide the background information required to make a determination of the suitability of the Project area to support and provide essential habitat for these species.

Northern Anchovy

Northern anchovy historically ranged from the Queen Charlotte Islands, British Columbia south to Cape San Lucas, Baja California. More recently, populations have moved into the Gulf of California, Mexico. Larvae and juveniles are often abundant in nearshore areas and estuaries

with adults being more oceanic. However, adults can be abundant in shallow nearshore areas and well-circulated estuaries, and eggs and larvae have been found offshore. Northern anchovy is non-migratory but makes extensive inshore-offshore movements and along-shore movements. In some populations, juveniles and adults are observed moving into estuaries during spring and summer and then back out during the fall. Spawning occurs throughout the year dependent upon the population. In southern California, spawning occurs between January and May. Larvae consume copepod eggs and nauplii, naked dinoflagellates, rotifers, ciliates, and foraminiferans. Adults and juveniles typically consume phytoplankton, planktonic crustaceans, and fish larvae. Northern anchovy is one of the most abundant fish in the California current and are important prey for a variety of fish, birds, and marine mammals. Finally, they are considered an indicator of environmental stress, being affected by low dissolved oxygen and water-soluble fractions of crude oil (Emmett et al. 1991).

Pacific Sardine

Pacific sardine is a pelagic species. Individuals can be found in estuaries but are most common in open coastal habitats and offshore. The Pacific sardine is wide ranging with sardines in the Alguhas, Benguela, California, Kuroshio, and Peru currents, and off New Zealand and Australia being considered the same species. Changes in distribution are common and linked to environmental conditions. In California, sardines are highly mobile and move seasonally. Older adults move from southern California and northern Baja spawning grounds to feeding grounds off the Pacific Northwest and Canada. Younger individuals (two to four years old) migrate to feeding grounds in central and northern California. Juveniles occur in nearshore habitats off northern Baja and southern California. Although numbers vary greatly, at times sardines are the most abundant fish species in the California current. In southern populations spawning occurs year-round with a peak from April to August between Point Conception and Magdalena Bay. Eggs and larva are found everywhere adults are found. Sardines are planktivores consuming both phytoplankton and zooplankton. They are themselves prey for a variety of predators. Eggs and larvae are consumed by numerous planktivores with juvenile and adults being consumed by a variety of fish, birds, and mammals (NMFS 1998).

Pacific Mackerel

Pacific mackerel is a pelagic species. In the northeastern Pacific, Pacific mackerel range from Banderas Bay, Mexico to southeastern Alaska. As a group they are the same species as mackerel of a variety of names occurring elsewhere in the Pacific, Atlantic, and Indian oceans. Pacific mackerel usually occur within 20 miles of shore. Local populations spawn from Eureka, California south to Cabo San Lucas, Baja California between 2 and 200 miles from shore with peak spawning occurring between late April and July. However, fecundity is more closely tied to sufficient food and environmental conditions than to season. Pacific mackerel larvae eat zooplankton including copepods and fish larvae. Juveniles and adults consume small fishes, fish larvae, squid and pelagic crustaceans. Pacific mackerel larvae are predated by numerous invertebrate and vertebrate planktivores. Juveniles and adults are important prey for many large fishes, marine mammals, and birds. Due to their larger size, they are likely less important as forage than Pacific

sardine or northern anchovy which are available to a wider variety of predators and are more abundant (NMFS 1998).

Jack Mackerel

Jack mackerel is a schooling fish that ranges widely throughout the northeastern Pacific. Individuals are found along the mainland coasts to an offshore limit approximated by a line running from Cabo San Lucas, Baja California, to the eastern Aleutian Islands, Alaska. Typically, small jack mackerel (< 6 years of age) are most abundant near the mainland coast and islands in the Southern California Bight. Older individuals fill out the geographic range and are generally found offshore in deep water and along the coastline north of Point Conception, California. Jack mackerel spawn in nearshore oceanic waters between February and October in California, with peak spawning activity between March and July. Larvae eat primarily copepods with the small jack mackerel found off southern California consuming large zooplankton, juvenile squid and anchovy. Jack mackerel are prey items for large predators such as tunas and billfish.

California Scorpionfish

The California scorpionfish ranges from Santa Cruz, California south to Uncle Sam Bank, Baja California. It is a benthic species found in both sandy and rocky habitats. Individuals are predominantly solitary but are known to aggregate near prominent features both natural and man-made. Young fish live in shallow habitats typically hidden within dense algae and bottom-encrusting organisms. Spawning occurs between May and September and peaks in July. Eggs are laid in a gelatinous mass that floats near the surface. The primary food items include juvenile crabs, small fishes (e.g. northern anchovy), octopus, isopods, and shrimp (Core Team 1998).

English Sole

English sole range from central Baja California to Unimak Island, Alaska. They occur in greatest numbers north of Point Conception, California. Juveniles are found in all Pacific coast estuaries from San Pedro Bay, California to Puget Sound with Elkhorn Slough, California being the southernmost estuary where they are abundant. Adults make limited movements with a northward migration in the spring to summer feeding grounds, returning in the fall. Spawning occurs over soft-bottom substrates at depths of 165-230 feet. Spawning occurs between December and April for southern stocks. Eggs are buoyant and larvae are pelagic. Adults and juveniles prefer soft sand and mud bottoms generally in less than 12 m of water. Larvae are planktivorous eating different life stages of copepods and other small planktonic organisms. Juveniles feed on copepods, gammaridean amphipods, cumaceans, mysids, polychaetes, small bivalves, clam siphons, and other benthic invertebrates. Adults eat a variety of benthic organisms, but particularly polychaetes, amphipods, molluscs, ophiuroids, and crustaceans. Larvae are likely eaten by larger fishes, with juveniles falling prey to larger fishes, marine mammals, and birds. Adults may be eaten by marine mammals, sharks and other large fishes. English sole are an indicator of environmental stress, accumulating contaminants and developing cancerous tumors as a result (Emmett et al. 1991).

Habitat Areas of Particular Concern

In addition to provisions and definitions relating to EFH in general, the MSA encourages regional management councils to specify habitat areas of particular concern (HAPC) in their region. HAPC are defined for regionally important and potentially rare habitats that may be sensitive to environmental degradation.

Seagrass habitat is present in the waters immediately within the Project area and is designated as HAPC by the National Marine Fisheries Service (NMFS; NMFS 1999). The seagrass present is known as eelgrass (*Zostera marina*). Mooney and Woodfield (2009) summarized eelgrass functions and contributions to ecological processes:

Eelgrass plays many important roles in estuarine systems. It clarifies water through sediment trapping and stabilization (de Boer 2007). It also provides the benefits of nutrient transformation and water oxygenation (Yarbro and Carlson 2008). Eelgrass serves as a primary producer in detritus-based food webs (Thresher et al. 1992) and is further directly grazed upon by invertebrates, fish, and birds (Valentine and Heck 1999), thus contributing to eco-system health at multiple trophic levels. Additionally, it provides physical structure in the form of habitat to the community and supports epiphytic plants and animals, which are in turn grazed upon by other invertebrates, fish, and birds. Eelgrass is also a nursery area for many commercially and recreationally important finfish and shellfish (Heck et al. 2003), including both those that are resident within the bays and estuaries, as well as oceanic species that enter the estuaries to breed or spawn. Among recreationally important species, sand basses and lobster make use of eelgrass beds as habitat. Besides providing important habitat for fish, eelgrass and associated invertebrates provide important food resources, supporting migratory birds during critical life stages, including migratory periods.

Analysis of Potential Eelgrass Impacts

While the project description is not fully developed relative to all in-water components, the Project seeks to potentially add a boat dock and aquaculture facilities in the Sweetwater River Channel. The boat dock would be shore parallel, on the north side of the channel, and east of the existing entrance to Pier 32 Marina. Although not yet specified, aquaculture facilities are also envisioned within the Sweetwater River Channel just offshore of Pier 32 Marina. The boat docks and aquaculture facilities would be located over water that is within, National City, Chula Vista, and the Port of San Diego. This is generally the area from the entrance to Pier 32 Marina to the pedestrian bridge of the Sweetwater River (Figure 3).

Given the potential extent of proposed project elements relative to the area available, it is likely that much of the eelgrass shown in Figure 3 would be impacted. Impacts would result from shading associated with docks and aquaculture facilities. It is difficult to assess exactly how much of this eelgrass would be impacted given the extent of the proposed features and the limited area within which those features would be placed. For this reason, it should be assumed

that all of the 7,590 square meters (1.88 acres) of eelgrass between the entrance to Pier 32 and the pedestrian bridge would be impacted.

Eelgrass impacts to 7,590 square meters (1.88 acres) of eelgrass would require successful transplantation of 9,108 square meters (2.25 acres) of eelgrass to meet the 1.2:1 mitigation ratio as specified within the CEMP. The CEMP recommends a 1.38:1 transplant ratio to ensure success of the 1.2:1 mitigation ratio for transplants in southern California. This would require 10,474 square meters (2.59 acres) of plantable eelgrass area.

Given that it is probable that some eelgrass would remain within the Project area after implementation of the improvements, any eelgrass that survives could be deducted from the final mitigation and any excess mitigation that is above that actually required relative to final calculated impacts could be maintained in an eelgrass bank. Credits in the eelgrass bank could be sold or used to offset impacts to future projects in San Diego Bay that require eelgrass mitigation.

The only way to ensure successful mitigation at the scale required by this Project would be to identify areas that could be made suitable to support eelgrass through minor site modification. Eelgrass is generally limited in south San Diego Bay by depth. Eelgrass cannot grow above + 1-foot MLLW due to desiccation stress (plants dry out during low tide). At the lower depth limit, light attenuation through the water column reduces light availability to a point where eelgrass cannot effectively photosynthesize enough to offset respiratory requirements. Hence, the best way to typically create new eelgrass beds under this scenario is to either convert low intertidal areas into shallow subtidal, or place material to make areas that are slightly too deep shallow enough to support eelgrass.

The details of any mitigation plan would have to be carefully developed to ensure success. A suitable area of seafloor would have to be identified and set aside for restoration purposes. Once the parcel is identified, an appropriate plan can be developed to create conditions for eelgrass growth. One potential strategy would be to combine this Project need with a dredge project. The dredge project sediment would be beneficially re-used to increase elevation (make shallower) an identified and suitable area of seafloor. The dredge project would benefit by likely having a shorter disposal distance relative to offshore sediment disposal. The potential reduction in sediment disposal distance would have additional benefits through reduction in emissions of pollutants and greenhouse gases.

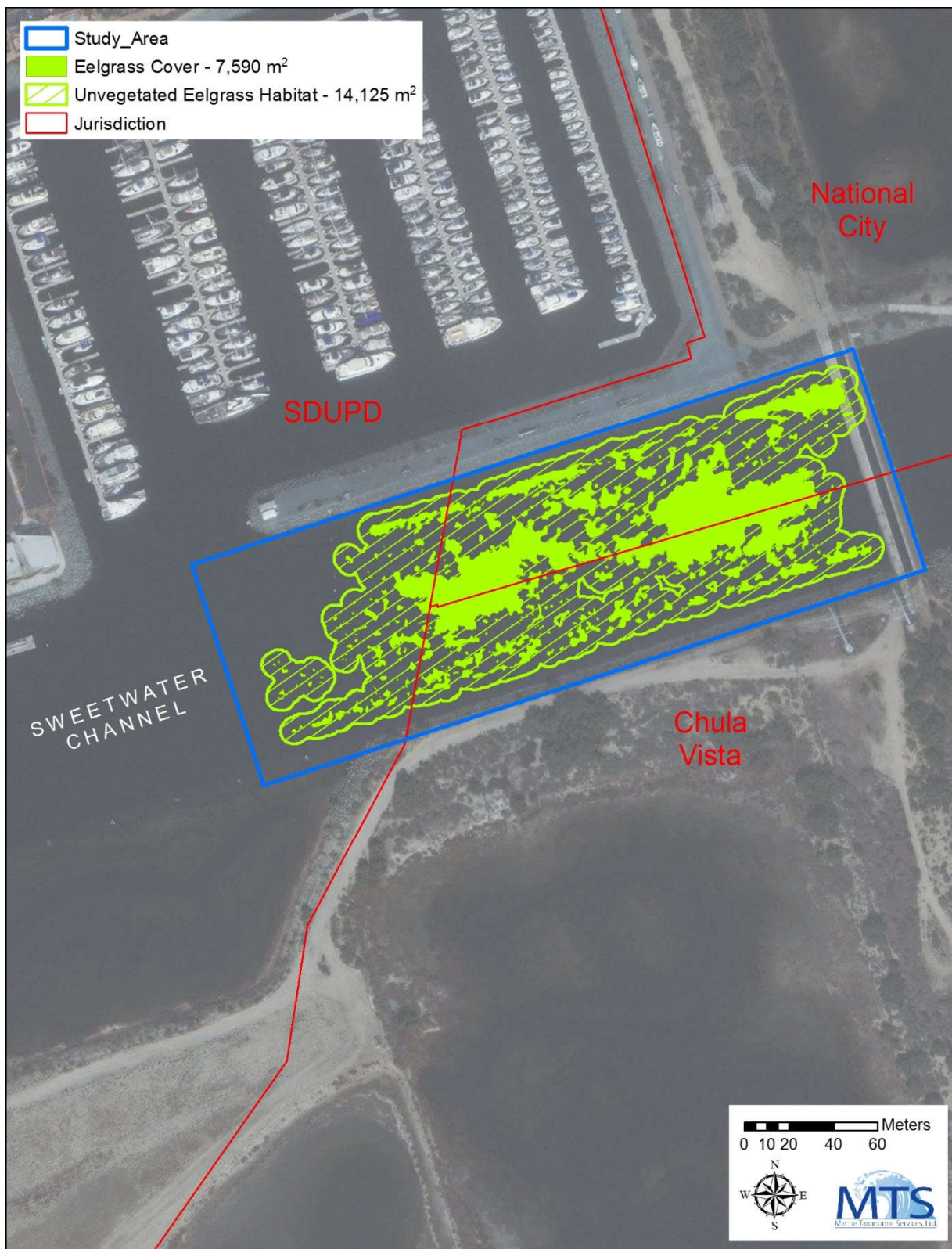


Figure 3. Area of potential eelgrass impact (blue boundary) and maximum extent of impacted eelgrass (solid green).

Analysis of Pile Driving Noise

From the compendium of pile driving associated noise level data (Buchler et al. 2015), the sound pressure levels associated from several instances of driving two differently dimensioned concrete piles were utilized for this analysis. An 18-inch octagonal pile installed within 2-4 meters of water reached an L_{PK} of 192 dB, $L_{E,24h}$ of 163 dB and a root mean squared level of 177 dB RMS. The 24-inch octagonal piles had the same L_{PK} of 192 dB, a $L_{E,24h}$ of 166 dB and a root mean squared value of 176 dB RMS.

The results of the noise analysis relative to marine mammals found that Level A isopleths relative to L_{PK} thresholds were mostly negligible and within the source distance when driving either 18-inch or 24-inch piles with the exception of high-frequency cetaceans which required a 2.2-meter distance from the sound source to avoid injury (Table 2). In other words, anticipated L_{PK} sound levels are typically lower than the Level A Harassment threshold at the pile driving source. The $L_{E,24h}$ isopleths for Level A ranged from 1.4 meters to a high of 46 meters during driving of 18-inch piles and from 2.2 meters to 72 meters when impact driving a 24-inch pile (Table 2). The progression of sensitivity between hearing groups was consistent regardless of pile size, starting with the mid-frequency cetaceans, then the Otariid Pinnipeds, the Phocid Pinnipeds, the low-frequency cetaceans and ending with high-frequency cetaceans.

The isopleth for in-water behavioral disruption (Level B) of marine mammals was calculated at 136 meters using the NOAA threshold of 160 dB RMS and selection of 177 dB RMS at source for driving an 18-inch concrete pile (Appendix A). The data for 24-inch concrete piles show an observed 176 dB RMS which results in a Level B isopleth of 117 meters. The lower isopleth for the larger pile is a function of the variability in pile driving noise across projects cited in Buchler et al. (2015).

In air, the Level B Harassment threshold of 90 dB RMS for harbor seals is achieved at 108 meters from the pile driving noise source. For non-harbor seal pinnipeds, the 100 dB RMS threshold's isopleth is 34 meters away from sound source (Table 3).

The results of noise analysis relative to fishes used the same scenarios and assumptions as those used for marine mammals. Applying the NOAA thresholds for physical injury and behavioral modification for fishes, allowed calculation of isopleths within which injury or behavioral modification may occur. L_{PK} levels are not anticipated to result in physical injury to fishes given that peak values result in isopleths that are less than 1 meter when pile driving both 18-inch and 24-inch concrete piles. $L_{E,24h}$ levels when driving 18-inch piles are anticipated to generate an injury isopleth between 21 and 38 meters for fish dependent on body size and 33 to 61 meters when driving 24-inch piles (Table 4). Behavioral modification may occur for all fish occurring up to 630 meters away from source of pile driving noise, based on the presumption that all fish experience behavioral alteration when noise levels reach 150 dB RMS (WSDOT 2019) (Table 4).

Table 2. NMFS thresholds and calculated isopleths to thresholds for Level A harassment of marine mammals for each of the marine mammal hearing groups. $L_{E,24h}$ = Cumulative Sound Exposure Level, L_{PK} = Peak Sound Exposure Level, PTS = Permanent Hearing Threshold, N/a = impact distance is negligible (less than 1 meter). Thresholds are in dB and isopleths are in meters.

Hearing Groups	Low-Frequency Cetaceans	Mid-Frequency Cetaceans	High-Frequency Cetaceans	Phocid Pinnipeds	Otariid Pinnipeds
$L_{E,24h}$ Threshold	183	185	155	185	203
L_{PK} Threshold	219	230	202	218	232
PTS Isopleth to $L_{E,24h}$ Threshold	18-inch concrete pile				
	38	1.4	46	21	1.5
PTS Isopleth to L_{PK} Threshold	n/a	n/a	2.2	n/a	n/a
PTS Isopleth to $L_{E,24h}$ Threshold	24-inch concrete pile				
	61	2.2	72	33	2.4
PTS Isopleth to L_{PK} Threshold	n/a	n/a	2.2	n/a	n/a

Table 3. NMFS thresholds and calculated isopleths to thresholds for Level B Harassment of marine mammals relating to "In-water" and "In-air" noise. "In-air" data only apply to pinnipeds because of their tendency to haul out on land. "In-water" isopleths are calculated based on sound levels emitted from an 18-inch concrete pile and a 24-inch concrete pile. "In-air" isopleths are derived from pile driving noise data not specific to any one pile size. Thresholds are in dB RMS and isopleths are in meters.

		Threshold (dB RMS)	Isopleth (meters)		
			Pile Dimensions		
			18-inch	n/a	24-inch
In-Water	All Marine Mammals	160	136		117
	Harbor Seal	90		108	
In-Air	Non-Harbor Seal	100		34	
	Pinniped				

Table 4. NOAA thresholds and calculated isopleths to thresholds for physical injury and behavioral effects in fishes. Physical injury for all fishes can occur if L_{PK} levels are above 206 dB or if $L_{E,24h}$ levels exceed 187 dB for fish ≥ 2 grams or 183 dB for fish < 2 grams. Behavioral modification is assumed to affect all fish at levels exceeding 150 dB RM. The dimensions of the pile being driven effects the isopleth calculation.

Pile Type		Onset of Physical Injury			Behavioral Effect (RMS dB)
		L_{PK} (dB)	$L_{E,24h}$ (dB)		
			Fish ≥ 2 g	Fish < 2 g	
Threshold		206	187	183	150
Isopleth	18-inch	1	21	38	631
	24-inch	1	33	61	541

Discussion

The marine biological communities present at the Project area generally include a cross section of habitat types available in south central and south San Diego Bay. The Sweetwater River is the largest source of freshwater input into San Diego Bay and means that aquatic communities within the estuary are subject to variable conditions that can lead to dynamic communities. For instance, severe winters and rainfall events can cause increased turbidity and decreased salinity. These factors can cause some species to be lost temporarily and create space for other species to colonize. Thus, the current data should be viewed as a snapshot of a dynamic system.

The presence of eelgrass poses the greatest constraint to development activities. Eelgrass creates a unique marine habitat that serves many important functions in the bay environment and is therefore given special status under the Clean Water Act, 1972 (as amended), Section 404(b)(10). The proposed Project has the potential to cause impacts to eelgrass that can be generally discussed but cannot be quantified due to the current level of Project plan development.

There are two areas of concern relative to eelgrass impacts associated with the Project features. The first is the vessel dock proposed within the Sweetwater River channel. There is eelgrass growing along the shoreline which will be shaded by the dock structures and therefore be lost. The Project plans are not well enough developed to determine the potential extent of impact, but it is certain that if a dock is constructed in the currently proposed area, eelgrass will be shaded and impacted. This impact cannot be avoided if the dock is constructed and therefore eelgrass losses will require mitigation in accordance with the California Eelgrass Mitigation Policy (CEMP; NMFS 2014).

The second Project design element that will impact eelgrass if implemented is the installation of aquaculture facilities within the Sweetwater River channel. While the current Project description does not detail the type of aquaculture proposed, the most likely scenario for aquaculture within the estuary would be culture of oysters or other shellfish. The location would require an “off bottom” method with the shellfish in floating or suspended containment structures. The structures and the shellfish within would shade the bottom and therefore displace eelgrass. The level of impact would be dependent upon the placement and area of the structures. While the level of impact cannot be determined based on the current Project plan detail, impact to eelgrass is certain if aquaculture is established in the Sweetwater River channel anywhere between the entrance to the Pier 32 Marina and the Interstate 5 Freeway overpass. Similar to the impacts to eelgrass that would be associated with the dock structure, eelgrass losses will require mitigation in accordance with the CEMP.

Given the potential for long-term but unpredictable impacts to eelgrass, a monitoring plan will likely be required by the NMFS. The CEMP requires that pre-construction and post-construction eelgrass surveys be performed to evaluate projects that have the potential to impact eelgrass. In cases where impacts cannot be predicted or where the potential exists for protracted impacts

that might not be present at the time of the post-construction survey, the typical requirement is for two years of post-construction monitoring data. This allows determination of impacts when there is long-term potential for impacts that cannot be determined from the post-construction eelgrass survey. Implementation of a 2-year (or longer) eelgrass monitoring program and development of a mitigation plan should be sufficient mitigation for this Project to proceed. Mitigation should be carried out in accordance with the CEMP at or before the time of impact in a manner that conservatively mitigates for all potential impacts to eelgrass. The final calculation of mitigation requirements should occur after two years of post-construction monitoring. At that time, it would be determined whether or not the previously implemented mitigation was on track to sufficiently mitigate for all eelgrass losses. If planned properly, the mitigation should be sufficient and there should be a surplus of eelgrass that the Project proponent could maintain in an eelgrass mitigation bank in accordance with the CEMP (NMFS 2014). Any implemented eelgrass mitigation site shall be monitored for 5 years to ensure successful eelgrass establishment in accordance with the CEMP.

In addition to design considerations, the Project should seek to avoid impacting eelgrass during construction. Indirect impacts may arise due to disturbance by construction vessels, pile installation, or increased turbidity. To avoid these impacts, Project implementation should minimize shading associated with staging of vessels or dock structures. Construction crews should incorporate techniques that avoid suspension of sediments that could reduce light transmittance through the water or settle on eelgrass directly. This includes use of silt curtains to contain suspended sediments during pile installation.

Another biological constraint to consider is a potential impact to California least terns from turbidity generated by Project activities such as pile jetting. This arises from concerns that elevated turbidity reduces visibility in the water and could impair foraging terns, which view prey fish from above and dive to catch them in surface waters. Most projects with such elements are required to utilize best management practices to mitigate turbidity and may only be permitted to perform certain work elements (e.g. pile driving) outside of least tern nesting season (April to September), allowing a work period from October to March. Use of silt curtains during pile installation is sufficient to mitigate the potential to impact water quality during pile installation. Most projects in southern California bays and harbors where California least terns occur are restricted to pile driving outside of the nesting season. Adherence to a construction schedule that prevents pile driving and bottom disturbing activities during the nesting season will help ensure that impacts are negligible. Maintaining the use of silt curtains even if pile driving occurs outside of least tern nesting season helps to ensure protection of water quality.

An additional concern raised regionally by resource agencies reviewing similarly proposed projects is the increase in over-water coverage associated with Project structures. In this case, the proposed docks and aquaculture structures would be considered over-water coverage. Increased over-water coverage can lead to lower primary productivity due to shading and loss of open water for foraging by California least terns and other piscivorous birds. Given the proposed facilities, this Project will have an increase in over-water cover. The increase in over-water

coverage will require a mitigation action that is approved by regulatory agencies prior to implementation of the Project. Suitable mitigation might include reduction in over-water coverage at another location in San Diego Bay, restoration of upland riparian habitats, restoration of submerged aquatic vegetation (e.g. eelgrass), proposing ways to improve water quality, restoring other soft-bottom habitats such as mud flats, or paying an *in lieu* fee (once a program is developed).

It is not anticipated that the green sea turtle and other sensitive species noted above would be significantly impacted by the proposed improvements or construction activities. The loss of foraging habitat (eelgrass) is a concern relative to green sea turtles but that loss would be mitigated through restoration of eelgrass habitat as noted above. However, the pile driving associated with installation of additional docks may produce noise levels that can cause behavioral disruption to marine mammals and green sea turtles. Mitigation measures can be implemented to ensure the potential to cause harm to all sensitive species is negligible. First construction monitoring for these species within the maximum calculated isopleth (Level B, in water) for disruption of marine mammals during pile driving should be implemented. Second, a soft-start procedure should be implemented during pile driving.

The four-managed coastal pelagic fish species that occur in San Diego Bay are generally open water schooling species. All of these species are highly mobile and not specifically dependent upon any particular habitat areas within the Project area. Therefore, they would either flee construction activities or take advantage of potential prey opportunities due to disturbance during construction. However, the presence of shellfish aquaculture may impact essential fish habitat for the coastal pelagics. The Pacific sardine and northern anchovy feed on small planktonic organisms. Thus, the introduction of shellfish for the purpose of aquaculture would impact essential fish habitat through reduction of forage. This impact could be mitigated by proposing ways to improve water quality, restoring other marine habitats, or increasing the amount of eelgrass restoration which will be a required mitigation action for the loss of eelgrass habitat.

The two-managed pacific groundfish species occur in low numbers in San Diego Bay and are not likely to be common Project area. If the demersal species noted were to occur in the Project area, they would likely flee any immediate construction activities but may benefit from exposure of prey items over disturbed bottom following certain construction activities. Given there is minimal chance the species can be found in the area, the fact that critical life stages are not tied to habitat in the area, the potential for Project activities to cause harm to EFH for pacific groundfish is considered to be negligible.

In addition to the minor potential to impact the managed pelagic fish species through loss of forage, NMFS identifies cumulative impacts associated with over-water structures. The most significant impacts cited by NMFS relate to losses of primary productivity, the potential to distribute invasive species, and increases in associated uses such as vessels which increase potential for bottom scarring and release of contaminants NMFS 2013. For these reasons,

mitigation relating to the increase in over-water cover is warranted even though impacts at the scale of the project may not be measurable. However, the mitigation measure implemented in relation to over-water coverage mentioned above in relation to sensitive avian species should be developed in a manner that also provides benefits to fisheries. In other words, the mitigation for increased overwater coverage should be developed in a manner that is suitable to resource agencies responsible for management of avian species and fisheries.

There is the potential for direct harm to fishes during pile driving. Sounds associated with pile driving may reach NOAA established thresholds for injury based on cumulative effects of sound exposure. However, procedures such as soft starts can further reduce potential impacts by allowing fish to flee areas adjacent to pile driving before full impact energy is applied. Monitors which will be on site for marine mammals and sea turtles can also monitor for injured fish and stop work if there is an observation of concern. It is unlikely that non-territorial or non-habitat associated species would remain within the relatively narrow isopleths for injury. Given that larger species with site fidelity may flee while open water species would be unlikely to remain within the isopleth for any extended period of time, impacts would be temporary and negligible.

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Appendix A

Memorandum Draft Re: National City Bayfront Projects & Plan Amendments – Potential Noise Effects
on Fish and Marine Mammals



Draft Memorandum

To:	
From:	Jonathan Higginson, INCE-USA Senior Manager, Noise Analyst
Date:	January __, 2020
Re:	National City Bayfront Projects & Plan Amendments – Potential Noise Effects on Fish and Marine Mammals

Introduction

This memorandum is being prepared to inform the Environmental Impact Report (EIR) for the proposed National City Bayfront Projects & Plan Amendments (Project) regarding potential noise impacts to fish and marine mammals due to proposed in-water construction activities. Waterside construction activities including pile driving are proposed as part of the project in order to construct docks, gangways, and a pier platform. Pile driving will generate both underwater (hydroacoustic) noise and airborne (in-air acoustic) noise. Underwater noise may affect both fish and marine mammals. In addition, marine mammals may potentially be impacted by airborne noise while they are hauled out onto land (i.e., while they are in air rather than in water). During pile installation jetting would be used to the extent possible, but an impact pile driving hammer would also be required. While some pile details (assumed materials and sizes) have been established, the precise details of the construction process are not known at this time. Details such as the pile driver size and power rating, the number of pile strikes per pile, and the number of piles installed per day can all affect the underwater noise levels. As a result, underwater noise levels are estimated based, in part, on information for similar in-water construction in San Diego Bay. The project-specific underwater noise levels should be recalculated for each waterside project element when final construction details are available.

Introduction to Hydroacoustic Concepts

Fundamental concepts for in-air noise are covered in detail in the Noise section of the project EIR. The following discussion provides a brief introduction into the fundamental concepts and

terminology used in underwater sound (hydroacoustic) analysis. Refer to the following documents for more detailed information:

- *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish* (Caltrans 2015)
- *Caltrans Engineering Technical Brief: Overview of the Evaluation of Pile Driving Impacts on Fish for the Permitting Process* (Caltrans 2018)

When a pile is struck with an impact hammer, the pile vibrates and radiates sound energy into the water. Figure 1 shows the pressure modulations associated with a single pile strike. The peak sound pressure occurs immediately after the pile is struck. The pile will then continue to ring for a few hundred milliseconds. One way to characterize the sound produced by the pile strike is to measure the peak sound pressure expressed in decibels relative to 1 micro-pascal. This is called the Peak Sound Pressure Level or L_{PEAK} .

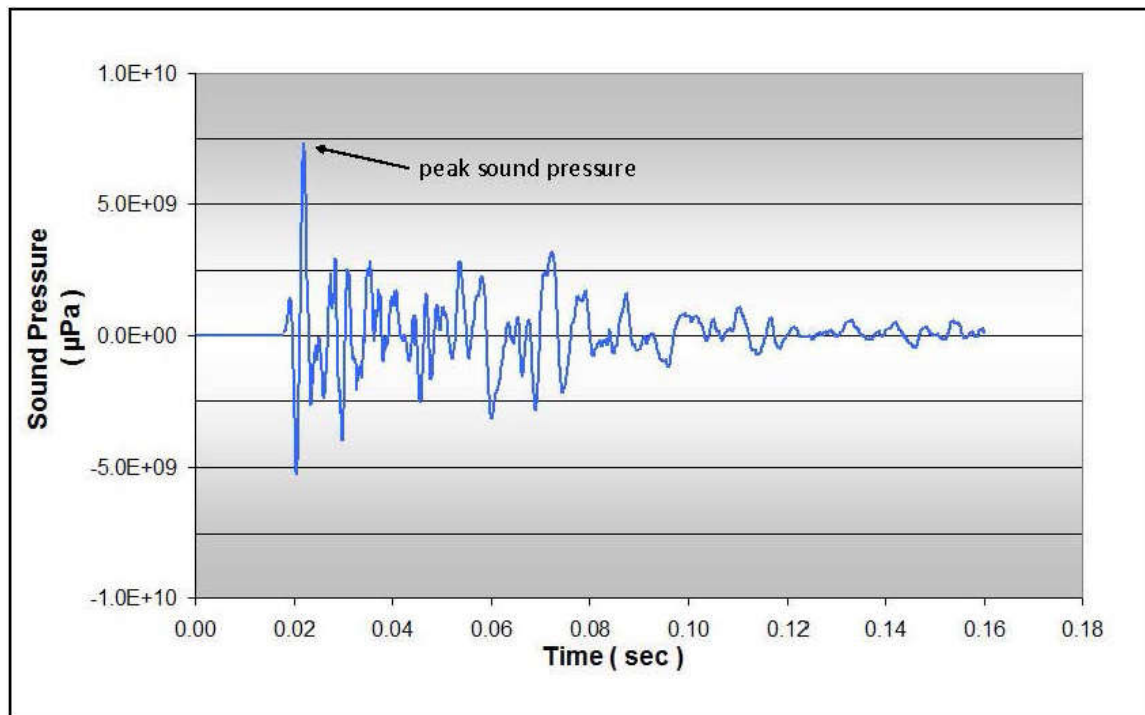


Figure 1. Sound Pressure Resulting from Pile Strike

Another way to quantify the sound associated with a pile strike is to measure the total energy associated with the pile strike. This is commonly expressed as the Sound Exposure Level or SEL. The total sound energy associated with the pile strike is summed and normalized to 1 second. Figure 2 shows how sound energy from a single strike accumulates over time to reach a maximum value. For a given pile and pile strike, the SEL value is typically 25 dB less than the peak level.

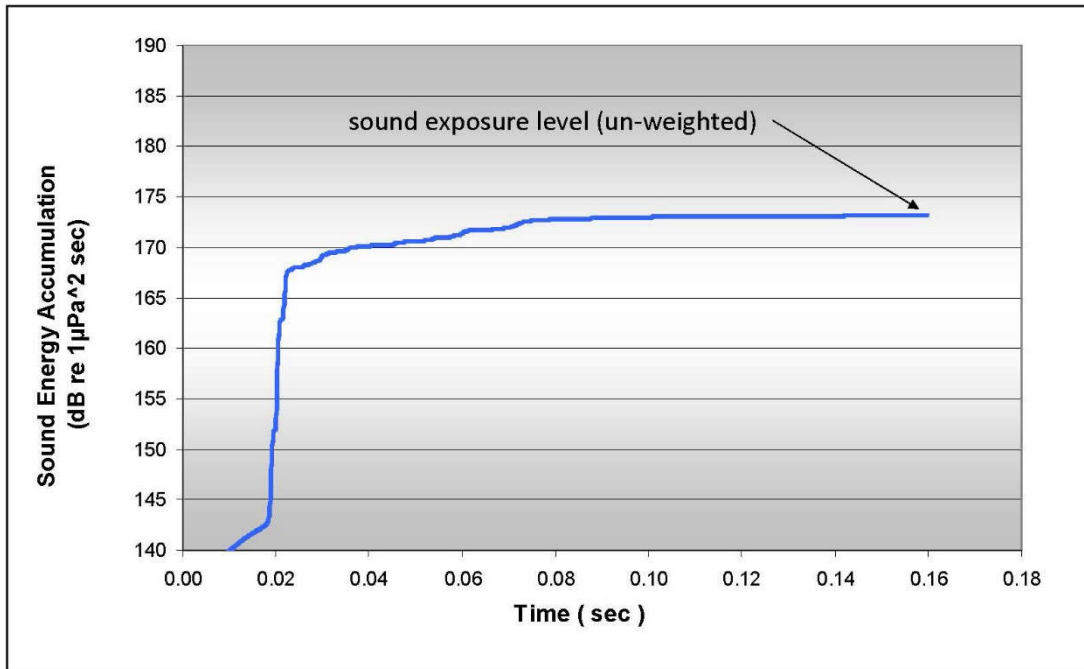


Figure 6. Sound Energy Accumulation Resulting from Pile Strike

Note: This is an “unweighted” sound energy scale and does not use the A-weighting scale normally applied to human hearing.

Because impact pile driving involves a series of pile strikes throughout the day, the cumulative sound energy associated with the pile strikes that occur in 1 day is also used. The cumulative SEL or $SEL_{CUMULATIVE}$ is determined by adding up the sound energy associated with all pile strikes that occur over a given day. If the single strikes SEL and the number of daily strikes are known, the cumulative SEL can be calculated with the following equation:

$$SEL_{CUMULATIVE} = SEL_{SINGLESTRIKE} + 10\log (\text{number of strikes})$$

A final metric that is used to characterize pile driving sound is the root-mean-square (RMS) level. As discussed above, this is essentially an average of the sound energy associated with a single strike.

Underwater sound generated by vibratory driving and rotational pile installation is similar to impact pile driving with the exception that sound pressure is continuous rather than intermittent over the driving period. With vibratory driving, SEL and RMS values are equal. The calculation of cumulative SEL is also different:

$$SEL_{CUMULATIVE} = SEL + 10\log (\text{duration of driving in seconds})$$

Sound levels diminish over distance as a result of many complex factors. For the purposes of this analysis, a simplified approach is taken. Sound is assumed to diminish at a rate of 4.5 dB per doubling of distance. This is generally a conservative approach and should be used unless there is site-specific information indicating that a different attenuation rate is appropriate. Attenuation is calculated with the following equation:

$$dB_2 = dB_1 - F \cdot \log(D_2/D_1)$$

where: dB_1 is the sound level at a distance of D_1 from the pile
 dB_2 is the sound level at a distance of D_2 from the pile
 F = attenuation factor (attenuation is 4.5 dB per doubling of distance where $F = 15$)

Potential impacts are typically identified in terms of the distance from construction activity at which various thresholds would be exceeded. The term “isopleth” is used to describe a line (for instance that could be drawn on a map) connecting points having equal sound levels. Underwater isopleths are analogous to “noise contours” that are often described for in-air noise. It is important to note that the convention for describing distances in association with hydroacoustic impacts is to state all distances in meters rather than feet. While results can easily be converted to feet for reporting purposes, it is important to be mindful of the calculated distances and to ensure the appropriate unit (meters or feet) is clearly identified.

Interim Injury Criteria

In-water Noise

Fish

Acoustic criteria intended to protect fish from harm and mortality caused by pile driving activities were adopted by the California Department of Transportation (Caltrans), the Federal Highway Administration (FHWA), the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the NOAA Fisheries Northwest and Southwest Regions in 2008. These “interim injury criteria” are now routinely used to evaluate the effects of impact pile driving sound on fish. These criteria do not apply to vibratory pile driving. Vibratory pile driving is considered to be an avoidance and minimization measure for reducing effects on fish from impact pile driving and is not assessed for potential injury to fish. The same line of thinking is also applied to pile drilling. (Vibratory driving and pile drilling, however, may affect marine mammals, and so vibratory driving and pile drilling must be considered when marine mammals are present, as described in the following sections of the memorandum). Table 1 summarizes the adopted interim criteria for fish.

Table 1. Interim Level A Injury Criteria for Fish

Interim Injury Criteria	Agreement in Principal
Peak	206 dB
Cumulative SEL	187 dB – for fish size of two grams or greater 183 dB – for fish size of less than two grams

dB = decibels; SEL = Sound Exposure Level.

Additional guidance provided by NOAA Fisheries states that a level of 150 dB_{RMS} should be used to assess potential behavioral effects on fish. The accumulation period for the cumulative SEL is 1 day of activity. In other words, the accumulative energy resets each day.

Marine Mammals

In 2018, NOAA Fisheries published criteria for assessing in-water impacts on marine mammals from pile driving and other construction sources (NOAA 2018). These thresholds relate to the onset of permanent hearing threshold shift (PTS) and have frequency weighting functions that are applied to overall measured unweighted sound levels based on the type of activity (e.g., drilling, pile driving) and the potentially effected species. Background and details on these criteria can be found here:

<https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance>

In-water acoustic thresholds for behavioral disruption were previously reported on the NOAA Fisheries Westcoast Region website at:

https://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/threshold_guidance.html

Tables 2 and 3 summarize these various criteria. As with fish, the accumulation period for the cumulative SEL is 1 day of activity and the accumulative energy resets each day.

Table 2. NOAA Fisheries In-water Level A Acoustic Thresholds (PTS Onset)

Criterion Level A Hearing Groups	PTS Onset (Received Sound Level)	
	Impulsive Sound Source	Non-Impulsive Sound Source
Low-frequency Cetaceans (LF) (<i>baleen whales</i>)	Peak: 219 dB _{LF} SEL _{CUM} : 183 dB _{LF}	SEL _{CUM} : 199 dB _{LF}
Mid-frequency Cetaceans (MF) (<i>dolphins, toothed whales, beaked whales, bottlenose whales</i>)	Peak: 230 dB _{MF} SEL _{CUM} : 185 dB _{MF}	SEL _{CUM} : 198 dB _{MF}
High-frequency Cetaceans (HF) (<i>true porpoises, Kogia, river dolphins, cephalorhynchid, Lagenorhynchous cruciger and australis</i>)	Peak: 202 dB _{HF} SEL _{CUM} : 155 dB _{HF}	SEL _{CUM} : 173 dB _{HF}
Phocid Pinnipeds (PW) (<i>true seals</i>)	Peak: 218 dB _{HF} SEL _{CUM} : 185 dB _{HF}	SEL _{CUM} : 201 dB _{HF}
Otariid Pinnipeds (OW) (<i>sea lions and fur seals</i>)	Peak: 232 dB _{HF} SEL _{CUM} : 203 dB _{HF}	SEL _{CUM} : 219 dB _{HF}

Notes: Dual Thresholds (impulsive): Use one resulting in largest effect distance (isopleth); SEL thresholds incorporate frequency weighting functions; all decibels referenced to 1 micro-pascal (re: 1uPa); the recommended accumulation period is 24 hours.

dB = decibels; PTS = permanent hearing threshold shift SEL_{CUM} = cumulative Sound Exposure Level.

Table 3. NOAA Fisheries In-Water Level B Acoustic Thresholds (Behavioral Disruption)

Criterion	Criterion Definition	Threshold
Level B	Behavioral disruption for impulsive noise	160 dB _{RMS}
Level B	Behavioral disruption for continuous noise	120 dB _{RMS} ^a

Note: All decibels referenced to 1 micro-pascal (re: 1uPa).

^a The 120 dB threshold may be slightly adjusted if background noise levels are at or above this level.

dB_{RMS} = decibels root-mean-squared.

In-Air Noise (Marine Mammals Only)

In-air acoustic thresholds for marine mammals were previously reported on the NOAA Fisheries Westcoast Region website at:

https://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/threshold_guidance.html

These thresholds are summarized in Table 4. It is noted that thresholds are currently only provided for Level B take (behavioral disruption) and that no threshold is currently established for Level A take (injury). Because injury is a more severe effect than behavioral disruption it follows that Level A take would occur at higher noise levels than those associated with Level B take. Therefore, although no specific threshold has been established for Level A take (injury) it can be concluded that avoidance of Level B take would also avoid Level A take. It is noted that the thresholds in Table 1 are all established using unweighted decibels (dB) (also sometimes referred to as “flat” or “Z” weighted), as opposed to A-weighted decibels (dBA) which are typically used for assessing environmental noise impacts on humans. When a sound is measured using both unweighted decibels and A-weighted decibels, the values are rarely the same. For most environmental sound sources the unweighted (dB) level will be higher than the A-weighted (dBA) level. The difference between the two values depends on the frequency content (spectrum) of the sound.

Table 4. NOAA National Marine Fisheries Service Current In-Air Acoustic Thresholds

Criterion	Criterion Definition	Threshold
Level A	PTS (injury) conservatively based on TTS	None established
Level B	Behavioral disruption for harbor seals	90 dB _{RMS}
Level B	Behavioral disruption for non-harbor seal pinnipeds	100 dB _{RMS}
PTS = permanent hearing threshold shift		
TTS = temporary hearing threshold shift		
dB = decibels referenced to 20 micro Pascals (re: 20 µPa)		
RMS = root mean square		

Analysis Methods

Fish

NOAA Fisheries has published a Microsoft Excel spreadsheet that facilitates the assessment of underwater sound impacts from pile driving on fish. Data inputs to the spreadsheet include sound source levels for the pile being evaluated, the number of pile strikes per day, and the sound attenuation rate (typically 4.5 dB per doubling of distance). Source levels are typically taken from the database of pile driving sound levels reported in Caltrans 2015. This is commonly referred to as the pile driving “compendium.” The spreadsheet determines the distances within which the various injury criteria are exceeded. These distances are often referred to as “injury isopleths”.

An important concept related to the analysis of underwater sound impacts on fish is the concept of “effective quiet.” The concept of effective quiet relates to the calculation of cumulative SEL. As discussed above, the cumulative SEL value is calculated using the single strike SEL value and the anticipated number of daily pile strikes. The sound level generated by pile driving diminishes with distance from the pile. At a certain distance, the pile driving sound level is so low that it is no longer expected to result in injury to fish even when the energy is accumulated from multiple pile strikes. The area beyond this distance is called the area of “effective quiet” and is considered to be located at the point where the single strike SEL value drops to 150 decibels or less. Accordingly, the distance at which the single strike SEL drops to less than 150 dB is the maximum distance within which injury is assumed to result. This means that at about 5,000 strikes, the injury isopleth relative to the 187 dB criterion does not increase. This occurs at about 2,000 strikes relative to the 183 dB criterion.

Marine Mammals

Underwater Sound

NOAA Fisheries has also published a Microsoft Excel spreadsheet that facilitates the assessment of underwater sound impacts on marine mammals from non-impulsive sources (e.g. drilling, vibratory pile driving, and tactical sonar) and impulsive sources (e.g. impact pile driving, explosives, seismic exploration). The spreadsheet provides default Weight Factor Adjustments (WFAs) to account for variations in hearing responses from the various marine mammal hearing groups. The default WFAs

are used if the frequency spectrum from the source is not available. For most typical analyses, source levels are taken from the compendium of pile driving source levels in the Caltrans 2015. Because spectra are not available for these source levels, the default WFAs are used.

The analysis process assumes that marine mammals remain stationary during the sound generating activity. In addition, recovery between intermittent sounds is not considered for sound energy that occurs with the accumulation period of 24 hours. The spreadsheet uses inputs that are similar to the fish spreadsheet and calculates the distance within which the PTS threshold is predicted to be exceeded. This distance is called the “PTS isopleth.”

The concept of effective quiet is not applied to marine mammal analysis.

Airborne Sound

There are no specific guidelines or required methodologies for the analysis of airborne sound. The propagation of airborne sound can be analyzed using the same techniques that are typically applied to the analysis of environmental noise impacts on humans. The simplest commonly-used approach assumes geometric spreading from a point source, with noise attenuation at a rate of 6 dB per doubling of distance from source. The primary difference between the analysis for marine mammals versus humans is that (as noted previously) the noise levels considered for marine mammal impacts are unweighted sound pressure levels (dB) as opposed to the A-weighted sound pressure levels (dBA) typically used to assess potential impacts to humans. (A-weighting is a frequency modification based on how humans hear sound). To make a construction noise assessment relative to the unweighted criteria, unweighted construction noise source levels are needed. The FHWA Roadway Construction Noise Model (RCNM) is a commonly accepted reference for noise levels generated by construction equipment. These reference sound levels, however, are A-weighted. The unweighted sound levels can be estimated from these A-weighted sound levels with conversion factors developed from measured sound level spectra. RCNM data indicate maximum A-weighted noise levels (rms) of approximately 101 dBA at 50 feet from impact pile driving. A review conducted by ICF of available pile driving sound spectra (i.e., frequency) data indicates that unweighted noise levels for impact pile driving are up to 6 dB higher than A-weighted noise levels. Adjusting the A-weighted noise source levels accordingly results in unweighted noise levels (rms) of approximately 107 dB at 50 feet.

Analysis and Estimated Impact Distances

Due to the programmatic nature of the Project, the full details of the required pile driving activity are not known at this time. The piles are anticipated to include the following.

- For the Floating Dock: 21 concrete piles, each 18 inches in diameter and 50 feet in length. It is anticipated that these piles would be jetted into place.
- For the Dock: 16 concrete piles, each 18 inches in diameter and 50 feet in length.

- For the Pier Platform: 42 concrete piles, each 24 inches in diameter and 40 feet in length. 29 piles would be installed on the landside and 13 on the waterside.

A key variable that is currently unknown is the total number of impact hammer strikes that will occur in a 24-hour period. This total will be a product of the number of strikes required to install each pile and the number of piles that will be installed each day. The number is important because it will affect the cumulative SEL. Where pile jetting is used, the number of strikes per pile will be reduced (possibly to zero), but an impact hammer may still be needed to achieve the required final depth. To make a preliminary analysis possible, the number of pile strikes was assumed based on data for the proposed marina expansion that was analyzed as part of the Fifth Avenue Landing Project. This data indicated up to 75 strikes per pile and 10 piles per day, for a total of 750 strikes per day.

In-Water Noise

Fish

Table 5 summarizes the results of the hydroacoustic assessment for potential impacts on fish.

Table 5. Pile Driving Hydroacoustic Assessment for Fish

Pile Type	Distance to Injury Isopleth for Fish, meters (feet)			Distance to Disturbance Threshold (feet) (all fish)
	Peak (all fish)	Cumulative SEL (fish > 2 grams)	Cumulative SEL (fish < 2 grams)	
Concrete, 18 inch	1 (4)	21 (68)	38 (126)	631 (2,070)
Concrete, 24 inch	1 (4)	33 (108)	61 (199)	541 (1,775)

dB= decibels; SEL = Sound Exposure Level.

Marine Mammals

Table 6 summarizes the results of the hydroacoustic assessment for potential impacts on marine mammals. For Level A impacts, the Cumulative SEL impact distances are all larger than the corresponding Peak impact distances, and therefore the Cumulative SEL distances would be used in determining impacts and establishing any required mitigation.

Table 6. Pile Driving Hydroacoustic Assessment for Marine Mammals

Pile Type	Distance to Level A Impacts for Marine Mammals, meters (feet)					Distance to Level B Threshold for Impulsive Sound, meters (feet)
	Low-Frequency Cetaceans	Mid-Frequency Cetaceans	High-Frequency Cetaceans	Phocid Pinnipeds	Otariid Pinnipeds	
Concrete, 18 inch	Cumulative SEL					136 (446)
	38 (126)	1.4 (4)	46 (150)	21 (67)	1.5 (5)	
	Peak					
	N/A	N/A	2.2 (7)	N/A	N/A	
Concrete, 24 inch	Cumulative SEL					117 (383)
	61 (199)	2.2 (7)	72 (237)	33 (106)	2.4 (8)	
	Peak					
	N/A	N/A	2.2 (7)	N/A	N/A	

dB= decibels; SEL = Sound Exposure Level; N/A = impact distance is negligible (less than 1 meter).

In-Air Noise (Marine Mammals Only)

Table 7 summarizes the results of the in-air noise assessment for potential impacts on marine mammals.

Table 7. Pile Driving In-Air Noise Assessment for Marine Mammals

Criterion	Criterion Definition	Threshold	Distance from Impact Pile Driving, meters (feet)	Distance from Vibratory Pile Driving or Extraction, meters (feet)
Level B	Behavioral disruption for harbor seals	90 dB _{rms}	108 m (354 ft)	161 m (530 ft)
Level B	Behavioral disruption for non-harbor seal pinnipeds	100 dB _{rms}	34 m (112 ft)	51 m (167 ft)

dB = decibels referenced to 20 micro Pascals (re: 20uPa)

rms = root mean square

References Cited

- Caltrans. 2015. *Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish*. Sacramento, CA.
- Caltrans. 2018. *Caltrans Engineering Technical Brief: Overview of the Evaluation of Pile Driving Impacts on Fish for the Permitting Process*. Sacramento, CA.

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Appendix I

Cultural Resources Inventory and Evaluation Report

DRAFT CULTURAL RESOURCES INVENTORY AND EVALUATION REPORT (NON-CONFIDENTIAL)

NATIONAL CITY BAYFRONT PROJECTS AND PLAN AMENDMENTS, NATIONAL CITY, CALIFORNIA

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NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

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Report Date: September 25, 2021

Report Title: Cultural Resources Inventory and Evaluation Report for the National City Bayfront Projects and Plan Amendments, San Diego, CA.

New Sites: P-37-039520; P-37-039519/CA-SDI-23093

Updated Sites: P-37-007454/CA-SDI-7454; P-37-013073/CA-SDI-13073; P-37-024739/CA-SDI-16385; P-37-020167/P-37-028795; Granger Hall

USGS Quadrangle: National City, California; 7.5' series (1:24,000)

Acreage: Project plan area 122 acres; archaeological survey area 15.5 acres

Keywords: Coronado Belt Line; Santa Fe Railway; National City Santa Fe Depot; Granger Hall; Paradise Marsh; archaeological pedestrian survey; built environment survey; California Register of Historical Resources, California Environmental Quality Act.

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Acronyms and Abbreviations

BNSF	Burlington Northern Santa Fe
BP	before present
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CHRIS	California Historical Resources Information System
City	City of National City
CRHR	California Register of Historical Resources
District	San Diego Unified Port District
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
FAR	floor area ratio
FPR	first point of rest
GB Capital	GB Capital Holdings, LLC
IONE	Ione Fire Brick Company
JRP	JRP Historical Consultant Services
LCP	Local Coastal Program
LCPA	LCP Amendment
MLD	Most Likely Descendent
MTDB	Metropolitan Transit Development Board
MTS	Metropolitan Transit System
NAHC	Native American Heritage Commission
NC&O	National City & Otay Railroad
NCMT	National City Marine Terminal
NRHP	National Register of Historic Places
Pasha	Pasha Automotive Services
PMP	Port Master Plan
PMPA	PMP Amendment
PRC	California Public Resources Code
project	National City Bayfront Projects
ROW	right-of-way
RV	recreational vehicle
Santa Fe	Pacific & Atlantic Railroad and the Atchison, Topeka & Santa Fe Railroad
SD&A	San Diego and Arizona
SD&AE	San Diego, Arizona and Eastern
SD&SE	San Diego and South Eastern Railway
SDERC	San Diego Electric Railway Company

SDS	San Diego Southern
SHPO	State Historic Preservation Officer
USGS	United States Geological Survey

Chapter 1

Introduction

The San Diego Unified Port District (District), the City of National City (City), GB Capital Holdings, LLC (GB Capital), and Pasha Automotive Services (Pasha), as co-applicants and project proponents, are each proposing components that constitute the National City Bayfront Projects (project or proposed project) (Figures 1 and 2). The proposed project would include eight components: construction and operation of a recreational vehicle (RV) park, modular cabins, dry boat storage, up to four hotels, and an expanded Pier 32 Marina GB Capital Component); construction and operation of a rail connector track and storage track (Pasha Rail Improvement Component); road closures (Pasha Road Closures Component); development of Segment 5 of the Bayshore Bikeway (Bayshore Bikeway Component); and construction and operation of hotel, restaurant, retail, and/or a combination of tourist/visitor-serving commercial development north of Bay Marina Drive (City Program-Development Component). These projects would require changes to land and water use designations in the District's Port Master Plan (PMP) (National City Marina District Balanced Land Use Plan (Balanced Plan); as well as amendments to the City's Local Coastal Program (LCP), General Plan, Harbor District Specific Area Plan, Land Use (Zoning) Code, and Bicycle Master Plan that would include changes to jurisdictional boundaries; changes to subarea boundaries; and changes to land use, specific plan, and zone designations (City Plan Amendments Component).

ICF was retained by the District, the lead agency for the proposed project, to prepare a cultural resources inventory and evaluation report for the proposed project and plan amendments.

Efforts to identify recorded archaeological resources and determine archaeological resource potential within and around the cultural resources study area included consultation with the Native American Heritage Commission (NAHC), outreach to Native Americans, a records search, and analysis of historic maps and aerial photographs. Because much of the cultural resources study area is entirely developed with buildings, structures, pavement, and modern landscaping, intensive archaeological pedestrian survey was limited to areas of exposed soils and sediments. The remaining developed portions of the project area were visually inspected through reconnaissance survey.

ICF architectural historians surveyed the cultural resources study area on October 1, 2018, and July 12, 2019. During these surveys, ICF staff recorded intact buildings and structures 45 years of age or older using digital photography.

No prehistoric archaeological resources were identified within the cultural resources study area. One previously recorded prehistoric shell midden (CA-SDI-7454) was not relocated and appears to have been destroyed through natural processes or anthropogenic disturbance. One historic period isolate (P-37-039520) and one historic period refuse deposit (P-37-039519/CA-SDI-23093) were identified during the archaeological survey. As part of this study, ICF has evaluated these two resources and found that both are not eligible for listing in the California Register of Historical Resources (CRHR).

Four built environment resources 45 years of age or older were identified within the cultural resources study area: two buildings and two railroad lines. The two buildings, Granger Hall and the National City Santa Fe Depot, were listed in the National Register of Historic Places (NRHP) in 1973 and 1996, respectively. Architectural historians confirmed that these two resources retain sufficient

historical integrity to convey their significance. The two other built resources in the cultural resources study area are a segment of the Atchison, Topeka and Santa Fe Railway, and a segment of the Coronado Belt Line.



Figure 1
Regional Location Map
National City Bayfront Projects & Plan Amendments



The Atchison, Topeka, and Santa Fe Railway segment is part of a larger 5.9-mile segment of the railroad line evaluated in 2002 and determined not eligible for NRHP listing. Other portions of this line within San Diego County have also previously been evaluated and found not eligible for listing in the NRHP and the CRHR. As part of this study, ICF has evaluated the portion of this railroad line within the cultural resources study area of the proposed project and found it not eligible for listing in the CRHR.

The portion of the Coronado Belt Line in the cultural resources study area is part of a surviving approximately 7.5-mile segment of the original approximately 20-mile railroad. In 1994 the surviving 7.5-mile railroad segment was evaluated and found not eligible for the NRHP, and the State Office of Historic Preservation (SHPO) concurred with that finding. The resource was nominated for CRHR listing in 2001. In 2002 the State Historical Resources Commission listed the Coronado Belt Line in the CRHR but then agreed to a request by the District and the Cities of San Diego, Chula Vista, and Imperial Beach to reconsider its decision. In November 2002 the Commission voted to de-list the resource. As part of this study, ICF has re-evaluated the portion of the surviving Coronado Belt Line within the cultural resources study area and found it not eligible for listing in the CRHR.

Analysis of the proposed project's potential to result in impacts on significant cultural resources, and mitigation measures to address such impacts will be developed in the Environmental Impact Report (EIR) for the proposed project.

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Chapter 2

Project Description

The District, the City, GB Capital, and Pasha, as co-applicants and project proponents, are each proposing components that constitute the proposed project. The project would include changes to land and water use designations in the District's PMP, as well as amendments to the City's LCP Land Use (Zoning) Code and Bicycle Master Plan that would include changes to jurisdictional boundaries; changes to subarea boundaries; and changes to land use, specific plan, and zone designations (City Program – Plan Amendments). The PMP Amendment (PMPA) and corresponding LCP Amendment (LCPA) to clarify jurisdictional land use authority and the balancing of commercial and maritime uses is herein referred to as the "Balanced Plan." The project would entail construction and operation of hotels, an RV park, modular cabins, dry boat storage, an expanded marina, retail and potentially other buildings, and a rail connector track and storage track. In addition to closing several street segments in areas that would be redesignated as Marine-Related Industrial in the District's PMP, the project would construct and operate Segment 5 of the Bayshore Bikeway (Bayshore Bikeway Component) (Figure 3).

The District is the lead agency because it is the public agency with the greatest responsibility for supervising or approving the proposed project as a whole. The District is responsible for permitting and carrying out the portions of the proposed project within the District's jurisdiction. The City and California Coastal Commission are considered responsible agencies. The California Department of Transportation (Caltrans) is also considered a responsible agency because approval from Caltrans would be required in order for GB Capital to use the Caltrans property east of the Pier32 Marina.

2.1 National City Marina District Balanced Land Use Plan Component (Balanced Plan)

This element of the project would consist of transportation improvements, public access improvements, proposed land and water use designation changes, expansion and reconfiguration of Pepper Park, and use modifications to the National City Aquatic Center and relocation of existing buoys. The National City Marina District Land Use Plan (Balanced Plan) covers a total of approximately 69.3 acres, including an approximately 60.9-acre area north of Sweetwater Channel in the District's and National City's land use jurisdiction, as well as approximately 8.36 acres extending into Sweetwater Channel.

2.1.1 Transportation Improvements

The following transportation improvements would be implemented as part of the Balanced Plan:

- Realign Marina Way from its existing alignment to form a curve that rounds out to the west when traveling toward the Balanced Plan area and connects to the proposed new Pepper Park entrance. Utilities would be relocated from the existing Marina Way right-of-way (ROW) to the realigned Marina Way ROW, which would be 70 feet wide.

- Add a connector rail track to provide an additional point of connection between the existing rail yard along the west side of Marina Way and the east side of the National Distribution Center, north of the Balanced Plan area, to the existing rail line north of the existing West 32nd Street and west of Tidelands Avenue. A storage track also may be provided north of and parallel to the connector rail track (see Section 2.3, *Pasha Rail Improvement Component*).
- Close West 32nd Street east of Tidelands Avenue, allowing for the realignment of Marina Way as proposed, and the southern half of the existing Goesno Place south of West 32nd Street to vehicular traffic and relocate the northern portion of the road to the east. Potential relocation of utilities is also proposed for both street segment closures.
- Shift the southern terminus of Tidelands Avenue to the east, to accommodate a reconfigured historic first point of rest (FPR).

2.1.2 Public Access Improvements

The Balanced Plan includes several public access improvements:

- Increase Pepper Park by over 2.54 acres—approximately 1.52 acres to the north and west, and approximately 1 acre to the north and east. The Pepper Park expansion, which may also include a reconfiguration of the layout of the existing Pepper Park, has not yet been designed; however, several potential park components and options are being analyzed as the “worst-case scenario” in the EIR supported by this cultural resources study (see Section 3.4.1.3, *Proposed Pepper Park Expansion and Reconfiguration*).
- Provide a 100-foot habitat buffer from the delineated wetlands west of the Wildlife Refuge (Paradise Marsh) and a 200-foot building setback from the western edge of the Wildlife Refuge. Vehicular parking and low-impact non-motorized uses such as public access trails and bike paths could be located between the habitat buffer and building setback.
- Provide a north–south public access corridor, allowing visual, pedestrian, bicycle, and emergency vehicle access, while excluding vehicular parking and permanent structures, within the existing alignment of Marina Way. The corridor would range from 20 to 40 feet wide and be centered on the existing 20-foot-wide view corridor at Pier 32 Marina. The Bayshore Bikeway (see Section 2.5) may be routed through this corridor.
- Provide an east–west public access corridor, allowing visual, pedestrian, bicycle, and emergency vehicle access, while excluding vehicular parking and permanent structures, within the existing alignment of West 32nd Street. This corridor would range from 14 to 40 feet in width and may also include an ancillary bicycle path.

2.1.3 Proposed Land and Water Use Designation Changes

Changes to existing land and water use designations are proposed as part of the Balanced Plan. Proposed construction activities associated with these changes and entailing potential to result in ground disturbances and alterations to the existing built environment are discussed elsewhere in this chapter. For details on land and water use changes associated with the Balanced Plan, see the EIR’s Section 3.4.1.4, *Proposed Land and Water Use Designation Changes*.

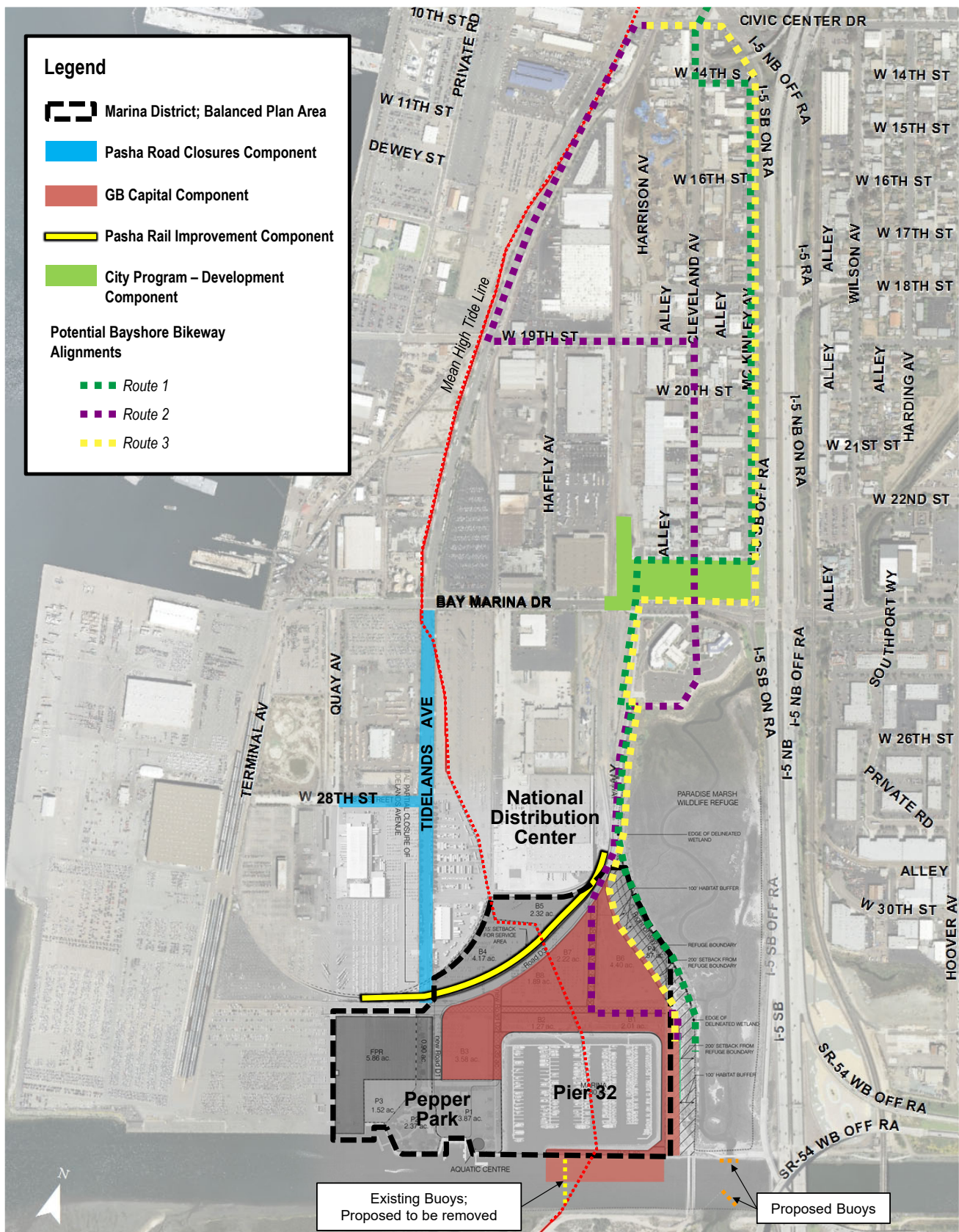


Figure 3
Project Component Boundaries
National City Bayfront Projects & Plan Amendments

2.1.4 Proposed Pepper Park Expansion and Reconfigurations

Pepper Park is proposed to be expanded by approximately 2.54 acres, from approximately 5.22 acres to approximately 7.76 acres. Existing amenities include a boat launch ramp, picnic tables, restrooms, fishing pier, floating boat dock, playground equipment, and approximately 71 parking spaces. Although the Pepper Park expansion has not yet been designed, for the purpose of providing a “worst-case scenario” for the environmental analysis, it is anticipated that the following components may be implemented:

- Reconfiguration of the existing Pepper Park layout, which may include a mixture of hardscape (e.g., paved plazas, shade structures) and new landscaping (e.g., landscaped berms, open lawn).
- An amphitheater.
- An interactive fountain/splashground.

A Pepper Park expansion may include the City-requested relocation of the City-owned historic Granger Hall to Pepper Park. The park expansion/reconfiguration could result in additional opportunities for larger and more frequent organized events. No revisions to the existing boat launch ramp facility are proposed.

2.1.5 Proposed Use Modifications to National City Aquatic Center and Relocation of Buoys

The Pepper Park expansion is anticipated to be designed around the National City Aquatic Center, which is located within the park. No land use changes or physical improvements to the aquatic center are proposed as part of the project. The proposed project includes modifications to existing operational restrictions in the Coastal Development Permit for the facility that limit existing operations and utilization of the facility. The project proposes to relocate the buoys located south of Pier 32 Marina, which are too recent to be considered potential cultural resources.

2.2 GP Capital Component

The GB Capital Component would include construction and operation of up to four hotels, an RV park, modular cabins, dry boat storage, a 10,000-square-foot administration center building adjacent to the existing marina buildings, construction of two additional 4,000-square-foot buildings and an associated 8,200-square-foot maintenance yard, and additional moorings and improvements to the marina. In addition, this component would implement a new road realignment for Marina Way, public access/view corridors, and bicycle and pedestrian paths. All of the landside component parts would be developed within the Commercial Recreation land use designation that is proposed as part of the Balanced Plan. The majority of this component would be developed in the first phase, which is anticipated to be operational around 2022. The second phase includes up to four hotels, which would be operational based on market demand, and are anticipated to be developed by or around 2025. The GB Capital Component would incorporate native plantings and non-invasive ornamental plants, drought-tolerant, low-maintenance plants that are well adapted to bayfront conditions throughout the project area. Hardscape materials, consistent with the character of the existing marina, would include permeable paving (porous asphalt, concrete pavers, and decomposed granite). The development would include view corridors and trails that would be connected to the

adjacent marina and Pepper Park. Low-level lighting that is sensitive to the adjacent refuge and wetlands is proposed.

2.3 Pasha Rail Improvement Component

Implementation of the Balanced Plan would decrease the land available within the Balanced Plan area for Pasha's operations. The following project elements would help Pasha to increase operational efficiency and thereby offset the reduction of acreage as a result of the Balanced Plan:

- **Proposed Rail Improvements on Lot K:**

- Existing train activities on and around NCMT are constrained by the freight train operating windows and limitations on the length of trains. Moreover, the frequent insufficient supply of empty railcars, as well as related storage, further constrains train operations. The Pasha Rail Improvement Component would include construction and operation of a connector track and a storage track west of the realigned Marina Way/Road D3 roadway identified in the Balanced Plan. This project component would allow Pasha to load trains more efficiently.

The connector track would connect the existing rail and loop track on the NCMT, west of the National Distribution Center, to additional railcar storage at the existing BNSF National City Yard, just east of the National Distribution Center. The storage track would provide additional railcar storage by adding a second track parallel to and north of the connector track. Figure 3-17 identifies the locations of the existing National Distribution Center, the existing BNSF National City Yard, the proposed connector track, and the proposed storage track. The project does not propose to remove any existing rail track

- **Connector Track:** The BNSF National City Yard has eight tracks, switches, and can hold approximately 50 rail cars. BNSF can use the rail yard either for multi-level auto rail cars or for storage for freight train rail cars, giving them more flexibility for operations. The connector track portion of the Pasha Rail Improvement Component would improve efficiencies for Pasha's operations at NCMT. The improved efficiencies are due to Pasha no longer requiring BNSF to pull empty railcars north of the NCMT to the switch near Civic Center Drive and Harbor Drive and then having to send them back to the NCMT on the loop track, which can take a considerable amount of time because it requires dependence on BNSF rail crews. Instead, empty railcars could be pulled on the connector track directly from BNSF's National City Yard to the loop track on NCMT, resulting in reduced maneuvering and quicker train build times.
- **Storage Track:** The proposed storage track would add approximately 2,000 feet of train storage, which would accommodate approximately 18–20 additional railcars. The storage track would allow the approximately 12–15 empty tri-level railcars weekly to be stored off the on-terminal rail ladder. However, providing an additional railcar storage area would not significantly increase vehicle throughput, particularly if only tri-level cars are available, because they are unable to accommodate larger vehicles such as SUVs, which is the bulk of Pasha's rail transport needs. The consumer demand for SUVs, and other high-profile vehicles such as trucks, is market driven and heavily dependent on gasoline prices. This new car market trend for SUVs and trucks, versus traditional sedans (i.e., low-profile vehicles), is anticipated to continue for the foreseeable future; thus, bi-level railcars are anticipated to

continue to be in high demand at NCMT. While these tri-level railcars are waiting to be removed from the NCMT rail ladder by BNSF, the railcars impact Pasha's regular rail activities, causing inefficiencies for Pasha to build a train. The storage track, therefore, would provide a place for these empty tri-level railcars to be stored, off the main on-terminal rail ladder. Having these empty railcars off the on-terminal rail ladder would allow regularly scheduled inbound/southbound trains to improve efficiency upon arrival. A less congested rail ladder on terminal creates a smoother, more routine flow of railcars, which supports more efficient operations for Pasha.

2.4 Pasha Road Closures Component

Pasha also proposes the Pasha Road Closures Component, which includes closure of Tidelands Avenue between Bay Marina Drive on the north and West 32nd Street on the south as well as West 28th Street between Quay Avenue and Tidelands Avenue. Tidelands Avenue between Bay Marina Drive and West 32nd Street is an access road to the back gate of the NCMT; it also serves as an access road to the main entrance of Pepper Park. The existing roadways bifurcate marine terminal operations. Closure of the roads would increase operating efficiencies by eliminating certain internal fences and drive aisles and consolidating the two truck-away locations down to one, a reduction in the truck-away footprint of approximately 0.5 acre. The road closures, which total approximately 6.07 acres, of which approximately 5.76 acres is within the District's jurisdiction and the remaining approximately 0.31 acre is within the City's jurisdiction. The area of the road closures located within the District's Jurisdiction would require changing land use designations from Street to Marine-Related Industrial.

2.5 Bayshore Bikeway Component

An alignment of the Bayshore Bikeway Component would extend generally from Civic Center Drive on the north to West 32nd Street on the south, via McKinley Avenue and Marina Way. The Bayshore Bikeway Component would construct a Class I bike path that traverses the City's LCP and some areas of the District's proposed PMP. The Bayshore Bikeway Component would be constructed using a 12-foot width, as stipulated in the San Diego Association of Governments Regional Bike Plan for Class I bike paths, and would replace an existing interim bike path in the project area that includes Class I, II, and III segments and was constructed in 2018. The existing interim bike path cannot be removed until the Bayshore Component is construction. One of three optional alignments would be selected for implementation. As of the writing of this EIR, the preferred route is Route 3. The southern portion of this route is consistent with the Bayshore Bikeway location identified in the PMP and the City's Harbor District Specific Plan. The route details for each of the three possible alignments are provided below.

- **Route 1:** This route is approximately 8,152 feet long and would travel along the former Coronado Belt Line railroad ROW to the southern end of the Best Western Marina Gateway Hotel where it would turn west to travel along the western side of Marina Way. This route would then turn east on West 23rd Street and north onto McKinley Avenue.
- **Route 2:** With an approximate length of 7,887 feet, Route 2 would travel along the existing alignment for Marina Way from West 32nd Street to the southern end of the Best Western Marina Gateway hotel where it would turn east into the hotel parking lot, turn north between

the two buildings on the hotel property, cross Bay Marina Drive, and travel north along Cleveland Avenue to West 19th Street. The route would turn west at West 19th Street, then north on Tidelands Avenue.

- **Route 3:** Route 3, which is approximately 7,929 feet in length, would travel between the former railroad ROW and existing Marina Way on the southern end, and along McKinley Avenue on the northern end. This route would travel along Bay Marina Drive, between Marina Way and McKinley Avenue, then turn north on McKinley Avenue. The southern portion of this route is consistent with the Bayshore Bikeway location identified in the PMP and the City's Harbor District Specific Area Plan.

2.6 City Program – Development Component

The City Program – Development Component proposes amendments to the City's Zoning Code for seven parcels north of Bay Marina Drive; these are discussed in the EIR's Section 3.4.8, *City Program – Plan Amendments Component*. Six of the parcels (totaling approximately 2.9 acres) are owned by the City and comprise two complete blocks between Bay Marina Drive to the south, West 23rd Street to the north, Harrison Avenue (now Marina Way) to the west, and Interstate 5 to the east. The remaining parcel (approximately 1.2 acres), owned by the City and leased to the San Diego Railway Association, is located at the northwest corner of Bay Marina Drive and Marina Way the historic Santa Fe Rail Depot is located on this parcel.

The two City-owned blocks are currently vacant. The City proposes to re-zone the parcels to Tourist Commercial (CT), which could allow these parcels to be developed with hotel, restaurant, retail, and/or some combination of tourist/visitor-serving commercial uses. The CT zone allows a floor area ratio (FAR) of up to 1.0, with no height limit; however, as part of the *City Program – Plan Amendments Component* (see EIR Section 3.4.8), the City proposes to increase the FAR to 2.0 in the CT zone. The maximum allowable development with a FAR of 2.0 would be approximately 254,782 square feet of floor area. The proposed 2.0 FAR would allow for the development of desired land uses that require substantial floor areas such as hotels. The parking requirement would be based on the specific uses permitted in the CT zone. For purposes of the analysis, an example of a potential development scenario associated with the City Program – Development Component would be a hotel with up to five stories and 150 rooms, along with 15,500 square feet of restaurant space and 12,000 square feet of retail space. The City Program – Development Component would also include the potential closure, or narrowing (from two lanes to one lane each way), of Bay Marina Drive (west of Marina Way) to through vehicular traffic. An alignment of the Bayshore Bikeway, consistent with Routes 1 and 3, as described above, would traverse the site, which would be located in the City and outside District jurisdiction.

2.7 Port Master Plan Amendment Component

The project components that are under the District's existing planning jurisdiction are within the National City Bayfront, Planning District 5, of the PMP. "Marina District" is the term for the area located generally north and west of Pier 32 Marina. There are multiple actions related to the proposed PMPA, which would incorporate the Balanced Plan Component, Pasha Road Closures Component, GB Capital Component, Pasha Rail Improvement Component, and a portion of the

Bayshore Bikeway Component. Proposed construction activities associated with these components are addressed elsewhere in this project description.

2.8 City Program – Plan Amendments Component

Implementation of the City Program and most of the Bayshore Bikeway Component would require amendments to the City's General Plan, LCP, Harbor District Specific Area Plan, Land Use (Zoning) Code, and Bicycle Master Plan. In addition, with the exception of the property owned by Caltrans, the area of the GB Capital Component that is east of the mean high-tide line and not currently within the PMP would be amended in the City Planning Documents to reflect its addition to the PMP through the project's PMPA and the amendment to the City's LCP and Harbor District Specific Area Plan. Potential construction associated with this component is addressed above in 2.6 *City Program – Development Component*. The proposed planning amendments are discussed in detail in the EIR's Section 3.4.8, *City Program – Plan Amendments Component*.

Chapter 3

Cultural Resources Study Area

The cultural resources study area for the proposed project consists of two principle areas of proposed development located in relatively close proximity and connected by proposed bike path routes west of Interstate 5 (Figure 4a), and a third area located well to the east of Interstate 5 (Figure 4b). The largest of the three encompasses the area of proposed development for the 60.9-acre Balanced Plan located immediately north of Sweetwater Channel. It consists of the Pier 32 Marina, Pepper Park, paved portions of the Pasha Automotive Services facility, and undeveloped land east of Marina Way and the Pier 32 Marina on the west side of Paradise Marsh. The cultural resources study area also includes the approximately 8.36 acres extending into Sweetwater Channel. This southerly portion of the bayfront cultural resources study area extends north to include the public ROW along those portions of West 28th Street and Tidelands Avenue that would be closed as part of the Pasha Road Closures Component.

The second largest portion of the cultural resources study area is located approximately 1,550 feet north of the Balanced Plan area. This northern bayfront portion of the cultural resources study area consists of two currently vacant National City blocks immediately north of Bay Marina Drive, and a parcel on the west side of Harrison Avenue (now Marina Way) containing the San Diego Railway Association's NRHP-listed National City Santa Fe Depot building. It also includes a potential partial or complete closure of Bay Marina Drive (west of Marina Way) within the City's jurisdiction. The southerly and northerly bayfront portions of the cultural resources study area are connected by proposed bikeway routes. The cultural resources study area encompasses the bikeway routes, which are described above in Section 2.5. The cultural resources study area includes the public ROW portions of the proposed bikeway routes, the portion of proposed bikeway Route 2 traversing parking lots within the Best Western Marina Gateway Hotel property, and the proposed bikeway routes aligned through marshlands and undeveloped land east of Marina Way and the Pier 32 Marina, including segments of the former Coronado Belt Line railroad alignment.

An additional, discontinuous portion of the cultural resources study area is located approximately 2 miles northeast of Bay Marina Drive. It consists of the property at 1615 E. 4th Street in National City. Owned by the City of National City, this property contains Granger Hall, which may be relocated to Pepper Park as an optional feature of the Pepper Park expansion component of the Balanced Plan.

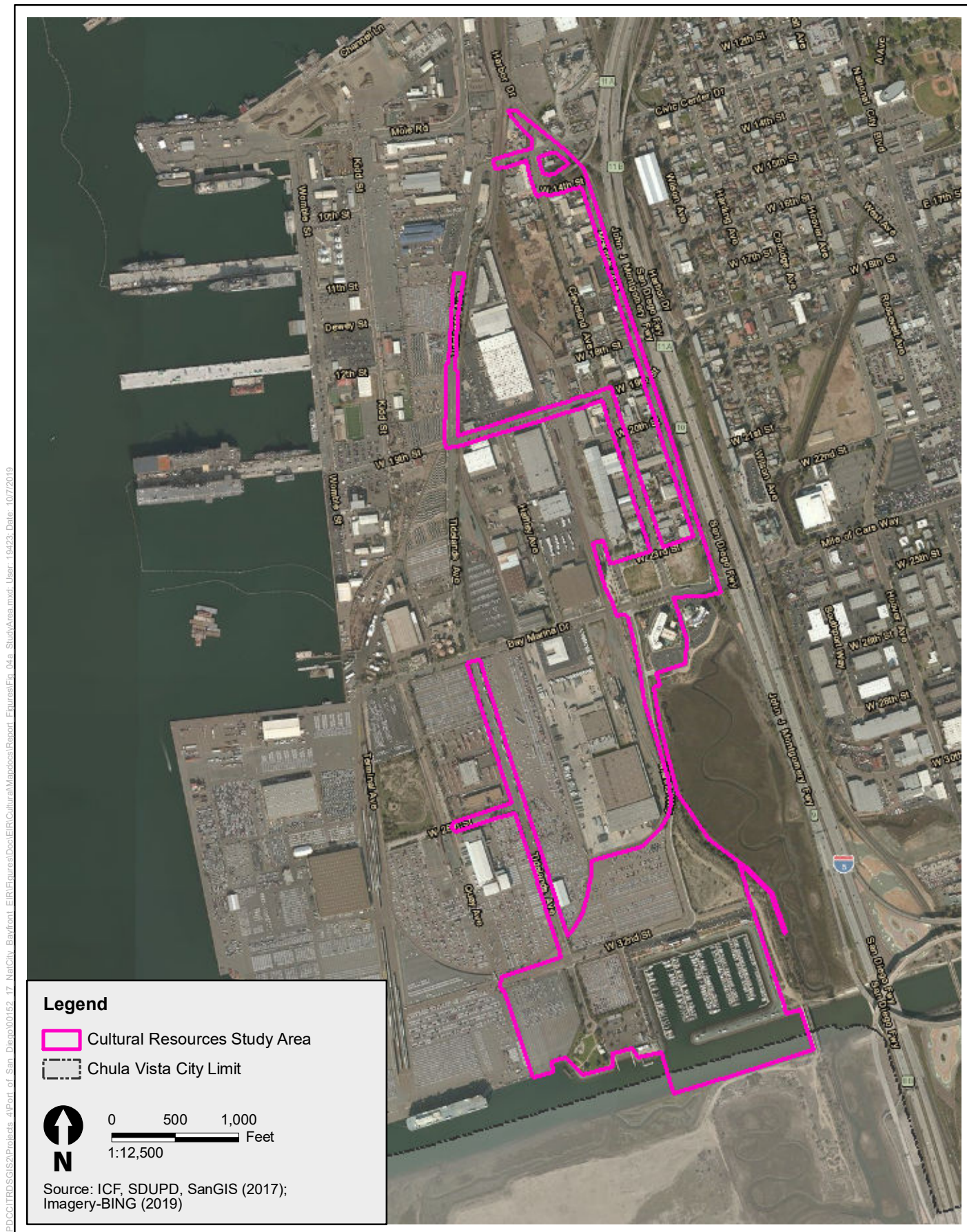


Figure 4a
Cultural Resources Study Area
National City Bayfront Projects & Plan Amendments



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4.1 California Environmental Quality Act and Cultural Resources

The California Environmental Quality Act (CEQA) requires public agencies to evaluate the implications of their project(s) on the environment and includes significant historic resources as part of the environment. Public agencies must treat any cultural resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant (California Code of Regulations [CCR] Title 14, Section 15064.5). A historic resource is considered significant if it meets the definition of *historical resource* or *unique archaeological resource*, as defined below.

4.1.1 Historical Resources

The term *historical resource* includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (California Public Resources Code [PRC] Section 5020.1(j)). Historical resources may be designated as such through three different processes.

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1(k)).
2. A local survey conducted pursuant to PRC Section 5024.1(g).
3. The property is listed in or eligible for listing in the NRHP (PRC Section 5024.1(d)(1)).

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

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
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.
4. It has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a historical resource for the purpose of CEQA, 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 (14 CCR 4852(c)).

4.1.2 Unique Archaeological Resources

A *unique archaeological resource* is defined in PRC Section 21083.2 as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

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

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR. For the purposes of this CEQA cultural resources study, a resource is considered significant if it meets the CRHR eligibility (significance and integrity) criteria. Individual resource assessments of eligibility are provided in this report.

Even without a formal determination of significance and nomination for listing in the CRHR, the lead agency can determine that a resource is potentially eligible for such listing, to aid in determining whether a significant impact would occur. The fact that a resource is not listed in the CRHR, or has not been determined eligible for such listing, and is not included in a local register of historic resources does not preclude an agency from determining that a resource may be a historical resource for the purposes of CEQA.

4.1.3 Thresholds of Significance

According to CEQA, a project that causes a *substantial adverse change* in the significance of a *historical resource* or an *archaeological resource* has a significant effect on the environment (14 CCR 15064.5; PRC Section 21083.2). CEQA defines a *substantial adverse change* as (14 CCR 15064.5(b)):

- Physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired; or
- Demolition or material alteration in an adverse manner of the physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- Demolition or material alteration in an adverse manner of the physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resource survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- Demolition or material alteration in an adverse manner of the physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by the lead agency.

PRC Section 5097.5 prohibits excavation or removal of any “... any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” *Public lands* are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

4.1.4 Public Resources Code and Health and Safety Code

Provisions for the treatment of human remains can be found under California PRC Sections 5097.9 through 5097.994, which explain the actions to be taken when Native American remains are found. Section 7050.5 of the California Health and Safety Code states that anyone who knowingly disinters, disturbs, or willfully removes any human remains in or from any location, other than a cemetery, without the authority of law is guilty of a misdemeanor, except in those circumstances described in Section 5097.99 of the PRC. Under these provisions, if a county coroner determines that remains found during excavation or disturbance of land are Native American, the coroner must contact the NAHC within 48 hours, and the NAHC must determine and notify a Most Likely Descendent (MLD) who shall complete inspection of the site within 24 hours of notification, and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

4.2 National City

The City of National City maintains an official Historic Properties List, but unlike the City of San Diego, it does not have formal significance criteria for designating resources for addition to the Historic Properties List. Under the City’s Land Use Code, Section 18.12.160, properties may be nominated for local designation to the Historic Properties List by resolution of the City Council or through application by property owner, and the National City Historical Society is invited to submit comments to be included in the staff report and recommendation to the Planning Commission. The Planning Commission then holds a public hearing on the nomination and makes a recommendation to the City Council, which holds an additional public hearing prior to making a final decision. The City of National City also periodically updates a local historic properties survey. Owners of properties included in the survey are encouraged to nominate their properties for inclusion in the Historic Properties List, which qualifies them for Mills Act contracts.

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5.1 Prehistoric Context

The following culture history outlines and briefly describes the known prehistoric cultural traditions of the region. The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Period (San Dieguito tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas tradition, and La Jolla/Pauma complex), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

5.1.1 Early Period Complexes

The Early Period encompasses the earliest documented human habitation in the region. The San Dieguito complex is the earliest reliably dated occupation of the area. The assemblage of artifacts associated with the San Dieguito complex has been studied and elaborated upon extensively (Rogers 1939, 1945, 1966; Warren and True 1961; Warren 1967; Moriarty 1969, 1987). The complex correlates with Wallace's (1955) "Early Man Horizon," and Warren subsequently defined a broader San Dieguito tradition (1968). The earliest component of the Harris Site (CA-SDI-149/316/4935B) is located along the San Dieguito River and is characteristic of the San Dieguito complex (Warren 1966, 1967; Warren and True 1961). Artifacts from the lower levels of the site include leaf-shaped knives, ovoid bifaces, flake tools, choppers, core and pebble hammerstones, several types of scrapers, crescents, and short-bladed shouldered points (Warren and True 1961; Warren 1966). Little evidence for the San Dieguito complex/Early Man Horizon has been discovered north of San Diego County.

Some researchers interpret the San Dieguito complex as having a primarily, but not exclusively, hunting subsistence orientation (Warren 1967, 1968, 1987; Warren et al. 1998). Others see a more diversified San Dieguito subsistence system as possibly ancestral to, or as a developmental stage for, the subsequent, predominantly gathering-oriented complex denoted as the La Jolla/Pauma complex (cf. Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991).

5.1.2 Archaic Period Complexes

In the southern coastal region of California, the Archaic Period dates from circa 8,600 years before present (BP) to circa 1300 BP (Warren et al. 1998). The La Jolla/Pauma complex has been identified from the content of archaeological site assemblages dating to this period. These assemblages occur at a range of coastal and inland sites and appear to indicate that a relatively stable and sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of San Diego County for more than 7,000 years. La Jolla/Pauma complex sites are considered to be part of Warren's (1968) Encinitas tradition and Wallace's (1955) Milling Stone Horizon. The inland or Pauma complex aspect of this culture lacks shellfish remains, but is otherwise similar to the La Jolla complex and may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1958, 1980; True and Beemer 1982). The content of these site assemblages is characterized by manos and metates, shell middens, terrestrial and marine mammal remains, burials, rock features, cobble-based tools at coastal sites, and increased hunting

equipment and quarry-based tools at inland sites. Artifact assemblages can also include bone tools, doughnut stones, discoidals, stone balls, plummets, biface points and knives, Elko-eared dart points, and beads made of stone, bone, and shell. Beginning approximately 5500 BP and continuing during the latter half of the Archaic Period, evidence of hunting and the gathering and processing of acorns gradually increases through time. The evidence in the archaeological record consists of artifacts such as dart points and the mortar and pestle, which are essentially absent during the early Archaic Period. The initial and subsequent increasing use of these technologies during the middle and late Archaic Period constitutes a major transition in how the prehistoric populations interacted with their environment in the southern coastal region. The period of this shift, from circa 4000 to 1300 BP, has been designated as the Final Archaic Period (Warren et al. 1998).

5.1.3 Late Prehistoric Period Complexes

In the San Diego area, the Late Prehistoric Period has been described as a time characterized by an increased number of sites and “many technological innovations, and new patterns in material culture and belief systems” (McDonald and Eighmey 1998). This characterization aptly describes the period for the entire San Diego County area. Changes in tool and ornament types, burial practices, and site location choices from those documented for the earlier periods are well documented in the archaeological record and are described below.

As with the earlier periods, archaeologists have defined distinctive complexes for the Late Prehistoric Period prehistoric cultures of the area. Two complexes have been defined for the protohistoric occupants of the area. One, designated as San Luis Rey, is identified in the southern Orange, western Riverside, and northern San Diego counties areas; the other, Cuyamaca, is identified in southern San Diego County (Meighan 1954; True 1966, 1970; True et al. 1974). The San Luis Rey complex is believed to be the progenitor of the Shoshonean-speaking peoples (Luiseño/Juaneño culture) living in the area at the time of historic contact in northern San Diego County (referred to as San Luis Rey of Shoshonean origin) (cf. Koerper 1979). Those of southern San Diego County (Cuyamaca, Yuman), are believed to be the ancestors of the Hokan-speaking Diegueño or Kumeyaay (Ipai/Tipai) occupying southern San Diego County at contact. The demarcation line between the San Luis Rey complex and the Cuyamaca complex is believed to be near the historic separation of the tribal territories of the Luiseño/Juaneño and Diegueño. It is highly unlikely, however, that the boundary remained static over time. During Late Prehistoric times, the cultural resources study area would have been within the area commonly associated with the archaeologically defined Diegueño or Kumeyaay (Ipai/Tipai) complex.

Hearths documented at southern San Diego County sites are often clay lined, yet this type of hearth is not found in the northern county sites. The Kumeyaay (Ipai/Tipai) of southern San Diego County appear to have primarily practiced cremation (some in burial urns) (Kroeber 1925), but may also have occasionally buried the dead by inhumation.

5.2 Ethnographic Context

The Kumeyaay who inhabited the southern part of San Diego County, western and central Imperial County, and northern Baja California were the direct descendants of the early Yuman-speaking hunter-gatherers of the Late Prehistoric Period. The Kumeyaay appear to have had considerable variability in the level of social organization and settlement. The Kumeyaay were organized

patrilineal, patrilocal lineages that claimed prescribed territories but did not own the resources in general. The Kumeyaay occupied bipolar villages during the year and would occupy residential bases in the foothills/mountains during the summer and the lower elevations in the winter, with numerous campsites throughout as they exploited seasonally available resources. Acorns were the most important staple of the diet as indicated by the presence of numerous large habitation sites near the locations of abundant oaks and bedrock suitable for milling. Grass seeds, sages, berries, wild greens, and fruits were eaten. Houses were usually only built for the winter and were conical structures covered with tule bundles or willow and had excavated floors and central hearths. Houses and campsites are believed to have been relatively dispersed with no formal layout or discrete boundaries for structures or campsites. Both pottery and basketry were utilized in addition to stone tools. Religious activities were practiced with the assistance of shaman (Carrico 2008; Luomala 1978).

The arrival of Spanish missionaries and soldiers in 1769 began a period of Euro-American exploration and settlement that would forever alter the Kumeyaay way of life. Dual military outposts of the Presidio de San Diego and Mission San Diego de Alcalá were established at Old Town near the village of Cosoy. The Mission system used Native American labor to build a footing for greater European settlement and introduced horses, cattle, agriculture, and new construction materials, methods, and styles. In 1774, the mission was moved 5 miles east, nearer to the Kumeyaay village of Nipaguay in Mission Valley. The Kumeyaay were generally resistant to Spanish attempts to coerce them into the Euro-American culture, but the change in location of the mission enabled the priests to gain more converts. As the Spanish gained influence many of the Kumeyaay became resentful, and this culminated in the sacking and burning of the mission in 1775 (Carrico 2008).

Mexico won its independence from Spain in 1821, and the missions were secularized in 1834. While most Spanish laws and institutions remained intact, the mission lands were divided, and large tracts of land (referred to as ranchos) were given to individuals and families. Cattle ranching and other agricultural activities were the focus of the economy (McGinnis and Baksh 2008). During the Mexican period, the Pueblo of San Diego (including the present cultural resources study area) was established on some 48,000 acres of the ex-mission lands, and many of the Kumeyaay who lived near the pueblo center and mission were dispersed as they were deprived of their land (City of San Diego 2001). As the new owners took possession of the ranchos, most Native Americans retreated away from the settlements while a few provided menial labor on the ranchos. However, because of the low population of Euro-Americans, the Kumeyaay were able to maintain a strong degree of autonomy outside of the rancho system (Shipek 1987).

The Mexican period ended when Mexico ceded nearly half of its land, including California, to the United States after the cessation of the war between the two countries in 1848. Soon after, gold was discovered in California and the tremendous influx of Americans and people of many nations quickly drowned out much of the Hispanic cultural influences. The further division of land by the U.S. government and squatting by white settlers deprived Native Americans of their traditional lands and resources (McGinnis and Baksh 2008). After the Civil War ended in 1865, San Diego County saw a huge increase in the number of settlers seeking land, and Native Americans were continually marginalized and forced off their land onto land that was not suitable for subsistence. By the 1870s the situation was very desperate for the Native Americans of San Diego County, and the U.S. government was slow to act. It was not until 1875 that ten reservations were finally established in San Diego County (Shipek 1987).

5.3 Historic Context

5.3.1 Spanish Period

The historic period in California began with the early explorations of Juan Cabrillo in 1542. Cabrillo came ashore on what is now Point Loma to claim the land for Spain and gave it the name San Miguel. Sixty years passed before another European, Sebastián Vizcaíno, entered the Bay on November 10, 1602 and gave it the name San Diego (Pourade 1960:49, 66). The original Spanish settlement in San Diego began in 1769 on Presidio Hill and consisted of a presidio (fort) and a chapel that also served as Alta California's first mission. In that same year, an expedition headed by Gaspar de Portolá traveled north from the Presidio de San Diego to extend the Spanish Empire from Baja California into Alta California by seeking out locations for a chain of presidios and missions in the area. The Spanish period extended to 1821 and encompassed early exploration and subsequent establishment of the San Diego presidio and the Mission San Luis Rey. From its original outpost on what is now Presidio Hill, Mission San Diego de Alcalá was moved to roughly its current site in Mission Valley in 1774. In November 1774, the mission was attacked by Tipai warriors from south of the San Diego River who razed the mission and killed Father Luis Jayme and two others. The San Diego mission was rebuilt in 1775, and while one of the least successful missions in the chain of California missions, it firmly established Spain's presence in the region. During this period, Spanish colonists introduced horses, cattle, sheep, pigs, corn, wheat, olives, and other agricultural goods and implements, as well as new architecture and methods of building construction (Englehardt 1920:60–64).

The project vicinity was known as La Purísima (“the most pure”), and served as a grazing area for San Diego Mission cattle herds. In 1795, Presidio of San Diego soldiers laid claim to the area and began to graze horses and cattle there. Presidio officials dispensed with the name, La Purísima, and renamed the area El Rancho Del Rey (“the King’s Ranch”) (Moyer 1969:90). Spanish colonists maintained an ultimately tenuous grip on the region. While some missions flourished economically, threats from within and without increasingly undermined political stability. Indigenous populations declined dramatically due to disease, overwork, and the missions’ campaigns to end native ways of life. Instances of native resistance to Spanish authority multiplied across Alta California. Mariners with allegiances to competing colonial powers and trapper-explorers from the east and north increasingly challenged the authority of officials and priests whose problems were of little interest to officials in Spain, which was embroiled in European conflict and declining as a major power (Pourade 1961:176–177; Bean and Rawls 2003:48–52, 54–56).

5.3.2 Mexican Period

Following Mexico's independence from Spain in 1821, the Mexican period began in San Diego County and lasted until 1848, ending with the conclusion of the Mexican-American War. During this period most Spanish laws and practices continued until shortly before secularization of the missions. Former Presidio soldiers become civilian residents and populated the Pueblo of San Diego, which was established during this period. Transportation routes were expanded. Economic activity centered upon agriculture and livestock-raising for subsistence and localized markets, and hide and tallow production for the international market (Pourade 1961:182–183; Sherman 2001:23).

In 1834, after years of political instability and several failed efforts to secularize the missions, Governor José Figueroa issued a proclamation that initiated thorough secularization. Some large

grants of land were made prior to the secularization, but those following secularization redistributed the missions' large grazing holdings and ushered in the Rancho Era. Provisions for assuring that Indians would receive mission land proved of little or no practical benefit to the region's Native Americans. Mission lands were distributed mainly to officials and retired soldiers. Approximately 500 private rancho land grants were made under Mexican rule. Many Native Americans were forced to work on Mexican ranchos, while those living farther inland were able to maintain their way of life longer. Some former mission neophytes organized pueblos and attempted to live within Mexican law and society. The most successful of these was the Pueblo of San Pasqual, founded by Kumeyaay who were no longer able to live at the Mission San Diego de Alcalá (Farris 1997; Bean and Rawls 2003:58–63).

In 1845 Governor Pío Pico granted El Rancho del Rey to Don Juan (John) Forster. The name of the 26,631-acre grant was changed to Rancho de la Nación ("National Ranch") when the land was transferred to Forster. Born in Liverpool, England, Forster came to San Diego from Mexico in 1833 to sell a large stock of imported Chinese goods and later returned, settled, and married Pío Pico's sister, Doña Ysidora. As a prominent and politically connected immigrant, Forster would amass landholdings that included San Felipe Rancho and Ranch Santa Margarita y las Flores (Moyer 1969:90–91).

5.3.3 National City's Founding and Early Development

At the close of the Mexican-American War in 1848, Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo, which marked the beginning of the American Period. In 1856 Forster sold Rancho de la Nación to San Francisco bankers Francois Luis Pioche and J. B. Bayerque. The Kimball brothers, Frank, Warren, and Levi, purchased the rancho from Pioche for \$30,000 in 1868. Led by Frank, the brothers built a wharf on the Bay, cleared and surveyed the land, and began selling home sites. They renamed the area National Ranch and subsequently changed it again to National City. National City was incorporated in 1887 (Moyer 1969:91, 94).

In addition to leading the creation and early development of National City, Frank Kimball played a leading role in San Diego-area railroad development. Kimball traveled to Boston to meet with officials of the recently merged Pacific & Atlantic Railroad and the Atchison, Topeka & Santa Fe Railroad (Santa Fe). The Santa Fe committed to forming a new company, the California Southern, to construct a transcontinental connection from San Diego to Barstow. Kimball signed over 10,000 acres and agreed to sell the railroad interests another \$100,000 worth of land in exchange for a commitment to develop the California Southern shops at National City. Shops were developed there during the line's construction, which was completed in the early 1880s. The California Southern was initially marred by washouts in Temecula Canyon until the Santa Fe replaced the inland portion of the route with a new coastal line between Fullerton and Oceanside. Unfortunately for Kimball and National City, when the Santa Fe absorbed the California Southern in 1885 it located its Southern California shops in San Bernardino. Constructed in 1882 and subsequently restored, National City's Santa Fe Railway Depot stands today within the cultural resources study area at 922 West 23rd Street (City of National City 2017; Moyer 1969:91; Pourade 1964:155–161, 212, 223–24).

During the Southern California land boom of the 1880s, the Santa Fe-controlled San Diego Land and Town Company hired town-planner Colonel William G. Dickinson to develop lands acquired from Kimball. Seeking a reliable water supply, Dickinson hired engineer James D. Schuyler to raise an existing dam on the Sweetwater River to create a substantial reservoir and develop a new water

conveyance system. When completed in 1888, Schuyler's arch-masonry Sweetwater Dam was one of the largest dams in the United States (City of Chula Vista et al. 1986:6–7, 59).

Incorporated in 1886, the National City & Otay Railroad (NC&O) built a new railroad to haul materials to the dam site, provide transportation to the town site planned by Dickenson, and promote the area to prospective buyers. The completed railroad extended from San Diego and through National City to Sweetwater Junction, where it split into two lines (Moyer 1969:93; USGS 1904). In 1888 the Coronado Railroad Company completed the Coronado Belt Line parallel to the Bay shoreline from San Diego south, around the Bay's southern end, and then north to the resort area anchored by the Hotel del Coronado. This railroad line is discussed in more detail below. Eventually acquired by John D. Spreckels, the Coronado Belt Line would be subsumed into the San Diego and Arizona Railway in the 1910s, and renamed the San Diego & Arizona Eastern Railway in 1933 (Weitze 2001:1–7).

After the land boom of the late 1880s turned to bust, local economic woes were reinforced by the nationwide depression that accompanied the Panic of 1893. The value of Frank Kimball's Land and Town Company stock and landholdings around National City plummeted. Kimball was forced to begin selling property. Ralph Granger, a newcomer from Colorado who made a fortune in silver mining, purchased Kimball's Paradise Valley orchard land east of central National City and made the property his home. (Phillips 1962.)

Agriculture flourished around National City during the late nineteenth and early twentieth centuries. In 1889, University of Wisconsin professor of botany and agriculture, William Aaron Henry, planted 16 acres of Eureka lemons in the area. The crop thrived in the cool coastal environment and soon outperformed oranges. Cultivation of lemon orchards became the area's leading agricultural enterprise. Locals also produced grapefruit, oranges, olives, guavas, strawberries, figs, apricots, peaches, pears, and ornamental trees. Local fruit production soon supported a thriving packing industry (City of Chula Vista et al. 1986:13, 20–21, 27, 42, 45, 49; Phillips 1962).

Granger Hall

Ralph Granger commissioned the development of an important National City historical resource that was originally located on his Paradise Valley estate. A yacht and horse racing enthusiast, Granger also developed a deep interest in music. He collected rare violins and had a music hall constructed on his estate in 1898. San Diego's most renowned pre-World War II architect, Irving Gill, designed the building that would become known as Granger Hall, employing his expertise in acoustics. The hall's ceiling incorporated a 75-foot mural of Euterpe, Goddess of Music, along with her handmaiden and 15 cherubs painted by a Chicago artist. The hall contained a massive Murray Harris Concert Organ, a Knabe Concert Grand Piano, and a fireproof case containing Granger's precious violins. As Cheri Lynn Hoffman explained in the NRHP nomination form for the building:

World-famous musical artists such as Ysaye, Hambourg, and Friml performed at the hall. Granger paid full concert fees and often guaranteed artists fees for San Diego performances enabling residents to enjoy the finest musical entertainment. The Granger family provided financial assistance for the education of Royal Brown, well-known San Diego Organist.

After building the music hall, Granger constructed a bank building at Eighth and National. He also developed the Granger Block in downtown San Diego at Fifth and Broadway, and purchased the Merchants National Bank. Granger moved from National City to San Diego after fire destroyed his Paradise Valley home in 1906. Granger Hall was relocated from its original Paradise Valley location

to its current location on East Fourth Street near the 805 freeway in 1969 (Hoffman 1973:2–3, 3 quoted; Phillips 1962).

Coronado Belt Line, 1888–1900

Hailing from Evansville, Indiana, and Chicago, Illinois, respectively, railroad financier Elisha S. Babcock and piano manufacturer Hampton L. Story created the Coronado Beach Company in 1884. Their objective was to acquire the 4,185-acre Peninsula of San Diego rancho grant and develop the land into a resort town. Babcock and Story subdivided the land and named it “Coronado” (“crowned” in Spanish). The developers constructed a pipeline from San Diego to convey fresh water and contracted architects James and Meritt Reed to design today’s iconic Hotel del Coronado at Coronado Beach. In 1886, Babcock and Story created two hotel-associated transportation enterprises: the San Diego Street Car Company, which transported people from the city’s transcontinental railroad depot to the wharf at the location of today’s Broadway Pier, and the San Diego and Coronado Ferry Company, which conveyed visitors across San Diego Bay to the company’s Coronado landing on Orange Avenue. In November 1886, they also founded the Coronado Beach Railroad to build a line from the ferry landing to the hotel site originally traveled by horse-drawn railcars. During the height of the land boom, thousands of people traveled to Coronado, and many purchased subdivided lots that funded construction of the hotel. In March 1887, Babcock and Story completed a second line for steam locomotives from the ferry landing along the edge of Glorietta Bay to the hotel’s power plant, mainly for transporting fuel and building materials. By December of that year, they had extended this second line down the peninsula at a distance of 7.6 miles (Bevil 2001:12).

In 1888, Babcock and Story reorganized their railroad enterprise into the Coronado Railroad Company, and proceeded to connect their existing line down the peninsula and around the Bay to downtown San Diego. While extending the existing line through today’s Imperial Beach, the company’s crews also began laying track south from its depot terminus at 5th and L Streets in San Diego’s downtown industrial district. The completed line would cross the NC&O line in San Diego near today’s intersection of South 32nd Street and East Harbor Drive. From there the two lines paralleled each other for blocks into National City, where they turned west on adjacent alignments before turning south, where the Coronado Belt Line extended south on 8th Avenue (today’s Cleveland Avenue) and the NC&O traveled south on 9th Avenue (later Harrison Avenue and now Marina Way). Beyond 24th Street, where the NC&O alignment turned to the east, the Coronado Belt Line continued south on an earthen embankment and multiple wooden trestles across the Paradise Creek and Sweetwater River marshlands. This more heavily engineered portion of the railroad line continued south into Chula Vista. There the line was constructed on higher ground south to Babcock’s and Story’s La Punta Salt Works, later known as the Western Salt Works (Bevil 2001:13–14).

Completed in June 1888, the 20.3-mile Coronado Belt Line was one of multiple local short lines constructed in the San Diego area during the Southern California real estate boom. In addition to it and the NC&O, those short railroad lines included the Ocean Beach Railroad; the San Diego, Old Town and Pacific Beach Railroad; the San Diego, Cuyamaca and Eastern Railway; and the Park Belt Motor Road. Initially traveling the Coronado Belt Line were eight small saddle-tank steam locomotives, four of them dummies disguised to look like coaches, and one conventional steam locomotive. The entirety of the Coronado Belt Line did not primarily transport passengers, although passenger cars sometimes traveled its looped alignment around the Bay. Most people traveled to the Hotel del Coronado on the Orange Street line from the ferry landing. However, special passenger

excursions from Los Angeles and San Francisco occasionally traveled the Coronado Belt Line around the Bay to Coronado. The Belt Line's main purpose was to transport building materials and freight, with the NC&O posing its main competition due to their proximity (Bevil 2001:14–15, Weitze 2001:4).

In terms of volume of freight carried and financial performance through the turn of the century, the Coronado Belt Line performed averagely compared to the region's other short lines. It did so during a period in which no local short line was distinguished by financial success. In addition to transporting building materials for construction of the hotel and other development—including construction of the Zuniga jetty at the San Diego Harbor entrance and a jetty at the Hotel del Coronado—the railroad provided limited passenger service. It also served the La Punta Salt Works, packinghouses in San Diego and National City, and other enterprises along the line, and transported freight hauled into the region via the Santa Fe Line. Salt produced at La Punta dominated the agricultural commodities transported on the Coronado Belt Line. Although it averaged \$50,000 in annual revenue from 1888 to 1892, with the collapse of the Southern California real estate boom and the economic depression that followed the Panic of 1893, its fortunes changed. It operated at a loss during late 1890s. Throughout the 1886–1901 period, its passenger and freight service generated \$43,690 in total profits, which amounted to an average annual profit \$2,730.00 (Bevil 2001:14–15, JRP Historical Consultant Services [JRP] 2001:7–9).

Even before the Panic of 1893, Babcock had sought investment in his enterprises from the sons of sugar magnate Claus Spreckels: John D. and Adolph B. Spreckels. The Spreckels brothers first acquired Story's interests and then gained controlling shares in the Coronado Beach Company, the Coronado Railroad, and the San Diego Streetcar Company. The reorganized streetcar company became the San Diego Electric Railway Company (SDERC), which electrified the line from the ferry landing to the Hotel del Coronado in 1893. After the turn of the century, as John D. Spreckels became the most powerful force in the San Diego economy, he would integrate the Coronado Belt Line into a changing and expanding system of local railroads controlled by his interests (Bevil 2001:16).

5.3.4 National City in the Twentieth Century

Many of the same factors that drove growth in San Diego also drove growth in National City during the first half of the twentieth century. As Germany's aggression drew the United States into World War I, the first West Coast Marine Corps Advance Base, the Naval Hospital, and Rockwell Field (later the North Island Naval Air Station) were established in San Diego. After World War I, Navy planners became convinced that Japan posed the greatest immediate threat to U.S. interests and committed to moving half of the nation's fleet to the West Coast. San Diego became the home of the Pacific Destroyer Force. By the mid-1920s, the federal government had completed or begun developing the Destroyer Base (today's Naval Base San Diego) on the harbor waterfront at the corporate boundary between San Diego and National City, as well as San Diego's Naval Training Station, the Marine Corps Recruit Base, the Naval Radio Station, the Fleet Fuel Depot, the U.S. Coast Guard Base, and Fort Rosecrans (Hennessey 1993:130–133; 143; Shragge 1994:338–39).

During the 1920s, federal investment in naval facility development and operation became the largest factor in the economies of San Diego and immediately surrounding communities, generating an economic boom that in turn led to increased non-military infrastructural development. The military payroll in San Diego reached \$15 million during that decade, and the city's population nearly doubled to 147,995. New housing subdivisions spread east, the central business district expanded, and manufacturing activity increased. In conjunction with the Navy's plans for increased

harbor dredging to accommodate aircraft carriers, San Diego voters approved a \$650,000 bond in 1928 to develop the first phase of the airport that would become Lindbergh Field. National City's population grew from 3,116 in 1920 to 7,301 in 1930, and reached 10,344 in 1940 (California Department of Finance 2013; Hennessey 1993:138–43; Shragge 1994:340–355).

Although development slowed dramatically during the economic depression of the 1930s, National City and other greater San Diego-area communities experienced dramatic growth with American entry into World War II. Military personnel and civilian defense workers moved to San Diego and surrounding communities during the war, creating a severe housing crisis. All local industries except for tuna fishing grew substantially during the war. Between 1940 and 1947, the number of workers employed by local industries increased 75% in food products, 457% in apparel, 147% in lumber, 195% in chemicals and allied products, and 145% in transportation equipment (including aircraft and shipbuilding). World War II enhanced the role that the U.S. Navy played in the local economy. By 1947, the Navy's active-duty personnel and civilian employees made up 51% of San Diego's total labor force. The defense industry would continue to help drive growth in San Diego and surrounding communities after the war. National City's population nearly doubled to 21,199 during the 1940s and reached 32,771 by 1960 (California Department of Finance 2013; Shragge 1994:354–355, 360).

5.3.5 Coronado Belt Line in the Twentieth Century

In 1901, the Coronado Railroad Company's electric line from the ferry landing to the Hotel del Coronado Boathouse was extended farther south to the Silver Strand to serve a new resort. Known as Tent City, the resort included cottages, hundreds of tents, a bath house, a restaurant, a dance hall, and other beach-resort amusements. Although most Tent City visitors arrived via the electrified line from the ferry, steam locomotives occasionally pulled special excursion trains from National City around the Bay to the resort (Bevil 2001:16–17).

In 1906 John D. Spreckels organized the San Diego and Arizona (SD&A) Railway Company to construct a railroad line from Arizona to San Diego. Spreckels hoped to capitalize on San Diego's geographical position as the United States' closest Pacific Ocean port to the Panama Canal, then under construction. Also acquiring the NC&O in 1906, Spreckels endeavored to achieve a monopoly over local San Diego rail service. Spreckels' interests separated the Coronado Railroad Company's steam and electric lines, and the SDERC acquired the latter. Spreckels' NC&O initially leased the Coronado Belt Line track and then merged with the Coronado Railroad Company to become the San Diego Southern (SDS) Railway Company. The NC&O was fitted exclusively for electric service, primarily passenger trolleys, and the Coronado Belt Line remained a steam engine railroad. Whereas, in the 1890s, the Coronado Railroad Company had only 9 locomotives and 50 freight cars, by the time of its merger into the SDS it had 1 locomotive and 33 freight cars. The SDS would operate at a loss through 1912, when Spreckels' interests merged it with the San Diego, Cuyamaca, and Eastern Railway Company and formed the San Diego and South Eastern Railway (SD&SE) Company out of the merger (JRP 2002:10, Weitze 2001:5–6).

The SD&SE as a whole did not succeed financially. It lost \$513,640.41 between 1912 and 1917. As the Coronado Division of the SD&SE, the Coronado Belt Line continued to function mainly as a freight line, and construction material continued to dominate its freight. For example, gravel, sand, and rock made up 87% of the line's total shipment value for the year 1913, and 79.6% of that material was shipped to the Coronado Station. That year 75.2% of all freight car loads transported goods to Coronado, while less than 1% delivered goods from Coronado to other destinations. The largest shipments to points other than Coronado were salt shipments from the Western Salt Works

(formerly La Punta Salt Works) to National City and San Diego, which constituted 8.8% of total carloads. Revenues declined approximately 30% for both freight shipments and passenger service across the SD&SE system from 1913 to 1915, at least in part as a result of competition from automotive buses and trucks. Characterizing the railroad system's performance, one SD&SE official admitted that his company "spent 27.8% more money for the privilege of operating this railroad than we received from transportation and all sources" (JRP 2002:10–12, quote from page 12).

Storms and flooding in 1916 severely damaged the Coronado Belt Line along with other rail lines in the county. Floodwaters from the collapsed Sweetwater and Otay Dams washed out much of the SD&SE Southern Division's Coronado Belt Line and former NC&O lines. The SD&SE opted to abandon the NC&O right-of-way, salvage its track, and bring the Coronado Belt Line back to life. The company rebuilt the washed out track—using salvaged track—and repaired or reconstructed the severely damaged trestles along the Coronado Belt Line, including the segment in National City south of 24th Street and across the Paradise Creek and Sweetwater River marshlands. The SD&SE also outfitted this portion of the line for electric trolley service south into Chula Vista. At Marmarosa Junction north of F Street, a switch conveyed electric passenger trains to track that crossed the SD&A line, turned east on F Street, and continued south on 3rd Street (Bevil 2001:19, JRP 2002:11–12, Weitze 2001:6).

In 1917, freight shipments along the Southern Division of the SD&SE included fruits and vegetables, salt from the Western Salt Works, and raw-materials production facilities created to supply the World War I-era defense industry, including potash for gunpowder from the Hercules Powder Company plant at Chula Vista's "Gunpowder Point," and magnesite from the International Magnesite Company plant. The Hercules plant was particularly important for the railroad, which shipped salt cake, lime, supplies, and machine parts to the plant as well as potash and acetone from the plant. Although shipments of raw construction materials declined dramatically overall, shipments to the Army/Navy Airfield at Coronado's North Island and hauls of materials produced by the aforementioned wartime industries allowed the Coronado Belt Line to generate marginal profits. At the same time, poor financial performance continued to plague the rest of the SD&SE. By the end of 1917, the SD&A—owned by Spreckels interests as far as the public knew but financially controlled by the Southern Pacific Railroad—had acquired the SD&SE. The Hercules Powder Plant closed in 1918. By that time, former NC&O track had replaced the approximately 6.5-mile original segment of the Coronado Belt Line track between downtown San Diego and National City, which was abandoned (Bevil 2001:20, JRP 2002:13–14, Weitze 2001:6–7).

The 1920s and 1930s brought changes to the uses of the Coronado Belt Line and its ownership. Two new plants at G Street in Chula Vista made use of the line: Pacific Cottonseed Products Corporation, which produced oil and other byproducts from cottonseed, and Pioneer Pyrophyllite Manufacturing Company, which produced ceramics and brick. In 1925, as a result of conversion to passenger buses, the SDERC ceased electric passenger service along the line to the south of 24th Street in National City. Then, in 1930 the SDERC discontinued electric passenger service between National City and San Diego. The onset of the Great Depression severely curtailed the performance of the Coronado Belt Line and other local short lines across the United States. In 1933 the heirs of John D. Spreckels, who had died in 1926, sold the SD&E to the Southern Pacific Railroad, which reorganized the company into the San Diego, Arizona and Eastern (SD&AE) Railway Company (Bevil 2001:20–21; Weitze 2001:7).

Apart from the Western Salt Works, it was military investment and the rise of the associated defense industry in the San Diego area that made ongoing operation of the Coronado Belt Line viable, at least

for a time. In 1935 the U.S. Army Air Corps vacated its facility at North Island. The U.S. Navy acquired the property, more than doubled its size, and established its Naval Air Station there. The Navy also established its Amphibious Training Base at the northern portion of the Silver Strand and expanded its existing radio station at the area north of Imperial Beach known as Coronado Heights, which became the Naval Radio Receiving Station Imperial Beach. Coronado Heights also became the home of the Army's coastal defense emplacements at Fort Emory, created in 1942. During the latter 1930s and 1940s freight shipments on the Coronado Belt Line included construction materials for military development, and machine parts, ammunition, fuel oil, and gasoline for military operations. In 1940, Frederick H. Rohr moved his fledgling company, Rohr Aircraft Corporation, to Chula Vista and established a plant along the Bay. The company specialized in the production of nacelles—engine housings—and other prefabricated aircraft components. The Rohr plant would prove a major force in the growth of Chula Vista, employing over 16,000 by 1959. Rohr shipped components for its manufacturing operations to its plant over the Coronado Belt Line, but the company shipped many of its products by truck (Bevil 2001:21–22, JRP 2002:16–17).

Despite an overall increase in rail shipments during World War II, the SD&AE as a whole continued to be a losing enterprise financially. Although demand for materials related to the Korean War boosted freight shipments on the Coronado Belt Line during the years 1950–1953, the line soon ceased to be financially sustainable. When the Navy ceased shipments on the line, the SD&AE removed the Silver Strand segment's track and sold it for reuse. "During the 1960s," explains historian Alexander Bevil, "except for the section of right-of-way connecting with the Santa Fe at National City to the Salt Works, the Coronado Belt Line was no longer a viable transportation corridor." During that decade, the original Coronado Belt Line and main SD&AE line in Chula Vista remained intact, but most of the track along F Street, Broadway, and segments farther east was covered by pavement or removed. In 1979, the County of San Diego purchased most of the SD&AE from the Southern Pacific and "transferred the operating and acquisition rights of the SD&AE to the Metropolitan Transit Development Board" (Bevil 2001:22).

5.3.6 Development in the Bayfront Cultural Resources Study Area

West of Interstate 5, development remained restricted to the portion of the cultural resources study area north of Bay Marina Drive from the late nineteenth century into the 1950s. The California Southern Railroad (later the Santa Fe Railway) and the Coronado Belt Line constructed in the 1880s, and the Santa Fe Depot constructed in 1899, attracted industry to this portion of the cultural resources study area. Dating to 1899, the earliest available Sanborn fire insurance map for National City shows the National City Santa Fe Depot on the west side of 9th Avenue, later Harrison Avenue (now Marina Way) (City Parcel 7). What Sanborn maps identified as block 280 (City Parcels 1-5) to the southeast of the Santa Fe Depot, between 9th Avenue and 8th Avenue, later Cleveland Avenue, contained an olive oil works and the offices of the San Diego Land and Water Company in 1899 (City Parcel 2). Block 233 (City Parcel 6) on the east side of 8th Avenue contained two dwellings by 1899.

By 1907, the NCO Railway had constructed a Depot at the southwest corner of block 233 (City Parcel 6). By 1911, a machine shop operated on block 280 (City Parcel 2)) at the site of the former olive oil works. Apart from the Santa Fe Depot, none of the buildings within this portion of the cultural resources study area in 1911 remained present by 1926. By that year, a flour and cereal warehouse had been constructed southeast of the depot at the northwest portion of block 280 (City Parcel 3). South of that building was a mattress stuffing factory made up of three buildings (City Parcel 4). By

1926 the Dunlop Packing Company operated out of a building located at the southeast corner of block 280 (City Parcel 5). Farther east, block 233 (City Parcel 6) was vacant in 1926 except for an apartment building at the block's northwest corner and a box car used as a dwelling to the south of the apartment building. Research yielded no other Sanborn maps covering this portion of the cultural resources study area. After 1926, a foundry and a transformer production facility operated at block 280 (City Parcels 1-5), and a metals recycling facility operated at block 233 (City Parcel 6). Aerial photographs indicate that these buildings were present into the 1970s, along with a building constructed at the northeast corner of block 280 (Parcel 2) after 1926. All of the buildings on both blocks had been demolished by 2009 (Leighton and Associates, Inc. 1995:2; NETR 2018; Sanborn Map Company 1899, 1907, 1911, 1926; USGS 1953).

The cultural resources study area south of Bay Marina Drive and west of Interstate 5 remained tidal marsh and flats into the 1950s. In 1966 a \$3.9 million bond issue funded construction of the first portion of the National City Marine Terminal, then known as the 24th Street Marine Terminal. Dredging began in June. The project was completed in 1968, and the District dedicated the terminal on October 29th. In November cargo operations began at the northerly wharves, and in April crews handled the first in-bound lumber shipments at the south wharves, known as the Sweetwater Berth. Over the next several decades, the terminal would expand, and it would eventually come to include portions of the southerly cultural resources study area. By 1972, Pepper Park and its adjacent parking lot had been developed at the far southern portion of the southerly cultural resources study area. In 1978 the District completed a 28-month dredging project across nearly 7 miles of the main harbor channel to provide for larger container vessels to access the terminal. Funded mainly by the federal government, the \$18.7 million project deepened the main channel to 40 feet beyond the terminal, and deepened the channel from that point to Sweetwater Channel immediately south of the terminal to a depth of 35 feet (Frost 2002: 3; NETR 2018; Reupsch 1970:10; District 1974:5-6, 24-26).

Recreational development and the introduction of waterborne automobile shipping at the terminal altered substantial portions of the southerly cultural resources study area. In August of 1990 the Pasha Group began importing Isuzus at the terminal, and the company dedicated its new facilities at the terminal on September 12. In 1996 the BNSF Railroad undertook \$23 million in terminal rail facility improvements that increased Pasha's annual handling capacity to 300,000 vehicles. In 2002, the northwest portion of the terminal wharf was extended by 1,025 feet at a cost of \$20 million to accommodate Pasha Services' automobile handling operations. Recreational facilities were also developed within the planning district from the 1980s through the 2000s. In 1988 the District completed the expansion and improvement of Pepper Park along Sweetwater Channel. In 2002 the City of National City and the District jointly conducted a ceremony to mark groundbreaking for the Pier 32 Marina, which was developed east of Pepper Park (Frost 2002:9-10, 12, 14-15, 19).

Background research and field studies were conducted in compliance with CEQA as amended (PRC Section 21000 et seq.), pursuant to the Guidelines for Implementation of the California Environmental Quality Act (14 CCR 14 15000 et seq.), and in accordance with industry standards for similar projects in San Diego County. The effort to identify cultural resources in the project's cultural resources study area included records searches of previous cultural resource investigations and recorded sites; background research and a review of literature relevant to the prehistory, ethnography, and history of the cultural resources study area; consultation with the NAHC and Native Americans; and site visits.

6.1 Cultural Resources Records Search

This study makes use of multiple records searches conducted for projects in western National City at the South Coastal Information Center (SCIC) at San Diego State University. The SCIC is part of the California Historical Resources Information System (CHRIS), which serves as the repository for cultural resources records in the state of California. Records searches conducted on April 24, 2017, October 3, 2018, April 7, 2020, May 1, 2020. cover the cultural resources study area, including the principal project sites west of I-5 and the current site of Granger Hall, and a quarter-mile radius surrounding the cultural resources study area.

Thirty-nine cultural resources studies have been conducted within a quarter-mile radius of the cultural resources study area (Table 1). Of these, 19 have occurred within at least a portion of the cultural resources study area. The oldest of these 19 studies was conducted in 1973 and the most recent in 2012. Only one study (SD-10830) encompassed the Granger Hall site.

Table 1. Previous Studies in the Cultural Resources Study Area and Quarter-Mile Record Search Boundary

Study	NADB-R	Year	Author	Title	In Cultural Resources Study Area
SD-00274	1120274	1973	Bull, Charles S. and Paul H. Ezell	An Archaeological Survey of the Sweetwater River Flood Control Channel	Yes
SD-00304	1120304	1978	Carrico, Richard and Lesley C. Eckhardt	Cultural Resources Reconnaissance of the San Diego Fixed Guideway Project Centre City to San Ysidro	No
SD-00330	1120330	1976	Carrico, Richard	Environmental Setting/Constraint Analysis for the Chula Vista Bayfront Redevelopment Project	No

Study	NADB-R	Year	Author	Title	In Cultural Resources Study Area
SD-00820		1973	Germeshausen, Edward Jr.	Cultural Survey Reports for: 11-SD-805, 11-SD-15	No
SD-00942	1120942	1980	Fink, Gary R.	Archaeological/Historical Study of the Sander Project	No
SD-01573	1121573	1989	Smith, Brian F.	The Results of an Archaeological Survey and the Evaluation of Cultural Resources for the South Chollas Valley Trunk Sewer Project Dep. No. 88-0710	Yes
SD-01955	1121955	1990	Smith, Brian F.	Results of an Archaeological Survey and Evaluation of Cultural Resources Within the Local Coastal Program Resubmittal #8 City of Chula Vista	Yes
SD-02089	1122089	1981	Environmental Science Associates, Inc.	Environmental Impact Report Environmental Assessment San Diego Energy Recovery Project	No
SD-02444	1122444	1991	Clevenger, Joyce and Susan Carrico	Historic Architectural and Archaeological Survey, U.S. Naval Station	No
SD-02714	1122714	1993	Laylander, Don	An Archaeological Survey for the Bay Route Bikeway, Chula Vista and National City, California	Yes
SD-03498	1123498	1998	Alter, Ruth C.	Cultural Resources Monitoring for the Sewer and Water Replacement Group 610 Project, Golden Hills, San Diego, California	No
SD-03530		1998	Carrico, Richard and John Dietler	Cultural Resources Monitoring Report for Sewer Group Job 622, Four Sewer Pipeline Segments in the Shelltown District, San Diego	No
SD-03746	1123746	1994	Crafts, Karen	Extended Phase I Investigation at Site CA-SDI-5512/H in Chula Vista, California	Yes
SD-04272	1124272	1984	Lauter, Gloria	Cultural Resource Survey of Proposed Disposal Near the Mouth of the Sweetwater River in Connection with Sweetwater Flood Control Project	Yes

Study	NADB-R	Year	Author	Title	In Cultural Resources Study Area
SD-04337		1993	Carrico, Richard	Historic Properties Inventory for the Proposed Montclair Canyon Sewer Project San Diego, CA	No
SD-04743	1124743	1994	Crafts, Karen	Historic Property Survey for the South Bay Bike Route Chula Vista & National City, California 11-SD-5 P.M. 8-6/R10-0	Yes
SD-05001	1125001	2001	Montes, Beth	Roy W. Way House 3462 Olive Street San Diego, CA	Yes
SD-05507	1125507	1990	Wade, Sue	Historic Properties Inventory for Secondary Treatment Clean Water Program for Greater San Diego: Confidential Appendices	No
SD-06186	1126186	1982	Van Horn, David M.	Test Excavation Report: W-194 Adjacent to the 32nd Street Bridge Over Chollas Creek, City of San Diego	Yes
SD-06425	1126425	1990	Carrico, Richard	Historic Resources Inventory Sweetwater Valley	Yes
SD-08964	1128964	2001	Bevil, Alexander D.	San Diego & Arizona Eastern Railway Coronado Branch Line Right-of-Way: California Register Nomination	Yes
SD-09928		2004	Aislin-Kay, Mamie and Christeen Taniguchi	Records Search and Site Visit for Cingular Telecommunications Facility Candidate SD-808-12 (Island View Market), 5080 Logan Avenue, San Diego, San Diego County, California	No
SD-10096	1130096	1994	Crafts, Karen	Extended Phase I Investigation at Site CA-SDI-5512/H in Chula Vista, California	No
SD-10830			Various	Granger Hall	Yes
SD-10843	1130843	1995	Coons, Bruce and Dolores Mellon	Report on the Station and General Office, California Southern Railroad	No
SD-11029	1131029		Various	National City Depot Transcontinental Railroad, 900 (922) West 23rd Street, National City, California 91950	Yes

Study	NADB-R	Year	Author	Title	In Cultural Resources Study Area
SD-11125	1131125	2006	Kyle, Carolyn E.	Treatment Plan for the San Diego Gas & Electric Silvergate Transmission Substation Project San Diego County, California	Yes
SD-11133	1131133	2007	Gregory, Carrie and Jennifer Hirsch	Final Reevaluation of National Register of Historic Places Eligibility for a Naval Station San Diego Historic District	Yes
SD-11294	1131294		Various	Station & General Office, California Southern Railroad, 900 W. 23rd Street, National City, California 9190; APN 559-040-43-01	No
SD-11460	1131460	2007	Reddy, Seetha N.	A Programmatic Approach for National Register Eligibility Determinations of Prehistoric Sites within the Southern Coast Archaeological Region, California	No
SD-11940	1131940	2008	Potter, Elizabeth	Monitoring for SDG&E Naval Station Metering Switchyard Reconductor and Upgrade	No
SD-14032	1134032	2012	Ni Ghabhlain, Sinead	Archaeological Survey Report for Segments 4 and 5 of the Bayshore Bikeway Project, San Diego County, California	Yes
SD-14106	1134106	2012	Ni Ghabhlain, Sinead and Shannon Davis, Sarah Stinger-Bowsher, Jennifer Krintz	Final Historic Resources Survey, Chula Vista, California	Yes
SD-15014	1135014	2012	Case, Robert P.	Results of Cultural Resource Monitoring Conducted During the Geotechnical Site Investigation Project at Sweetwater Marsh Unit, San Diego Bay National Wildlife Refuge, Chula Vista, California	Yes
SD-15151	1135151	2015	Brunzell, David	Cultural Resources Assessment of the Crown Castle/ Verizon Fiber PUC Project, San Diego, California	No

Study	NADB-R	Year	Author	Title	In Cultural Resources Study Area
SD-15870	1135870	2014		Cultural Resource Records Search and Site Visit Results for Verizon Wireless Candidate 'Pier 32,' 1022 Bay Marina Drive, National City, San Diego County, California	No
SD-16095	1136095	2014	Fulton, Phil	Cultural Resource Assessment Class III Inventory Verizon Wireless Services Tidelands Facility City of National City, San Diego County, California	No
SD-16190	1136190	2016	Wilson, Stacie	Letter Report - Monitoring of D Street Fill Wetland Restoration Project Site	No
SD-16552	1136552	2012	Davis, Shannon	Phase One Report, Historic Resources Reconnaissance Survey, Chula Vista, California	Yes

*Shaded studies were within or adjacent to the cultural resources study area.

6.2 Previously Recorded Cultural Resources in the Cultural Resources Study Area Vicinity

There are 25 previously recorded cultural resources within a quarter-mile radius of the cultural resources study area. Of these, 22 are considered standing structures and fall under the category of built environment resources. The remaining three are archaeological sites that include one prehistoric shell midden, one historic refuse dump, and the historical location of the Hercules Powder Company. Only one of these previously recorded archaeological resources (CA-SDI-07454) intersects with the cultural resources study area. Three of the previously recorded standing structures intersect with the cultural resources study area (P-37-013073, P-37-024739, and P-37-020167/P-37-028795). Descriptions of these previously identified resources are provided in Table 2 below. Granger Hall is listed on the NRHP, but was never identified as a cultural resource within CHRIS. This resource is addressed in Section 7.2.1.

Table 2. Previously Recorded Resources in the Cultural Resources Study Area and Quarter-Mile Record Search Boundary

Primary	Trinomial	Site Type	Description	Recorder(s)
P-37-007454	CA-SDI-007454	Site	Prehistoric shell midden	Ballester, 2002; Roeder, 1979
P-37-008873	CA-SDI-008873	Site	Historic trash dump	DeCosta & Kupel, 1981; Collett & Wade, 1990
P-37-013073	CA-SDI-013073	Structure	Historic Coronado Belt Line	Laylander, 1993; Pignuolo, 1999; Pignuolo, 2000

Primary	Trinomial	Site Type	Description	Recorder(s)
P-37-020167/ P-37-028795		Structure	Santa Fe Depot, National City	Coons, 1988; Tang 2002
P-37-024739	CA-SDI-016385	Structure	Historic Atchicson, Topeka & Santa Fe Railway.	Ballester & Woodard, 2002; Stiefel & Gunderman, 2009; Schultz & Harper, 2011; Ghabhlain, 2012; Castells & Krintz, 2013; Yates 2014; Castells, 2015
P-37-025680		Structure	Historic San Diego & Arizona Railroad	Wee & Ferrell, 2000; Iverson, 2005; Palette, 2006; Ghabhlain & Stringer- Bowsher, 2009, Williams, 2009, Giacinto & Wolf, 2012, Comeau, 2013
P-37-028290		Structure	Historic structures	Hirsch & Gregory, 2007
P-37-028295		Structure	Historic structures	Hirsch & Gregory, 2007
P-37-028296		Structure	Historic structure	Hirsch & Gregory, 2007
P-37-028297		Structure	Historic structure	Hirsch & Gregory, 2007
P-37-028303		Structure	Historic structure	Hirsch & Gregory, 2007
P-37-028304		Structure	Historic structure	Hirsch & Gregory, 2007
P-37-028305		Structure	Historic structure	Hirsch & Gregory, 2007
P-37-028306		Structure	Historic structure	Hirsch & Gregory, 2007
P-37-028310		Structure	Historic wharf quaywall	Hirsch & Gregory, 2007
P-37-030176		District	Hercules Powder Company site, Gunpowder Point	Craft, 2008
P-37-037704		Structure	Historic structure	Carrico, 1991
P-37-037667		Structure	Historic structure	Carrico, 1991
P-37-037676		Structure	Historic structure	Carrico, 1991
P-37-037681		Structure	Historic structure	Carrico, 1991
P-37-037682		Structure	Historic structure	Carrico, 1991
P-37-037692		Structure	Historic structure	Carrico, 1991
P-37-037696		Structure	Historic structure	Carrico, 1991
P-37-037698		Structure	Historic structure	Carrico, 1991
P-37-037699		Structure	Historic structure	Carrico, 1991
P-37-037702		Structure	Historic structure	Carrico, 1991

*Shaded resources are located within the cultural resources study area.

6.2.1 P-37-007454/CA-SDI-07454

CA-SDI-07454 was recorded by Roeder in 1979 based on the report of a local schoolteacher, Maria Cruz, who described a shell midden exposed in the study area (location information redacted). The site was recorded as covering 600 square feet in 1979. The site location was revisited by Ballester in 2002; however, no evidence of the site was observed within the survey area at that time. The site has not been formally evaluated for either the CRHR or NRHP.

6.2.2 P-37-013073/CA-SDI-13073

CA-SDI-13073 consists of surviving elements of the Coronado Belt Line. Constructed in the late 1880s, the line originally extended over 20.3 miles from San Diego south, around the South Bay, and north to Coronado. Remaining portions of the alignment have been recorded as historic archaeological resources by Laylander in 1993 and Pigniolo in 2000. In 2001, Bevel undertook the most thorough recordation of the resource. Bevel recorded the remaining 7.5 miles of railroad from National City to Imperial Beach, including the alignment, berms, tracks, ties, and bridges. As discussed in more detail elsewhere in this study, the railroad was also known as the Coronado Railroad and, through acquisition, became part of the San Diego Southern Railway, San Diego & Southeastern Railway, the San Diego and Arizona Railway, and the San Diego and Arizona Eastern Railway, the Southern Pacific, and the Union Pacific. The segment of the resource within the cultural resources study area is addressed in more detail elsewhere in this study.

6.2.3 P-37-024739/CA-SDI-16385

CA-SDI-16385 is the coastal branch Santa Fe Railway. Originally part of the California Southern Railroad, which was controlled by the Santa Fe, the line is part of the BNSF Railway today. Recorded segments total approximately 22.5 linear miles between National City and Sorrento Valley. Associated features include rail, ties, ballast, switches, spurs, bridges, culverts, and other smaller-scale components. The first recordation took place in 2002 when Ballester and Woodard of CRM TECH recorded two associated bridges and 5.9 linear miles of the railroad extending north from National City. One short component directly in front of the Historic Santa Fe Depot in National City was noted as abandoned and historic in age in 2002; all other sections were noted as modernized. In 2009 Stiefel and Gunderman recorded a modernized and functioning 1.5 linear miles of track and three associated bridges within Sorrento Valley. In 2011 Schultz & Harper recorded five segments extending north from the vicinity of the San Diego Airport to just north of Highway 52 and Interstate 5 in Rose Canyon. The five segments include approximately 22.4 linear miles of modernized track with associated historic features. In 2013 Castells and Krintz recorded 0.3 mile of functioning railway with an associated 1943 culvert within Rose Canyon. In 2014, Yates recorded a small segment of the resource immediately east of the Tenth Avenue Marine Terminal in Barrio Logan. Castells recorded an additional 1-mile-long segment, and an associated bridge, culvert, and concrete pad in Rose Canyon in 2015. Although the railway is associated with persons of historical importance (Frank Kimball and Alonzo Horton) and was instrumental in the economic development of the city and county of San Diego, evaluated segments have been recommended ineligible for listing in the NRHP and/or CRHR and local registers due to compromised historical integrity and modernization of the resource to maintain operation.

6.2.4 P-37-020167/P-37-028795

P-37-020167/P-37-028795 is a two-story railroad depot building popularly known as the National City Santa Fe Depot. This resource was assigned two primary numbers in CHRIS. The building was constructed in 1882 with Italianate and Greek Revival details and is located along the alignment of the 1880s California Southern Railroad—later the Santa Fe. The building was first recorded in 1988 (Coons 1988) and was later listed in the NRHP in 1996 under Criteria A and C. It is a historical resource for the purposes of CEQA and is listed as California Registered Historical Landmark No. 1023.

6.3 Historical Research

Research was conducted using public repositories, online sources, ICF's in-house cultural resources library, and sources provided by the District. Sanborn Map Company's fire insurance maps were accessed through the online database portal of the San Diego Public Library. The District provided secondary source histories and timelines for San Diego harbor and tideline development. National City provided material on Granger Hall. ICF also made use of existing historical context material for previous projects involving properties located on District tidelands and previous projects in the National City area. Apart from the Sanborn map research, deep property-specific historic research was not conducted for this study because only two properties within the cultural resources study area contain buildings 50 years of age or older, and both of those buildings are already listed on the NRHP.

6.4 Native American Correspondence

On September 26, 2018, ICF contacted the NAHC requesting a review of its Sacred Lands Files. The NAHC responded on October 10, 2018, stating that the Sacred Lands File failed to indicate the presence of Native American cultural resources in the cultural resources study area. The NAHC also provided a list of 25 Native American individuals and organizations that may have knowledge of cultural resources in the cultural resources study area. On October 11, 2018, ICF sent outreach letters to all 25 individuals and organizations identified by the NAHC. The letters described the proposed project and requested information on cultural resources in or nearby the cultural resources study area. Follow-up emails were sent in November and December of 2018. To date, replies have been received from the Viejas Band of Kumeyaay Indians and the Kumeyaay Cultural Repatriation Committee who request the presence of a Kumeyaay tribal monitor for ground disturbance. The Sycuan Band of the Kumeyaay Nation also responded requesting to meet with the District and the City, in addition to the requesting the presence of a Kumeyaay tribal monitor for ground disturbance. On October 24, 2019, ICF and District and City staff met with tribal representative Kristie Orozco of the Sycuan Band of the Kumeyaay Nation to discuss the project and the tribe's concerns and recommendations. On November 20, 2019, the District sent an email to Ms. Orozco with proposed mitigation measures and requested comments from the tribe on the mitigation measures. The District also invited Ms. Orozco to a site visit. As of September 2021, to date, no response has been received. The Native American correspondence is documented in Appendix A.

6.5 Archaeological Inventory

ICF archaeologist Nara Cox, BA, led a targeted pedestrian archaeological survey on October 26, 2018. Prior to the survey she reviewed aerial imagery to identify areas with exposed natural sediments that had not been subject to excessive disturbance and to identify areas completely built, paved, or landscaped. Three large areas with exposed natural sediments were identified: (1) approximately 11.2 acres south of Marina 32 and west of Paradise Marsh; (2) two parcels north of Bay Marina Drive and south of W. 23rd Street totaling 2.66 acres; and (3) an area bounded by the southbound lane of Interstate 5 and McKinley Avenue between W. 19th Street and W. 23rd Street totaling approximately 1.6 acres. The survey crew examined the ground surface within each targeted survey

area for the presence of prehistoric and historic period artifacts and features. The surveyors took notes and photographs of the project survey area and all identified resources. The cultural resources study area footprint and records search information were loaded onto an iPad tablet with Collector software, which allowed the survey crew to navigate through the cultural resources study area and record existing conditions at each survey area. The crew surveyed the entire cultural resources study area. However, because much of the cultural resources study area is entirely developed with buildings, structures, pavement, and modern landscaping, intensive survey was limited to areas of exposed soils and sediments.

Vegetation within the cultural resources study area consisted of annual grasses, marsh grasses, prickly pear, buckwheat, pepper trees, and other native and introduced shrubs and grasses. Topography was typically level with some occasional slight sloping and areas that had been cut to a few feet below the ground surface level. Ground visibility ranged from 100% in completely exposed soils and sediments to less than 10% due to leaf litter in shrubby areas. In some cases, vegetation in the cultural resources study area had been cleared along existing trails, which facilitated survey in those areas.

6.6 Built Environment Inventory

ICF architectural historians Margaret Roderick, MA and Timothy Yates, PhD surveyed the cultural resources study area for intact buildings and structures 50 years of age or older on October 1, 2018. On July 12, 2019, Yates and ICF archaeologist Nara Cox recorded the portion of Coronado Belt Line (CA-SDI-13073) within the cultural resources study area. Built environment resources within the cultural resources study area were recorded using digital photography. Segments of two historic-period railroad resources were identified within the cultural resources study area: a segment of the Coronado Belt Line (CA-SDI-13073) and a segment of the Santa Fe Railway (CA-SDI-16385). Two historic-period buildings were identified within the cultural resources study area: Granger Hall and the National City Santa Fe Depot. Both of these buildings are listed on the NRHP, and both qualify as historical resources for the purposes of CEQA. Both are described briefly below and documented in California Department of Parks and Recreation (DPR) update forms included in Appendix B of this report. An update form for the Santa Fe Railway segment in the cultural resources study area, and DPR 523A and 523B forms for the Coronado Belt Line segment in the cultural resources study area are also included in Appendix B. To provide a basis for assessing potential impacts on Granger Hall from its proposed relocation, and to help guide such proposed relocation efforts, ICF has prepared an inventory of Granger Music Hall's character-defining features. The inventory is included in Appendix C of this report.

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7.1 Archaeological Resources

Records searches obtained from the South Coastal Information Center identified one previously recorded archaeological resource within the proposed project's cultural resources study area. Outreach to the NAHC and Native Americans did not yield any information on prehistoric cultural resources within the cultural resources study area. A pedestrian archaeological survey of the cultural resources study area was conducted, and intensive survey in areas of exposed soils and sediments was completed over a total of 15.46 acres (13% of the total cultural resources study area). The remaining portion of the cultural resources study area is fully paved, built over, or covered in fill, and intensive archaeological survey in those areas was not possible.

Two newly identified cultural resources (P-37-039520, and P-37-039519/CA-SDI-23093) were identified in the survey area. The survey north of Bay Marina Drive resulted in the identification of one new historic period resource, a United States Geological Survey (USGS) Survey marker (P-37-039520) along McKinley Avenue. One newly identified historic period archaeological resource, a refuse deposit (P-37-039519/CA-SDI-23093), was identified as a result of the pedestrian survey (location information redacted).

No indication of previously recorded site CA-SDI-07454 was identified within or adjacent to the recorded site boundary either at the surface or by investigating exposed soils in the cut slopes within the site boundary during pedestrian survey. Based on the current survey, as well as results from a previously conducted survey (Ballester 2002), the portion of the site within the project's cultural resources study area appears to have been destroyed either through natural processes or through modern disturbances.

7.1.1 P-37-039520

Description

This resource consists of a National Geodetic Survey marker. The marker is in poor condition, having been covered in red paint, which was later partially scraped off. The inscription is nearly illegible as a result (Figure 5). Information in the National Geodetic Survey Data Explorer (<https://www.ngs.noaa.gov/NGSDDataExplorer/>) states that the marker was placed in May of 1954.

Evaluation

P-37-039520 is an isolated historic period feature: a National Geodetic Survey marker placed in 1954. There are no structural or artifactual remains associated with this feature. The marker is a common and ubiquitous feature across the United States. The recordation of this feature and information about the marker available on the National Geodetic Survey Data Explorer have exhausted its data potential. The marker cannot be associated with a significant event (Criterion 1), or a person of importance (Criterion 2) and does not exhibit any characteristics of unusual or distinct design, style, or type of construction (Criterion 3). The marker has no demonstrable

potential to provide data important in history (Criterion 4). The marker does not meet any of the significance criteria for listing in the CRHR, and therefore P-37-039520 does not qualify as a historical resource for the purposes of CEQA.



Figure 5. Detail View of National Geodetic Survey Marker (P--37-039520)

7.1.2 P-37-039519/CA-SDI-23093

Description

This resource consists of burned historic period debris in ashy sediments (location information redacted). Soils in the area are loamy and ashy, and vegetation consists of California buckwheat, sages, black-eyed Susan, grasses, and spiny rush. The site is located adjacent to (location information redacted) (California Department of Transportation 1994).

The deposit varies in density and is marked by notably ashy surrounding sediments, and burned debris (pressed glass, bottle glass, fragments of wood, as well as some burned and rusted mechanical parts) mixed with a high amount of fire bricks and fire brick fragments and slag. A secondary deposit of bricks and large redwood timbers was identified (location information redacted).

The deposit is dominated by pale peach-colored firebricks, glass, and slag. The debris extends along (location information redacted) and is partially covered by vegetation and sediment. Also noted is an area demonstrating looting activity at the south end of the deposit with over 40 exposed individual bricks as well as historic glass and slag. Firebrick brands noted consist of Ione Fire Brick Company [IONE] and Gladding, McBean and Company [GMcB oval logo] / [three stars] and [GMcB oval logo] / 7 (tongue and groove).

The identified IONE fire bricks were manufactured between 1907 and 1925 by the Ione Fire Brick Company in Amador County, California. The [GMcB oval logo] / [three stars] fire bricks were

manufactured between 1926 and 1935 in Alberhill, Riverside County, California, while the observed [GMcB oval logo] / 7 (tongue and groove) bricks (Figure 6) were manufactured between 1943 and 1962 in Pittsburg, Contra Costa County, California. This is the dominant brick form in the assemblage. The date range represented by the three diagnostic brick styles indicate that deposition of the refuse dates to sometime after 1945 despite the presence of much earlier bricks in the assemblage.

Evaluation

The former Davies Dump, also known as the National City Dump, (location information redacted) operated between the 1920s and 1950s. People from National City, Chula Vista, and San Diego brought their trash to the Davies Dump for disposal. Anything that could not be reused or sold as scrap was burned, and the ash was plowed into the adjacent area according to historical reports. The state bought the land in 1949 for Interstate 5, and the old Davies Dump was part of the purchase (County of San Diego 2012).

The artifacts appear to have been commercial or industrial building materials burned and redeposited in adjacent areas. The deposit cannot be confidently associated with a significant event (Criterion 1), or a person of importance (Criterion 2) and does not exhibit any characteristics of unusual or distinct design, style, or type of construction (Criterion 3). The materials themselves are common for the period and do not lend themselves to providing data important in history. Because of this, P-37-039519/CA-SDI-23093 has low potential to yield archaeological information important in history (Criterion 4). Consequently, P-37-039519/CA-SDI-23093 is recommended not eligible for the CRHR and is not considered an eligible resource for the purposes of CEQA.



Figure 6. Detail of Gladding, McBean and Company Bricks (P-37-039519/CA-SDI-23093)

7.2 Built Environment Resources

In this section, potential historical resources identified within the cultural resources study area are described, and explanations are provided regarding their significance and historical integrity assessments, or formally evaluated for CRHR eligibility and historical integrity. Four historic-period built environment resources were identified within the cultural resources study area: Granger Hall, the National City Santa Fe District, and a segment of the Coronado Belt Line (CA-SDI-13073), and a segment of the Santa Fe Railway line (CA-SDI-16385). These resources are updated and evaluated for CRHR eligibility as appropriate below. DPR 532 updates or evaluations are included in Appendix B of this report.

7.2.1 Granger Hall

Description

Originally sited to face west, Granger Hall now faces south onto East 4th Street in National City, California. It rests on a concrete block foundation not original to the building. Clad with faded red-painted shakes (square butt, with a band of fish-scale just below the roofline), the one-story, T-shaped Hall features two entrances along its primary (south) elevation: one towards the west and one towards the east. Concrete steps provide access to the main entrance. A concrete ramp aligned east to west along the building's exterior provides access to the performer's entrance (Figures 7 and 8). An open gabled porch with decorative, curved rafters and brackets comprises each entrance. Non-original vertical posts buttress the bracketed porches (Figure 8). A hipped-roof caps the building. Decorative, curved rafters support the roof's shallow eaves. In addition, four dormers (one facing each cardinal direction) located at the west portion of the Hall adorned with diamond-light windows provide interior lighting. Like the main roof, the dormer roof presents a shallow pitch with decorative, curved rafters providing support (Figures 8 and 9). Two boarded-up oval windows punctuate the elevation, a composition that is mirrored on the north elevation (Figure 10).

The three remaining elevations are less adorned. A brick chimney with decorative brickwork at its terminus divides the west elevation, which lacks fenestration. A shallow U-shaped dormer, as mentioned above, contains multiple diamond-light windows. Visible from the west elevation, the west portion of the rear (north) elevation features a rectangular projecting volume with a low-pitched shed roof at a lower height than the building's overall height (Figures 9 and 10). In addition to the boarded-up oval windows, the north elevation also incorporates three four-over-four single-hung windows (Figure 10). A single pedestrian door to the north punctuates the east elevation. A concrete staircase, which is not original, provides access (Figure 11).



Figure 7. Primary Elevation of Granger Hall, Camera Facing Northwest



Figure 8. Primary Elevation of Granger Hall, Detail of West Entrance and Porch, Camera Facing Northeast



Figure 9. West Elevation of Granger Hall, Camera Facing Northeast



Figure 10. Rear (North) Elevation of Granger Hall, Camera Facing Southeast



Figure 11. East Elevation of Granger Hall, Camera Facing Northwest



Figure 12. Interior of Granger Hall, Detail Showing Organ Screen and Painted Ceiling, Camera Facing East



Figure 13. Interior of Granger Hall, Detail Showing West Room, Camera Facing West

The building's interior features a wooden organ screen and stage to the east, wooden wainscot siding, unadorned walls, a painted ceiling, and a raised, open room to the west (Figure 12). The ceiling's painting depicts Euterpe, the Goddess of Music, with a simple, raised garland border. In addition, a rectangular grille and balustrade offset the west room. The west room contains panels of glass inset in the ceiling, which diffuse the natural light produced by the dormers above. Two doors on the northern wall of this western portion lead to small rooms, whose interiors have been substantially altered (Figure 13).

Significance and Integrity

Granger Hall was inscribed into the NRHP on March 18, 1975. The NRHP nomination accounted for the building's relocation to its current location and its new siting facing south instead of its original west orientation. The nomination form did not specify the NRHP significance criteria that applied to the listing. The Hall does not appear to be associated with a specific event or pattern of events significant to our history (Criterion A). Additionally, while Ralph Granger played a major role in the construction and patronage of the building, the building does not appear to be significant for its associations with Granger (Criterion B). However, the resource has architectural significance that clearly meets Criterion C. Designed by master architect Irving Gill, the Hall features his "innovative simplicity," which resulted in the building's "uncluttered natural beauty" (Hoffman 1973:3). Because the Keeper of the NRHP listed the Hall, the property is also listed in the CRHR.

For purposes of updating the status of Granger Hall, two professionally qualified architectural historians surveyed the exterior and interior of the building on October 1, 2018. Although in a state of moderate deterioration, the Hall retains sufficient integrity to convey its significance under NRHP Criterion C. The exterior of the Hall presents minimal shake loss and severe roof damage, and its two porches have been stabilized with the addition of posts, which are non-original. The interior of the hall displays similar deterioration. Part of the ceiling plaster has failed, with several portions either

dangling from the ceiling or collapsed on the floor. In addition, the survey identified at least one broken window, missing glass pieces in the western room, a damaged balustrade, and missing fireplace features. Since its 1975 listing in the NRHP, a floral patterned carpet covers the original wood floor. A California Historical Resources Status Code of “1S- individual property listed in the NR by the Keeper. Listed in the CR” has been assigned to the Hall. The building is also considered a historical resource for the purposes of CEQA.

7.2.2 National City Santa Fe Depot (P-37-020167/P-37-028795)

Description

The subject two-story railroad depot building faces east toward the intersection of Harrison Avenue (now Marina Way) and W. 23rd Street (Figure 14). The building fronts the alignment of the 1880s California Southern Railroad—later the Atchison, Topeka, and Santa Fe—the development of which occasioned the building’s construction in 1882. The Italianate-style rectangular-shaped building has a low-pitched hipped roof with shallow boxed eaves featuring paired molded brackets. The roof has a center and asphalt shingles. Brick chimneys pierce the southern and northern portions of the roof. Molded horizontal string courses and vertical corner courses accent the exterior shiplap cladding.

The east elevation, which now functions as the front elevation, is accessed at a warehouse entry with a restored sliding wood door and a shaped pediment featuring a rosette. Tall, narrow, wood-framed double-hung sash windows punctuate the east elevation—six across the second floor and two at the north portion of the first floor. These and other windows feature wood surrounds capped by pediments with rosettes. Two of the same types of windows are situated at the second story of the south elevation above two smaller first-story windows. The north elevation has a pair of adjacent entries with original wood frames, three-light transoms, and non-original four-panel wood doors, as well as six windows matching the larger windows on other elevations—two at the west portion of the first floor and four across the second floor. The west elevation could not be accessed during the field survey. Bird’s-eye aerial views and views from substantial distance during the survey indicate that its second story has seven windows matching the larger windows at other elevations. The southernmost of these has been restored to replace a non-original entry since the building was listed on the NRHP. The first story has three of these windows and several entries: a northerly entry matching the entries at the north elevation, a wider central entry with a two-leaf door and a pediment-capped five-light transom, and a larger southerly warehouse door matching the sliding warehouse door at the east elevation.



Figure 14. Primary (East) and South Elevations of National City Santa Fe Depot Building, Camera Facing Northwest

Significance and Integrity

Known popularly as the National City Santa Fe Depot, the subject building was listed in the NRHP on April 18, 1996, as the “Station and General Office, California Southern Railroad.” The building has significance under Criterion A, as the West Coast terminus of the Santa Fe’s transcontinental railroad, and as the last surviving West Coast terminus station of the five major railroads in the West. As an excellent example of the Italianate style, and the last example of a commercial building embodying the style in San Diego’s South Bay region, the building also meets Criterion C. The period of significance is 1882–1889. The building is automatically listed in the CRHR by virtue of its listing in the NRHP. Two professionally qualified architectural historians surveyed the exterior and interior the building on October 1, 2018. Several of the building’s windows and entries have been restored since it was listed in the NRHP in 1996. The building is in good condition and has a high degree of historical integrity. It continues to convey its significance under NRHP Criteria A and C. The depot building has a California Historical Resources Status Code of “1S- individual property listed in the NR by the Keeper. Listed in the CR.” The resource is also California Registered Historical Landmark No. 1023, “National City Depot, Transcontinental Railroad.” The building qualifies as a historical resource for the purposes of CEQA.

7.2.3 Coronado Belt Line (P-37-013073/CA-SDI-13073)

Description

The subject resource is an approximately 1.4-mile segment of the Coronado Belt Line in National City. It is part of a longer standard gauge railroad line (4 feet, 8½ inches) aligned on street

easements and private ROW at a distance of approximately 7.5 miles on the east side of the San Diego Bay, from National City to Imperial Beach. The 1.4-mile segment begins on the north side of the intersection of Civic Center Drive and Cleveland Avenue. From there, it extends south at a distance of approximately 0.6 mile embedded in street pavement to a point just north of the intersection of Cleveland Avenue and 23rd Street (Figures 15 and 16). Aerial photographs indicate that rails were either removed or paved over at that intersection during its reconstruction in the early 2010s.

Formerly visible rails embedded in the Cleveland Avenue roadway between 23rd Street and Bay Marina Drive (formerly 24th Street) appear to have been paved over within the last 5 years; today a pavement scar is visible on that section of road (Figure 17). At Marina Drive, the line originally curved as it crossed Bay Marina Drive. The portion crossing Marina Drive appears to have been removed in 2009 as part of the reconstruction of the intersection, the widening of Bay Marina Drive, and construction of the Best Western Plus Marina Gateway Hotel on the south side of Bay Marina Drive and the east side of Marina Way.

The Coronado Belt Line's rails daylight in the pavement of the parking lot on the northwest side of the hotel and on the east and southeast sides of the Historic Railroad Plaza building, and then curve to the southwest (Figure 18). Approximately 300 feet south of the southeast corner of Bay Marina Drive and Marina Way the rail line retains a switch to a spur line that ran northward (Figure 19). That spur line has been removed. The switch is at the southwest end of an approximately 240-foot segment of the line that runs through a landscaped area on the east side of the hotel parking lot. Beyond the switch, the line runs south. On the south side of the paved entrance to the parking lot from Marina Way, the Coronado Belt Line enters open space and runs along the west side of the Paradise Creek marsh.

From there, the line sits atop earthen berms ranging from approximately 40–50 feet wide and 10–13 feet high. Much of the line's 1,000-foot segment south of the hotel parking lot is covered by thick grass, though ties and rails are clearly visible in some places (Figure 20). Approximately 1,100 feet south of the hotel parking lot, an approximately 130-foot-long open deck wood trestle aligned northwest-southeast carries the line over the Paradise Creek slough (Figure 21). The trestle substructure appears to be in fair condition, and the deck is in fair-to-poor condition, with multiple collapsed or failing ties. South of the trestle, the railroad line is aligned northwest-southeast for a distance of approximately 800 feet; the rails and ties of this section are more visible than across the other portions of the segment recorded here (Figure 22). At the southern end of that section the line turns in a more southerly direction for approximately 900 feet. This is the most overgrown section of the segment recorded here; grass and shrub growth make it impossible to walk across the top of the berm along most of this section (Figure 23). The segment of the Coronado Belt Line recorded here crosses a paved bicycle path and terminates at the Sweetwater River Channel (Figure 24), where a precast concrete box bridge on concrete pilings has carried the railroad over the Sweetwater River Channel since the 1980s.



Figure 15. Coronado Belt Line Crossing at Civic Center Drive, Looking South Down Cleveland Avenue



Figure 16. Cleveland Avenue Segment of the Coronado Belt Line, Looking South at 22nd Street



Figure 17. Paved Over Section of the Coronado Belt Line Approaching the Intersection of Cleveland Avenue and Bay Marina Drive (Formerly 24th Street), Where Rails Appear to Have Been Removed, Looking South-Southwest



Figure 18. Daylighting Coronado Belt Line Rails in Parking Lot of Best Western Plus Marina Gateway Hotel, Looking Southwest



Figure 19. Former Spur Line Switch West of the Southwest Portion of the Best Western Plus Marina Gateway Hotel Parking Lot and South of the Historic Railroad Plaza Building at the Southeast Corner of Bay Marina Drive and Marina Way, Looking South



Figure 20. Coronado Belt Line Atop Berm on the West Side of Paradise Creek Marsh, From a Point Approximately 300 Yards South of the Best Western Plus Marina Gateway Hotel, Looking North



Figure 21. Timber Trestle Carrying Track over Paradise Creek Marsh Approximately 1,600 Feet North of Sweetwater River Channel, Looking South-Southeast.



Figure 22. Coronado Belt Line at the West Side of Paradise Creek Marsh, Looking Southeast



Figure 23. Largely Growth-Covered Portion of the Coronado Belt Line Berm Immediately North of the Sweetwater River Channel, Looking South-Southwest



Figure 24. Coronado Belt Line at Bike Path Crossing Immediately North of Sweetwater River Channel, 1988 Bridge at Upper Right, Looking Southeast

Previous Evaluation

In 1994 Stephen B. King evaluated the Coronado Belt Line for Caltrans and found the resource not eligible for listing in the NRHP. The SHPO concurred with King's finding in September 1994. Working on behalf of Save Our Heritage Organization, Alex D. Bevil surveyed and evaluated the surviving 7.5-mile segment of the railroad in 2001. Bevil found it eligible for NRHP listing under Criteria A and C. Bevil's work was submitted to support a nomination to have the resources formally listed in the CRHR. In February 2002 the State Historical Resources Commission voted in favor of listing the resource in the CRHR under Criterion 1, for association with events important to San Diego History, and under Criterion 3, as an important example of nineteenth and twentieth century railroad engineering (Bevil 2001, Weitze 2001:ii; Widell 1994).

In 2002 BRG Consulting, Inc. contracted JRP Historical Consulting Services (JRP) to review the previous evaluations of the Coronado Belt Line, conduct independent fieldwork and historical research, and respond to the State Historical Resources Commission's findings regarding the resource's associations with important events in San Diego history, and its engineering significance. Based on its field investigations and research findings, JRP produced a report arguing that the Coronado Belt Line lacked significance and sufficient historical integrity to justify its listing in the CRHR under Criteria 1 and 3 (JRP 2002).

In 2002, pursuant to Section 4855(B)(2) of Title 14, Chapter 11.5 of the California Code of Regulations, the Cities of San Diego, Chula Vista, and Imperial Beach joined the San Diego Unified Port District in requesting that the State Historical Resources Commission reconsider its previous designation of the Coronado Belt Line. These petitioners argued that Commission's previous determination had been based on factual error. The Commission reconsidered the previous determination in November 2002. Having reviewed all studies of the resource to date, Commission staff recommended that the evidence did not support a conclusion that the Coronado Belt Line had the historical significance and integrity necessary to justify its CRHR listing. The Commission voted 5 to 3 (with one abstention) in favor of the staff recommendation (State Historical Resources Commission 2002).

Although the Coronado Belt Line had been determined ineligible for listing in the NRHP and the CRHR by the end of 2002, an approximately 1.5-mile segment of the resource has been designated locally by the City of San Diego as Historic Landmark Site No. 640. The designated segment is located on bayfront City of San Diego land north of Imperial Beach, west of Chula Vista, and south of National City. The City designated the segment on December 19, 2003, under Criterion A (Historical Landscape), for the site's archaeological value, as an example of the private capitalization of infrastructure, and for the site's significant contributions to the historical, physical, and economic development of San Diego; under Criterion B (Historical Persons) for the site's association with historically significant individuals such as John D. Spreckels, Elisha Babcock, and Hampton L. Story; and under Criterion C (Architecture) for retaining high integrity and representing late-nineteenth-century railroad construction as evidenced by the presence of circa 1890 Carnegie steel rails and other character-defining features. The Metropolitan Transit Development Board (MTDB) (now Metropolitan Transit System [MTS]) filed an appeal to rescind the designation on January 6, 2004. The City of San Diego held a hearing to consider the appeal on September 7, 2004, and overturned the Historic Resources Board's designation of the Coronado Belt Line. Save Our Heritage Organization subsequently challenged the decision in the Superior Court, which issued a Peremptory Writ of Mandate requiring the City Council to set aside its decision to approve the MTDB appeal in July 2005. On September 13, 2005, the City Council upheld the historic designation

of the 1.5-mile Coronado Belt Line segment. Consequently, the 1.5-mile segment of the railroad line within City of San Diego jurisdiction remains a locally designated historical resource (Lia 2007). That designation does not apply to the portion of the railroad line within National City.

Evaluation

The subject 1.4-mile segment of the Coronado Belt Line does not meet any of the significance criteria necessary for listing in the CRHR as part of a larger linear resource that meets one of the CRHR significance criteria and maintains historical integrity. As addressed in greater detail above, National City's Historic Preservation Ordinance does not include significance criteria for evaluation or local designation of potential significant architectural and built environment resources within the city limits. The subject railroad segment does not appear to qualify as a historical resource for the purposes of CEQA. It has been over 15 years since the California Historical Resources Commission voted to list the larger surviving 7.5-mile segment of the railroad line in the CRHR, and then found that the resource lacked sufficient significance and integrity to justify CRHR listing in a November 8, 2002, redetermination vote. However, the same arguments and evidence presented in 2002 to challenge the 7.5-mile railroad line's CRHR listing continue to apply to the 1.4-mile segment of the line addressed here and the larger 7.5 mile segment. Moreover, since 2002 removal or paving over of track and changes to the setting have further diminished the historical integrity of the 1.4-mile segment addressed here.

CRHR Criterion 1

The Coronado Belt Line was one of three steam-engine short-line railroads built in the San Diego area in the 1880s, during the longer late-nineteenth-century era of widespread railroad development across California and the United States. Built in unison with the National Historic Landmark Hotel Del Coronado, the Coronado Belt Line contributed to the growth of the Coronado resort community mainly in terms of hauling construction materials, and to a lesser extent as a line that provided for occasional passenger excursions around the South Bay to Coronado. However, less than 50% of the original 20.3-mile Coronado Belt Line survives today. The railroad line does not retain a physical association with the community of Coronado, which is located over 6 miles north of the southern end of the Bay, where the surviving 7.5-mile segment of the alignment terminates today (JRP 2002:6–9). The surviving segment of the Coronado Belt Line does not retain sufficient historical integrity to convey any significance attributable to it based on its historic relationship to the community of Coronado.

Financially, the Coronado Belt Line was not particularly successful, and proved less profitable than comparable San Diego-area short lines during its period of independent operation from 1888 to 1908. Only in a single year, 1904, did the railroad pay dividends to stockholders (JRP 2002:7–9). Ultimately, the Coronado Belt Line was not a critical factor in the development or economic prosperity of the greater San Diego region. During the 1908–1916 period, when the Coronado Belt Line was first consolidated with the NC&O into the SDS Railway, and then became a part of the SD&SE Railroad in 1912, neither railroad company proved financially successful. During that period the Coronado Belt Line principally shipped construction materials to Coronado, and, again, the line no longer retains a physical connection to Coronado. The line's second most frequently hauled commodity was salt shipped from the salt works north to National City and San Diego. Much of the line from National City to Imperial Beach had to be reconstructed after the disastrous floods of 1916 to maintain operation, including much of the 1.4-mile segment recorded as part of the present study (JRP 2002:10–13). For these reasons, the subject 1.4-mile segment does not contribute to a larger

railroad line with historical integrity and significance under CRHR Criterion 1 tied to any period of potential significance prior to 1916.

It has been asserted that the Coronado Belt Line has historical significance for contributing to the development of federal military facilities in Imperial Beach and Coronado during World Wars I and II, and for its association with wartime and defense-related industrial facilities in the South Bay. Here again, because the resource does not retain a physical connection to northwestern Imperial Beach, the Silver Strand, or Coronado, it does not retain sufficient historical integrity to convey any significance attributable to it for its role in the development of military facilities on the west side of the Bay. As part of the SD&SE in 1916, and then part of the SD&AE beginning in 1917, the Coronado Belt Line's surviving segment provided Chula Vista's Hercules Powder Plant with shipment service both for inbound materials and for outbound sacks of muriate potash and acetone in tank cars. However, the Hercules Powder facility, a station that served the plant, and spur lines connecting the Belt Line to the facility have all been demolished. The surviving Coronado Belt Line segment in Chula Vista retains no functional association or physical connection with the demolished plant. More important to the growth of Chula Vista was the Rohr Aircraft Corporation facility developed along the Coronado Belt Line during World War II. The Rohr plant received parts shipments and in turn shipped parts and finished products on the Coronado Belt Line with the aid of two spur lines connecting to the plant. Rohr also shipped many of its airplane power packages—the company's signature product—by truck, and was never ultimately dependent on the railroad line. An intact Rohr Aircraft Corporation Plant determined significant as a historic district or complex could potentially include as contributing elements intact connecting spur lines and—if the spur lines remained present—a limited segment of a principle railroad line connected to the spur lines. However, the spur lines at the site of the former Rohr Aircraft facilities in Chula Vista have been removed, paved over, or otherwise compromised. The Coronado Belt Line's earthen berm and roadbed have also been paved over in the vicinity of the former Rohr Aircraft facility. Moreover, the Rohr Aircraft facility buildings developed south of H Street and west of Walnut Avenue have been demolished (JRP 2002:14–17; NETR 2019). For these reasons, the 1.4-mile segment of the Coronado Belt Line recorded here does not contribute to a larger railroad line that retains historical integrity and has strong historical and physical association with a historically significant federal military facility or a historically significant war- or defense-related industrial facility.

For these reasons, the 1.4-mile segment of the Coronado Belt Line recorded here does not contribute to a larger railroad line that is eligible for listing in the CRHR under Criterion 1.

CRHR Criterion 2

The Coronado Belt Line is not significant for association with the life of a historically important individual. The Coronado Belt Line's developers, Elisha Babcock and Hampton L. Story, certainly played significant roles in the establishment and early development of Coronado. To meet CRHR Criterion 2, however, a non-residential resource such as a railroad needs to represent strongly the productive life or achievements of a historically significant individual, and do so better than other potentially significant resources. Having lost its historic physical connection to the community of Coronado, the Coronado Belt Line does not strongly represent aspects' of Babcock's or Story's contributions to the establishment and early development of Coronado. Even if the Coronado Belt Line did retain its original physical relationship to Coronado, it would arguably not strongly represent the productive lives or achievements of the two men. Story sold his shares in the railroad enterprise in 1889, a year after it began operation. Babcock retained a financial interest in the line until no later than 1908, when Spreckels' interests assumed full control over the railroad and

merged it with the NC&O to form the SDS Railway. The Coronado Belt Line's economic performance never distinguished it from other San Diego-area short lines in the 20-year period from 1888 to 1908, during which it only paid dividends to stockholders in 1904 (JRP 2002:9, Lia 2004:7–8). The subject 1.4-mile segment of the Coronado Belt Line does not, therefore, have both significance and integrity under CRHR Criterion 2 as a resource that represents the productive life or achievements of either Babcock or Story.

John D. Spreckels is arguably the most significant individual in the history of San Diego during the first half of the twentieth century. Spreckels did not develop the Coronado Belt Line. Spreckels interests acquired control of the line in 1908, 20 years after its development, and integrated it into what became a regional railroad monopoly. Within less than a decade, the Coronado Belt Line and other formerly independent short lines in the SD&SE system became part of the SD&A, controlled unbeknownst to the public by the Southern Pacific. Neither the Coronado Belt Line nor other formerly independent short lines that became part of the Spreckels regional railroad monopoly after the turn of the century are the types of resources apt to strongly represent the productive life or achievements of a figure such as John D. Spreckels (Lia 2004:8–9). It would be far-fetched to conclude that the Coronado Belt Line could represent the productive life or achievements of John D. Spreckels better than other built resources in the San Diego area.

For these reasons, the 1.4-mile segment of the Coronado Belt Line recorded as part of the current study does not contribute to a larger railroad line that is eligible for listing in the CRHR under Criterion 2.

CRHR Criterion 3

The Coronado Belt Line is not significant for design or engineering value, or as an important example of a type, period, or method of construction. It has been asserted that the surviving 7.5-mile railroad segment is significant for embodying distinctive characteristics of late-nineteenth to mid-twentieth-century railroad construction. However, the flooding of 1916 was so severe, and the reconstruction of the line on the east side of the Bay so extensive, that the only aspect of integrity that the 7.5-mile segment retains with respect to any period of significance prior to 1916 is location. Materials created prior to 1916 are present, including scattered rails produced as early as 1897. However, the overwhelming majority of the existing track assemblage and features such as switches, trestles, and culverts were either manufactured or brought from elsewhere and used in reconstruction or maintenance efforts after 1916 (JRP 2002:18, 22, 24). As a railroad line reconstructed across marshlands and sloughs in the early twentieth century using trestles with standardized designs and earthen embankments, the surviving portion of the Coronado Belt Line did not require innovative engineering or technology. That the surviving portions of the line were largely reconstructed after 1916 makes the Coronado Belt Line all the more commonplace in terms of railroad technology and engineering. The resource is therefore not a significant example of railroad engineering.

The Coronado Belt Line has poor historical integrity overall. Moreover, since the reconstruction of large portions of the surviving segment on the east side of the Bay during the late-1910s, subsequent alterations have compromised the resource's integrity of design, workmanship, and materials—the most important aspects of integrity under CRHR Criterion 3. Foremost among such alterations is the loss of a majority of the rails and associated infrastructure that formed the original 20.3-mile line operating from San Diego to Coronado, and a large portion of the rails and associated infrastructure that subsequently formed the line operating from National City to Coronado. As

detailed in a 2002 assessment of the Coronado Belt Line's historical integrity, the surviving segment on the east side of the Bay retained five timber trestles at that time, most of which had been substantially modified since their construction in the late-1910s. Four others constructed in the late 1910s—including the longest one spanning the Sweetwater River Channel—were subsequently eliminated or replaced by modern concrete structures. None of the culverts extant in 2002 were built as part of the immediate post-1916 reconstruction effort, and research and field surveys conducted in 2002 indicated that most were constructed in the 1940s or 1950s. Dates observed on rails and tie plates in 2002 indicated that a "substantial amount" of the 75-pound rails constituting most of the resource's surviving rail in 2002 had been laid in the late 1920s or early 1930s (JRP 2002:20–23, 22 quoted).

For these reasons, the 1.4-mile segment of the Coronado Belt Line in National City recorded as part of the current study does not contribute to a larger railroad line that is eligible for CRHR listing under Criterion 3.

CRHR Criterion 4

The remains of the subject railroad in the study area exist mainly on a human-made elevated berm constructed for the railroad, or as orphaned portions of the track embedded in and daylighting from street or parking lot pavement, or as orphaned paved over portions of track. While evidence of occasional trash dumping in the form of individual broken bottles was evident along the railroad, the berm is not wide enough to have supported the kinds of temporary work camps in which nineteenth-century railroad workers sometimes slept, cooked, and ate. It has been suggested that Chinese laborers working on the railroad in the late 1880s may have created camps. Neither the current study nor previous surveys at locations along the larger railroad alignment have yielded any material evidence of such camps. It is possible that railroad laborers spent nights in boarding houses or camps located inland from the bayfront marshes that required berm and bridge construction. The floods of 1916 would have likely washed away evidence of any 1880s camps created at or near marshland portions of the alignment. Given the growth of towns and residential enclaves in the South Bay, it is unlikely that workers engaged in reconstruction of the extensively damaged railroad between National City and Imperial Beach camped along the alignment following the 1916 floods.

Other segments of the surviving 7.5-mile railroad alignment do not have material potential to yield information important to history. Portions of the railroad embedded in and daylighting from pavement, or covered by pavement, have no potential to yield important information on railroad construction. Although portions of the surviving alignment passed through historically industrial areas of Chula Vista and National City, historic archaeological materials associated with local industries in those areas would not yield important information on the railroad itself. Furthermore, during the majority of the period after the railroad's extensive reconstruction across the eastern South Bay following the 1916 floods, the railroad was not the primary source of freight for industries operating in those areas. For these reasons, Under CRHR Criterion 4, the subject railroad road is not significant as a source, or likely source, of important historical information, nor is it likely to yield important information about historic construction methods, materials, or technologies.

Historic Integrity of Recorded Segment

The historical integrity of the 1.4-mile segment of the Coronado Belt Line recorded here within National City has been diminished further since 2002. Along this segment, direct physical alterations since 2002 are most pronounced from the north side of the intersection of Cleveland Avenue and

23rd Street to the south side of the intersection of Cleveland Avenue and Bay Marina Drive. Rails have been removed or paved over along this approximately 450-foot portion of the recorded segment. Connecting spur lines have also been eliminated since 2002 along this portion of the recorded segment. The former industrial character of the setting in this area has been diminished by demolition of industrial properties and construction of the Best Western Plus Marina Gateway Hotel and associated landscaped areas where rails remain present. Although deteriorated since 2002, the wood trestle along the recorded portion of the line remains intact. However, grass and shrub overgrowth is severe across much of the line within the Paradise Creek and Sweetwater River marshlands south of the Best Western Plus Marina Gateway Hotel.

Conclusion

In conclusion, the recorded 1.4-mile segment of the Coronado Belt Line in National City does not contribute to a larger railroad line that is eligible for CRHR listing. The subject railroad segment does not qualify as a historical resource for the purposes of CEQA.

7.2.4 Santa Fe Railway (P-37-024739/CA-SDI-16385)

Description

Aligned north-south, the subject railroad line traverses the cultural resources study area at three at-grade crossings situated west of Cleveland Avenue and Harrison Avenue (now Marina Way) and east of Tidelands Avenue and Haffley Avenue in National City: Civic Center Drive, 19th Street, and Bay Marina Drive. The portion of the resource within the cultural resources study area also extends approximately 530 feet to the north of the Bay Marina Drive crossing. Developed beginning in the early 1880s by the California Southern Railroad Company, which was controlled by Atchison, Topeka, and Santa Fe interests, the subject resource is a predominantly double track railroad line generally aligned north-south through coastal San Diego County between Oceanside and National City. The portion of the resource recorded here consists of standard gauge railroad line (4 feet, 8½ inches). At Civic Center Drive, a single track segment of rails and wood ties transitions to rails imbedded in steel-reinforced concrete as the resource crosses the street that forms a linear branch of the proposed project's cultural resources study area for approximately 100 feet (Figure 25). Approximately 1,900 feet to the south of that crossing, the resource crosses another linear branch of the cultural resources study area at 19th Street (Figure 26). At this location, two sets of rails cross the public right-of-way imbedded in steel-reinforced concrete. The resource enters the cultural resources study area again from the north approximately 200 feet north of the National City Santa Fe Depot building. From there the resource stretches south at a length of approximately 530 feet to the north side of Bay Marina Drive (Figure 27). This segment consists of two principle sets of rails with ties, as well as the southern end of a spur track that continues north beyond the cultural resources study area, and a switch between the two principle tracks. On the north side of Bay Marina Drive, the eastern principle track splits into two tracks. Three sets of rails imbedded in steel-reinforced concrete cross Bay Marina Drive.



Figure 25. Santa Fe Railway Crossing at Civic Center Drive, Looking Southwest



Figure 26. Santa Fe Railway Crossing at 19th Street, Looking North-Northwest**Figure 27. Santa Fe Railway Alignment North of Bay Marina Drive, Looking North-Northwest Toward National City Santa Fe Depot**

Evaluation

In 2002, CRM TECH evaluated the approximately 5.9-mile segment of the Santa Fe Railway line from 24th Street in National City (today's Bay Marina Drive) north to Ash Street, and found the resource ineligible for listing in the NRHP. The California SHPO concurred with this finding. The 5.9-mile segment—which includes all portions of the resource recorded here—has a Status Code of “6Y” (determined ineligible for NRHP by consensus through Section 106 process).

The Santa Fe Line has potential significance under CRHR Criterion 1 as infrastructure that made possible the local real estate boom of the 1880s and served as San Diego County's sole connection to the transcontinental railroad system during the 1890s and the early twentieth century. Two historically important individuals, Frank Kimball and Alonzo Horton, helped bring the California Southern Railroad into existence. However, Kimball and Horton are more directly associated with the founding of National City and “New Town” San Diego (today's downtown), respectively. The Santa Fe Line does not have significance under CRHR Criterion 2. The Santa Fe Line as it exists today within the cultural resources study area consists of commonplace railroad infrastructure. The segment recorded here does not include any elements that embody important innovation in railroad engineering or construction technique under CRHR Criterion 3. Under CRHR Criterion 4, the portion of the resource recorded here is not significant as a source, or likely source, of important historical information, nor is it likely to yield important information about historic construction methods, materials, or technologies.

The portions of the Santa Fe Line recorded here do not contribute to a larger railroad line with sufficient historical integrity to convey significance under CRHR Criterion 1. The portions recorded

here, like other segments of the line through San Diego recorded in DPR forms appended to this report, have been subject to recurrent replacement of rails, ties, trestles, culverts, and bridges, as well as modifications to street crossings, over the course of the resource's nearly 140-year history. The Santa Fe Railway line elements recorded here are part of a much larger linear railroad resource that does not retain integrity of design, workmanship, materials, and, in many places, setting with respect to any potential period of significance reaching back to the late nineteenth or early twentieth century.

For these reasons, the portions of Santa Fe Line recorded here do not contribute to a larger railroad line with both significance under the criteria for listing in the CRHR and sufficient historical integrity. The recorded portions of the Santa Fe Line do not, therefore, qualify as a historical resource under CEQA.

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8.1 Archaeological Resources

Two historic period archaeological resources (P-37-039520 and P-37-039519/CA-SDI-23093) are located within the proposed project's cultural resources study area. Neither resource meets the significance criteria for listing in the CRHR, and therefore neither resource qualifies as a historical resource for the purposes of CEQA.

One previously recorded resource, P-37-007454/CA-SDI-7454, a prehistoric shell midden, was not relocated during the archaeological survey for the proposed project and appears to have been destroyed, either through tidal action or through anthropogenic disturbances.

The approximately 11.2 acres south of Marina 32 and west of Paradise Marsh was historically a tidal flat, a landform type that would have only been intermittently available for a small range of prehistoric land use activities. Additionally, historic period aerial imagery indicates that portions of this landform have been subject to disturbance related to the construction of the existing Marina and municipal trash burning and dumping. While the National City Bayfront area generally would be considered archaeologically sensitive (ICF n.d.), given the intensity of urban development in the area it is possible that any potential prehistoric archaeological resources have been destroyed.

Nevertheless, there is the potential for as-yet undiscovered prehistoric sites to be present in the proposed project area. Mitigation measures will be addressed in the EIR.

8.2 Built Environment Resources

Two significant built-environment resources are present within the proposed project's cultural resources study area. Both are listed in the NRHP and retain substantial historical integrity. One is Granger Hall, which has significance under NRHP Criterion C. The other is the National City Santa Fe Depot, which has significance under NRHP Criteria A and C. Resources located in California and listed in the NRHP are automatically listed in the CRHR. Consequently, Granger Hall and the National City Santa Fe Depot qualify as historical resources for the purposes of CEQA. DPR forms for the resources identified within the cultural resources study area are included in Appendix B of this report. Analysis of the potential for the proposed project to result in impacts on historical resources, and mitigation measures to address potential impacts, will be developed in the EIR for the proposed project.

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Chapter 9

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Appendix A

Native American Correspondence

National City Bayfront Plan, National City, San Diego County - Native American Outreach Contact Log											
Contact	Title	Tribe	Date of Original Contact	Method of Contact	2nd Contact	Method of Contact	3rd Contact	Method of Contact	Email	Phone #	Comments Received Y/N
Ralph Goff	Chairperson	Campo Band of Diegueño Mission Indians	10/11/2018	Letter	12/18/2018	left vm in public box-nc	1/17/2019	left vm in personal box-nc	rgoff@campo-nsn.gov	619-478-9046	No response
Robert Pinto Sr.	Chairperson	Ewiiapaayp Band of Kumeyaay Indians	10/11/2018	Letter	12/18/2018	left vm in joint box-nc	1/17/2019	left vm in joint box-nc		619-445-6315	No response
Will Micklin	Executive Director	Ewiiapaayp Band of Kumeyaay Indians	10/11/2018	Letter	12/18/2018	left vm in joint box-nc	1/17/2019	left vm in joint box-nc	wmicklin@leaningrock.net	619-445-6315	No response
Michael Garcia	Vice Chairperson	Ewiiapaayp Band of Kumeyaay Indians	10/11/2018	Letter	12/18/2018	left vm in joint box-nc	1/17/2019	left vm in joint box-nc	michaelg@leaningrock.net	619-445-6315	No response
Virgil Perez	Chairperson	Iipay Nation of Santa Ysabel	10/11/2018	Letter	12/18/2018	spoke with Virgil Perez	N/A	N/A		760-765-0845	No concerns
Frank Brown	Coordinator	Inter-Tribal Cultural Resource Protection Council	10/11/2018	Letter	12/18/2018	Spoke with Frank Brown, sent an email with the letter and map again.	N/A	N/A	frbrown@viejas-nsn.gov	619-884-6437	Would request consultation at the project stage and a native monitor all ground disturbance and mitigation for artifacts and burials 12/18/18
Erica Pinto	Chairperson	Jamul Indian Village	10/11/2018	Letter	12/18/2018	referred to Lisa Cumper	USE LISA CUMPER	USE LISA CUMPER		619-669-4785	No response
Lisa Cumper	THPO	Jamul Indian Village	10/11/2018	Letter	12/18/2018	left vm in personal box-nc	1/17/2019	left vm in personal box-nc	lcumper@jiv-nsn.gov	619-669-4855	No response

Contact	Title	Tribe	Date of Original Contact	Method of Contact	2nd Contact	Method of Contact	3rd Contact	Method of Contact	Email	Phone #	Comments Received Y/N
Ron Christman		Kumeyaay Cultural Repatriation Committee	10/11/2018	Letter	12/18/2018	left message with wife-nc	1/17/2019	would not take our contact info-nc		619-445-0385	See 11/30/2018 email response from Clint Linton
Steve Banegas	Spokesperson	Kumeyaay Cultural Repatriation Committee	10/11/2018	Letter	12/18/2018	left vm in personal box-nc	1/17/2019	left vm in personal box-nc	sbanegas50@gmail.com	619-742-5587	See 11/30/2018 email response from Clint Linton
Bernice Paipa	Secretary	Kumeyaay Cultural Repatriation Committee	10/11/2018	Letter	12/18/2018	sent email with letter and map-NC	N/A	N/A	bernicepaipa@gmail.com		See 11/30/2018 email response from Clint Linton
Clint Linton	Director of Cultural Resources	Kumeyaay Cultural Repatriation Committee	10/11/2018	Letter	letter returned to sender, sent an email 11/30 NC	N/A	N/A	N/A	clint@redtailenvironmental.com	760-803-5694	11/30/2018: Email response "Please have a Kumeyaay NAM for all ground disturbing activities related to this project" NC
Kim Bactad	Executive Director	Kumeyaay Diegueno Land Conservancy	10/11/2018	Letter	letter returned to sender, sent an email 11/30 NC	N/A	1/17/2019	no voicemail, called twice	kimbactad@gmail.com	619-659-1008	No response
Carmen Lucas		Kwaaymii Laguna Band of Mission Indians	10/11/2018	Letter	12/18/2018	left vm in personal box-nc	1/17/2019	left vm in personal box-nc		619-709-4207	No response
Gwendolyn Parada	Chairperson	La Posta Band of Diegueno Mission Indians	10/11/2018	Letter	12/18/2018	sent email with letter and map-NC	1/17/2019	left vm in personal box-nc	lp13boots@aol.com	619-478-2113 ex 109	No response

Contact	Title	Tribe	Date of Original Contact	Method of Contact	2nd Contact	Method of Contact	3rd Contact	Method of Contact	Email	Phone #	Comments Received Y/N
Angela Elliott-Santos	Chairperson	Manzanita Band of Kumeyaay Nation	10/11/2018	Letter	12/18/2018	left vm in public box-nc	1/17/2019	left message with secretary requesting a call with any concerns		619-766-4930	No response
David Thompson	EPA	Manzanita Band of Mission Nation	10/11/2018	Letter	12/18/2018	left vm in public box-nc	1/17/2019	left message with secretary requesting a call with any concerns		619-766-4851	No response
Nick Elliot	Cultural Resources Coordinator	Manzanita Band of the Kumeyaay Nation	10/11/2018	Letter	12/18/2018	left vm in public box-nc follow up email sent as well 12/18/2018	1/17/2019	Nick Elliot passed away, referred to Angela Elliott Santos or Lisa Haws	nickmepa@yahoo.com	619-766-4930	No response
Tuba Ebru Ozdil	Cultural Resources Planning Specialist	Pechanga Band of Luiseno Indians	10/11/2018	Letter	12/18/2018	left vm in personal box-nc	1/17/2019	left vm in personal box-nc	eozdil@pechanga-nsn.gov	951-770-6313	No response

Contact	Title	Tribe	Date of Original Contact	Method of Contact	2nd Contact	Method of Contact	3rd Contact	Method of Contact	Email	Phone #	Comments Received Y/N
Lisa Haws referred to Kristie Orosco	Cultural Resource Manager	Sycuan Band of the Kumeyaay Nation	10/11/2018	Letter	letter returned to sender. Phone call to Haws, was informed she no longer works there. Spoke with replacement Kristie Orosco. Requested her email and sent copy of letter and map. 11/30 NC	sent a follow up email	1/17/2019	Spoke on the phone, she requested another email. Sent.NC	korosco@sycuan-nsn.gov	619-312-1935	1/18/2019: Email response requesting to schedule discussion with the Port, Kumeyaay monitor for all ground disturbance. 10/24/2019: ICF, District and City staff met with tribal representative Kristie Orosco to discuss the project and the tribe's concerns and recommendations. 11/20/2019: the District sent an email to Ms. Orosco with proposed mitigation measures and requested comments from the tribe on the mitigation measures. The District also invited Ms. Orosco to a site visit. To date, no response received.
Cody J Martinez	Chairperson	Sycuan Band of the Kumeyaay Nation	10/11/2018	Letter	letter returned to sender, sent an email 11/30 NC	sent a follow up email	12/18/2018 1/17/2019	left vm with sheila silva assistant	ssilva@sycuan-nsn.gov	619-445-2613 X 1000	No response

Contact	Title	Tribe	Date of Original Contact	Method of Contact	2nd Contact	Method of Contact	3rd Contact	Method of Contact	Email	Phone #	Comments Received Y/N
Robert J Welch Jr.	Chaiperson	Viejas Band of Kumeyaay Indians	10/11/2018	Letter	12/18/2018	referred to assistant Katy Dunn, left vm and sent email	N/A	N/A	ihagen@viejas-nsn.gov	619-445-3810	See 12/19/2018 email response from Ray Teran and Ernest Pingleton
Rand Sandoval Jr.	Environmental Specialist, Resource	Viejas Band of Kumeyaay Indians	10/11/2018	Letter	12/18/2018	sent email addressed to all three Viejas	N/A	N/A	rsandoval@viejas-nsn.gov	619-659-2343	See 12/19/2018 email response from Ray Teran and Ernest Pingleton
Ernest Pingleton	THPS, Resources Management	Viejas Band of Kumeyaay Indians	10/11/2018	Letter	12/18/2018	sent email addressed to all three Viejas	N/A	N/A	epingleton@viejas-nsn.gov	619-659-2314	12/19/2018: Email response from Ray Teran and Ernest Pingleton requesting Kumeyaay Cultural Monitor

Appendix B

DPR 523 Forms

Confidential Archaeological Site Records

Not for Public Distribution

ICF-Bayfront-ISO-001

ICF-Bayfront-H-002

CA-SDI-07454

Page 1 of 6

*Recorded by Margaret Roderick

*Resource Name or # (Assigned by recorder) Granger Music Hall

*Date October 3, 2018

☐ Continuation ☒ Update

P1. Other Identifier: Granger Hall

P2e. Other Locational Data:

Address: 1615 East 4th Street, National City, CA 91950

APN: 554-050-11-00

*P3a. Description:

Originally sited to face west, Granger Music Hall (Granger Hall) now faces south onto East 4th Street in National City, California. It rests on a concrete block foundation not original to the building. Clad with faded red-painted shakes (square butt, with a band of fish-scale just below the roofline), the one-story, T-shaped Hall features two entrances along its primary (south) elevation: one towards the west and one towards the east. Concrete steps provide access to the main entrance. A concrete ramp aligned east to west along the building's exterior provides access to the performer's entrance (Photographs 1 and 2). An open gabled porch with decorative, curved rafters and brackets comprises each entrance. Non-original vertical posts buttress the bracketed porches (Photograph 2). A hipped-roof caps the building. Decorative, curved rafters support the roof's shallow eaves. In addition, four dormers (one facing each cardinal direction) located at the west portion of the Hall adorned with diamond-light windows provide interior lighting. Like the main roof, the dormer roof presents a shallow pitch with decorative, curved rafters providing support (Photographs 2 and 3). Two boarded-up oval windows punctuate the elevation, a composition that is mirrored on the north elevation (Photograph 1).

The three remaining elevations are less adorned. A brick chimney with decorative brickwork at its terminus divides the west elevation, which lacks fenestration. A shallow U-shaped dormer, as mentioned above, contains multiple diamond-light windows. Visible from the west elevation, the west portion of the rear (north) elevation features a rectangular projecting volume with a low-pitched shed roof at a lower height than the building's overall height (Photographs 3 and 4). In addition to the boarded-up oval windows, the north elevation also incorporates three four-over-four single-hung windows (Photograph 4). A single pedestrian door to the north punctuates the east elevation. A concrete staircase, which is not original, provides access (Photograph 5).

The building's interior features a wooden organ screen and stage to the east, wooden wainscot siding, unadorned walls, a painted ceiling, and a raised, open room to the west (Photograph 6). The ceiling's painting depicts Euterpe, the Goddess of Music, with a simple, raised garland border. In addition, a rectangular grille and balustrade offset the west room. The west room contains panels of glass inset in the ceiling, which diffuse the natural light produced by the dormers above. Two doors on the northern wall of this western portion lead to small rooms, whose interiors have been substantially altered (Photograph 7).

*P3b. Resource Attributes: HP13. Community center/social hall; HP39. Other (Music Hall)

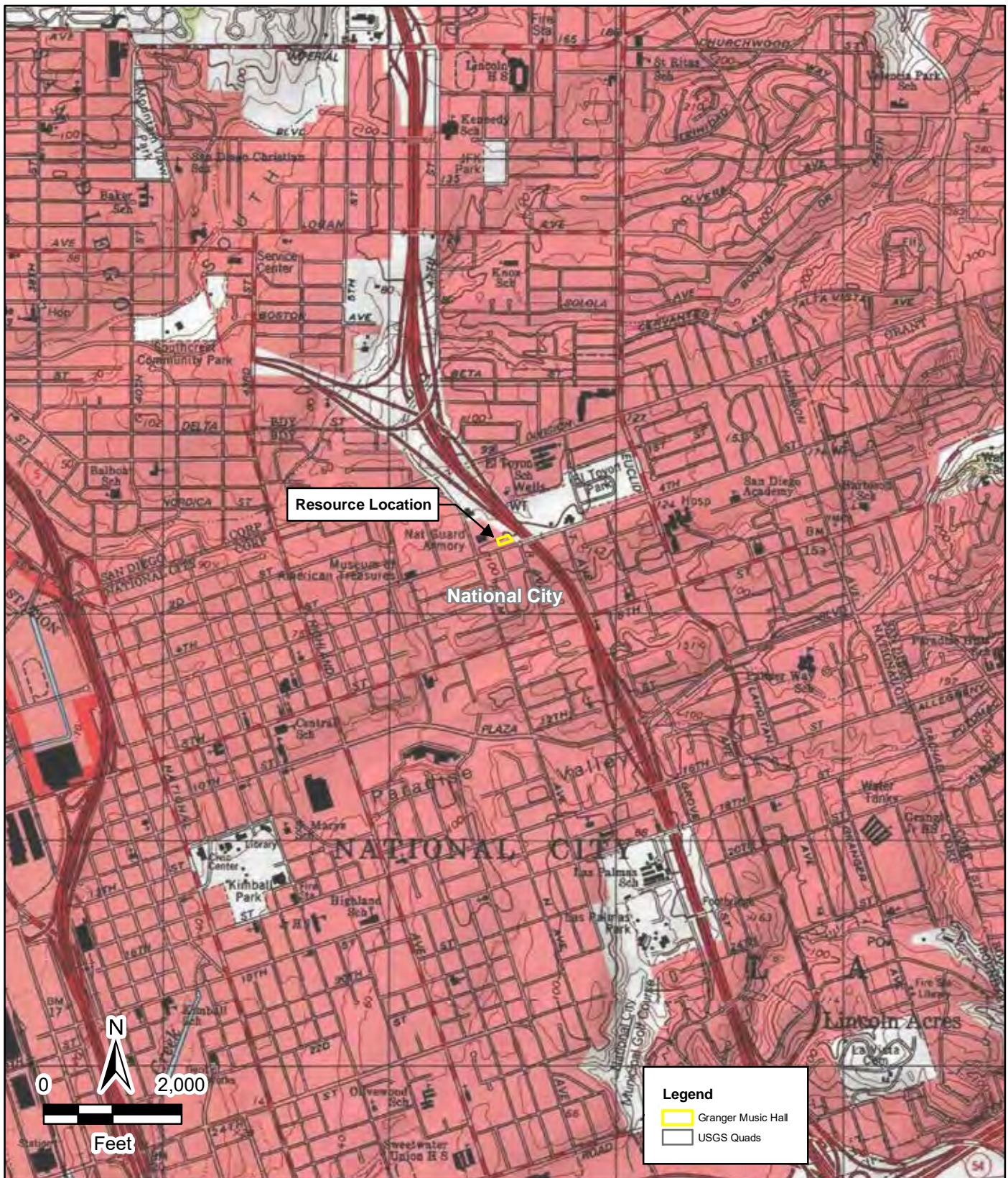
*P8. Recorded by: Margaret Roderick

*P9. Date Recorded: October 3, 2018

*P11. Report Citation: ICF. 2019. *Cultural Resources Inventory and Evaluation Report for the National City Bayfront Projects and Plan Amendments, National City, California*. Prepared for the San Diego Unified Port District.

*B10. Significance:

Granger Hall was inscribed into the National Register of Historic Places (NRHP) on March 18, 1975. The NRHP nomination accounted for the building's relocation to its current location and its new siting facing south instead of its original west orientation. The nomination form did not specify the NRHP significance criteria that applied to the listing. The Hall does not appear to be associated with a specific event or pattern of events significant to our history (Criterion A). Additionally, while Ralph Granger played a major role in the construction and patronage of the building, the building does not appear to be significant for its associations with Granger (Criterion B). However, the resource has architectural significance that clearly meets Criterion C. Designed by master architect Irving Gill, the Hall features his "innovative simplicity," which resulted in the building's "uncluttered natural beauty" (NRHP Nomination 1974:3). Because the Keeper of the NRHP listed the Hall, the property is also listed on the California Register of Historical Resources (CRHR).



Page **3** of **6**

*Resource Name or # (Assigned by recorder) Granger Music Hall

*Recorded by Margaret Roderick *Date October 1, 2018 ☐ Continuation ☒ Update

*B14. Evaluator: **Margaret Roderick, ICF**
555 W. 5th Street, Suite 3100
Los Angeles, CA 90012

*Date of Evaluation: 10/3/2018

Update: For purposes of updating the status of Granger Music Hall, two professionally qualified architectural historians surveyed the exterior and interior the building on October 1, 2018. Although in a state of moderate deterioration, the Hall retains sufficient integrity to convey its significance under NRHP Criterion C. The exterior of the Hall presents minimal shake loss and severe roof damage, and its two porches have been stabilized with the addition of posts, which are non-original. The interior of the hall displays similar deterioration. Part of the ceiling plaster has failed, with several portions either dangling from the ceiling or collapsed on the floor. In addition, the survey identified at least one broken window, missing glass pieces in the western room, a damaged balustrade, and missing fireplace features. Since its 1975 listing in the NRHP, a floral patterned carpet covers the original wood floor. A California Historical Resources Status Code of "1S- individual property listed in the NR by the Keeper. Listed in the CR" has been assigned to the Hall. The building is also considered a historical resource for the purposes of the California Environmental Quality Act (CEQA).

Photographs:



Photograph 1. Primary elevation of Granger Music Hall, camera facing northwest.

Page 4 of 6

*Resource Name or # (Assigned by recorder) Granger Music Hall

*Recorded by Margaret Roderick *Date October 1, 2018 ☐ Continuation ☒ Update



Photograph 2. Primary elevation of Granger Music Hall, Detail of west entrance and porch, camera facing northeast.



Photograph 3. West elevation of Granger Music Hall, camera facing northeast.

Page 5 of 6

*Resource Name or # (Assigned by recorder) Granger Music Hall

*Recorded by Margaret Roderick *Date October 1, 2018 ☐ Continuation ☒ Update



Photograph 4. Rear (north) elevation of Granger Music Hall, camera facing southeast.



Photograph 5. East elevation of Granger Music Hall, camera facing northwest.

Page 6 of 6

*Resource Name or # (Assigned by recorder) Granger Music Hall

*Recorded by Margaret Roderick *Date October 1, 2018 ☐ Continuation ☒ Update



Photograph 6. Interior of Granger Music Hall, detail showing organ screen and painted ceiling, camera facing east.



Photograph 7. Interior of Granger Music Hall, detail showing west room, camera facing west.

GRANGER MUSIC HALL was built by Ralph Granger, patron of the performing arts and San Diego civic leader. The Hall was designed by Irving John Gill and is one of the few remaining examples of his earliest work. GRANGER MUSIC HALL is believed to be one of two privately owned music halls in the United States. The Hall contained a Murray Harris organ, Knabe concert grand piano and a safe housing the Hawley Violin Collection. World famous musical artists such as Eugene Ysaie and Rudolph Friml performed in the Hall. Ralph Granger guaranteed full concert fees so that San Diego residents could enjoy the finest music.

7. DESCRIPTION

CONDITION	(Check One)					
	<input type="checkbox"/> Excellent	<input type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Deteriorated	<input type="checkbox"/> Ruins	<input type="checkbox"/> Unexposed
	(Check One)			(Check One)		
	<input type="checkbox"/> Altered	<input checked="" type="checkbox"/> Unaltered	<input checked="" type="checkbox"/> Moved	<input type="checkbox"/> Original Site		
DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE						
<p>GRANGER MUSIC HALL was built by Ralph Granger in 1898. The HALL is a 19th Century single-story wood frame structure with two entrances on the west*--one for the public and one for performers. A music room which Granger built on his Paradise Valley estate in 1896 was expanded by the addition of an 80x32 foot auditorium to the south*. The original room became the foyer of the present HALL which measures 100x32 feet and has a seating capacity of 150. The cedar shingle exterior, painted red, contains four 5 1/2 foot oval windows of solid glass, two on each side of the auditorium. These, with the small dormer windows in the foyer aesthetically highlight the interior. Granger was in Colorado on business during construction of the auditorium and rectangular windows were installed. Shortly after his return, the oval windows replaced the rectangular ones.</p> <p>"General construction consists of tongue in groove maple hardwood floor covering over a one-inch douglas fir subfloor, supported by 2x10 inch douglas fir studs, spaced 16 inches on center. The exterior wall covering consists of cedar shingles, laid over 1x6 inch redwood horizontal solid sheathing. All interior wall coverings are lime plaster supported by 2x3/8 inch king truss assemblies at approximately 24 inches on center. Skid sheathing spaced at 4 inch intervals support a base roof of cedar shingles. An estimated build-up of six additional layers of mineral-surfaced composition roof coverings have been installed."¹</p> <p>Irving John Gill, who worked under Adler and Sullivan mastering acoustical technique, was the architect. "Designed so that no two walls or surfaces are parallel, the floor slopes forward from the back of the auditorium approximately six inches. The ceiling and walls have a slight canter which was done deliberately for acoustics."² Wood panel wainscoting extends five feet up the wall. From the panel to the ceiling, the wall is covered with seamless Irish linen. A simple border of garlands adorns the cove to the ceiling on which is painted a 75' mural of Euterpe, Goddess of Music. Plaster decorations surrounding the mural are finished in gold leaf. At the south end of the HALL is a stage, behind which the elaborately carved white cedar casing once housed a 1060 pipe concert organ. The HALL was nearly sound-proof and considered acoustically perfect.</p> <p>PRESENT CONDITION: On November 6, 1969 the structure was relocated to a park site. Its original N-S orientation is now W-E. The structure has suffered fire, water and vandal damage. "... damage due to fire occurred in the roof area (foyer) in 1937 and in the south wall, roof and ceiling on Jan. 4, 1969."³ The organ has been removed for repair. "The structural condition of the relocated building has been analyzed by a California State-licensed civil engineer. Complete rehabilitation plans and specifications have been prepared. The building now rests upon a new foundation and new floor substructure."⁴</p>						

SEE INSTRUCTIONS

*Original Location Orientation

6. SIGNIFICANCE

PERIOD (Check One or More as Appropriate)

- ☐ Pre-Columbian ☐ 16th Century 18th Century ☐ 20th Century
☐ 15th Century ☐ 17th Century ☒ 19th Century

SPECIFIC DATE(S) (If Applicable and Known) 1898

AREAS OF SIGNIFICANCE (Check One or More as Appropriate)

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> Aboriginal | <input type="checkbox"/> Education | <input type="checkbox"/> Political | <input type="checkbox"/> Urban Planning |
| <input type="checkbox"/> Prehistoric | <input type="checkbox"/> Engineering | <input type="checkbox"/> Religion/Phi- | <input type="checkbox"/> Other (Specify) |
| <input checked="" type="checkbox"/> Historic | <input type="checkbox"/> Industry | losophy | |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Invention | <input type="checkbox"/> Science | |
| <input checked="" type="checkbox"/> Architecture | <input type="checkbox"/> Landscape | <input type="checkbox"/> Sculpture | |
| <input checked="" type="checkbox"/> Art | Architecture | <input type="checkbox"/> Social/Human- | |
| <input type="checkbox"/> Commerce | <input type="checkbox"/> Literature | itarian | |
| <input type="checkbox"/> Communications | <input type="checkbox"/> Military | <input checked="" type="checkbox"/> Theater | |
| <input type="checkbox"/> Conservation | <input checked="" type="checkbox"/> Music | <input type="checkbox"/> Transportation | |

STATEMENT OF SIGNIFICANCE

GRANGER MUSIC HALL was built by Ralph Granger who made a fortune from the "Last Chance" Silver Mine in Colorado in the 1890s. His new fortune enabled him to indulge his lifelong love of music in grand style.

The HALL was designed by IRVING JOHN GILL, famous Californian architect whose innovative simplicity of style is evident in the HALL's uncluttered natural beauty. Gill was an expert in acoustical design and the HALL is considered acoustically perfect. GRANGER MUSIC HALL is believed to be one of two privately owned music halls in the United States.*

A Seventy-Five Foot Mural of EUTERPE, GODDESS OF MUSIC, with her handmaiden and 15 cherubs adorns the auditorium ceiling. It was painted by a muralist from Chicago** who lay on his back on a scaffold to do the work. Rachel Granger Wegeforth, Ralph Granger's daughter, said he worked quickly finishing in a few weeks. This was fortunate as he was a guest in the Granger home during the entire time and had brought along his two pet St. Bernards.

A Murray Harris Concert Organ, one of the largest built at the time, having 1060 pipes filled the entire south wall.--Gracing the stage in front of the organ casing was a Knabe Concert Grand Piano with a twelve foot keyboard, one of two made. The foyer contained a fireproof safe which housed the famous Hawley Violin Collection purchased by Granger in 1896. The 12 violins comprised the best small collection in the world. Granger sold the collection in 1902.

World-Famous Performing Artists such as YSAYE, HAMBOURG, and FRIML appeared in the Hall. Granger paid full concert fees and often guaranteed artists fees for San Diego performances enabling residents to enjoy the finest musical entertainment. The Granger family provided financial assistance for the education of ROYAL BROWN, Well-Known San Diego Organist.

Although Granger moved to National City to "enjoy the fruits" of his hard work, he became a civic leader constructing a bank building (8th & National), and the first major structure in downtown San Diego, the Granger Block (5th & Broadway). He purchased the Merchants National Bank in San Diego and became its president. Eventually he sold his interests to Bank of America. He moved to San Diego in 1906 when fire destroyed his home in National City's Paradise Valley.

*See Attachment

**Believed to be Detlef Sammann

T A B L E O F C O N T E N T S

- I. NATIONAL REGISTER OF HISTORIC PLACES INVENTORY - NOMINATION FORM
- II. EXHIBITS
- A. *Music Hall in the Country*
- B. *Sleeping Beauty of Paradise Valley*
- C. *Partial List of Artists Who Appeared in the Hall*
- D. *A Silver Baron Who Built a House of Golden Music*
- E. *Ralph Granger, "My Story"*
- III. BIBLIOGRAPHY, FOOTNOTES & ACKNOWLEDGEMENTS
- IV. NATIONAL REGISTER OF HISTORIC PLACES - PROPERTY MAP FORM
- Attachment: *National City Quadrangle*
- V. NATIONAL REGISTER OF HISTORIC PLACES - PROPERTY PHOTOGRAPH FORM
- Attachments: *Exterior GRANGER MUSIC HALL w/duplicate*
- Interior GRANGER MUSIC HALL*
- Organ Casing w/duplicate*
- Foyer w/duplicate*
- Mural Detail w/duplicate*
- Musicians Who Appeared in the Hall w/duplicate*

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Type all entries -- complete applicable sections)

STATE: CALIFORNIA	
COUNTY: SAN DIEGO	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

1. NAME

COMMON: GRANGER HALL
AND/OR HISTORIC: GRANGER MUSIC HALL

2. LOCATION

STREET AND NUMBER: PRESENT: 1700 EAST 4TH ORIGINAL: 2600 EAST 8TH			
CITY OR TOWN: NATIONAL CITY			
STATE: CALIFORNIA	CODE: 06	COUNTY: SAN DIEGO	CODE: 073

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP	STATUS	ACCESSIBLE TO THE PUBLIC
<input type="checkbox"/> District <input type="checkbox"/> Site <input type="checkbox"/> Object	<input checked="" type="checkbox"/> Building <input type="checkbox"/> Structure <input type="checkbox"/> Both	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Both	Public Acquisition: <input type="checkbox"/> In Process <input checked="" type="checkbox"/> Being Considered
		<input type="checkbox"/> Occupied <input checked="" type="checkbox"/> Unoccupied <input type="checkbox"/> Preservation work in progress	Yes: <input type="checkbox"/> Restricted <input checked="" type="checkbox"/> Unrestricted <input type="checkbox"/> No
PRESENT USE (Check One or More as Appropriate)			
<input type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Educational <input checked="" type="checkbox"/> Entertainment	<input type="checkbox"/> Government <input type="checkbox"/> Industrial <input type="checkbox"/> Military <input type="checkbox"/> Museum	<input type="checkbox"/> Park <input type="checkbox"/> Private Residence <input type="checkbox"/> Religious <input type="checkbox"/> Scientific	<input type="checkbox"/> Transportation <input checked="" type="checkbox"/> Other (Specify) COMMUNITY CENTER
<input checked="" type="checkbox"/> Comments AFTER RESTORA- TION			

4. OWNER OF PROPERTY

OWNER'S NAME: SOUTH BAY HISTORICAL SOCIETY		
STREET AND NUMBER: c/o 1243 NATIONAL AVENUE		
CITY OR TOWN: NATIONAL CITY	STATE: CALIFORNIA	CODE: 06

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: OFFICE OF THE COUNTY RECORDER, SAN DIEGO COUNTY		
STREET AND NUMBER: 220 WEST BROADWAY (COUNTY OPERATIONS BUILDING)		
CITY OR TOWN: SAN DIEGO	STATE: CALIFORNIA	CODE: 06

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: NATIONAL CITY GENERAL PLAN 1965			
DATE OF SURVEY: 1965 <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> County <input checked="" type="checkbox"/> Local			
DEPOSITORY FOR SURVEY RECORDS: NATIONAL CITY CIVIC CENTER			
STREET AND NUMBER: 1243 NATIONAL AVENUE			
CITY OR TOWN: NATIONAL CITY	STATE: CALIFORNIA	CODE: 06	

SEE INSTRUCTIONS

STATE:

COUNTY:

ENTRY NUMBER

DATE

FOR NPS USE ONLY

RICHARD C. SIMONTON

May 7, 1973

Miss Cheri Lynn Hoffman,
Junior Planner
City of National City
1243 National Avenue
National City, California 92050

PLANNING DEPT.
RECEIVED

MAY 8 1973

NATIONAL CITY, CALIF.

Dear Miss Hoffman:

Yours of April 25 was on my desk when I came home from a recent trip and I'm delighted to know that the Granger Music Hall is to be preserved and hopefully recognized as an historical landmark. I called my good friend, Lester Wegeforth and he has given me recent news about the Hall and that it has been transported to a new location. I'm glad to know your city realizes the importance of the Granger Music Hall and I personally have had several delightful evenings listening to the organ.

To set the record straight, I was Founding President of the American Theatre Organ Society in 1954 and the charter meeting was in our home. We now have 6,000 national members and we are dedicated to preserving the theatre organ as an art form. We are a very dynamic group for the good purpose intended and we are not necessarily limited to the Mighty Wurlitzer as part of the silent film era.

In talking to Mr. Wegeforth several years ago, we had mentioned that there were only two privately owned music halls in the United States, yours in National City and the Hammond Castle in Gloucester, Massachusetts. The late Jack Hammond was a close personal friend but both Mr. and Mrs. Hammond are deceased and under the terms of the Will, the home was given to the Catholic Church (see the enclosed.) The managing director of the Hammond Museum is Mrs. Corinne Witham, also a close friend, and I'm sure she could be helpful if you wish to make contact.

My major interest these days is the Harold Lloyd Foundation and Mr. Lloyd died two years ago and under the terms of his Will, he had named me a Trustee and so the five of us have made great progress and we will have the Harold Lloyd Estate open to the public as of May 25 for guided tours. He had given us this fantastic mansion, 16½ acres in Beverly Hills, complete with all of the original negatives for his famous films, his Oscar, his Rolls-Royces including all the furnishings in the mansion, just the way he walked out of it. We are now in the process of having the National Register of Historical Places recognized as a landmark and Mr. James Biddle has been very helpful.

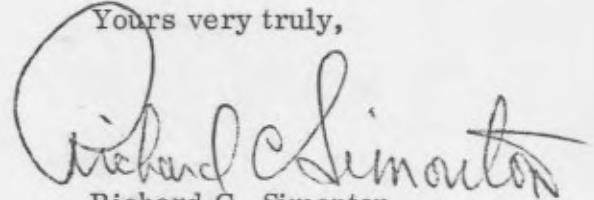
6900 SANTA MONICA BOULEVARD • LOS ANGELES, CALIFORNIA 90038 • (213) 465-7177

We have not asked to be recognized as a landmark yet, but we will be asking for that probably next year when all of the legal problems are resolved.

If you need any further information about the National Register, I can give you further information and Mr. Biddle and his group are very dedicated and they can tell you whether or not you could qualify for Federal funds.

Meantime, thank you for the information about the Granger Music Hall, and I hope it shall be restored and the organ again playable.

Yours very truly,


Richard C. Simonton

RCS:sc



RICHARD C. SIMONTON, Trustee

P.O. Box 470 ☆ Beverly Hills, CA 90210 ☆ (213) 276-6672
Greenacres Estate ☆ 1225 Benedict Canyon Road

9. MAJOR BIBLIOGRAPHICAL REFERENCES

See Section III

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY				O R	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES				
CORNER	LATITUDE				LONGITUDE				
	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds		
NW	°	'	"	°	'	"	°	'	"
NE	°	'	"	°	'	"	°	'	"
SE	°	'	"	°	'	"	°	'	"
SW	°	'	"	°	'	"	°	'	"

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 100x300 lot

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE

PRESENT
ORIGINAL

SEE INSTRUCTIONS

11. FORM PREPARED BY

NAME AND TITLE: CHERI LYNN HOFFMAN JUNIOR PLANNER		DATE: APRIL 1973
ORGANIZATION: NATIONAL CITY PLANNING DEPARTMENT		
STREET AND NUMBER: 1243 NATIONAL AVENUE		
CITY OR TOWN: NATIONAL CITY	STATE: CALIFORNIA	CODE: 06

12. STATE LIAISON OFFICER CERTIFICATION

NATIONAL REGISTER VERIFICATION

As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:

National ☐ State ☐ Local ☐

Name _____

Title _____

Date _____

I hereby certify that this property is included in the National Register.

Chief, Office of Archeology and Historic Preservation

Date _____

ATTEST: _____

Keeper of The National Register

Date _____



INTERIOR VIEW GRANGER MUSIC HALL - 2600 - E - 8th STREET, NATIONAL CITY, CALIF. PICTURE
 TAKEN JUST AFTER BUILDING WAS COMPLETED ABOUT 1898 - THE FRESCO IS PAINTED ON CANVAS
 BUILDING STILL ON ORIGINAL SITE - COURTESY LESTER WEBERFORTH





INTERIOR GRANGER MUSIC HALL - 2600 - E - 8th ST. NATIONAL CITY - ABOUT - 1898
AT THIS DATE THIS WAS THE LARGEST INDOOR PIPE ORGAN - IN SOUTHERN
CALIFORNIA



Page 1 of 4

*Resource Name or # (Assigned by recorder) National City Santa Fe Depot

*Recorded by T. Yates

*Date October 1, 2018

☐ Continuation ☒ Update

P1. Other Identifier: Station and General Office, California Southern Railroad, National City; California Southern Railroad Station, National City

P2e. Other Locational Data:

Address: 900 W. 23rd Street, National City, CA 91950

APN: 554-050-11-00

*P3a. Description:

The subject two-story railroad depot building faces east toward the intersection of Harrison Avenue and W. 23rd Street. The building fronts the alignment of the 1880s California Southern Railroad—later the Atchison, Topeka, and Santa Fe Railway (Santa Fe)—the development of which occasioned the building's construction in 1882. The Italianate-style rectangular-shaped building has a low-pitched hipped roof with shallow boxed eaves featuring paired molded brackets. The roof has a center and asphalt shingles. Brick chimneys pierce the southern and northern portions of the roof. Molded horizontal string courses and vertical corner courses accent the exterior shiplap cladding.

The east elevation, which now functions as the front elevation, is accessed at a warehouse entry with a restored sliding wood door and a shaped pediment featuring a rosette. Tall, narrow, wood-framed double-hung sash windows punctuate the east elevation, six across the second floor and two at the north portion of the first floor. These and other windows feature wood surrounds capped by pediments with rosettes. Two of the same types of windows are situated at the second story of the south elevation above two smaller first-story windows. The north elevation has a pair of adjacent entries with original wood frames, three-light transoms, and non-original four-panel wood doors, as well as six windows matching the larger windows on other elevations—two at the west portion of the first floor and four across the second floor. The west elevation could not be accessed during the field survey. Bird's-eye aerial views and views from substantial distance during the survey indicate that its second story has seven windows matching the larger windows at other elevations. The southernmost of these has been restored to replace a non-original entry since the building was listed on the National Register of Historic Places (NRHP). The first story has three of these windows and several entries: a northerly entry matching the entries at the north elevation; a wider central entry with a two-leaf door and a pediment-capped five-light transom; and a larger southerly warehouse door matching the sliding warehouse door at the east elevation.

*P3b. Resource Attributes: HP17. Railroad Depot

*P8. Recorded by: Timothy Yates

*P9. Date Recorded: October 3, 2018

*P11. Report Citation: ICF. 2019. *Cultural Resources Inventory and Evaluation Report for the National City Bayfront Projects and Plan Amendments, National City, California*. Prepared for the San Diego Unified Port District.

*B10. Significance:

Known popularly as the National City Santa Fe Depot, the subject building was listed in the NRHP on April 18, 1996, as the "Station and General Office, California Southern Railroad." The building has significance under Criterion A, as the West Coast terminus of the Santa Fe's transcontinental railroad, and as the last surviving West Coast terminus station of the five major railroads in the West. As an excellent example of the Italianate style, and the last example of a commercial building embodying the style in San Diego's South Bay region, the building also meets Criterion C. The period of significance is 1882–1889. The building is automatically listed on the California Register of Historical Resources by virtue of its listing in the NRHP.

*B14. Evaluator: Timothy Yates, ICF
525 B Street, Suite 1700
San Diego, CA 92101

*Date of Evaluation: 10/15/2018

Update: Two professionally qualified architectural historians surveyed the exterior and interior the building on October 1, 2018. Several of the building's windows and entries have been restored since it was listed in the NRHP in 1996. The building is in good condition and has a high degree of historical integrity. It continues to convey its significance under NRHP



Page **3** of **4**

*Recorded by Timothy Yates

*Resource Name or # (Assigned by recorder) National City Santa Fe Depot

*Date October 1, 2018

☐ Continuation ☒ Update

Criteria A and C. The depot building has a California Historical Resources Status Code of "1S- individual property listed in the NR by the Keeper. Listed in the CR." The resource is also California Registered Historical Landmark No. 1023, "National City Depot, Transcontinental Railroad." The building qualifies as a historical resource for the purposes of the California Environmental Quality Act (CEQA).

Photographs:



Photograph 1. Primary (east) and south elevations of National City Santa Fe Depot, camera facing west-northwest.

Page 4 of 4

*Recorded by Timothy Yates

*Resource Name or # (Assigned by recorder) National City Santa Fe Depot

*Date October 1, 2018

☐ Continuation ☒ Update



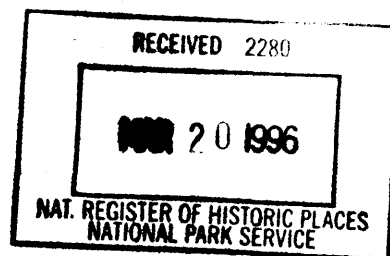
Photograph 2. Primary and north elevations, camera facing west-southwest.



Photograph 3. Bird's eye aerial view of west elevation. Bing Maps.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM



This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Station and General Office, California Southern Railroad, National City

other names/site number California Southern Railroad Station, National City

National City Santa Fe Depot

2. Location

street & number 900 (922) West 23rd Street

N/A

☐ not for publication

city or town National City

NA

☐ vicinity

state California code CA county San Diego

code 073

zip code 91950

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register Criteria. I recommend that this property be considered significant ☐ nationally ☒ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

[Signature]
Signature of certifying official/Title

State Historic Preservation Officer

State or Federal agency and bureau

3/12/96
Date

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

☒ entered in the National Register
☐ See continuation sheet.

☐ determined eligible for the National Register
☐ See continuation sheet.

☐ determined not eligible for the National Register.

☐ removed from the National Register

☐ other (explain): _____

[Signature]
Signature of the Keeper

Date of Action

Entered in the
National Register

4-13-96

5. Classification

Ownership of Property
(Check as many boxes as apply)

☐ private
☒ public-local
☐ public-State
☐ public-Federal

Category of Property
(Check only one box)

☒ building(s)
☐ district
☐ site
☐ structure
☐ object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1	1	buildings
0	0	sites
0	2	structures
0	0	objects
1	3	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

TRANSPORTATION: Rail Related

Current Functions
(Enter categories from instructions)

Vacant

7. Description

Architectural Classification
(Enter categories from instructions)

ITALIANATE

Materials
(Enter categories from instructions)

foundation CONCRETE

roof ASPHALT

walls WOOD, STUCCO

other BRICK:Chimneys

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- ☒ A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ B Property is associated with the lives of persons significant in our past.
- ☒ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☐ D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "X" in all the boxes that apply.)

- ☐ A owned by a religious institution or used for religious purposes.
- ☐ B removed from its original location.
- ☐ C a birthplace or a grave.
- ☐ D a cemetery.
- ☐ E a reconstructed building, object, or structure.
- ☐ F a commemorative property.
- ☐ G less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested.
- ☐ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey #_____
- ☐ recorded by Historic American Engineering Record #_____

Areas of Significance

(Enter categories from instructions)

TRANSPORTATION

ARCHITECTURE

Period of Significance

1882 - 1889

Significant Dates

1882

1889

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Contractor: Stratton, W.A.
S.F.R.R.

Primary location of additional data:

- ☒ State Historic Preservation Office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☐ Other

10. Geographical Data

Acreage of Property 1.3 ACRES

UTM References

(Place additional UTM references on a continuation sheet)

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☐ See continuation sheet.

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Bruce Coons/Dolores Mellon/Historians

organization Architect Milford Wayne Donaldson, FAIA, Inc.

date 27 October 1995

street & number 530 Sixth Avenue

telephone (619) 239-7888

city or town San Diego

state CA zip code 92101

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name Community Development Commission for the City of National City

street & number 140 E. 12th Street, Suite B

telephone (619) 336-4250

city or town National City

state CA zip code 91950-3312

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

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Station and General Office, California Southern Railroad
National City, San Diego County, California

7. NARRATIVE DESCRIPTION

The Station and General Office, California Southern Railroad (Station) located at 900 W. 23rd Street in National City is a two-story wood building, measuring sixty-four feet by thirty-six feet. Rectangular in shape, the Italianate style building was constructed in 1882 to serve as a combination passenger station, freight depot, and headquarters of the Santa Fe Railroad on the West Coast. Although the building has undergone some alterations over the years, it remains fairly well-maintained. Typical of the Italianate style is the Station's low-pitched flat topped hip roof with widely overhanging eaves and decorative brackets; tall, narrow windows; double doors and a molded string course. (See Photo #1) The Station's original wood foundation and exterior wood platforms have been removed. As originally sited, the Station's west facade opened to the platform area which provided access and egress to trains located on the adjacent railroad tracks. A center for the shipment of freight, over time the area surrounding the Station would be covered by a criss-cross of tracks, repair shops, car construction shops, round-houses and creosoting works for the preparation of railroad ties used in constructing the western portion of the Santa Fe route. (For a map of the rail yards, c. 1885, see page 7:16) All that remains of the vast Santa Fe operations in National City is the Station, and the remnants of a set of tracks which run parallel to the building's west facade. The remainder of the 1.3 acres which comprise the proposed National Register property is now covered by asphalt paving, and includes three non-contributing resources. The property is bounded by the tracks of the Atchison, Topeka and Santa Fe Railroad on the west, 24th Street on the south, Harrison Avenue to the east and an adjacent property along the north. Although marred by recent additions, the building manages to retain its historic integrity through the maintenance of original exterior and interior elements. The Station's historical feeling and association remains, as the building is sited in its original location, adjacent to the Santa Fe rail line. (Compare Historic Photo #1-4 and current photos #5-7) Recent alterations included a c. 1950s box car along the west facade, a small, single-story building along the north facade with a false water tower on its roof, and a second vintage box car. The single-story building, and vintage box cars are non-contributing resources.

There are very few changes to the Station externally for the recommended period of significance 1882-1889. The greatest impact to the Station's original fabric was the addition of the two small windows on the east side (c. 1930's), the wood platform and floors were removed and replaced with concrete (date unknown), and two door openings and one window opening were modified (1970's). Several changes occurred within the interior of the building.

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Station and General Office, California Southern Railroad
National City, San Diego County, California

Exterior:

The Station's west facade abuts the railroad tracks. (See Photo #7) As originally constructed, the northern-most door on the west facade led to the passenger's waiting room. The original door had four panels. The original glass transom has been replaced by wood. (See Photo #9) Moving south along the first floor's west facade, two tall, narrow windows, double-hung and eight-paned, separate the passengers' entrance from a double door, which has now been filled in with brick and glass, to allow the addition of a box car along the west side. The 1950s vintage box car is single-story in height and constructed of metal. It is one of three non-contributing structures included in this nomination. (See Photos #6 and 27) The 8'x9' wooden freight door located at the southwest corner has also been infilled to accommodate this addition. In its place is an opening which leads to the freight car that served as the restrooms when the building was a restaurant in the 1970's. (See Photo #10) All other windows and doors are finished with wood surrounds. Not all of the wood surrounds are original to the 1882 construction of the Station. Four windows have been modified to have replacement surrounds (date unknown). Rosettes add decoration to the shaped pediments above all windows and doors. (See Photos #11 and 12) The second story's west facade is a series of double-hung eight-paned windows also incorporating the same wood surrounds and shaped pediments with rosettes. A window has been removed on the second story to allow a door to be added as a fire exit in the 1970's. (See Photo #7)

The building's south facade has two original smaller double-hung six-pane windows on the first floor. The second story windows remain unchanged since 1882. An outside fire exit steel stairway was added at the south side of the building in the 1970's when the Station became a restaurant, and leads to a new doorway to the second story. The sign located on the south exterior is not original. (See Photo #8)

The east facade has also sustained some alterations. In the 1990's, the Station was modified for offices. During this time, the sliding wood freight door was removed. Subsequently the door was nailed on the outside of the old opening. (See Photos #5 & #13) Period photographs date the present entry door and two small windows at the north east corner to pre-1940's. Another small window was added to the south of the freight door in the 1990's. The remaining windows have experienced some alteration to their pediments and decorative rosettes. The new wood paneling along the first floor's east facade is not original and was added in the 1990's. (See Photo #14) The second story fenestration appears unchanged.

The building's north facade has been altered. A small, single story building covers the first floor's two original doors. (See Photos #6 & 15) The doors have been removed, but the doorway openings remain. Some doorway openings have been infilled. (See Photos #16 & 17) The second floor windows remain unchanged. The single-story building is a modified square

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Station and General Office, California Southern Railroad
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shape, and covered in shiplap siding. Single-door openings are located along the addition's east and west facades. An opening along the north facade leads to the property's second vintage box car. Stairs lead from the box car to the flat roof of the addition. Atop the building is a false water tower, constructed of wood with a conical shaped roof. The false water tower was constructed in the 1970's on the addition's rooftop. The false water tower was added to provide an enclosure for the electrical panels of the restaurant. The small building, box cars and false water tower are non-contributing resources.

A molded string course runs along the Station's exterior between floor levels. The boxed cornice with widely overhanging eaves supported by decorative brackets, typical of Italianate architecture, remains. (See Photo #11) The building's original wood shingle roof fabric has been replaced by asphalt shingles. The roof is a flat topped hipped roof common in Italianate design. A spark arrestor was added to the south chimney in the late 1880's. The spark arrestor present on the north chimney appeared after 1956. (See Photo #7) New plumbing and electrical service were added in the 1970's. Fire sprinkler pipes are located on the exterior of the north, west and south walls.

Interior:

A large portion of original fabric remains in the interior. The original stairway is intact under the 1970's paneling. (See Photo #18) The baggage, waiting and freight rooms have been altered to accommodate office space, as has the ticket office, all located on the first floor. (See Photo #19) The railroad's original safe remains and is in excellent condition. (See Photo #20) The brick walls of the safe are original and built in 1882. (See Photo #21) The second floor, which once housed the station master and his family in nine rooms, has been altered greatly with new room partitions, the enclosure of original doorways, and the painting over, or covering with wood of most of the glass transoms. (See Photos #23 & 24) An original coal burning fireplace remains upstairs. (See Photo #22) When the depot was converted to a restaurant, a dumb-waiter was added to transport food from the first floor kitchen in the northeast portion of the building. (See Photo #25)

All original wainscoting has been removed, and the plaster which once covered the brick walls has been removed, exposing the original brick construction on the ground floor. (See Photos #20 & 21) A suspended T-bar acoustical ceiling now covers the original wood lath and plaster ceiling, carpeting covers the fir floors and some doors have been removed. Wood paneling and artificial brick veneer was added to some interior walls and stairways in the 1970's. (See Photos #18 & 26)

Other alterations in the 1970's for the restaurant include the addition of plumbing and air conditioning and the removal of interior countertops. The original paint is still extant beneath

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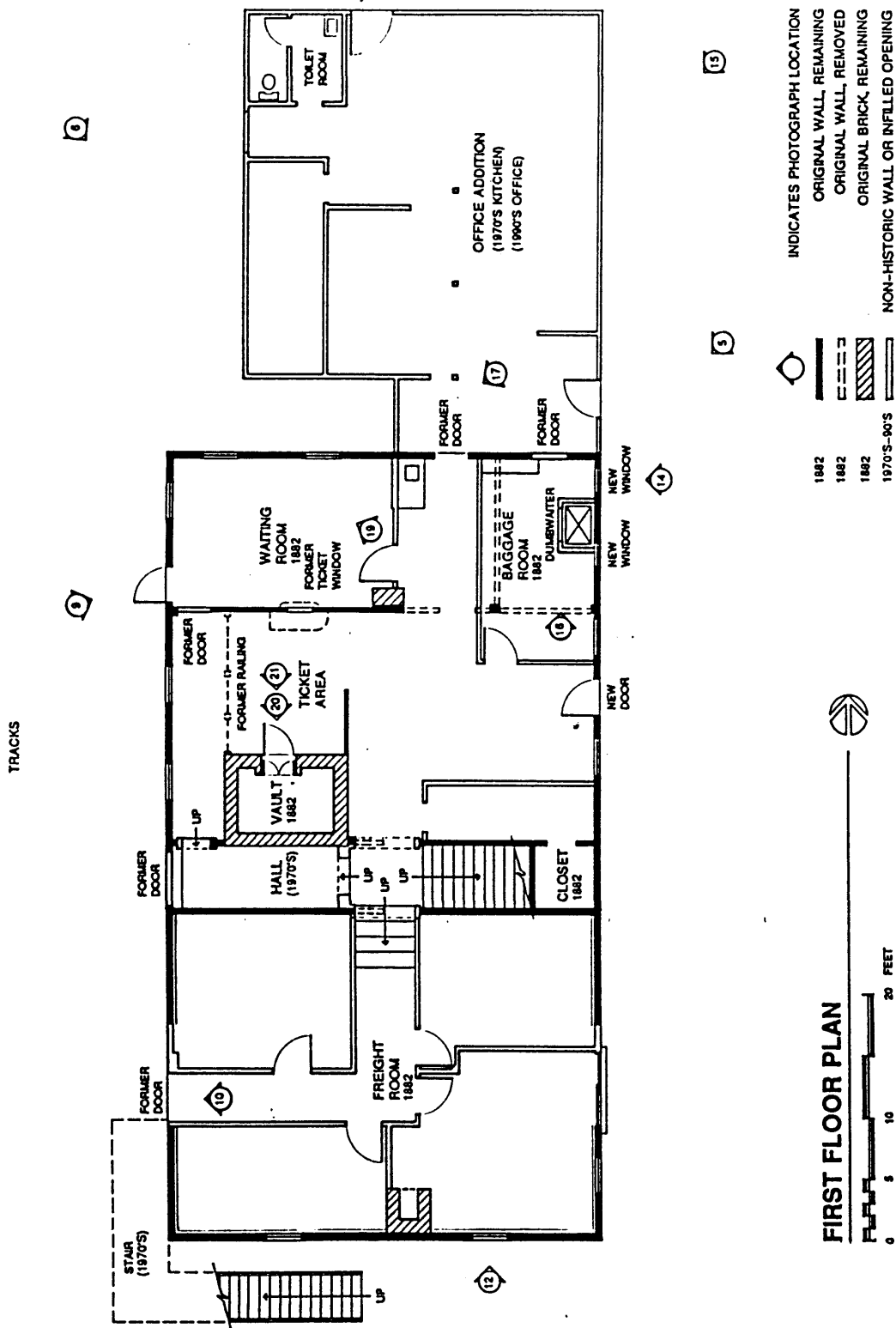
Station and General Office, California Southern Railroad
National City, San Diego County, California

more recent paint-overs. Although a more detailed study is recommended, it appears that the interior wood risers were first covered with a clear varnish and then a white chalk paint, possibly a primer, then a light brown/beige paint, a pinkish-red paint, a lighter brown paint and finally the application of a chocolate brown paint. The stairway banisters were first varnished and then covered in a very dark green paint which is found elsewhere in the interior. The banisters were later covered in white paint, then follows the color paint pattern found on the risers.

The original doors are four panel with redwood panels and sugar pine stiles. The original finish was varnish. The original wainscoting was alternating redwood and Douglas fir beaded tongue and groove with a varnish finish.

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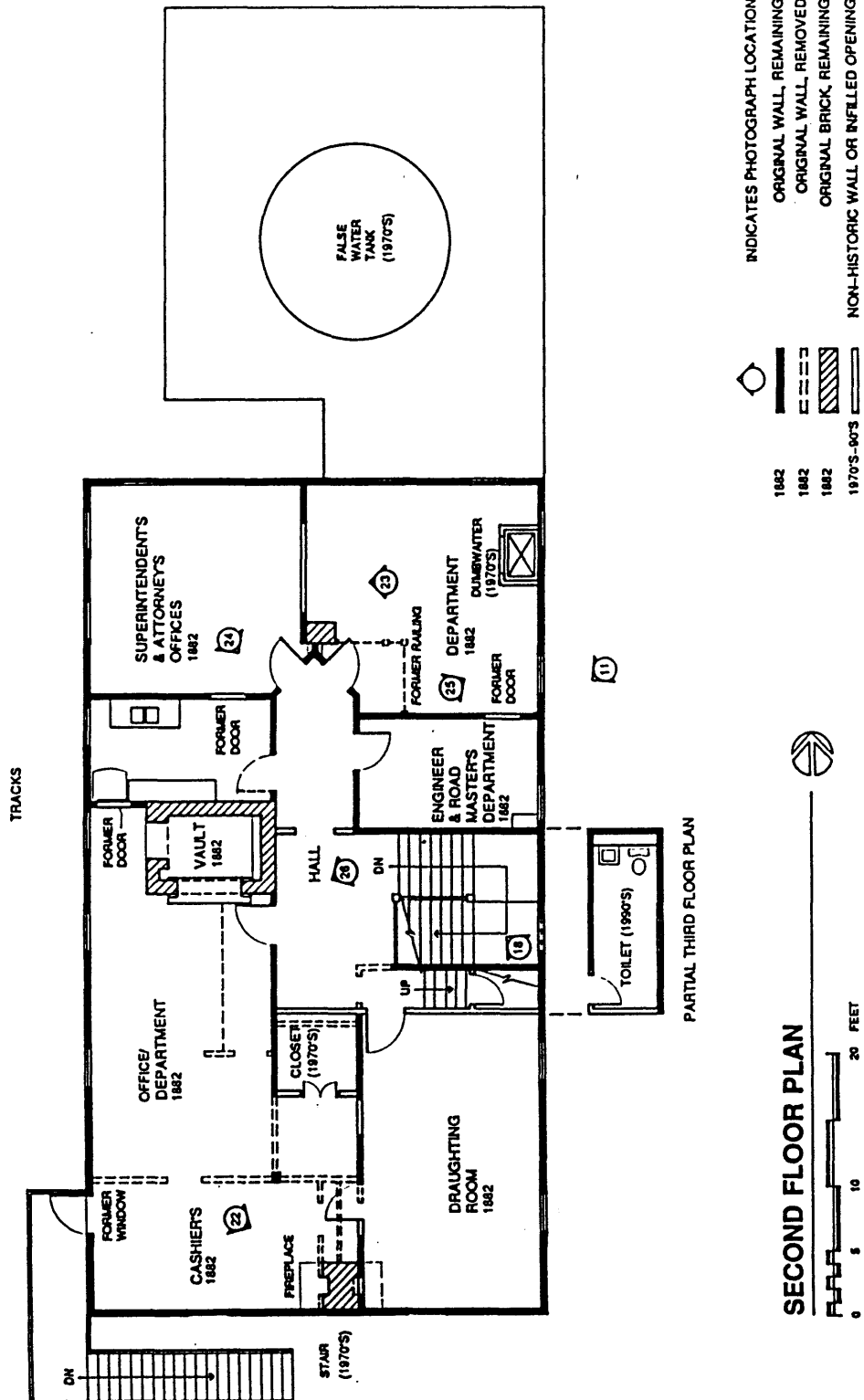
FIRST FLOOR PLAN

0 5 10 20 FEET

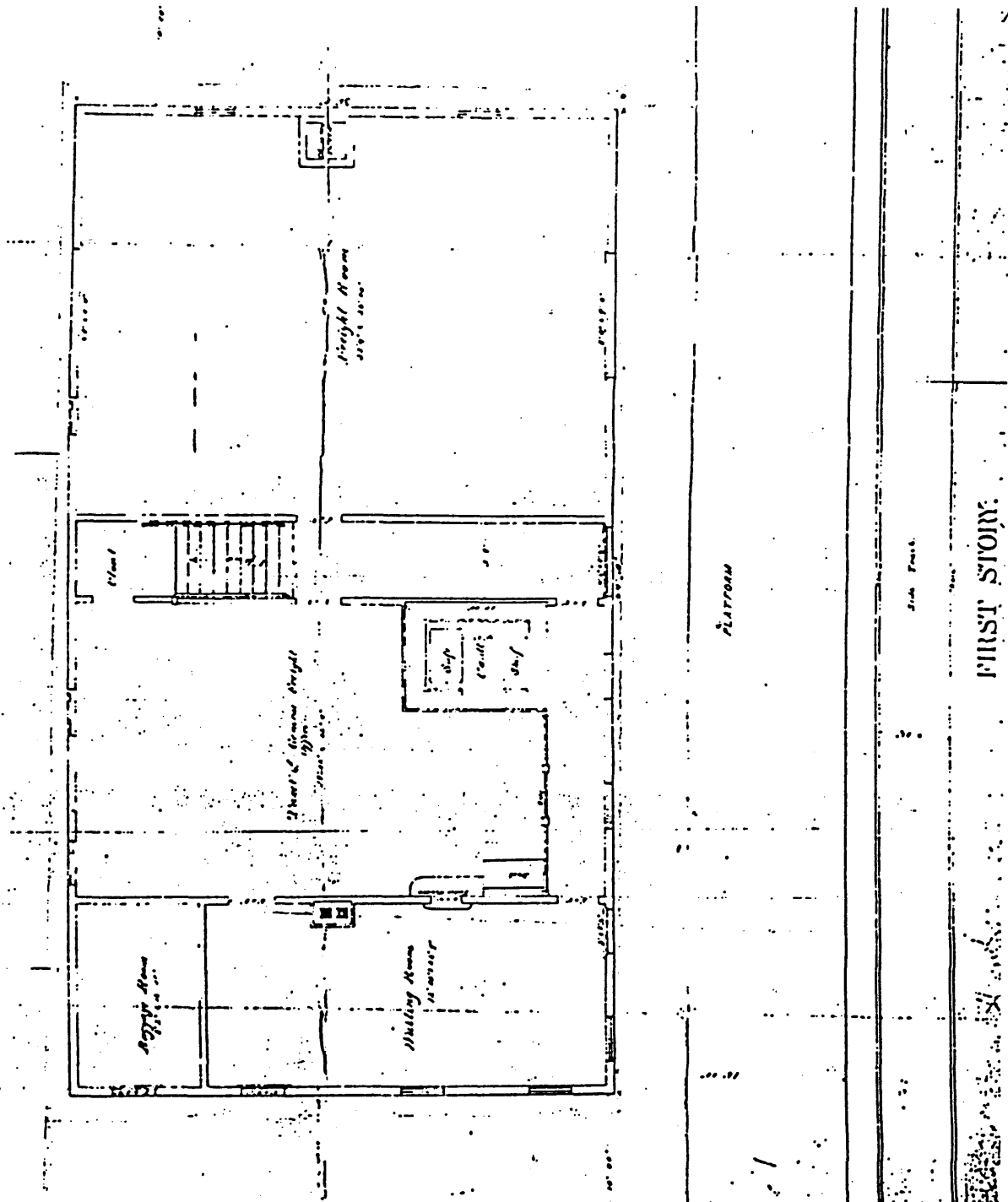
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National City, San Diego County, CaliforniaProposed First Story Plan (Original 1882)
Drafted by the Santa Fe Railroad

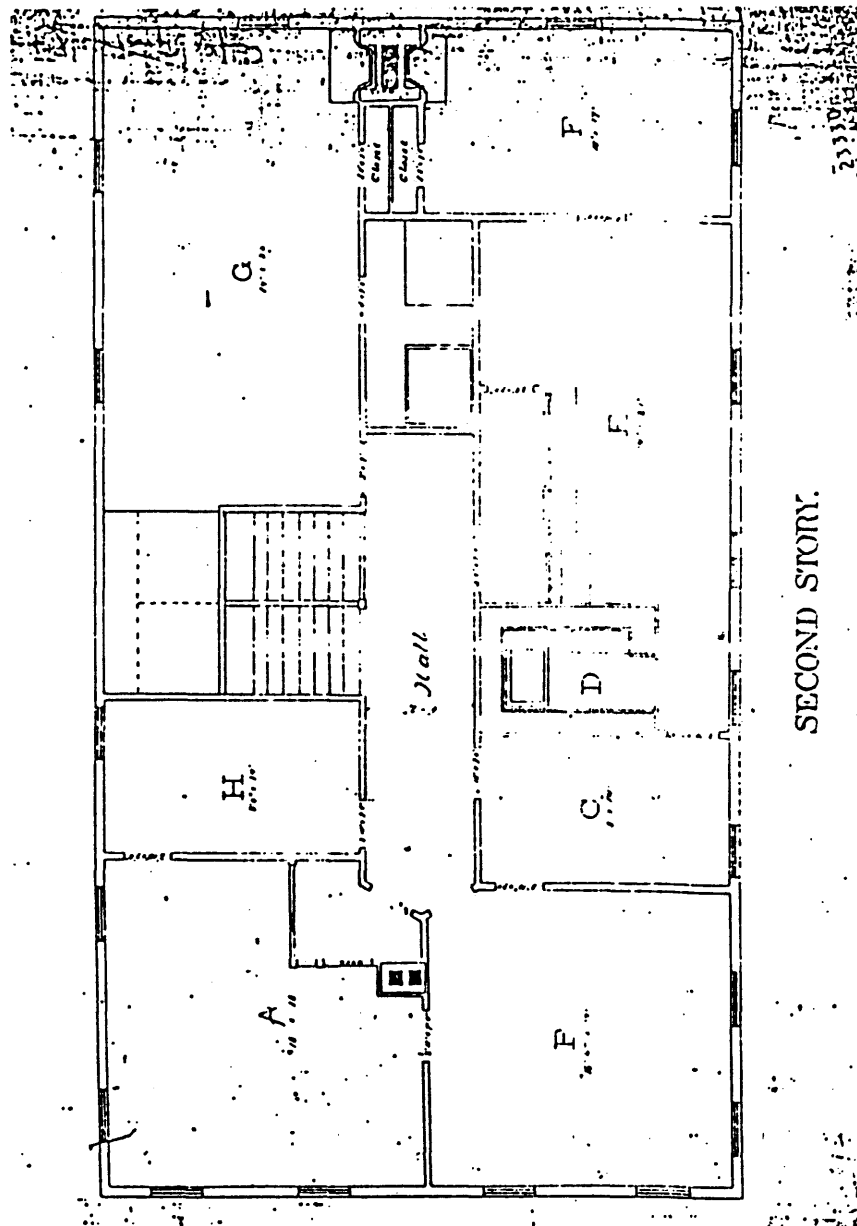
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Station and General Office, California Southern Railroad
National City, San Diego County, California



Proposed Second Story Plan (Original 1882)
Drafted by the Santa Fe Railroad
(This plan was built)

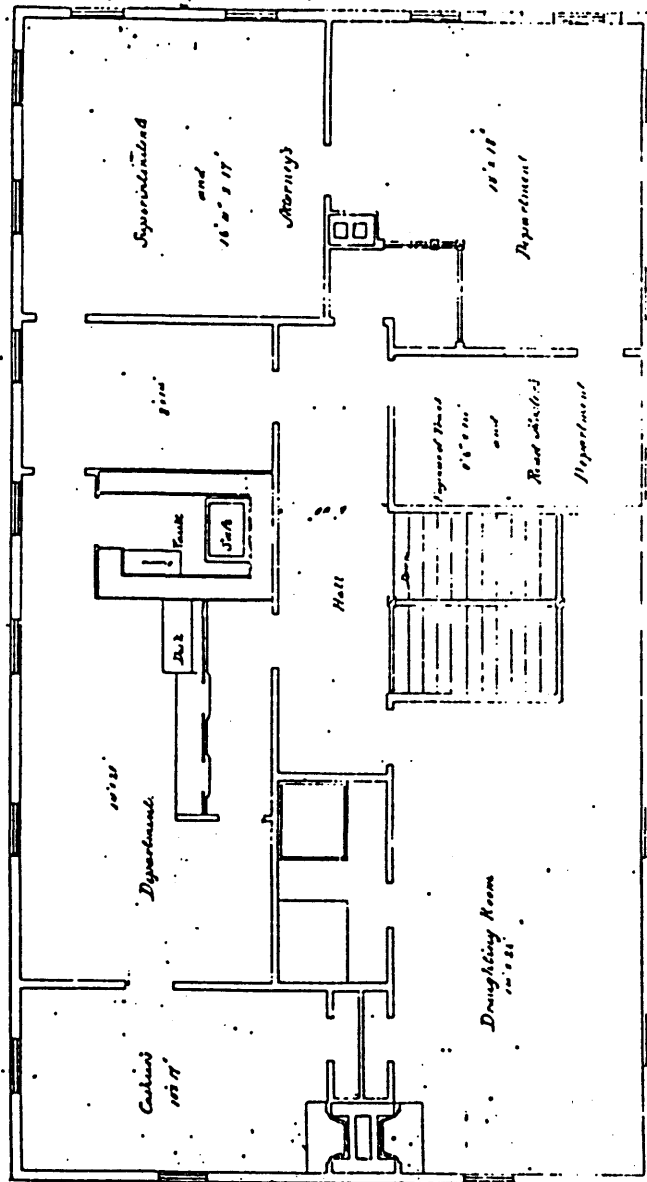
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Station and General Office, California Southern Railroad
National City, San Diego County, California



SECOND STORY

PROPOSED PLAN
STATION & GENERAL OFFICE
CALIFORNIA SOUTHERN RAILROAD
NATIONAL CITY
Scale 1/4" = 1'-0"
May 31, 1882

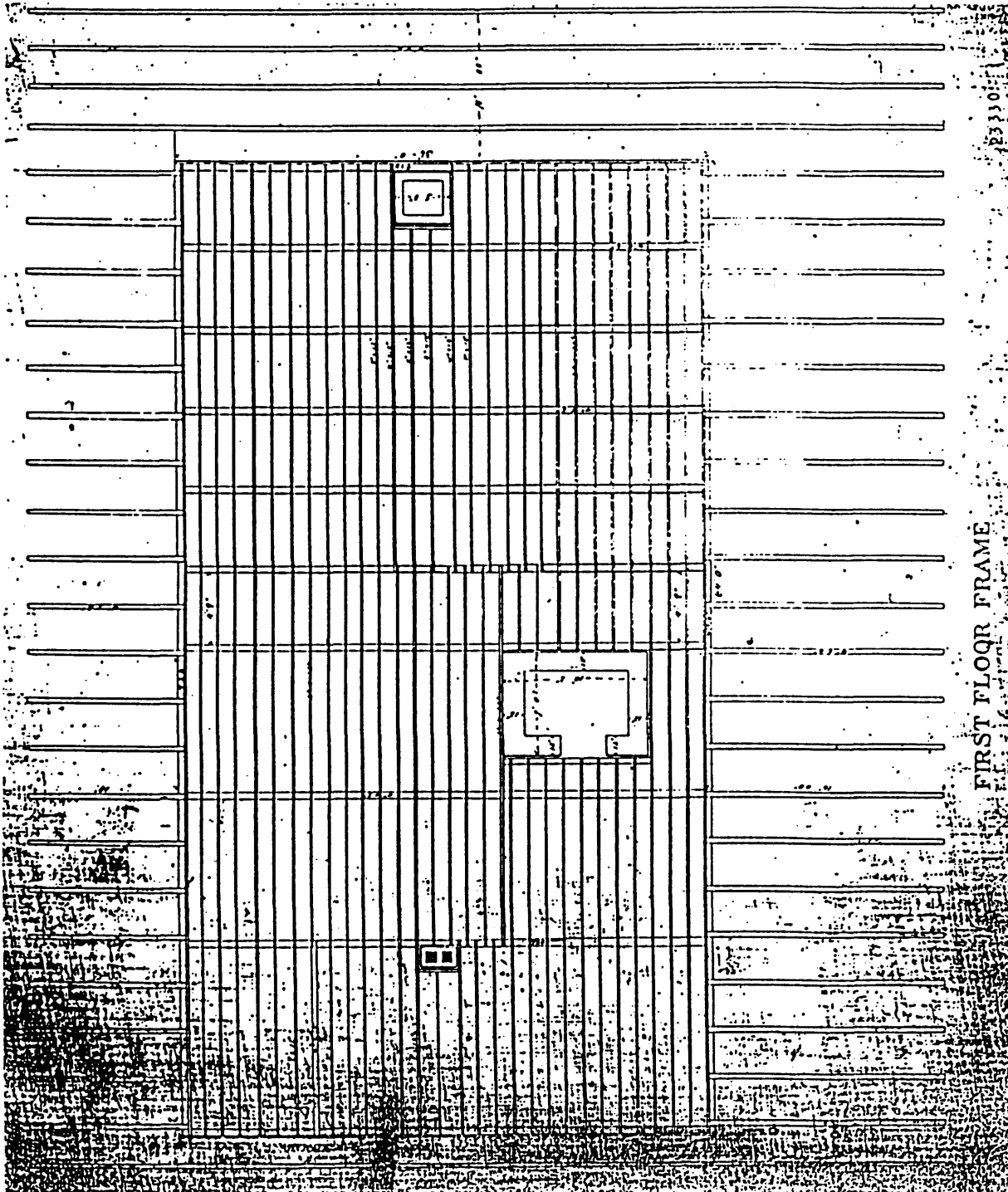
Proposed Second Story Plan (Original 1882)
Drafted by the Santa Fe Railroad
(This plan was not built)

(8-86)

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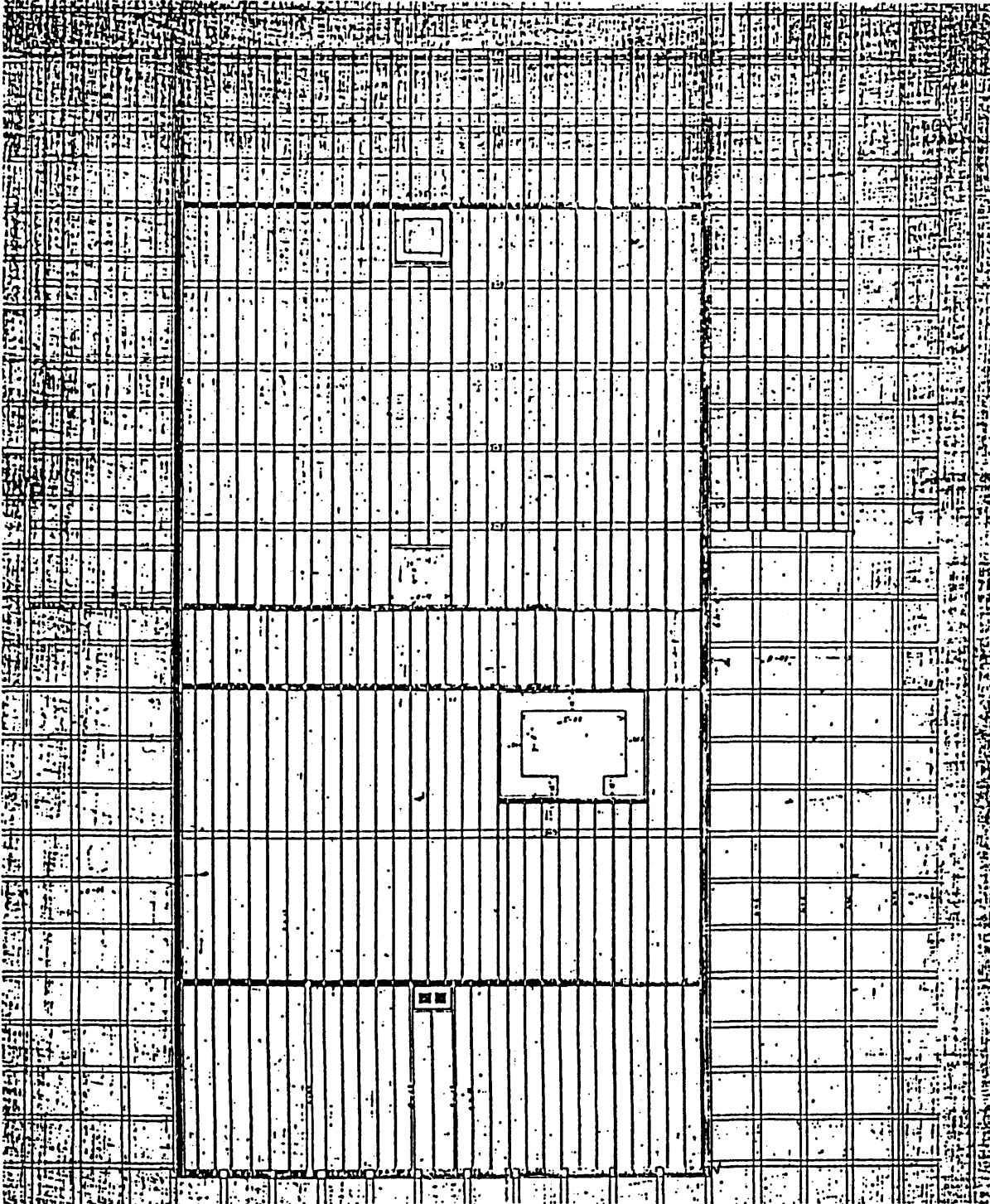
Section 7Page 10Station and General Office, California Southern Railroad
National City, San Diego County, California

Proposed First Floor Framing Plan (Original 1882)
Drafted by the Santa Fe Railroad

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Proposed First Floor Framing Plan (Original 1882)
Drafted by the Santa Fe Railroad
(This plan shows a more extensive platform framing plan)

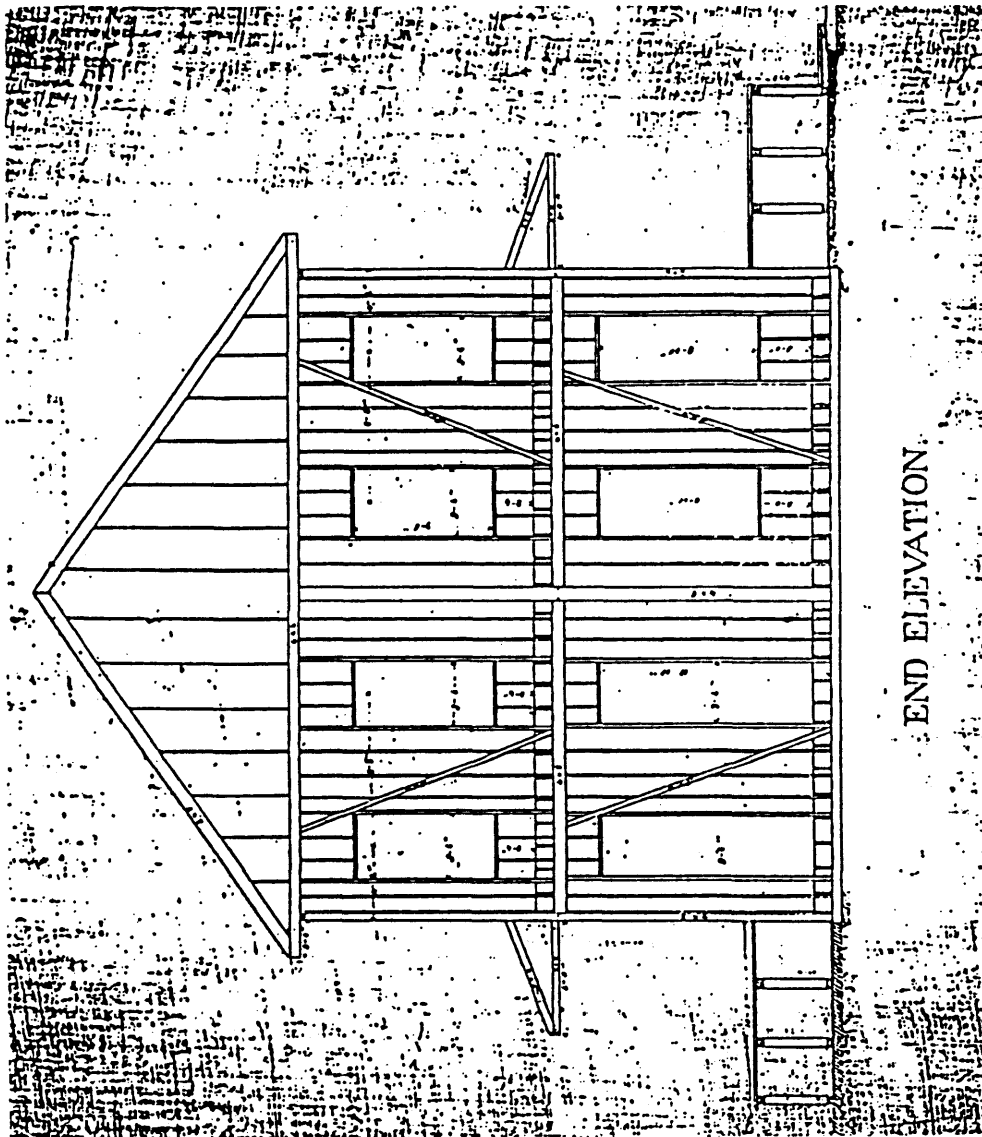
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Station and General Office, California Southern Railroad
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Proposed End (North) Elevation Framing (Original 1882)
Drafted by the Santa Fe Railroad

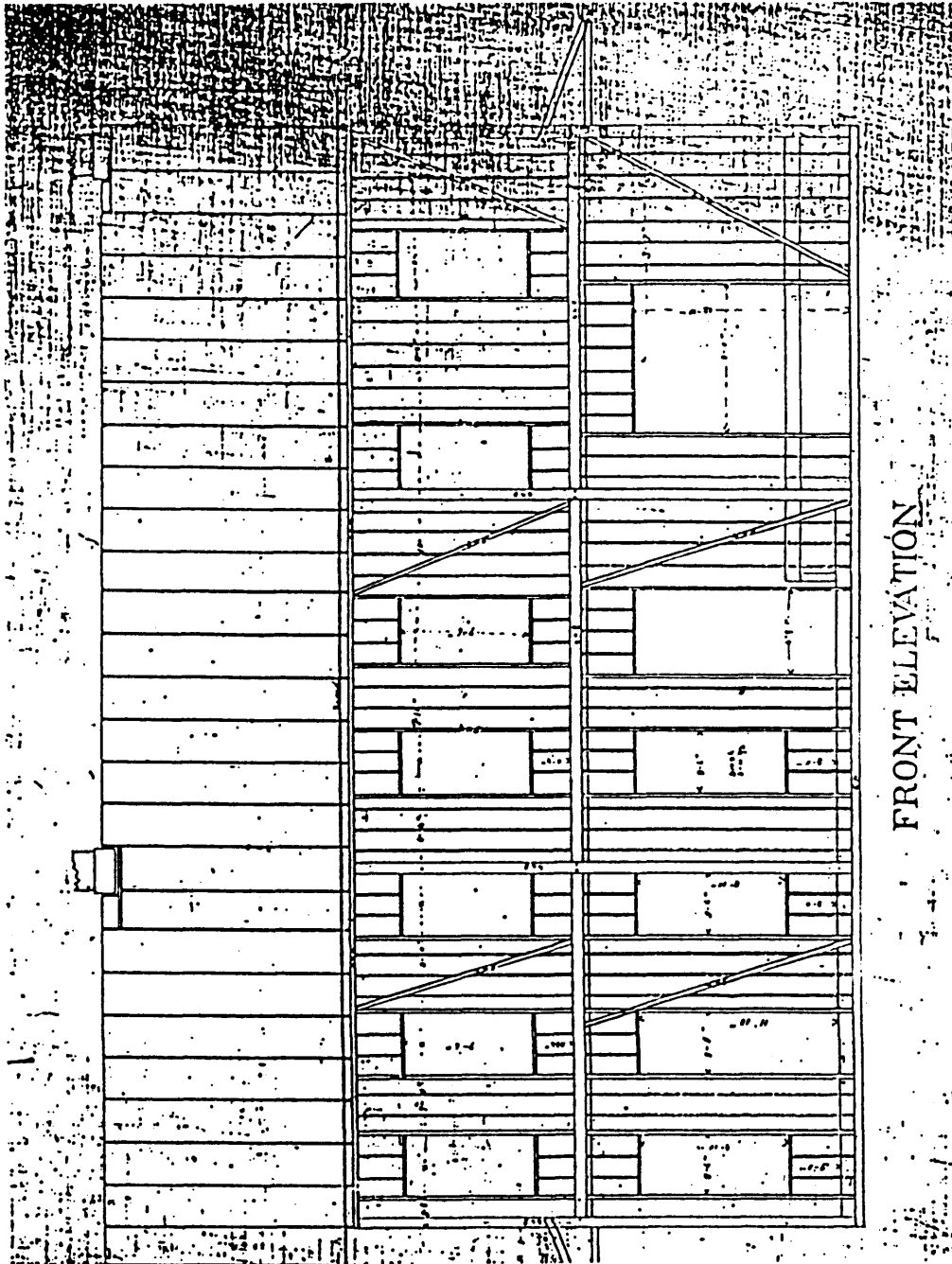
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Proposed Front (West) Elevation Framing (Original 1882)
Drafted by the Santa Fe Railroad

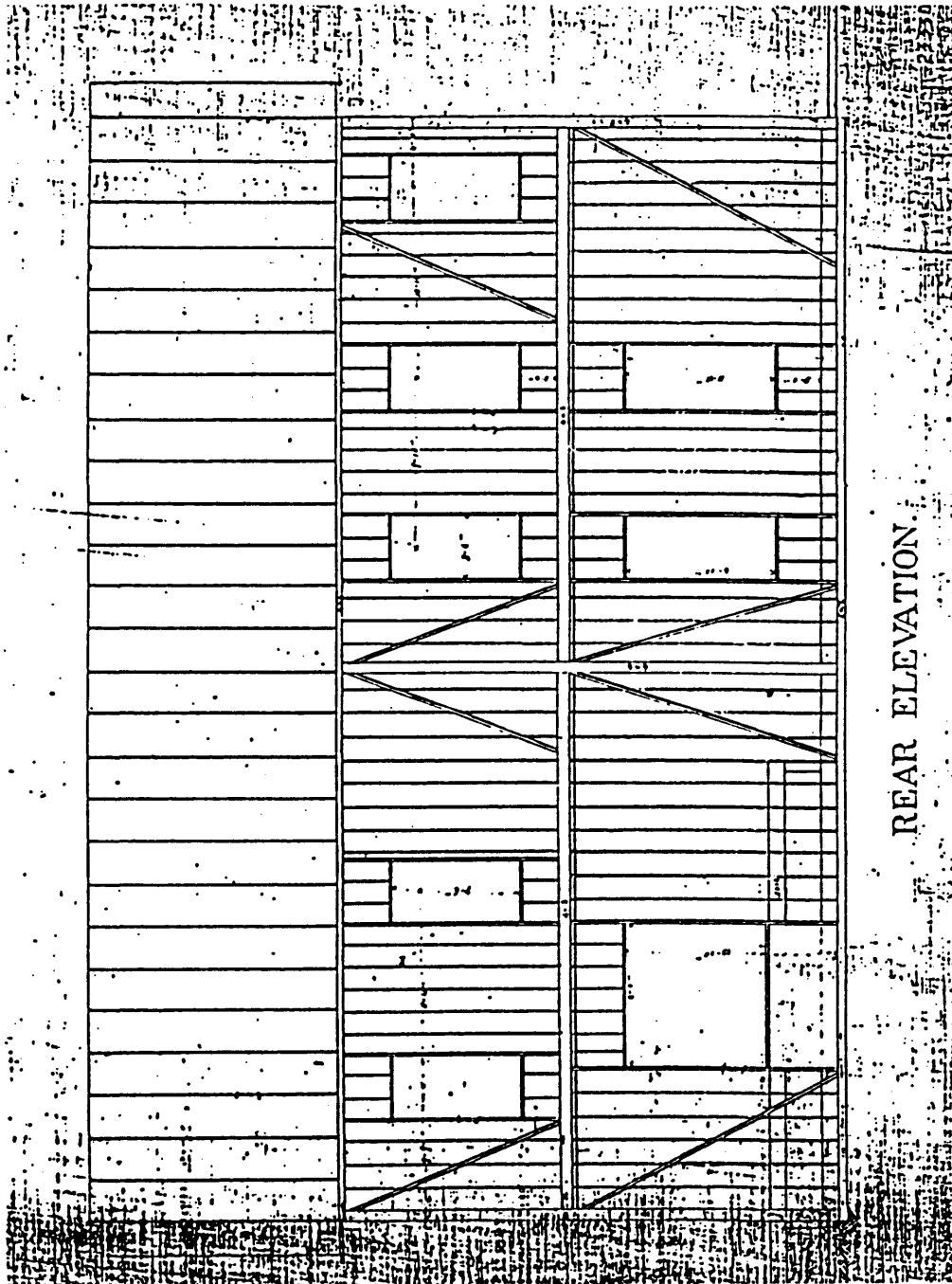
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REAR ELEVATION

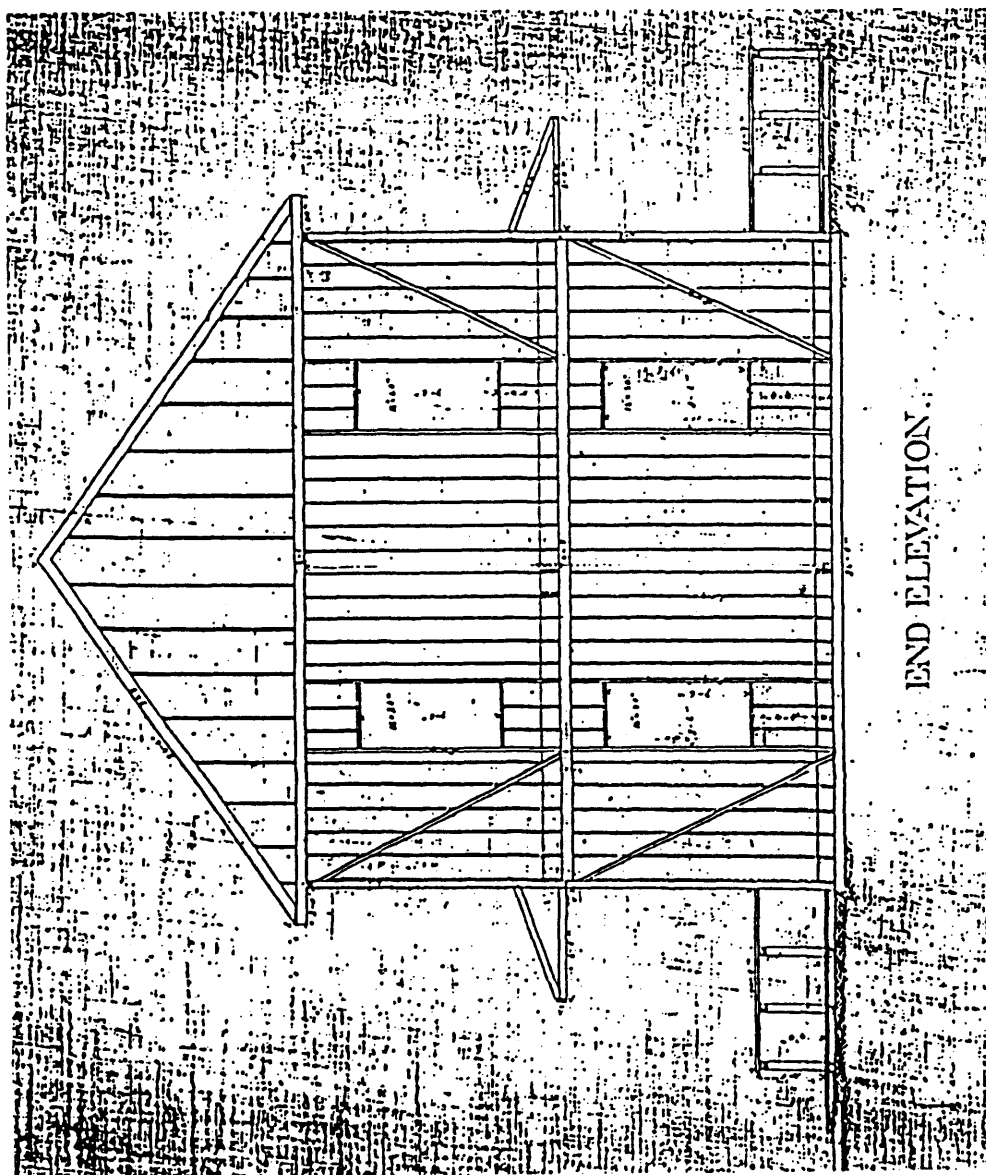
Proposed Rear (East) Elevation Framing (Original 1882)
Drafted by the Santa Fe Railroad

(8-86)

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National City, San Diego County, California

Proposed End (South) Elevation Framing (Original 1882)
Drafted by the Santa Fe Railroad

(8-86)

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machine Shops

Depot

Round House

Creosoting works

Terminal Grounds California Southern R.R.

S. Cal. R.R. Wharf

Y
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Station and General Office, California Southern Railroad
National City, San Diego County, California

8. STATEMENT OF SIGNIFICANCE

The Station and General Office, California Southern Railroad (Station) located at 900 W. 23rd Street in National City is a combination passenger station, freight depot, and general office building significant under Criterion A: Event. Built in 1882, the Station was constructed by the Santa Fe Railroad to serve as headquarters for the Santa Fe's West Coast operations to facilitate the shipment of passengers, goods, and materials from the East Coast to the West Coast and beyond. Construction of the western portion of the Santa Fe's transcontinental line was coordinated by the railroad's superintendent and other officers--all with offices within the building. With San Diego's natural harbor, second only to San Francisco in California at the time, the Santa Fe envisioned National City's Station as the hub of its West Coast transportation operations. The competition created by the completion of the West Coast's newest railroad sparked a price war, which encouraged emigration from the east to southern California in the mid-1880s. According to Ward McAfee, in California's Railroad Era: 1850-1911, "inexpensive tickets spelled increased immigration, which in turn encouraged a real estate boom in southern California and general prosperity in the state at large." The Station is also significant under Criterion C: Architecture, as a good example of the Italianate style of architecture, and the last surviving example of the style applied to a commercial structure in the south San Diego Bay Region.

CRITERION A: EVENT

Constructed as the headquarters of the Santa Fe's transcontinental line on the West Coast, the Station housed the railroad's general offices. The selling of tickets, receiving of goods and baggage, and a freight room were located on the first floor, while on the second floor were the offices of the superintendent, treasurer and other officers of the Santa Fe's West Coast operations. As the railroad was still under construction following the completion of the National City Station, officials located on the building's second floor supervised completion of Santa Fe's transcontinental line through the ordering and receipt of construction materials, the assignment of workers to complete the line, and the production of railroad essentials such as ties and cars. By June of 1883, the company's shops, now in full operation on the grounds, were producing new railroad cars for the line. Work in the company shops was also supervised from the Station building.

Santa Fe's first through transcontinental train to depart from California left the National City Station, its origination point, for the East Coast on November 14, 1885. The first transcontinental through train from the East Coast arrived at the National City Station, its destination on the Pacific Coast, on November 16, 1885. Construction of the transcontinental line was due in large part to the efforts of the Santa Fe's superintendent and others who worked tirelessly to insure completion of the line from their posts at the National City Depot.

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Station and General Office, California Southern Railroad
National City, San Diego County, California

The arrival of this train signaled the end of the Central Pacific/Southern Pacific's "Big Four" (Stanford, Huntington, Crocker, and Hopkins) political and transportation monopoly of the American West, one of the most powerful monopolies the United States has ever seen. This arrival also triggered a rate war between the Santa Fe and Southern Pacific Railroads as the two giants tried to put each other out of business. This rate war, in earnest by February, 1886, was directly responsible for the greatest land boom in Southern California history. The "Boom of the Eighties" occurred between 1885 and 1889. The first citrus shipment from San Diego County to the eastern states was shipped from the National City Station in 1885. The Santa Fe continued to concentrate its efforts on developing its lands on the National Ranch and portions of National City. The Santa Fe expected to build a city to rival San Francisco. This was not to be however, as the rate wars which the Santa Fe had initiated took their toll on its delicate financial situation. By 1889 the Santa Fe workshops and general offices were moved from National City to San Bernardino and Los Angeles.

The National City Station is the last original terminus station building in existence, associated with the original West Coast terminus facilities of any of the five transcontinental railroads: the Central Pacific/Union Pacific; Southern Pacific; Santa Fe; Northern Pacific and the Great Northern.

BACKGROUND:

On June 15, 1868, Frank A. Kimball, a builder and contractor from New Hampshire met with Francois Pioche, the owner of Rancho de la Nacion. Kimball had moved west in 1861, first settling in San Francisco where he and his brothers enjoyed immense success in business. However, due to ill health, Frank had to seek warmer climates, and in 1868 he traveled to San Diego. While in San Diego, Kimball had the opportunity to view Rancho de la Nacion fronting on San Diego Bay. It was Kimball's belief that the rancho, with its miles of coastline and favorable climate, would be an ideal location for a new city.

The rancho, an original Spanish land grant, had changed hands several times prior to Francois Pioche's ownership. Kimball purchased the land which included 23,623 acres and six miles of waterfront from Pioche for \$30,000, and renamed his acquisition, "The National Ranch".

Located immediately below the City of San Diego on the San Diego Bay, National City was laid out on the National Ranch in 1868 by the Kimball brothers. The city grew slowly at first with a small boom in the 1870's spurred by the announcement that the Texas and Pacific Railroad was to locate its terminus there. Some grading was started before this early effort was crushed by the Central/Southern Pacific's "Big Four" and a national depression.

Like many far-sighted businessmen during this era, Kimball recognized that his hopes for the

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creation of a permanent settlement in National City depended upon his ability to procure a railroad link for his fledgling city. As early as 1869, Kimball corresponded with railroad officials in an attempt to interest them in his plan. After several unsuccessful singular attempts, Kimball joined with city fathers in San Diego to work toward that common goal for the San Diego Bay area. In 1879 it was decided that Kimball would represent the committee's interests with railroad officials, and to this end he traveled east in June of 1879. Kimball ascertained that his best hope for success lay with the Atchison, Topeka and the Santa Fe Railroad Company which was determined to run rails from the East Coast to the Pacific Ocean, but had not yet committed to a specific area for their West Coast terminus. Kimball had been corresponding with Tom Nickerson, president of the Santa Fe, since March of 1879. It would take another full year of negotiations, however, until the Santa Fe organization would agree to a separate railroad. The California Southern Railroad was chartered on October 12, 1880 by the stock holders of the Santa Fe Railroad. The board of directors of the California Southern Railroad was identical to the board of directors of the Santa Fe Railroad with the exception of Frank Kimball, who sat only on the California Southern Railroad's board of directors.

The Santa Fe was attracted to the San Diego area and National City in particular for many reasons, chief among them was that San Diego Bay was one of the finest natural harbors in the world, and second only in California to San Francisco. In National City, the Santa Fe would control the only other deep water port in California at the time, the only connection to this port and the only competing all-weather transcontinental railroad to the Southern Pacific route in the United States terminating at a port on the Pacific Ocean. The West Coast terminus was to be located in National City in an arrangement worked out with the Kimball brothers who owned the 26,632 acre National Ranch fronting on San Diego bay. The agreement called for the Kimball brothers to give the Santa Fe \$10,000.00 in cash, 10,000 acres of land, and half of the unsold lots in National City. The land that was given to the Santa Fe included three miles of bayfront. This bayfront land was crucial to the Santa Fe in their competition with the Southern Pacific as they wanted to have the closest port on the West Coast to service the east as well as a shipping point to the orient for the terminus of their transcontinental railroad. The National City Station represents the culmination of years of efforts to bring a transcontinental route to southern California, on the part of officials from both National City and the Santa Fe Railroad. It was the intent of the railroad to headquarter West Coast operations in the station at National City.

The terminus facility (Station) was the focus of the Santa Fe's efforts to break up the Southern Pacific's strangle-hold monopoly of the transportation of goods and people in the State of California. The Southern Pacific's directors Governor Leland Stanford, Collins P. Huntington, Charles Crocker and Mark Hopkins, known collectively as "The Big Four", had publicly stated their intention to never allow a competing railroad into California. Through manipulation and political maneuvering the Southern Pacific was very successful in their efforts for many years.

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The Santa Fe decided the best course of action was to have the materials, including locomotives for the railroad, delivered by sea to the terminus grounds surrounding the Station, and to construct the railroad north and east from National City to meet up with the Atlantic and Pacific Railroad (controlled by the Santa Fe) then building across Arizona. A large wharf was constructed by the Santa Fe at the National City terminal and grading was begun on December 20, 1880. The first rail was laid at National City in June of 1881. In July of that year, the San Diego Union reported that the California Southern Railroad had spent approximately \$2,500,000 towards the building of the railroad with the bulk of the funds spent in the San Diego Bay region, "giving work to anyone who wants to work, increasing the value of real estate, building wharfs, etc."

The first locomotive was unloaded at the National City wharf on July 13, 1881. The Southern Pacific was vigorous in their efforts to stop the work on the Santa Fe railroad. They refused to allow the California Southern to cross their tracks at Colton, California. A crossing frog was constructed at the terminal grounds to be installed at Colton. The Southern Pacific obtained a court order to stop the installation of this crossing frog and sent a deputy to National City to confiscate it. When he retired to a hotel room for the night, the California Southern loaded the crossing frog onto a flat bed and transported the crossing to Colton. The Southern Pacific kept three engines continuously moving over the location to prevent use of the crossing. The Santa Fe prevailed in court and the first link was completed in California of the Santa Fe Route the Pacific. By October of 1882, the California Southern Station at National City was completed. Service to Colton from National City began in August 1882.

The Southern Pacific continued to do everything within its considerable power to block the Santa Fe's efforts to reach the Colorado River. Crews of laborers, dispatched from the offices of the National City Station worked furiously to complete the Santa Fe line. Through dogged efforts and some deft business moves the Santa Fe was able to overcome the Southern Pacific and the first through transcontinental train left the National City Station on November 14, 1885. The first train from the east arrived on November 16, 1885.

The excitement generated by the guarantee of the only cross-country route from San Diego Bay to the east cannot be overstated. As one San Diego historian wrote, "the event was the most potent influence in the creation of "the great (economic) boom" and the largest single factor in making the city what it is today."

The "Boom of the Eighties" as the land rush was termed which ensued with the completion of the railroad and the resulting rate war as the two competing railroads tried to put each other out of business (at one point the fare dropped to \$1.00 from St. Louis, Missouri to California) changed forever the face of southern California. Many of the southern California cities we know today can trace their origins directly to this boom period.

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William E. Smyth in his authoritative 1907 History of San Diego wrote, "Like all western cities of consequence, San Diego has experienced a series of booms and boomlets, interspersed by periods of depressions and decline; but when 'The Great Boom' is spoken of it is the phenomenal and sensational boom of 1886-88 which is referred to. This was epochal and serves to divide the past from the present, just as the Civil War does with the people of the South. As Southerners refer to events which happened 'before the war', or 'after the war', so San Diegans speak of this 'before the boom' and 'after the boom'.

San Diego's population county-wide was less than 5,000 in 1885. At the height of the boom, this population reached 35,000. Some accounts place total population in the region as high as 50,000. Most of the Victorian buildings in San Diego County were built during this period, the majority with the construction date of 1887. "Before the boom", Fifth Avenue in San Diego presented an appearance of a typical frontier western town with one and two story buildings mainly of frame construction with false fronts and board sidewalks. "After the boom", this appearance was forever changed to an urban streetscape lined with turreted brick, stone and mortar multistoried buildings reflective of a large permanent city. Many of these buildings still exist today and form the nucleus of San Diego's successful Gaslamp Quarter, a historic district on the National Register of Historic Places.

This railroad connection, orchestrated from railroad headquarters at the National City Station, ended the San Diego area's isolation and provided a direct link for shipment of goods to and from the east. The resulting lowered transportation costs of these goods enabled San Diego County to be more competitive in the market place.

The Santa Fe formed San Diego Land and Town Company to market and develop their lands on the National Ranch and in portions of National City which included over 10,000 acres on the bay of San Diego. They envisioned a city on their land to rival San Francisco as the dominant port on the Pacific Coast. They promoted the "Santa Fe Route to the Pacific" to the rest of the country and their land as the place to settle with statements like, "The most favored spot on earth", "The choicest land in California" and "No spot in California can nearly approach it". To further their goals they constructed the largest dam of its type in the world, the Sweetwater Dam, and a complete water delivery system that is still a very important system in Southern California. The dam was completed in 1888. The Santa Fe built large mansions that still stand for their executives sent out from Boston to run their land company. They built the houses known as Brick Row in National City for other officials of the Santa Fe and their land company. Brick Row is listed on the National Register of Historic Places. The Land and Town Company also constructed a local railroad named the National City and Otay Railroad to show property and to provide an early commuter link to the cities on San Diego Bay. A new city was founded by the Land and Town Company called Chula Vista on the land of the National Ranch, a city with a population of 138,000 today. The Santa Fe laid out many large estate "orchard

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ranches" and promoted the area as the ideal place to grow citrus. The Santa Fe constructed the International Hotel, a fine large hotel facing the station where prospective residents could stay after departing the trains at the National City Station. All these improvements demonstrated the importance that the Santa Fe had placed on their West Coast terminus and their hopes for the future.

The terminus grounds at the "end of the line" including the Station, continued to be the focus of Santa Fe operations until 1889. The grounds included repair shops, car construction shops, and creosoting works for ties for the western portion of the Santa Fe Route. The grounds also included engine houses, and the Santa Fe wharf for overseas shipping. All of these other structures were later removed. The Station building remained headquarters for West Coast operations until 1889. The only original and what was always the most evocative building associated with this exciting period is the National City Station.

Although the life of the California Southern Railroad was a short one, it nevertheless had a major impact both locally and nationally during the years of 1882 through 1889, and the Station building was the impetus from which all efforts sprang. Not only did the railroad forever alter the course of rail travel in the United States by successfully breaking the Southern Pacific's strangle-hold on intercontinental freight and rail travel, but it also insured the success of the fledgling cities of Southern California.

It is difficult to compare the California Southern Railroad Station with other stations of the era, as the National City Station is the last remaining original station built on the West Coast by the five transcontinental railroads. This Station is the only original station still in existence. All of the other original terminal stations have been demolished. As the last surviving West Coast transcontinental terminus station in the United States, the National City Station deserves particular consideration as the last to survive, in its original site. The building's location and current condition still manage to convey its significance in railroad history. No longer a main line passenger terminal this Santa Fe station served as a passenger station until 1930 and as a center for freight operations until the 1960's. In the late 1970's the structure was renovated into a restaurant. In the early 1990's, the building was utilized as office space. It is currently vacant.

CRITERION C: ARCHITECTURE

The Station is a good example of the Italianate style of architecture, and last surviving example of this style applied to a commercial structure in the south San Diego Bay region.

Standing just east of the main line, the Station and General Office, California Southern Railroad (Station) located at 900 West 23rd Street in National City, built 1882, is a two-story wood

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frame structure. The building exhibits a flat topped hipped roof with widely overhanging eaves and decorative brackets. Tall, narrow windows with pedimented crowns, double doors and a molded string course are all typical features of the style. Alterations in the 1970's included the removal of the original 8'x 9' siding wood freight doors, covering the first floor wood siding with plywood sheeting, and the addition of a new building to the north facade. The Station maintains a high degree of architectural integrity in terms of location, design, materials and workmanship. The contract for the structure was awarded to W.A. Stratton for \$3,800.00 in 1882. The original vault's substantial brick walls extend up through the second floor. The vault door still has its original paint with the words California Southern Railroad at the top and a decorative scheme in gold and a woodlands scene painted in the form of a panel. The building boasted redwood and fir wainscot on the interior's first and second floors. On the first floor were located the passenger waiting room, baggage and freight rooms, and ticket office. The second floor originally served as the Santa Fe's general offices and later served as a nine room residence for the Santa Fe station master and his family.

Italianate was the chosen style of the Kimball brothers for all their houses both existing and now gone. This preference exerted an influence on the developing city and was adopted for many homes and commercial structures constructed by others. The style was popular in National City long after it had passed from favor in other parts of the United States.

Two of the most significant Italianate buildings in addition to the Station in National City are houses built by the Kimball brothers as their residences. The best example of Italianate architecture in National City is the George Kimball House located at 1515 "L" Avenue. Built in 1887, the two story residence has a large center hall plan with a full basement totaling 5,000 square feet. The exterior exhibits the square box form, with a flat topped hipped roof, double brackets under the eaves, dental molding, tall narrow two over two windows, heavy window cornice moldings and quoins all typical of the style. An unusual feature of this building is the wrap-around veranda and balcony with extensive gingerbread more typical of the Queen Ann style then popular. The architect called the building "a good fashioned heavy country Southern residence". This residence is listed on the National City local register of historical places.

The Frank Kimball residence at 921 "A" Avenue was built in 1868. Though moved and altered with a craftsman era porch added, this residence remains extremely important as the first residence constructed in National City and the oldest existing residence in the south bay area of San Diego County. The home is also the one most closely associated with Frank Kimball, the driving force behind the founding and development of National City and the one man more than any other responsible for bringing the transcontinental railroad to the area. This large simplified Italianate residence was Frank's residence and the setting for all his successes and failures for over 30 years. The Kimballs also built the large Floyd home at 1941 Highland Avenue in National City. These residences are also listed on the National City local register of

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historic places.

In addition, there are eight Italianate residences still extant in National City. Most of these homes were constructed in the late 1880's during the Boom Period. The eight additional Italianate-designed residences are as follows:

National City Address

Historic Name if Known

539 E. 20th Street
907 D Avenue
437 G Avenue
811 C Avenue
2529 D Rear Avenue
684 E. 30th Street
926 E. 7th Street
934 E. 9th Street

Charles Kimball House
Boyd Vurguson House
Parsons House

Additional Information

The following excerpts from Ward McAfee's California Railroad Era 1850-1911, Chapter 13, "San Diego and the Santa Fe" supports the historic context and provides more detail to the events surrounding the Station and the reasons for its construction.

Despite its success in the extra session of 1884, the Southern Pacific was simultaneously besieged with foreboding events outside the legislative halls. Rival transcontinental lines were invading its geographic area of control. Sadly for the Southern Pacific's directors, political control would be virtually worthless if the rumored profit-eroding rate war occurred. As long as they possessed the only southern transcontinental railroad, they were capable of winning a rate war with any or all competitors situated on more difficult northern routes. Consequently, the Southern Pacific's profits depended upon blocking the completion of a rival southern transcontinental line. To fail to do so would invite disaster.

Throughout the 1870's, San Diego had worked for the completion of a rival southern road, but with the failure of Tom Scott they had sought an accommodation with the hated Southern Pacific. Frank and Warren Kimball, developers owning much of the land immediately south of San Diego, had written Charles Crocker early in 1879 to encourage a Southern Pacific connection for the San Diego area. Crocker replied that

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if the "hoodlum constitution" of 1878 were ratified by the electorate in May, he and his associates would "not want to built any more railroads in California". Nevertheless, the constitution of 1878 were ratified, three-fourths of San Diego supporting the verdict. "They are as rabid down there as they can be," Crocker wrote to Huntington. The Southern Pacific would not come to San Diego. Undeterred, the Kimball brothers then contacted other railroad magnates, Commodore Vanderbilt and Jay Gould among them. Gould was unusually frank. "I don't build railroads, I buy them," he wrote the Kimballs. Finally, in the fall of 1879, the Kimballs succeeded in persuading the Atchison, Topeka and Santa Fe Railroad to terminate in San Diego, in exchange for a modest financial subsidy and a generous grant of land. For its part, the Santa Fe agreed to build along a direct route from San Diego to Yuma.

Hearing of San Diego's good fortune, a San Bernardino citizens' committee made strenuous efforts to alter the Santa Fe's route into California. The San Diego to Yuma survey would leave San Bernardino far off the main line, whereas a more northerly route from Needles through the Cajon Pass and on to San Diego would pass through their town. Despite San Diego's efforts to defeat the San Bernardino idea, the railroad company found it irresistible, for the new route would serve a larger population and result in greater profits. Concurrently with these events, the Santa Fe acquired half interest in the Atlantic and Pacific, a railroad company with a large federal land grant dating back to 1866. The Atlantic and Pacific, as the Pacific link of the Santa Fe, would enter California at Needles near the 35th parallel. These agreements nullified the pact between the Santa Fe and San Diego.

After all their thwarted attempts, San Diegans were willing to settle for almost any guarantee of a rail connection which would make their town a transcontinental terminus. So a new arrangement between San Diego and the Santa Fe was consummated. A corporation called the California Southern would build northward from San Diego toward San Bernardino, with the intention of meeting the Atlantic and Pacific. Chartered in October 1880, the California Southern commenced construction the following June among the cheers of San Diegans. But not all southern Californians celebrated the event. Angelinos were noticeably glum, fearing that completion of this second transcontinental line might enable San Diego to bypass Los Angeles as the chief city of southern California. In fact, they even went so far as to encourage Congress to strip the Atlantic and Pacific of part of its old land grant, a move which almost succeeded four years later.

Meanwhile, the directors of the Southern Pacific were engaged in secret maneuvers to maintain their hegemony. By strategic purchases of stock in early 1882, Huntington and his temporary ally Jay Gould acquired control of the St. Louis and San Francisco

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Railroad, which like the Santa Fe held half interest in the westward building Atlantic and Pacific. By this coup, Huntington forced the Atlantic and Pacific to stop at Needles. There, the Santa Fe reluctantly agreed, the Atlantic and Pacific would connect with a Southern Pacific branch from Mojave. By August 1883 the connection was made, and Santa Fe cars entered California over track controlled by the Southern Pacific. This arrangement was most unsatisfactory for the Santa Fe, because the Southern Pacific channeled the trade of California over its own line via Yuma by means of discriminatory practices on its track west of Needles. With the prospects of the Santa Fe dimming, the railroad outlook was "gloomy for San Bernardino, and black --dead black-- for San Diego". "We'll buy the Santa Fe yet for the cost of its rails," exulted a Southern Pacific agent in Colton. Ultimate victory appeared always to belong to the California monopoly.

By the fall of 1884, the Santa Fe gained an unobstructed entrance into southern California, forcing the Southern Pacific to sell its track from Needles to Mojave by threatening to inaugurate ruinous transcontinental competition to Guaymas over its Sonora Railway line in Mexico. Huntington was beaten. With the California Southern at San Bernardino and the Santa Fe controlling track 50 miles to the north, construction began in Cajon Pass to bridge the gap. A year later the work completed; by November 1885, the Santa Fe had a rival southern transcontinental line, terminating in National City. The long-awaited event was celebrated in San Diego region with "many speeches marked with flights of imagination concerning the tremendous benefits which were to accrue to the city". San Bernardino likewise rejoiced with fireworks, speeches, brass band, and a barbecue. San Bernardino's newspapers commemorated the affair as "this important event, the most important in our history". "San Bernardino...will no longer be ignored as heretofore, but will take her proper place as the second city of southern California," concluded one editorial.

The cheering had scarcely stopped, when the long-expected transcontinental rate war erupted. The completion of other transcontinental lines --- the Northern Pacific to Portland in 1883 and an extension of the Union Pacific to the same city in the following year -- had caused some earlier uneasiness in rates and periodic stabilizing agreements. However, all such arrangements were shattered by the completion of the second southern transcontinental road. As a prerequisite to any new agreements, the Santa Fe demanded 50 percent of the business of southern California and 27 percent of northern California's trade. The Southern Pacific refused to meet these conditions, and the rate slashing began. Late in 1885, before the rate war fully commenced, a ticket between Kansas City and Los Angeles sold for \$70. Early the following year, rates began dropping rapidly. By March 6, as one story goes, the charge was one dollar. This anecdote has served to dramatize the real cutthroat quality of this competition

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among giants. Low transcontinental rates continued throughout 1886, not merely to National City and Los Angeles but to San Francisco and other Pacific coast communities as well.

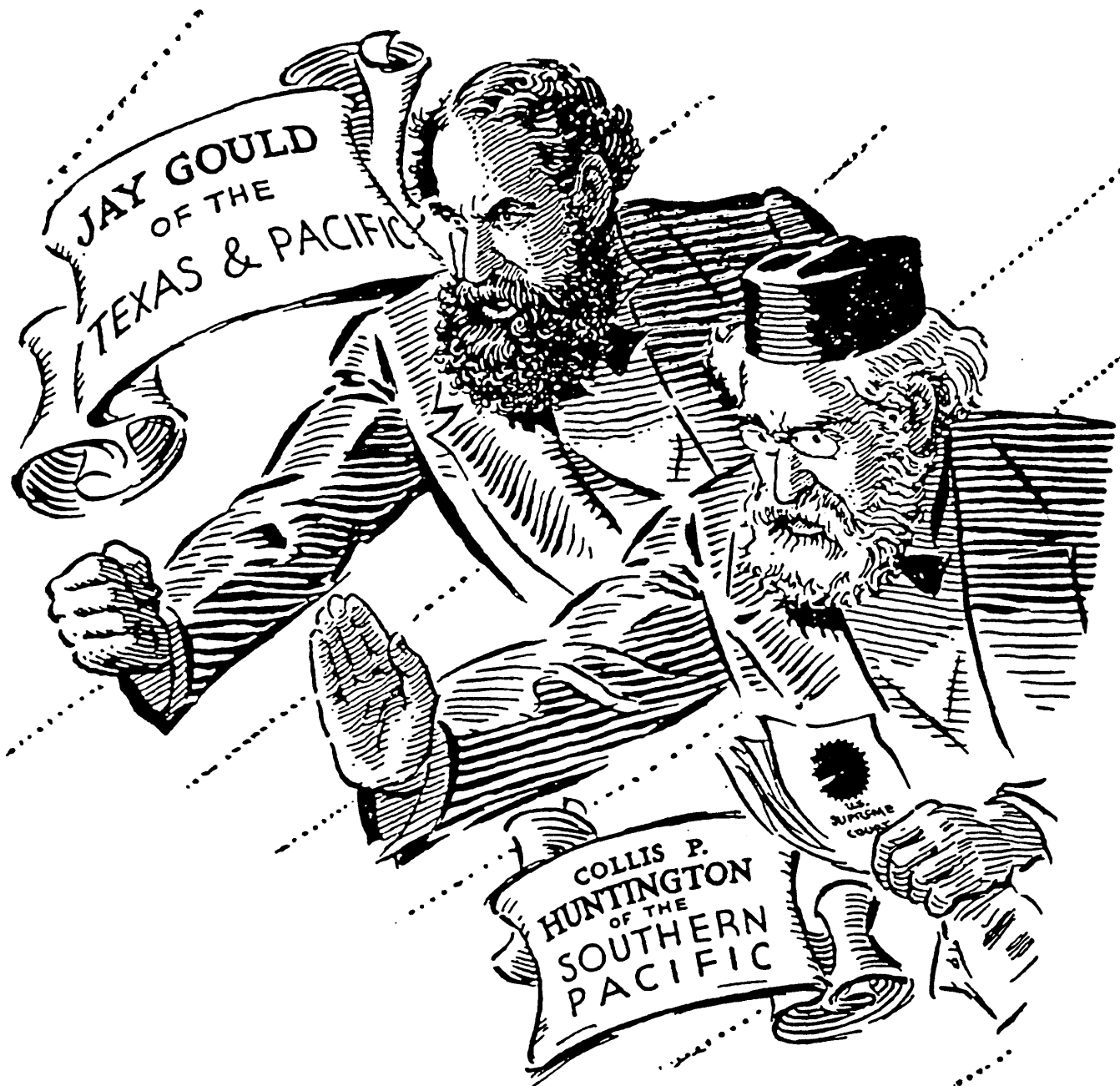
Few Californians could complain of railroad tyranny during this period. Inexpensive tickets spelled increased immigration, which in turn encouraged a real estate boom in southern California and general prosperity in the state at large. Even reformers muffled their criticism. Stephen Mallory White, who had joined the anti-railroad movement of the early eighties and who would later win fame for his attacks on the Southern Pacific in the 1890's, mirrored the changing public mood. During the latter half of the 1880's, White worked as a Southern Pacific attorney at a time when he was also a member of the California state senate. By 1887, many Californians, especially those in the southern part of the State, could agree with a statement made by John C. Stubbs, General Traffic Manager of the Southern Pacific: "The interests of the railroad companies and the communities they serve are identical".

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Gould and Huntington joined forces to stall briefly the expansion of the Atlantic & Pacific. They were outsmarted by the Santa Fe Railway. — DONALD DUKE COLLECTION

Source:

Donald Duke and Stan Kistler, Santa Fe: Steel Rails to California

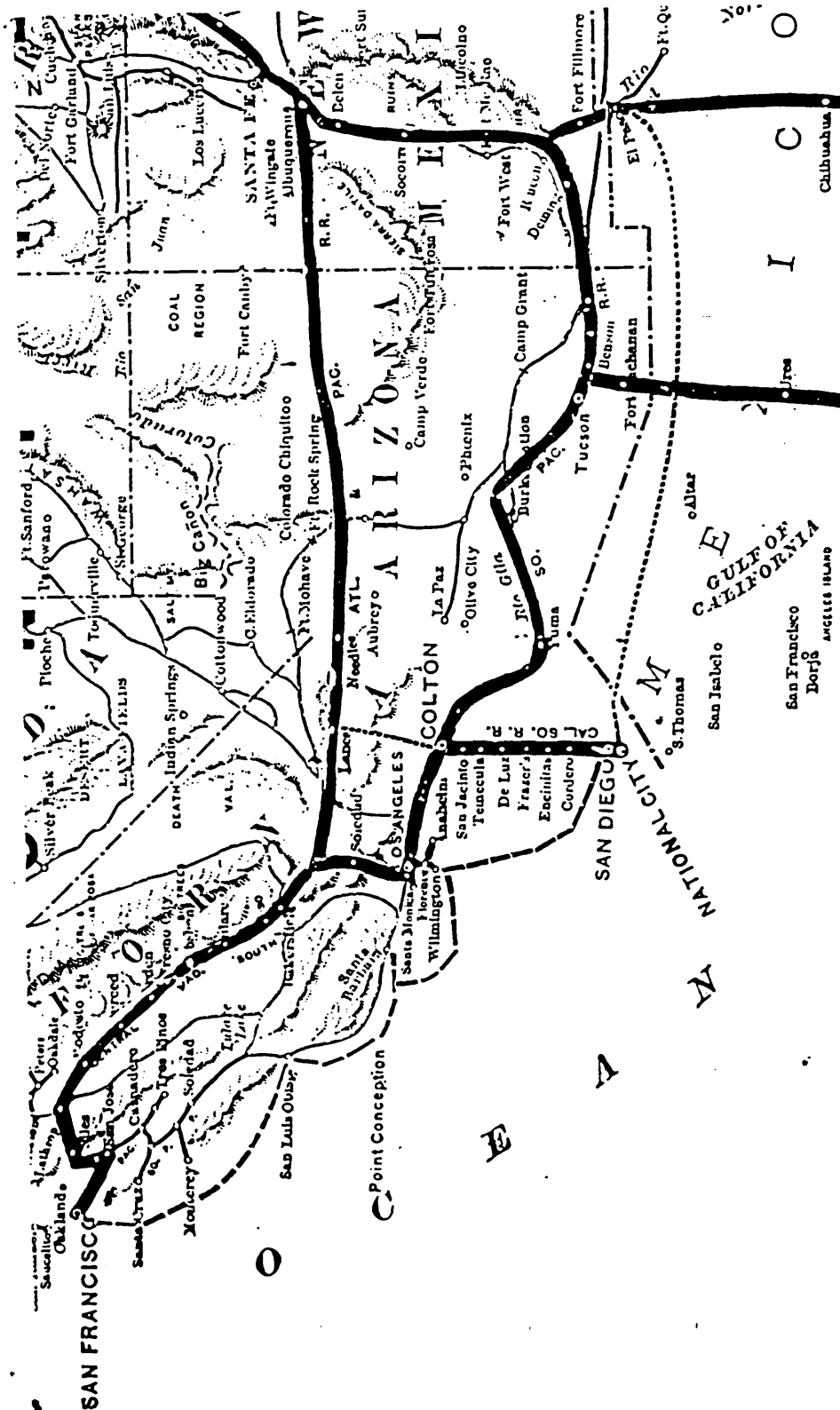
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The first link is completed August 14, 1882.

This map shows the opening of California Southern Railroad from the National City to Colton Stations.
Source: Richard V. Dodge and R.P. Middlebrook, "The California Southern Railroad: A Rail Drama of the Southwest"

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California Southern Railroad Company.
California Central Railway Company.

JOINT TIME CARD**No. 1.**

W.B.GARNER
501 ARROWHEAD AVE.
SAN BERNARDINO, CALIF

TO TAKE EFFECT SUNDAY, OCTOBER 16TH, 1887, AT 12:01 A. M.**FOR THE INFORMATION AND GOVERNMENT OF EMPLOYEES ONLY.**

THE COMPANIES RESERVE THE RIGHT TO VARY THE SAME AS CIRCUMSTANCES MAY REQUIRE.

PREVIOUS TIME CARDS ARE VOID.

**Read Rules and Regulations Carefully. Important Changes have been made.
Time in this Schedule is Pacific Standard Time of the New System.**

Courtesy of W. B. Garner

This is the cover of the original time table at the height of Boom Period in 1887.

Source: Richard V. Dodge and R.P. Middlebrook, "The California Southern Railroad: A Rail
Drama of the Southwest"

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SAN DIEGO DIVISION.

CALIFORNIA SOUTHERN R. R. CO.

	STATIONS.	Miles from San Diego	Capacity of Coach	SOUTH BOUND.											
				4.	6.	8.	10.	12.	14.	16.	18.	20.	22.	24.	26.
				San Diego Express.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.	First Class.
				Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.
N	Leave SAN BERNARDINO.	81.0		10:50 am	9:00 pm	8:00 am	10:20 am	11:10 am	1:10 pm	6:35 pm	6:50 pm	4:30 am	6:40 am		7:00 am
T	3.5 COLTON.	84.5		11:00	9:15	8:10	10:30	11:20	1:20	6:45	7:00	4:45	7:15		7:15
T	5.6 East Riverside.	88.1		11:08	9:30	8:20 am	10:40 am	11:30 am	1:30 pm	6:55 pm	7:10 pm	5:00	7:30		8:00 am
	7.1 BOX SPRINGS.	95.2		11:35	10:10							5:42	8:08		
T	11.0 PERRIS.	106.2		11:52	11:00							6:22	8:00		
T	12.0 ELSIPORE.	118.2		12:33 pm	11:58							7:12	10:		
T	4.4 WILDOMAR.	122.6		12:39	12:18 am							7:26	10:18		
T	4.6 MURRIETA.	127.2		12:47 1:07	12:40 1:05							7:42 7:57	10:40 10:55		
T	5.8 TEMECULA.	133.0		1:18	1:35							8:17	11:20	8:40 pm	
	7.5 RANCHITA.	140.5		1:43	2:08							8:46	11:48	9:08	
T	4.0 FALLBROOK.	144.5		1:58	2:25							9:02	12:05 pm 12:20	9:25	
	6.5 DE LUZ.	151.0		2:23	2:55							9:42	12:55	9:55	
	5.5 YSIDORA.	159.5		2:43	3:30							10:18	1:35	7:30	
T	4.7 OCEANSIDE.	164.2		2:54	3:50 4:50							10:40	2:10	7:50	
T	3.1 CARLSBAD.	167.3		2:59	4:58							10:52	2:26	8:02	
	2.4 STEWART'S.	169.7		3:04	5:00							11:01	2:40	8:12	
T	6.6 ENCINITAS.	176.3		3:18	5:15							11:30	3:15	8:40	
T	6.6 DEL MAR.	182.9		3:34	5:35							11:59	3:50	9:20	
	2.8 CORDERO.	185.5		3:40	5:45							12:12 pm	4:05	9:45	
	7.0 SELWYN.	192.5		4:01	6:07							12:52	4:50	10:24	
	9.7 OLD TOWN.	202.2		4:20	6:30							1:30	5:30	11:05	
T	3.5 SAN DIEGO.	205.7		4:35	6:45							1:45	5:45	11:20	
T	1.8 22D STREET.	207.5		4:45	6:55							2:00	6:00	11:30	
N	3.7 NATIONAL CITY. Arrive.	211.2		4:55 pm	7:10 am							2:20 pm	6:15 pm	11:45 pm	
				Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.	Daily.

ALL trains must approach South Switch of y at San Bernardino under complete control.

This document facsimile is the original time table of 1887 showing the National City Station in bold black letters as the terminus of the California Southern Railroad.

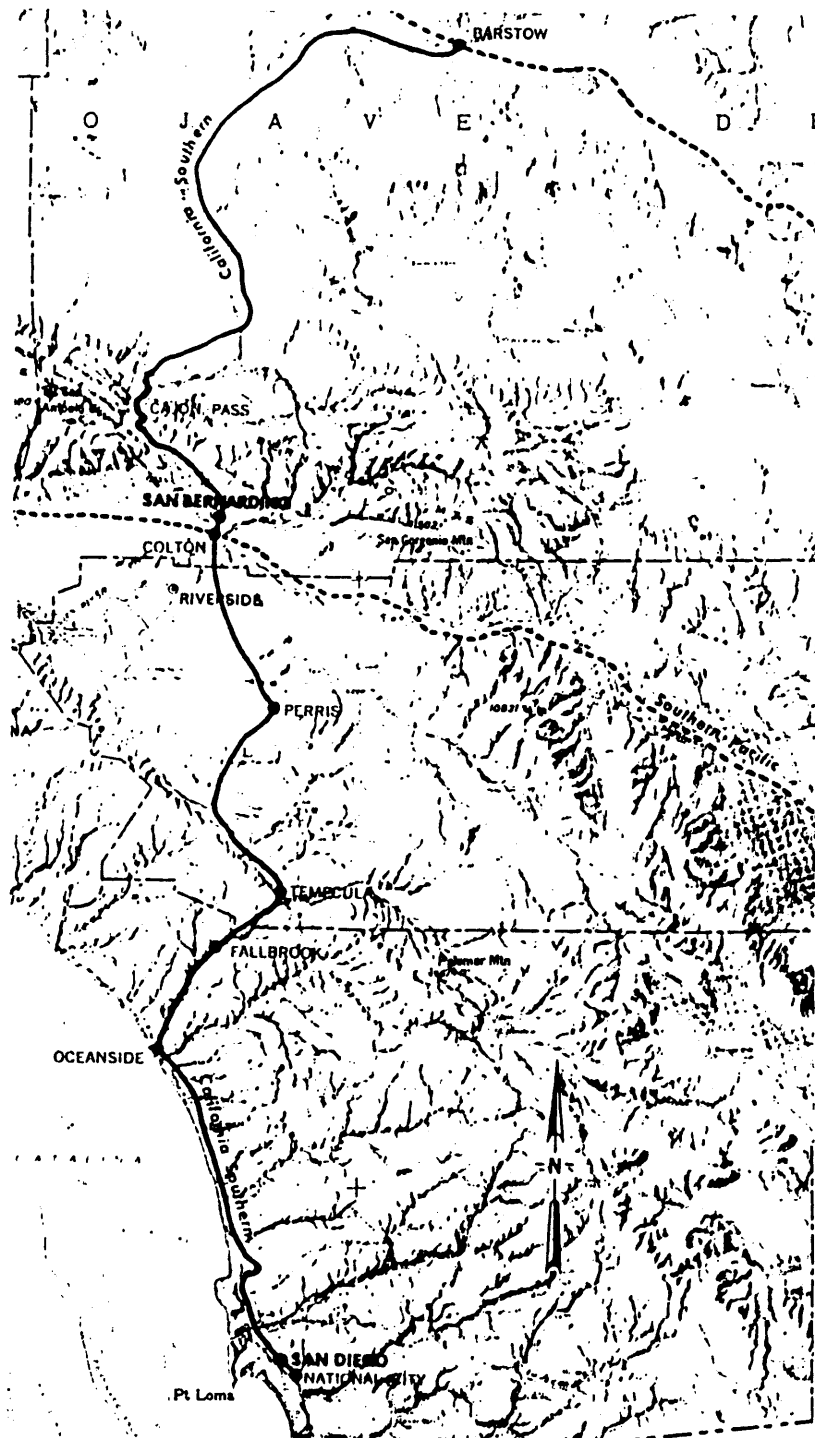
Source: Richard V. Dodge and R.P. Middlebrook, "The California Southern Railroad: A Rail Drama of the Southwest"

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National City, San Diego County, California

The Route of the California Southern — 1885

Source: Ward McAfee, California's Railroad Era.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 9 Page 1 Station and General Office, California Southern Railroad
National City, San Diego County, California

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Section 10 Page 1 Station and General Office, California Southern Railroad
National City, San Diego County, California

10. VERBAL BOUNDARY

The boundary of the Station and General Office of the California Southern Railroad at National City is outlined on the accompanying USGS map. The boundary is defined by Parcel 2 of the Assessor's Parcel Map #7651, in the City of National City, County of San Diego, State of California.

BOUNDARY JUSTIFICATION

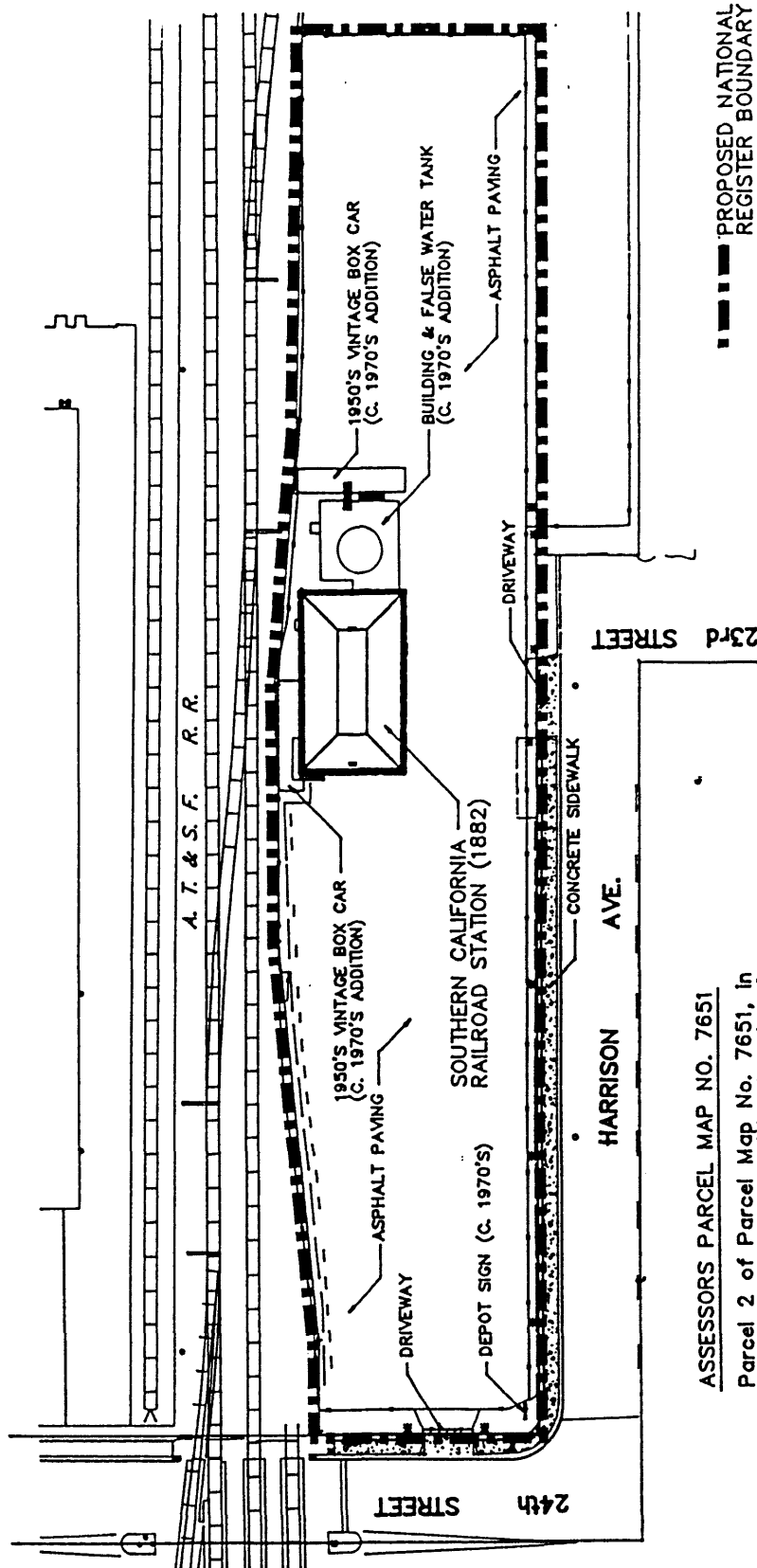
The boundary includes the single parcel of land encompassing the Station and its immediate surroundings. The City of National City owns only the property contained within the boundary and is solely responsible for the nomination of the Station. To expand the boundary would also require the consent of the various property owners for nomination to the National Register. The original terminal grounds were much larger but were not included because subsequent development has drastically altered these grounds. In addition, further research including archaeological investigations would need to be performed to justify the historic integrity of the outlying areas. The proposed boundary maintains historic integrity of an undeveloped parcel with the exception of the 1970's additions of a kitchen and box cars for the operation of the restaurant.

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Section _____ Page _____ Station and General Office, California Southern Railroad
National City, San Diego County, California

STATION AND GENERAL OFFICE, SOUTHERN CALIFORNIA RAILROAD, NATIONAL CITY



--- PROPOSED NATIONAL
REGISTER BOUNDARY

ASSESSORS PARCEL MAP NO. 7651

Parcel 2 of Parcel Map No. 7651, in
the City of National City, County of
San Diego, State of California.

0' 4' 12' 20' 40' 80' FEET



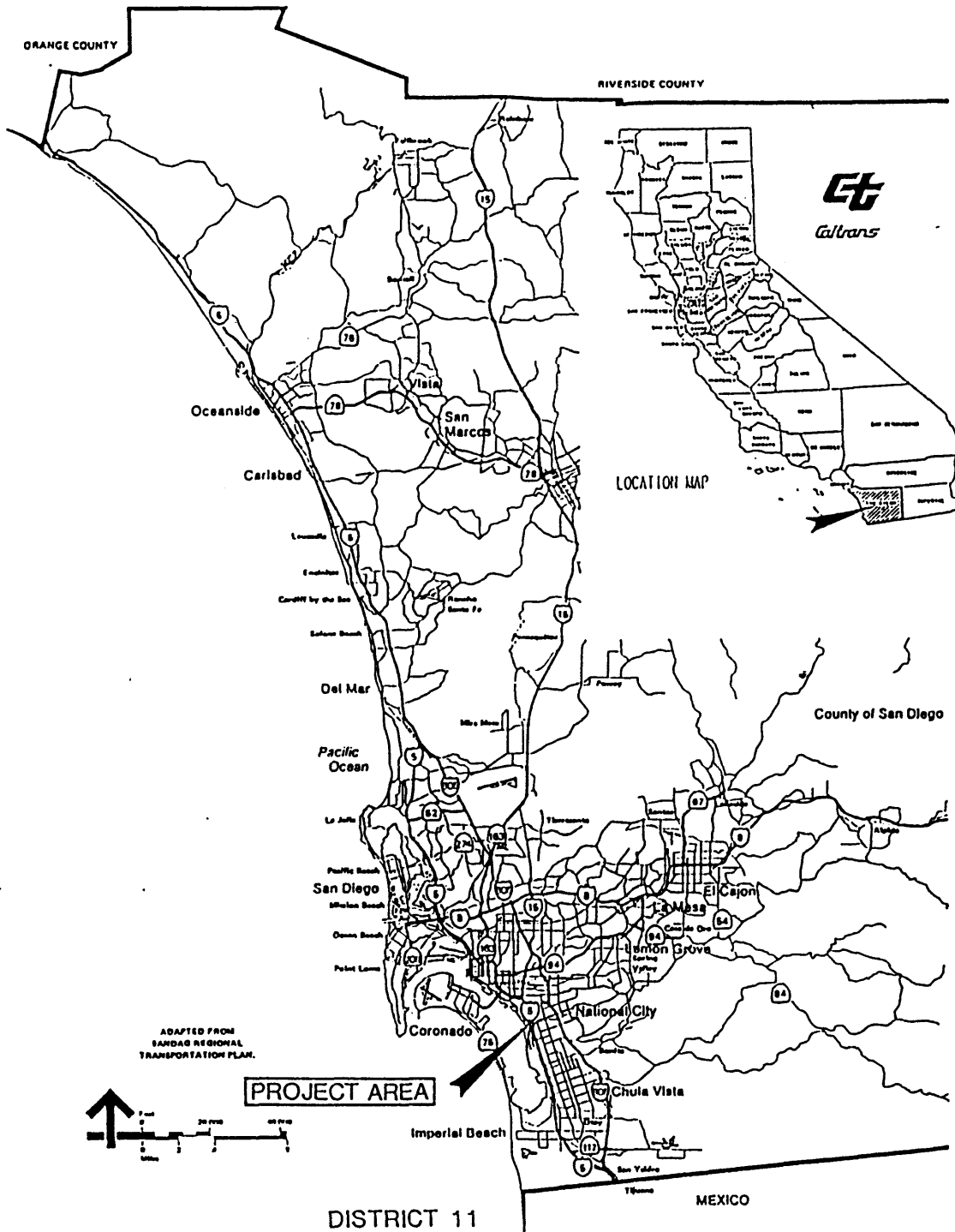
SITE PLAN

900 W. 23RD STREET, NATIONAL CITY

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section _____ Page _____ Station and General Office, California Southern Railroad
National City, San Diego County, California



PROJECT VICINITY MAP

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section _____ Page 1 Station and General Office, California Southern Railroad
National City, San Diego County, California

PHOTOGRAPH LOG

HISTORIC PHOTOGRAPHS of the Station and General Office, California Railroad at National City, 900 West 23rd Street, National City, California. Originals are on file at the San Diego Historical Society, Photograph Collection, Casa de Balboa, Balboa Park, San Diego, California.

Historic Photo #1, c.1887-1895.

West and south facades of station, facing northeast.

Historic Photo #2, c.1885.

West and north facades of station, facing southeast.

Historic Photo #3, c.1956.

West and south facades of station, facing northeast.

Historic Photo #4, 1949.

Aerial photo of station. Note relationship to freight lines.

CURRENT PHOTOGRAPHS of the California Southern/Santa Fe Railroad Terminus Depot were taken by Dolores Mellon, April 6, 1994 at the Depot's location of 900 West 23rd Street, National City, California. Negatives are on file at 530 Sixth Avenue, San Diego, California 92101.

Photo #5

Depot's east facade facing southwest. Also serves as the main entrance.

Photo #6

North and west facades facing southeast.

Photo #7

South and west facades facing northeast. Note exterior stairway, and freight car additions.

Photo #8

South facade facing north.

Photo #9

West facade facing east, door alteration detail.

Photo #10

Interior view of freight car addition, facing west.

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NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section _____ Page 2 Station and General Office, California Southern Railroad
National City, San Diego County, California

Photo #11

East facade second story fenestration and roofline detail.

Photo #12

South facade, first floor fenestration detail.

Photo #13

East and south facades facing northwest.

Photo #14

East facade, first floor window and siding alteration detail.

Photo #15

North and east facades facing southwest. Water tower and one-story addition detail.

Photo #16

Interior photo of building's original north facade, including baggage room entrance, now enclosed.

Photo #17

Interior photo of building's original north facade, including original passenger entrance doorway.

Photo #18

Interior photo of the original stairway. Note the addition of wood paneling. This photograph is by Edward Gohlich, taken December 1, 1995. The negative is on file at Edward Gohlich Photography, 10101 Country View Road, La Mesa, CA 91941.

Photo #19

Interior photo of northwest room, formerly the passenger waiting room. Note wood covering the original glass transoms.

Photo #20

Railroad safe, located on the first floor.

Photo #21

Railroad safe, brick floor and interior.

Photo #22

Second floor, south side of the structure. Note original fireplace.

Photo #23

Northeast second floor interior, facing west. Note doorway now enclosed.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section _____ Page 3 Station and General Office, California Southern Railroad
National City, San Diego County, California

Photo #24

Second floor, station-master's residence. Note glass transom covered by wood.

Photo #25

Second floor, northeast corner. Note the addition of restaurant dumb-waiter.

Photo #26

Second floor interior, facing southwest.

Photo #27

South and west facades showing box cars. This photograph is by Edward Gohlich, taken December 1, 1995. The negative is on file at Edward Gohlich Photography, 10101 Country View Road, La Mesa, CA 91941.

HISTORIC PRESERVATION MEMORY

HAAS HAER Loc. X SHL No. 3 NR Status 3
UTM: A 11/489625/3613425 C
B D

HRIT 2050-0005-0000

IDENTIFICATION

1. Common name: The Depot
2. Historic name: California Southern/Santa Fe Terminus Depot (88-37-006)
3. Street or rural address: 900 West 23rd Street
City National City Zip 92050 County San Diego
4. Parcel number: 559-040-43-01
5. Present Owner: Curtis Corn 90% Sam Tidwell 10% Address: 4429 Loma Paseo
City Bonita Zip 92002 Ownership is: Public Private X
6. Present Use: industrial tank cleaning facility Original use: transcontinental railroad terminus depot

DESCRIPTION

- 7a. Architectural style: Victorian railroad depot, with Italianate and Greek Revival details.
- 7b. Briefly describe the present *physical appearance* of the site or structure and describe any major alterations from its original condition:

Major aspects of the Depot match the original photograph provided.

Minor alterations include:

Two doors which have been changed on the west side of Depot.

Modern siding has been added to the first floor over the original siding.

An outside stairway has been added to the south side of the building ending at the corner of the west side where a window has been changed into a doorway.

A small, one-story structure was attached to the north side during the 1970's.

Attach Photo Envelope Here

8. Construction date: April 28, 1881
Estimated Factual X
9. Architect Mr. Bither, Architect
of the California Southern
Railroad.
10. Builder The California
Southern Railroad
11. Approx. property size (in feet)
Frontage Depth
or approx. acres 1.12 acres
12. Date(s) of enclosed photograph(s)
Historic photo: Circa 1887
Current photo: November 21, 1985

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-37-013073H

HRI # _____

Trinomial CA-SDI-13073

NRHP Status Code _____

Other Listings _____

Review Code _____

Reviewer _____

Date _____

Page 1 of 17

*Resource Name or # (Assigned by recorder) Coronado Belt Line

P1. Other Identifier: Coronado Railroad; San Diego Southern Railway; San Diego and South Eastern Railway, San Diego and Arizona Railway; San Diego and Arizona Eastern Railway.

*P2. Location: ☐ Not for Publication ☒ Unrestricted

*a. County San Diego

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad National City **Date** 1967 (PR 1975) **T** 17S; **R** 2W; 1/4 of Sec (Un-sectioned) La Nacion Rancho; San Bernardino B.M.

c. Address N/A City National City Zip 91950

d.UTM: (give more than one for large and/or linear resources): UTM: NAD 1983, 11S 489361 mE / 3614635 mN (north end of segment at Cleveland Avenue and Civic Center Drive) 490041 mE / 3612577 mN (north side of Sweetwater River Channel)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) The resource is an approximately 1.4-mile segment of the Coronado Belt Line.

*P3a. **Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The subject resource is an approximately 1.4-mile segment of the Coronado Belt Line in National City. It is part of a longer standard gauge railroad line (4 feet - 8½ inches) aligned on street easements and private right-of-way at a distance of approximately 7.5 miles on the east side of the San Diego Bay, from National City to Imperial Beach. The 1.4-mile segment begins on the north side of the intersection of Civic Center Drive and Cleveland Avenue. From there, it extends south at a distance of approximately 0.6 mile embedded in street pavement to a point just north of the intersection of Cleveland Avenue and 23rd Street (see Photographs 3 and 4). Aerial photographs indicate that rails were either removed or paved over at that intersection during its reconstruction in the early 2010s (see page 5 Continuation Sheet).

*P3b. **Resource Attributes:** (List attributes and codes) HP11. Engineering structure; AH7.Railroad Grades

*P4. **Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photograph: (View, date, accession #) Photograph 1. Coronado Belt Line at west side of Paradise Creek marsh, looking southeast.

*P6. **Date Constructed/Age and Sources:**

☒ Historic ☐ Prehistoric ☐ Both

1888 (see page 17 Continuation Sheet)

*P7. **Owner and Address:**

Metropolitan Transit System/Union Pacific
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

*P8. **Recorded by:** (Name, affiliation, address)

T. Yates and N. Cox, ICF
525 B Street, Suite 1700
San Diego, CA 92101

*P9. **Date Recorded:** July 13, 2019

*P10. **Survey Type:** (Describe) Intensive



*P11. **Report Citation:** (Cite survey report and other sources, or enter "none.") ICF. 2021. *Cultural Resources Inventory and Evaluation Report for the National City Bayfront Projects and Plan Amendments, National City, California*. Prepared for the San Diego Unified Port District.

*Attachments: NONE ☒ Location Map ☒ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☒ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 17

*NRHP Status Code 6Y

*Resource Name or # (Assigned by recorder) Coronado Belt Line

B1. Historic Name: Coronado Belt Line; Coronado Railroad; San Diego Southern Railway; San Diego and South Eastern Railway, San Diego and Arizona Railway; San Diego and Arizona Eastern Railway.

B2. Common Name: Coronado Belt Line

B3. Original Use: Railroad shipping and occasional passenger service B4. Present Use: Not in use

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alteration, and date of alterations) Initially constructed in 1888; reconstructed in 1916–1917 in the vicinity of Paradise Creek, the Sweetwater River, and elsewhere in the South Bay as a result of flooding; alteration to maintain operation into the 1960s.

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*B8. Related Features: _____

B9. Architect: N/A b. Builder: N/A

*B10. Significance: Theme: N/A Area N/A

Period of Significance N/A Property Type Railroad Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The subject 1.4-mile segment of the Coronado Belt Line does not meet any of the significance criteria necessary for listing in the California Register of Historical Resources (CRHR) as part of a larger linear resource that meets one of the CRHR significance criteria and maintains historical integrity. As addressed in greater detail below, the City of National City's Historic Preservation Ordinance does not include significance criteria for evaluation or local designation of potential significant architectural and built environment resources within the city limits. The subject railroad segment does not appear to qualify as a historical resource for the purposes of CEQA.

Historic Background

Development and Early History of the Coronado Belt Line

Hailing from Evansville, Indiana, and Chicago, Illinois, respectively, railroad financier Elisha S. Babcock and piano manufacturer Hampton L. Story created the Coronado Beach Company in 1884. Their objective was to acquire the 4,185-acre Peninsula of San Diego rancho grant and develop the land into a resort town. Babcock and Story subdivided the land and named it "Coronado" ("crowned" in Spanish). The developers constructed a pipeline from San Diego to convey fresh water and contracted architects James and Meritt Reed to design today's iconic Hotel del Coronado at Coronado Beach. In 1886, Babcock and Story created two hotel-associated transportation enterprises: the San Diego Street Car Company, which transported people from the city's transcontinental railroad depot to the wharf at the location of today's Broadway Pier, and the San Diego and Coronado Ferry Company, which conveyed visitors across San Diego Bay to the company's Coronado landing on Orange Avenue. In November 1886, they also founded the Coronado Beach Railroad to build a line from the ferry landing to the hotel site originally traveled by horse-drawn railcars (see page 6, Continuation Sheet).

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References: See page 17 Continuation Sheet.

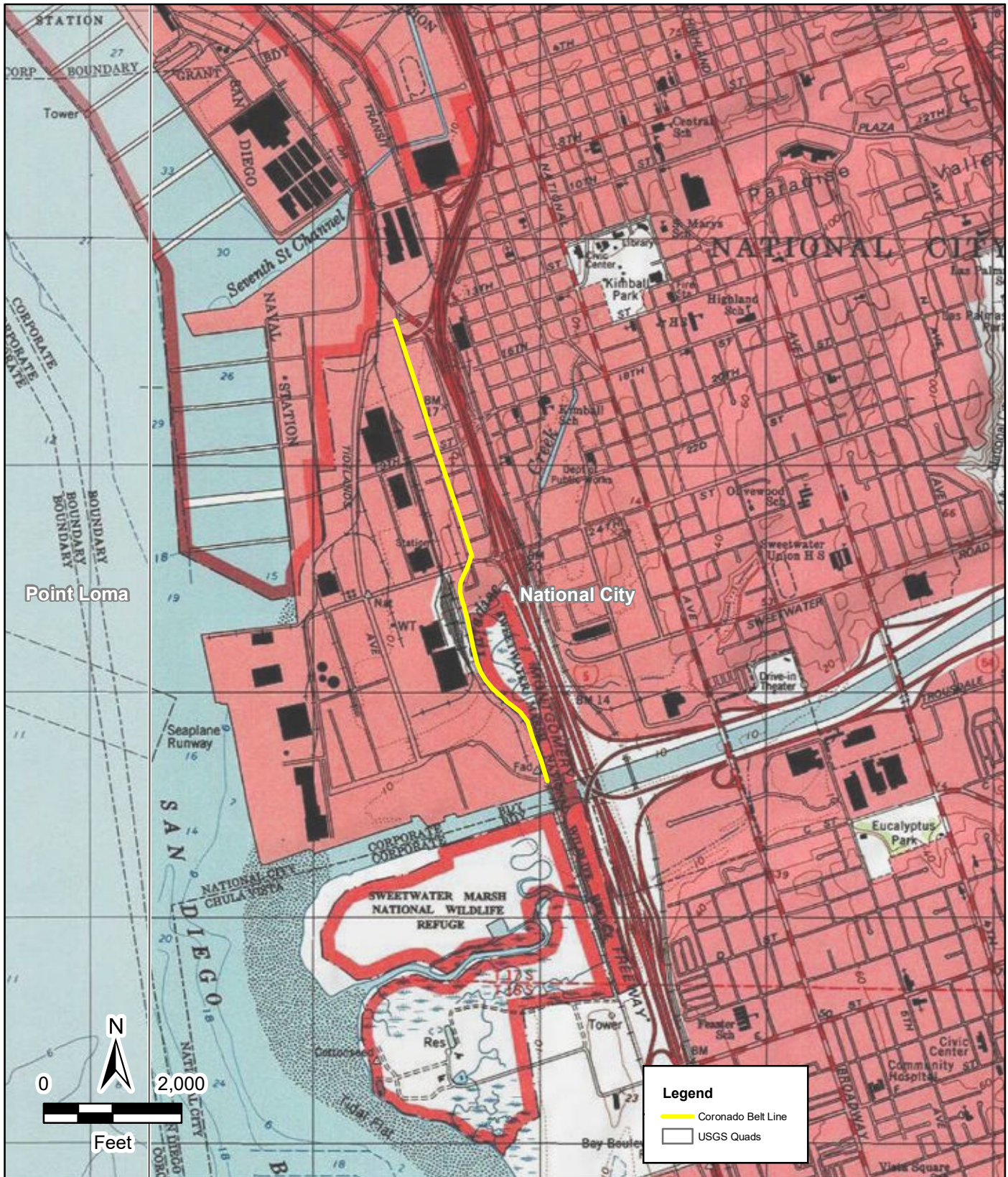
B13. Remarks:

*B14. Evaluator: Timothy Yates, Ph.D.

*Date of Evaluation: September 3, 2019

(This space reserved for official comments.)





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Recorded by T. Yates and N. Cox

*Resource Name or # (Assigned by recorder) Coronado Belt Line

*Date July 13, 2019

L1. Historic and/or Common Name: Coronado Belt Line; Coronado Railroad

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:**

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) UTM: NAD 1983, 11S 489361 mE / 3614635 mN (north end of segment at Cleveland Avenue and Civic Center Drive) 490041 mE / 3612577 mN (north side of Sweetwater River Channel)

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

The Coronado Belt Line is an inactive standard gauge railroad line. An approximately 1.4-mile segment has been recorded as part of the current study. From the north side of the intersection of Civic Center Drive and Cleveland Avenue, it extends south at a distance of approximately 0.6 mile embedded in street pavement. Rails have been removed or paved over from north side of 23rd Street to the south side of Bay Marina Drive. The Coronado Belt Line's rails daylight in the pavement of the parking lot on the northwest side of the Best Western Plus Marina Gateway Hotel, south of Bay Marina Drive, and continue south through the parking lot and a landscaped area of the hotel property. South of the hotel, the resource is aligned through marshland, and sits atop earthen berms ranging from approximately 40–50 feet wide and 10–13 feet high, and a single wood trestle, for a distance of approximately 0.5 mile. The portion recorded here terminates at the Sweetwater River Channel.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width: From 4 feet 8.5 inches (street segments) to approximately 12 feet (embankments)

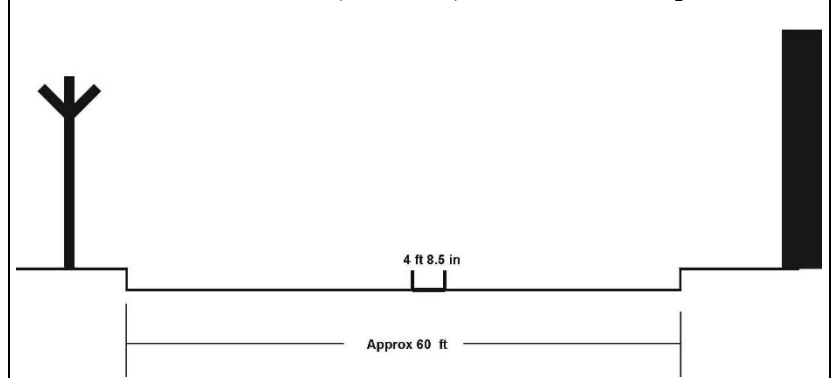
b. Bottom Width: From 4 feet 8.5 inches (street segments) to up to 50 feet (embankments)

c. Height or Depth: 10–13 feet high

d. Length of Segment: Approximately 1.4 miles

L5. Associated Resources: Wood trestle over Paradise Creek Slough

L4e. Sketch of Cross-Section (include scale): Cleveland Avenue segment



L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) From Civic Center Drive to the south side of the Best Western Plus Marina Gateway Hotel, the setting is decidedly urban and characterized mainly by a mix of light industrial and commercial properties. South of the hotel the setting consists of marshlands traversed by transmission lines with large steel towers.

L7. Integrity Considerations: Only approximately 7.5 miles of the original 20.3-mile Coronado Belt Line survives today. A 1.4-mile segment is recorded here; see page 11, Continuation Sheet below.



L8b. Description of Photograph, Map, or Drawing (View, scale, etc.)

Photograph 2. Largely growth-covered portion of Coronado Belt Line berm immediately north of the Sweetwater River Channel, looking south-southwest.

L9. Remarks:

L10. Form Prepared by: (Name, affiliation, and address)

T. Yates, ICF
525 B Street, Suite 1700
San Diego, CA 92131

L11. Date: September 3, 2019

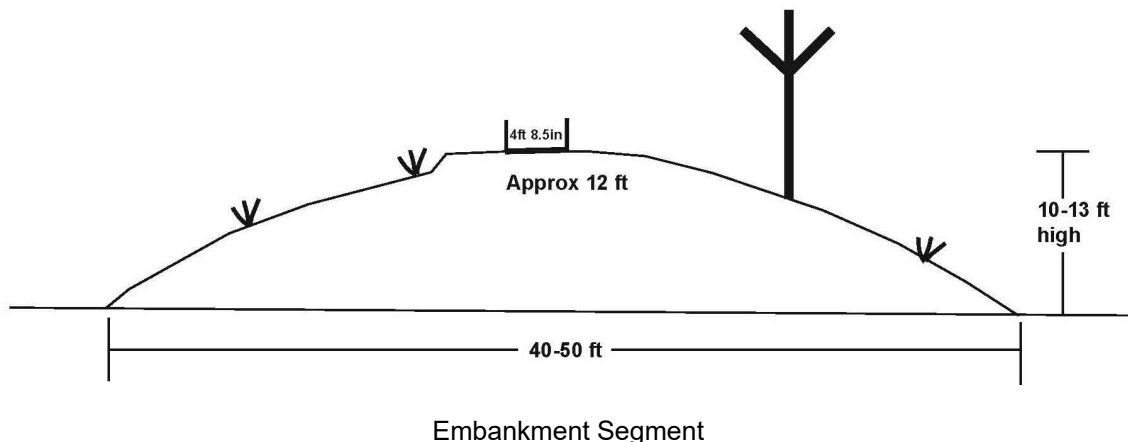
***P3A. Description (cont.):**

Formerly visible rails embedded in the Cleveland Avenue roadway between 23rd Street and Bay Marina Drive (formerly 24th Street) appear to have been paved over within the last 5 years; today a pavement scar is visible on that section of road (Photograph 5). At Marina Drive, the line originally curved as it crossed Bay Marina Drive. The portion crossing Marina Drive appears to have been removed in 2009 as part of the reconstruction of the intersection, the widening of Bay Marina Drive, and construction of the Best Western Plus Marina Gateway Hotel on the south side of Bay Marina Drive and the east side of Marina Way.

The Coronado Belt Line's rails daylight in the pavement of the parking lot on the northwest side of the hotel and on the east and southeast sides of the Historic Railroad Plaza building, and then curve to the southwest (Photograph 6). Approximately 300 feet south of the southeast corner of Bay Marina Drive and Marina Way the rail line retains a switch to a spur line that ran northward (Photograph 7). That spur line has been removed. The switch is at the southwest end of an approximately 240-foot segment of the line that runs through a landscaped area on the east side of the hotel parking lot. Beyond the switch, the line runs south. On the south side of the paved entrance to the parking lot from Marina Way, the Coronado Belt line enters open space and runs along the west side of the Paradise Creek Marsh.

From there, the line sits atop earthen berms ranging from approximately 40–50 feet wide and 10–13 feet high. Much of the line's 1,000-foot segment south of the hotel parking lot is covered by thick grass, though ties and rails are clearly visible in some places (Photograph 8). Approximately 1,100 feet south of the hotel parking lot, an approximately 130-foot-long open deck wood trestle aligned northwest-southeast carries the line over the Paradise Creek slough (Photograph 9). The trestle substructure appears to be in fair condition, and the deck is in fair-to-poor condition, with multiple collapsed or failing ties. South of the trestle, the railroad line is aligned northwest-southeast for a distance of approximately 800 feet; the rails and ties of this section are more visible than across the other portions of the segment recorded here (Photograph 1). At the southern end of that section the line turns in a more southerly direction for approximately 900 feet. This is the most overgrown section of the segment recorded here; grass and shrub growth make it impossible to walk across the top of the berm along most of this section (Photograph 2). The segment of the Coronado Belt Line recorded here crosses a paved bicycle path and terminates at the Sweetwater River Channel (Photograph 10), where a precast concrete box bridge on concrete pilings has carried the railroad over the Sweetwater River Channel since the 1980s.

L4e. Sketch of Cross-Section (cont.):



***B10. Significance (cont.):**

During the height of the land boom, thousands of people traveled to Coronado, and many purchased subdivided lots that funded construction of the hotel. In March 1887, Babcock and Story completed a second line for steam locomotives from the ferry landing along the edge of Glorietta Bay to the hotel's power plant, mainly for transporting fuel and building materials. By December of that year, they had extended this second line down the peninsula at a distance of 7.6 miles (Bevil 2001:12).

In 1888, Babcock and Story reorganized their railroad enterprise into the Coronado Railroad Company, and proceeded to connect their existing line down the peninsula around the bay to downtown San Diego. While extending the existing line through today's Imperial Beach, the company's crews also began laying track south from its depot terminus at 5th and L Streets in San Diego's downtown industrial district. The completed line would cross the National City and Otay Railway (NC&O) line in San Diego near today's intersection of South 32nd Street and East Harbor Drive. From there the two lines paralleled each other for several blocks into National City, where they turned west on adjacent alignments before turning south, where the Coronado Belt Line extended south on 8th Avenue (today's Cleveland Avenue) and the NC&O traveled south on 9th Avenue (today's Harrison Avenue). Beyond 24th Street, where the NC&O turned to the east, the Coronado Belt Line continued south on an earthen embankment and multiple wooden trestles across the Paradise Creek and Sweetwater River marshlands. This more heavily engineered portion of the railroad line continued south into Chula Vista. There the line was constructed on higher ground south to Babcock's and Story's La Punta Salt Works, later known as the Western Salt Works (Bevil 2001:13–14).

Completed in June 1888, the 20.3-mile Coronado Belt Line was one of multiple local short lines constructed in the San Diego area during the Southern California real estate boom. In addition to it and the NC&O, those short railroad lines included the Ocean Beach Railroad; the San Diego, Old Town and Pacific Beach Railroad; the San Diego, Cuyamaca and Eastern Railway; and the Park Belt Motor Road. Initially traveling the Coronado Belt Line were eight small saddle-tank steam locomotives, four of them dummies disguised to look like coaches, and one conventional steam locomotive. The entirety of the Coronado Belt Line did not primarily transport passengers, although passenger cars sometimes traveled its looped alignment around the bay. Most people traveled to the Hotel del Coronado on the Orange Street line from the ferry landing. However, special passenger excursions from Los Angeles and San Francisco occasionally traveled the Coronado Belt Line around the bay to Coronado. The Belt Line's main purpose was to transport building materials and freight, with the NC&O posing its main competition due to their proximity (Bevil 2001:14–15, Weitze 2001:4).

In terms of volume of freight carried and financial performance through the turn of the century, the Coronado Belt Line performed averagely compared to the region's other short lines. It did so during a period in which no local short line was distinguished by financial success. In addition to transporting building materials for construction of the hotel and other development—including construction of the Zuniga jetty at the San Diego Harbor entrance and a jetty at the Hotel del Coronado—the railroad provided limited passenger service. It also served the La Punta Salt Works, packinghouses in San Diego and National City, and other enterprises along the line, and transported freight hauled into the region via the Santa Fe line. Salt produced at La Punta dominated the agricultural commodities transported on the Coronado Belt Line. Although it averaged \$50,000 in annual revenue from 1888 to 1892, with the collapse of the Southern California real estate boom and the economic depression that followed the Panic of 1893, its fortunes changed. It operated at a loss during the late 1890s. Throughout the 1886–1901 period, its passenger and freight service generated \$43,690 in total profits, which amounted to an average annual profit \$2,730.00 (Bevil 2001:14–15, JRP Historical Consultant Services [JRP] 2002:7–9).

Even before the Panic of 1893, Babcock had sought investment in his enterprises from the sons of sugar magnate Claus Spreckels: John D. and Adolph B. Spreckels. The Spreckels brothers first acquired Story's interests and then gained controlling shares in the Coronado Beach Company, the Coronado Railroad, and the San Diego Streetcar Company. The reorganized streetcar company became the San Diego Electric Railway Company (SDERC), which electrified the line from the ferry landing to the Hotel del Coronado in 1893. After the turn of the century, as John D. Spreckels became the most powerful force in the San Diego economy, he would integrate the Coronado Belt Line into a changing and expanding system of local railroads controlled by his interests (Bevil 2001:16).

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*Recorded by T. Yates and N. Cox

*Resource Name or # (Assigned by recorder) Coronado Belt Line

*Date July 13, 2019

☒ Continuation ☐ Update

Coronado Belt Line in the Twentieth Century

In 1901, the Coronado Railroad Company's electric line from the ferry landing to the Hotel del Coronado Boathouse was extended farther south to the Silver Strand to serve a new resort. Known as Tent City, the resort included cottages, hundreds of tents, a bath house, a restaurant, a dance hall, and other beach-resort amusements. Although most Tent City visitors arrived via the electrified line from the ferry, steam locomotives occasionally pulled special excursion trains from National City around the bay to the resort (Bevil 2001:16–17).

In 1906 John D. Spreckels organized the San Diego and Arizona (SD&A) Railway Company to construct a railroad line from Arizona to San Diego. Spreckels hoped to capitalize on San Diego's geographical position as the United States' closest Pacific Ocean port to the Panama Canal, then under construction. Also acquiring the NC&O in 1906, Spreckels endeavored to achieve a monopoly over local San Diego rail service. Spreckels' interests separated the Coronado Railroad Company's steam and electric lines, and the SDERC acquired the latter. Spreckels' NC&O initially leased the Coronado Belt Line track and then merged with the Coronado Railroad Company to become the San Diego Southern (SDS) Railway Company. The NC&O was fitted exclusively for electric service, primarily passenger trolleys, and the Coronado Belt Line remained a steam engine railroad. Whereas, in the 1890s, the Coronado Railroad Company had 9 locomotives and 50 freight cars, by the time of its merger into the SDS it had 1 locomotive and 33 freight cars. The SDS would operate at a loss through 1912, when Speckels' interests merged it with the San Diego, Cuyamaca, and Eastern Railway Company and formed the San Diego and South Eastern Railway (SD&SE) Company out of the merger (JRP 2002:10, Weitze 2001:5–6).

The SD&SE as a whole did not succeed financially. It lost \$513,640.41 between 1912 and 1917. As the Coronado Division of the SD&SE, the Coronado Belt Line continued to function mainly as a freight line, and construction material continued to dominate its freight. For example, gravel, sand, and rock made up 87 percent of the line's total shipment value for the year 1913, and 79.6 percent of that material was shipped to the Coronado Station. That year 75.2 percent of all freight car loads transported goods to Coronado, while less than 1 percent delivered goods from Coronado to other destinations. The largest shipments to points other than Coronado were salt shipments from the Western Salt Works (formerly La Punta Salt Works) to National City and San Diego, which constituted 8.8 percent of total carloads. Revenues declined approximately 30 percent for both freight shipments and passenger service across the SD&SE system from 1913 to 1915, at least in part as a result of competition from automotive buses and trucks. Characterizing the railroad system's performance, one SD&SE official admitted that his company "spent 27.8 percent more money for the privilege of operating this railroad than we received from transportation and all sources" (JRP 2002:10–12, quote from page 12).

Storms and flooding in 1916 severely damaged the Coronado Belt Line along with other rail lines in the county. Floodwaters from the collapsed Sweetwater and Otay Dams washed out much of the SD&SE Southern Division's Coronado Belt Line and former NC&O lines. The SD&SE opted to abandon the NC&O right-of-way, salvage its track, and bring the Coronado Belt Line back to life. The company rebuilt the washed out track—using salvaged track—and repaired or reconstructed the severely damaged trestles along the Coronado Belt Line, including the segment in National City south of 24th Street and across the Paradise Creek and Sweetwater River marshlands. The SD&SE also outfitted this portion of the line for electric trolley service south into Chula Vista. At Marmarosa Junction north of F Street, a switch conveyed electric passenger trains to track that crossed the SD&A line, turned east on F Street, and continued south on 3rd Street (Bevil 2001:19, JRP 2002:11–12, Weitze 2001:6).

In 1917, freight shipments along the Southern Division of the SD&SE included fruits and vegetables, salt from the Western Salt Works, and raw-materials production facilities created to supply the World War I-era defense industry, including potash for gunpowder from the Hercules Powder Company plant at Chula Vista's "Gunpowder Point," and magnesite from the International Magnesite Company plant. The Hercules plant was particularly important for the railroad, which shipped salt cake, lime, supplies, and machine parts to the plant as well as potash and acetone from the plant. Although shipments of raw construction materials declined dramatically overall, shipments to the Army/Navy Airfield at Coronado's North Island and hauls of materials produced by the aforementioned wartime industries allowed the Coronado Belt Line to generate marginal profits. At the same time, poor financial performance continued to plague the rest of the SD&SE. By the end of 1917, the SD&A—owned by Spreckels interests as far as the public knew but financially controlled by the Southern Pacific Railroad—had acquired the SD&SE. The Hercules Powder Plant closed in 1918. By that time, former NC&O track had replaced the

approximately 6.5-mile original segment of the Coronado Belt Line track between downtown San Diego and National City, which was abandoned (Bevil 2001:20, JRP 2002:13–14, Wietze 2001:6–7).

The 1920s and 1930s brought changes to the uses of the Coronado Belt Line and its ownership. Two new plants at G Street in Chula Vista made use of the line: Pacific Cottonseed Products Corporation, which produced oil and other byproducts from cottonseed, and Pioneer Pyrophyllite Manufacturing Company, which produced ceramics and brick. In 1925, as a result of conversion to passenger buses, the SDERC ceased electric passenger service along the line to the south of 24th Street in National City. Then, in 1930 the SDERC discontinued electric passenger service between National City and San Diego. The onset of the Great Depression severely curtailed the performance of the Coronado Belt Line and other local short lines across the United States. In 1933 the heirs of John D. Spreckels, who had died in 1926, sold the SD&E to the Southern Pacific Railroad, which reorganized the company into the San Diego, Arizona and Eastern (SD&AE) Railway Company (Bevil 2001:20-21; Weitze 2001:7).

Apart from the Western Salt Works, it was military investment and the rise of the associated defense industry in the San Diego area that made ongoing operation of the Coronado Belt Line viable, at least for a time. In 1935 the U.S. Army Air Corps vacated its facility at North Island. The U.S. Navy acquired the property, more than doubled its size, and established its Naval Air Station there. The Navy also established its Amphibious Training Base at the northern portion of the Silver Strand and expanded its existing radio station at the area north of Imperial Beach known as Coronado Heights, which became the Naval Radio Receiving Station Imperial Beach. Coronado Heights also become the home of the Army's coastal defense emplacements at Fort Emory, created in 1942. During the latter 1930s and 1940s freight shipments on the Coronado Belt Line included construction materials for military development, and machine parts, ammunition, fuel oil, and gasoline for military operations. In 1940, Frederick H. Rohr moved his fledgling company, Rohr Aircraft Corporation, to Chula Vista and established a plant along the bay. The company specialized in the production of nacelles—engine housings—and other prefabricated aircraft components. The Rohr plant would prove a major force in the growth of Chula Vista, employing over 16,000 by 1959. Rohr shipped components for its manufacturing operations to its plant over the Coronado Belt Line, but the company shipped many of its products by truck (Bevil 2001:21–22, JRP 2002:16–17).

Despite an overall increase in rail shipments during World War II, the SD&AE as a whole continued to be a losing enterprise financially. Although demand for materials related to the Korean War boosted freight shipments on the Coronado Belt Line during the years 1950–1953, the line soon ceased to be financially sustainable. When the Navy ceased shipments on the line, the SD&AE removed the Silver Strand segment's track and sold it for reuse. "During the 1960s," explains historian Alexander Bevil, "except for the section of right-of-way connecting with the Santa Fe at National City to the Salt Works, the Coronado Belt Line was no longer a viable transportation corridor." During that decade, the original Coronado Belt Line and main SD&AE line in Chula Vista remained intact, but most of the track along F Street, Broadway, and segments farther east was covered by pavement or removed. In 1979, the County of San Diego purchased most of the SD&AE from the Southern Pacific and "transferred the operating and acquisition rights to the SD&AE to the Metropolitan Transit Development Board" (Bevil 2001:22).

Previous Evaluations and Local Designation

In 1994 Stephen B. King evaluated the Coronado Belt Line for the California Department of Transportation and found the resource not eligible for listing in the National Register of Historic Places (NRHP). The State Historic Preservation Officer (SHPO) concurred with King's finding in September 1994. Working on behalf of Save Our Heritage Organization, Alex D. Bevil surveyed and evaluated the surviving 7.5-mile segment of the railroad in 2001. Bevil found it eligible for NRHP listing under Criteria A and C. Bevil's work was submitted to support a nomination to have the resources formally listed in the CRHR. In February 2002 the State Historical Resources Commission voted in favor of listing the resource in the CRHR under Criterion 1, for association with events important to San Diego History, and under Criterion 3, as an important example of nineteenth and twentieth century railroad engineering (Bevil 2001, JRP Weitze 2001:ii, Widell 1994).

In 2002 BRG Consulting, Inc. contracted JRP Historical Consulting Services (JRP) to review the previous evaluations of the Coronado Belt Line, conduct independent fieldwork and historical research, and respond to the State Historical Resources Commission's findings regarding the resource's associations with important events in San Diego history, and its engineering

significance. Based on its field investigations and research findings, JRP produced a report arguing that the Coronado Belt Line lacked significance and sufficient historical integrity to justify its listing in the CRHR under Criteria 1 and 3 (JRP 2002).

In 2002, pursuant to Section 4855(B)(2) of Title 14, Chapter 11.5 of the California Code of Regulations, the Cities of San Diego, Chula Vista, and Imperial Beach joined the San Diego Unified Port District in requesting that the State Historical Resources Commission reconsider its previous designation of the Coronado Belt Line. These petitioners argued that Commission's previous determination had been based on factual error. The Commission reconsidered the previous determination in November 2002. Having reviewed all studies of the resource to date, Commission staff recommended that the evidence did not support a conclusion that the Coronado Belt Line had the historical significance and integrity necessary to justify its CRHR listing. The Commission voted 5 to 3 (with one abstention) in favor of the staff recommendation to remove the property from the CRHR (State Historical Resources Commission 2002).

Although the Coronado Belt Line had been determined ineligible for listing in the NRHP and the CRHR by the end of 2002, an approximately 1.5-mile segment of the resource has been designated locally by the City of San Diego, as Historic Landmark Site No. 640. The designated segment is located on bayfront City of San Diego land north of Imperial Beach, west of Chula Vista, and south of National City. The City designated the segment on December 19, 2003, under Criterion A (Historical Landscape), for the site's archaeological value, as an example of the private capitalization of infrastructure, and for the site's significant contributions to the historical, physical, and economic development of San Diego; under Criterion B (Historical Persons) for the site's association with historically significant individuals such as John D. Spreckels, Elisha Babcock, and Hampton L. Story; and under Criterion C (Architecture) for retaining high integrity and representing late-nineteenth-century railroad construction as evidenced by the presence of circa 1890 Carnegie steel rails and other character-defining features. The Metropolitan Transit Development Board (MTDB) (now Metropolitan Transit System [MTS]) filed an appeal to rescind the designation on January 6, 2004. The City of San Diego held a hearing to consider the appeal on September 7, 2004, and overturned the Historic Resources Board's designation of the Coronado Belt Line. Save Our Heritage Organization (SOHO) subsequently challenged the decision in the Superior Court, which issued a Peremptory Writ of Mandate requiring the City Council to set aside its decision to approve the MTDB appeal in July 2005. On September 13, 2005, the City Council upheld the historic designation of the 1.5-mile Coronado Belt Line segment. Consequently, the 1.5-mile segment of the railroad line within City of San Diego jurisdiction remains a locally designated historical resource (Lia 2007). That designation does not apply to the portion of the railroad line within the City of National City.

The City of National City maintains an official Historic Properties List, but unlike the City of San Diego, it does not have formal significance criteria for designating resources to be added to the Historic Properties List. Under the City's Land Use Code, Section 18.12.160, properties may be nominated for local designation to the Historic Properties List by resolution of the City Council or through application by property owner, and the National City Historical Society is invited to submit comments to be included in the staff report and recommendation to the Planning Commission. The Planning Commission then holds a public hearing on the nomination and makes a recommendation to the City Council, which holds an additional public hearing prior to making a final decision. The City of National City also periodically updates a local historic properties survey. Owners of properties included in the survey are encouraged to nominate their properties for inclusion in the Historic Properties List, which qualifies them for Mills Act contracts. However, the City of National City has no formalized significance criteria to apply in evaluating Coronado Belt Line.

Evaluation

The following evaluation applies CRHR significance criteria and integrity considerations to re-evaluate the 1.4-mile segment of the Coronado Belt Line within the National City Bayfront Plan project area. It has been over 15 years since the California Historical Resources Commission voted to list the larger surviving 7.5-mile segment of the railroad line in the CRHR, and then found that the resource lacked sufficient significance and integrity to justify CRHR listing in a November 8, 2002, redetermination vote. However, the same arguments and evidence presented in 2002 to challenge the 7.5-mile railroad line's CRHR listing continue to apply to the 1.4-mile segment of the line addressed here and the larger 7.5 mile segment. Moreover, since 2002 removal or paving over of track and changes to the setting have further diminished the line's historical integrity.

CRHR Criterion 1

The Coronado Belt Line was one of three steam-engine short-line railroads built in the San Diego area in the 1880s, during the longer late-nineteenth-century era of widespread railroad development across California and the United States. Built in unison with the National Historic Landmark Hotel Del Coronado, the Coronado Belt Line contributed to the growth of Coronado resort community mainly in terms of hauling construction materials, and to a lesser extent as a line that provided for occasional passenger excursions around the South Bay to Coronado. However, less than 50% of the original 20.3-mile Coronado Belt Line survives today. The railroad line does not retain a physical association with the community of Coronado, which is located over 6 miles north of the southern end of the bay, where the surviving 7.5-mile segment of the alignment terminates today (JRP 2002:6–9). The surviving segment of the Coronado Belt Line does not retain sufficient historical integrity to convey any significance attributable to it based on its historic relationship to the community of Coronado.

Financially, the Coronado Belt Line was not particularly successful, and proved less profitable than comparable San Diego-area short lines during its period of independent operation from 1888 to 1908. Only in a single year, 1904, did the railroad pay dividends to stockholders (JRP 2002:7–9). Ultimately, the Coronado Belt Line was not a critical factor in the development or economic prosperity of the greater San Diego region. During the 1908–1916 period, when the Coronado Belt Line was first consolidated with the NC&O into the SDS Railway, and then became a part of the SD&SE Railroad in 1912, neither railroad company proved financially successful. During that period the Coronado Belt Line principally shipped construction materials to Coronado, and, again, the line no longer retains a physical connection to Coronado. The line's second most frequently hauled commodity was salt shipped from the salt works north to National City and San Diego. Much of the line from National City to Imperial Beach had to be reconstructed after the disastrous floods of 1916 to maintain operation, including much of the 1.4-mile segment recorded as part of the present study (JRP 2002:10–13). For these reasons, the subject 1.4-mile segment does not contribute to a larger railroad line with historical integrity and significance under CRHR Criterion 1 tied to any period of potential significance prior to 1916.

It has been asserted that the Coronado Belt Line has historical significance for contributing to the development of federal military facilities in Imperial Beach and Coronado during World Wars I and II, and for its association with wartime and defense-related industrial facilities in the South Bay. Here again, because the resource does not retain a physical connection to northwestern Imperial Beach, the Silver Strand, or Coronado, it does not retain sufficient historical integrity to convey any significance attributable to it for its role in the development of military facilities on the west side of the bay. As part of the SD&SE in 1916, and then part of the SD&AE beginning in 1917, the Coronado Belt Line's surviving segment provided Chula Vista's Hercules Powder Plant with shipment service both for inbound materials and for outbound sacks of muriate potash and acetone in tank cars. However, the Hercules Powder facility, a station that served the plant, and spur lines connecting the Belt Line to the facility have all been demolished. The surviving Coronado Belt Line segment in Chula Vista retains no functional association or physical connection with the demolished plant. More important to the growth of Chula Vista was the Rohr Aircraft Corporation facility developed along the Coronado Belt Line during World War II. The Rohr plant received parts shipments and in turn shipped parts and finished products on the Coronado Belt Line with the aid of two spur lines connecting to the plant. Rohr also shipped many of its airplane power packages—the company's signature product—by truck and was never ultimately dependent on the railroad line. An intact Rohr Aircraft Corporation Plant determined significant as a historic district or complex could potentially include as contributing elements intact connecting spur lines and—if the spur lines remained present—a limited segment of a principle railroad line connected to the spur lines. However, the spur lines at the site of the former Rohr Aircraft facilities in Chula Vista have been removed, paved over, or otherwise compromised. The Coronado Belt Line's earthen berm and roadbed have also been paved over in the vicinity of the former Rohr Aircraft facility. Moreover, the Rohr Aircraft facility buildings developed south of H Street and west of Walnut Avenue have been demolished (JRP 2002:14–17; NETR 2019). For these reasons, the 1.4-mile segment of the Coronado Belt Line recorded here does not contribute to a larger railroad line that retains historical integrity and has strong historical and physical association with a historically significant federal military facility or a historically significant war- or defense-related industrial facility.

For these reasons, the 1.4-mile segment of the Coronado Belt Line recorded here does not contribute to a larger railroad line that is eligible for listing in the CRHR under Criterion 1.

CRHR Criterion 2

The Coronado Belt Line is not significant for association with the life of a historically important individual. The Coronado Belt Line's developers, Elisha Babcock and Hampton L. Story, certainly played significant roles in the establishment and early development of Coronado. To meet CRHR Criterion 2, however, a non-residential resource such as a railroad needs to represent strongly the productive life or achievements of a historically significant individual, and do so better than other potentially significant resources. Having lost its historic physical connection to the community of Coronado, the Coronado Belt Line does not strongly represent aspects of Babcock's or Story's contributions to the establishment and early development of Coronado. Even if the Coronado Belt Line did retain its original physical relationship to Coronado, it would arguably not strongly represent the productive lives or achievements of the two men. Story sold his shares in the railroad enterprise in 1889, a year after it began operation. Babcock retained a financial interest in the line until no later than 1908, when Spreckels' interests assumed full control over the railroad and merged it with the NC&O to form the SDS Railway. The Coronado Belt Line's economic performance never distinguished it from other San Diego-area short lines in the 20-year period from 1888 to 1908, during which it only paid dividends to stockholders in 1904 (JRP 2002:9, Lia 2004:7–8). The subject 1.4-mile segment of the Coronado Belt Line does not, therefore, have both significance and integrity under CRHR Criterion 2 as a resource that represents the productive life or achievements of either Babcock or Story.

John D. Spreckels is arguably the most significant individual in the history of San Diego during the first half of the twentieth century. Spreckels did not develop the Coronado Belt Line. Spreckels interests acquired control of the line in 1908, 20 years after its development, and integrated it into what became a regional railroad monopoly. Within less than a decade, the Coronado Belt Line and other formerly independent short lines in the SD&SE system became part of the SD&A, controlled unbeknownst to the public by the Southern Pacific. Neither the Coronado Belt Line nor other formerly independent short lines that became part of the Spreckels regional railroad monopoly after the turn of the century are the types of resources apt to strongly represent the productive life or achievements of a figure such as John D. Spreckels (Lia 2004:8–9). It would be far-fetched to conclude that the Coronado Belt Line could represent the productive life or achievements of John D. Spreckels better than other built resources in the San Diego area.

For these reasons, the 1.4-mile segment of the Coronado Belt Line recorded as part of the current study does not contribute to a larger railroad line that is eligible for listing in the CRHR under Criterion 2.

CRHR Criterion 3

The Coronado Belt Line is not significant for design or engineering value, or as an important example of a type, period, or method of construction. It has been asserted that the surviving 7.5-mile railroad segment is significant for embodying distinctive characteristics of late-nineteenth to mid-twentieth-century railroad construction. However, the flooding of 1916 was so severe, and the reconstruction of the line on the east side of the bay so extensive, that the only aspect of integrity that the 7.5-mile segment retains with respect to any period of significance prior to 1916 is location. Materials created prior to 1916 are present, including scattered rails produced as early as 1897. However, the overwhelming majority of the existing track assemblage and features such as switches, trestles, and culverts were either manufactured or brought from elsewhere and used in reconstruction or maintenance efforts after 1916 (JRP 2002:18, 22, 24). As a railroad line reconstructed across marshlands and sloughs in the early twentieth century using trestles with standardized designs and earthen embankments, the surviving portion of the Coronado Belt Line did not require innovative engineering or technology. That the surviving portions of the line were largely reconstructed after 1916 makes the Coronado Belt Line all the more commonplace in terms of railroad technology and engineering. The resource is therefore not a significant example of railroad engineering.

The Coronado Belt Line has poor historical integrity overall. Moreover, since the reconstruction of large portions of the surviving segment on the east side of the bay during the late-1910s, subsequent alterations have compromised the resource's integrity of design, workmanship, and materials—the most important aspects of integrity under CRHR Criterion 3. Foremost among such alterations is the loss of a majority of the rails and associated infrastructure that formed the original 20.3-mile line operating from San Diego to Coronado, and a large portion of the rails and associated infrastructure that subsequently formed the line operating from National City to Coronado. As detailed in a 2002 assessment of the Coronado Belt Line's historical integrity, the surviving segment on the east side of the bay retained five timber trestles at that time, most of which had been substantially modified since their construction in the late-1910s. Four others constructed in the late

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1910s—including the longest one spanning the Sweetwater River Channel—were subsequently eliminated or replaced by modern concrete structures. None of the culverts extant in 2002 were built as part of the immediate post-1916 reconstruction effort, and research and field surveys conducted in 2002 indicated that most were constructed in the 1940s or 1950s. Dates observed on rails and tie plates in 2002 indicated that a “substantial amount” of the 75-pound rails constituting most of the resource’s surviving rail in 2002 had been laid in the late 1920s or early 1930s (JRP 2002:20–23, 22 quoted).

For these reasons, the 1.4-mile segment of the Coronado Belt Line in National City recorded as part of the current study does not contribute to a larger railroad line that is eligible for CRHR listing under Criterion 3.

CRHR Criterion 4

The remains of the subject railroad in the study area exist mainly on a human-made elevated berm constructed for the railroad, or as orphaned portions of the track embedded in and daylighting from street or parking lot pavement, or as orphaned paved over portions of track. While evidence of occasional trash dumping in the form of individual broken bottles was evident along the railroad, the berm is not wide enough to have supported the kinds of temporary work camps in which nineteenth-century railroad workers sometimes slept, cooked, and ate. It has been suggested that Chinese laborers working on the railroad in the late 1880s may have created camps. Neither the current study nor previous surveys at locations along the larger railroad alignment have yielded any material evidence of such camps. It is possible that railroad laborers spent nights in boarding houses or camps located inland from the bayfront marshes that required berm and bridge construction. The floods of 1916 would have likely washed away evidence of any 1880s camps created at or near marshland portions of the alignment. Given the growth of towns and residential enclaves in the South Bay, it is unlikely that workers engaged in reconstruction of the extensively damaged railroad between National City and Imperial Beach camped along the alignment following the 1916 floods.

Other segments of the surviving 7.5-mile railroad alignment do not have material potential to yield information important to history. Portions of the railroad embedded in and daylighting from pavement, or covered by pavement, have no potential to yield important information on railroad construction. Although portions of the surviving alignment passed through historically industrial areas of Chula Vista and National City, historic archaeological materials associated with local industries in those areas would not yield important information on the railroad itself. Furthermore, during the majority of the period after the railroad’s extensive reconstruction across the eastern South Bay following the 1916 floods, the railroad was not the primary source of freight for industries operating in those areas. For these reasons, Under CRHR Criterion 4, the subject railroad road is not significant as a source, or likely source, of important historical information, nor is it likely to yield important information about historic construction methods, materials, or technologies.

Historic Integrity of Recorded Segment

The historical integrity of the 1.4-mile segment of the Coronado Belt Line recorded here within National City has been diminished further since 2002. Along this segment, direct physical alterations since 2002 are most pronounced from the north side of the intersection of Cleveland Avenue and 23rd Street to the south side of the intersection of Cleveland Avenue and Bay Marina Drive. Rails have been removed or paved over along this approximately 450-foot portion of the recorded segment. Connecting spur lines have also been eliminated since 2002 along this portion of the recorded segment. The former industrial character of the setting in this area has been diminished by demolition of industrial properties and construction of the Best Western Plus Marina Gateway Hotel and associated landscaped areas where rails remain present. Although deteriorated since 2002, the wood trestle along the recorded portion of the line remains intact. However, grass and shrub overgrowth is severe across much of the line within the Paradise Creek and Sweetwater River marshlands south of the Best Western Plus Marina Gateway Hotel.

Conclusion

In conclusion, the recorded 1.4-mile segment of the Coronado Belt Line in National City does not contribute to a larger railroad line that is eligible for CRHR listing. The subject railroad segment does not qualify as a historical resource for the purposes of CEQA.

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Photographs (cont.):



Photograph 3. Crossing at Civic Center Drive, looking south down Cleveland Avenue.



Photograph 4. Cleveland Avenue segment, looking south at 22nd Street.



Photograph 5. Paved over section of the Coronado Belt Line approaching intersection of Cleveland Avenue and Bay Marina Drive (formerly 24th Street), where rails appear to have been removed, looking south-southwest.



Photograph 6. Daylighting Coronado Belt Line rails in parking lot of Best Western Plus Marina Gateway Hotel, looking southwest.

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Photograph 7. Former spur line switch west of southwest portion of Best Western Plus Marina Gateway Hotel parking lot and south of Historic Railroad Plaza building at southeast corner of Bay Marina Drive and Marina Way, looking south.



Photograph 8. Coronado Belt Line atop berm on west side of Paradise Creek Marsh, from point approximately 300 yards south of Best Western Plus Marina Gateway Hotel, looking north.

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Photograph 9. Timber trestle carrying track over Paradise Creek Marsh approximately 1,600 feet north of Sweetwater River Channel, looking south-southeast.



Photograph 10. Coronado Belt Line at bike path crossing immediately north of Sweetwater River Channel, 1988 bridge at upper right, looking southeast.

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*Recorded by T. Yates and N. Cox

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CONTINUATION SHEET

Property Name: _____ Coronado Railroad _____
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P-37-013073 is the historic Coronado Railroad grade within the APE that was first recorded by Don Laylander in 1993. The Coronado Railroad was constructed in the late 1880s. The route has been variously labelled on maps and in publications as the Coronado Belt Line, Coronado Railroad, San Diego Southern, San Diego & Southeastern, San Diego and Arizona - Southern Pacific Lines, A T. & S. F. - San Diego and Arizona Eastern. In 1999 and 2000, Andrew Pigniolo updated the site record. He noted the presence of an extant portion of the historic Coronado Railroad within the Bayshore Bikeway project APE. The railroad alignment was not in use and had been fenced off near the Western Salt Plant. Several portions of the track had been undermined by erosion while others had been partially covered by erosion from the nearby berm. The track south of the Bayshore Bikeway APE had been removed. The two trestles within the Bayshore Bikeway APE were both in poor condition. A portion of the southern trestle had been removed to limit access across the channel. The remainder had seriously deteriorated and had been tagged by graffiti. The northern trestle was also heavily deteriorated and a portion had been burned. The overall integrity of the site within the Bayshore Bikeway APE was poor according to Pigniolo and was recommended not eligible for the CRHR.

A segment of historic site P-37-013073, the historic Coronado Railroad grade, was observed within the Project APE and appears to be in poor condition, consistent with previous observations. The portions of the track directly east and west of the APE have been removed or covered with fill, respectively.

The portion of historic site P-37-013073, the historic Coronado Railroad grade, within the Project APE has not been evaluated for the CRHR or NRHP, but the resource has been recommended as not eligible for the CRHR as noted above. It is unknown if the SHPO has concurred with this recommendation, as no documentation was provided by the records search. If federal funds are obtained for this project, Section 106 compliance requires SHPO concurrence with the recommendation to be documented. This report concurs with the previous CRHR recommendation. Evaluations of eligibility to determine the structure's NRHP eligibility is recommended if Section 106 compliance is required. The results and an evaluation of eligibility should be reported in a separate document. If the evaluation determines that the resource is significant, then because it is being preserved in place, no further mitigation would be required for this resource. However, should the project be redesigned to include impacts to the resource, then mitigation would involve detailed recordation of this resource.

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CONTINUATION SHEET

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Gardner, Jill K., & Associates, Inc.

2012 Cultural Resources Survey of 2.86 Acres (APNs 626-060-01, 02, 05 and 626-050-02) for the Bikeway Access Project at 495 10th Street, City of Imperial Beach. Submitted by Jill K. Gardner & Associates, Inc.
Submitted to the City of Imperial Beach.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

SAN DIEGO & ARIZONA EASTERN RAILWAY
CORONADO BRANCH LINE RIGHT-OF-WAY:
CALIFORNIA REGISTER NOMINATION

☐ Update or Supplement

Other Listings:

Review Code:

Reviewer:

Date:

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*Resource Name or Number (Assigned by Recorder): Coronado Belt Line Right-of-Way

P1. Other Identifier: San Diego & Arizona Eastern Railway Coronado Branch Line Right-of-Way

*P2. Location: ☒ Not for Publication ☐ Unrestricted *a. County: San Diego

*b. USGS 7.5' Quad: Date: ;T ;R ; 1/4 of 1/4 of Section: ; SB B.M.

c. Address: City: Zip:

d. UTM: (Give more than one for large and/or linear resources) Zone: 11 ; POINT A: 489620 mE / 3614620mN; POINT B: 489820mE / 3613380 mN; POINT C: 490420mE / 3614140mN; POINT D: 490775mE / 3610620 mN; POINT E: 491200mE / 3606900mN; POINT F: 490160 mE / 3605445 mN; POINT G: 489160mE / 3605485 mN; POINT H: 489920mE / 3605820mN ☐ UTM Coordinates determined with Global Positioning System

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., when appropriate):

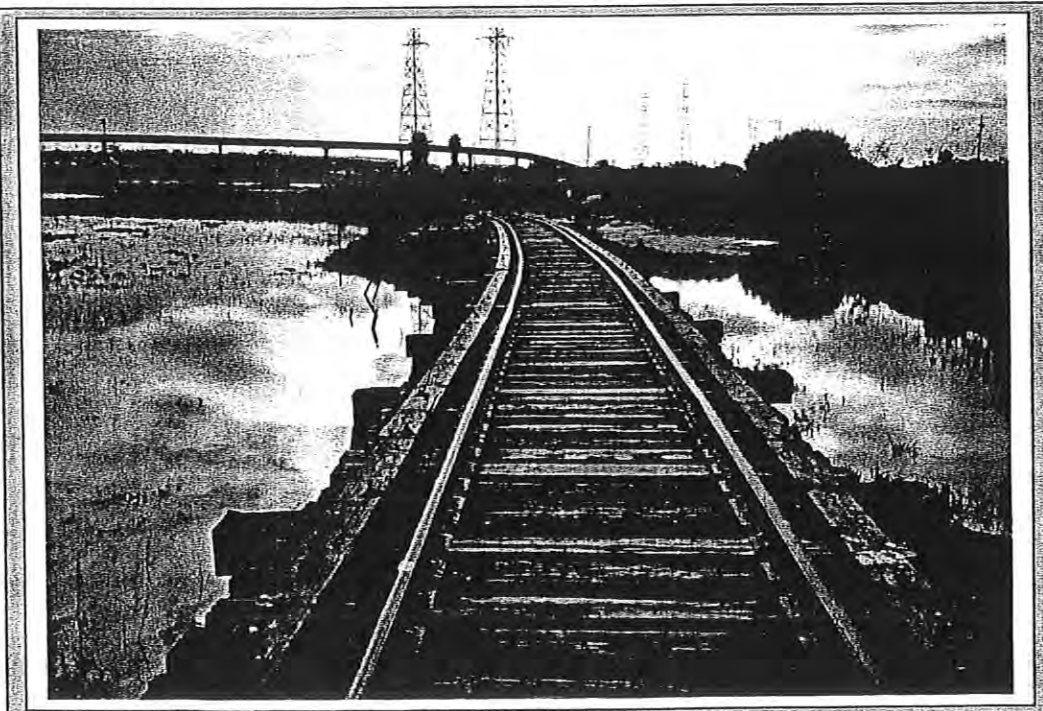
*P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries):

The resource is part of a standard gauge (4' 8½") railroad line that runs along a combination private right-of-way and street easement for approximately 7.5 miles from its northern terminus in National City to its southern terminus in Imperial Beach. Through the use of trestles, viaducts, and culverts, the right-of-way has maintained a relatively constant height of some 10-13ft. above sea level. Completed in 1888 by crews working for the Coronado Railroad and improved upon up until 1950, the line ran originally for 20.3 miles from the Coronado ferry landing, around San Diego South Bay's shoreline to downtown San Diego. During its period of historic significance, 1888-1950, it has evolved from a Victorian era passenger and freight carrier to a modern short line railroad. This can be seen along the approximately 20-40ft. right-of-way as it passes through light-industrial and warehouse areas along Chula Vista and National City's western bay fronts. However, a good part of the right-of-way travels on a raised roadbed some 8-10 feet above open salt marshes and evaporation ponds that are some of the last remaining undeveloped open spaces between San Diego and the Mexican border. Along the way, the right-of-way uses several historic wooden trestles and earthen causeways and non-historic concrete viaducts and culverts to cross creeks, river estuaries, and salt ponds. Other appurtenances, such as manual switches, crossovers, signals, steel rails and wooden ties that represent local examples of the use of mainstream late 19th to mid-20th century American railroad engineering and construction techniques. Although the wooden trestles are in need of repair, they have maintained their historic integrity. With the exception of certain trestles and near a salt processing plant, the majority of the tracks and wooden ties are in good condition. The final ¾ mile of track along Boulevard Ave. in Imperial Beach is buried with missing ties. Overall, the right-of-way is in good condition.

See Continuation Sheets for more details.

*P3b. Resource Attributes (List Attributes and Codes): HP37-Rail Road; HP11-Engineering Structure(s); HP19-Bridge(s)

*P4. Resources Present: ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of ☒ Photo (View, date, accession #): Trestle #1, Looking South, 12 February 2001, R749_024.JPG

*P6. Date Constructed/Age and Sources ☐ Prehistoric ☒ Historic
☐ Both: 1888-1950, Factual

*P7. Owner and Address:
San Diego Metropolitan
Transit Development Board
1255 Imperial Avenue
San Diego, CA 92101

*P8. Recorded by (Name, affiliation, address): Alexander D. Bevil
Save Our Heritage Organisation
P.O. Box
San Diego, CA

*P9. Date Recorded ☒ Updated ☐
12 April 2001

*P10. Type of Study (Describe):
California Register Nomination

*P11. Report Citation (Cite survey report and other sources, or enter "none."): None

*Attachments: ☐ NONE ☒ Location Map ☒ Sketch Map ☒ Continuation Sheets ☒ Building, Structure, and Object Record ☒ Linear Feature Records ☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☒ Photograph Record
☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

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*NRHP Status Code:

*Resource Name or Number (Assigned by Recorder): Coronado Belt Line Right-of-Way

- B1. Historic Name: Coronado Railroad Belt Line
B2. Common Name: San Diego & Arizona Eastern Railway Coronado Branch Line
B3. Original Use: Transportation B4. Present Use: Transportation—Rail Related
*B5. Architectural Style: N/A
*B6. Construction History (Construction date, alterations, and date of alterations): 1888-1950, alterations include replacement of wood ties as needed, concrete bridges and culverts, removal of sidings, removal of switch signal lights. Alterations also include the covering over sections of the right-of-way with dirt or asphalt, as well as the removal of a section of ties and rail in the Imperial Beach segment sometime in the late 1990s. See Continuation Sheets for more information.

- *B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: Original Location:
*B8. Related Features: The right-of-way contains various artifacts, both functioning and non-functioning, that represents the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950). These include manual switch mechanisms, wooden ties, steel rails and signal towers. Although covered with rust, some rails still show their manufacturer's name and date of construction.

- B9a. Architect: N/A B9b. Builder: Coronado Railroad, San Diego Southern, San Diego & Southeastern Railway, San Diego & Arizona Railway, San Diego & Arizona Eastern Railway

- *B10. Significance: Theme Transportation-Rail Related Area The development of an interurban steam and electric rail transportation network in San Diego's South Bay

Period of Significance 1888-1950 Property Type Railroad Right-of-Way Applicable Criteria A/C

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Coronado Belt Line right-of-way is a surviving element of an original 20.30-mile short line between San Diego and the resort community of Coronado. One of the earliest independent steam-powered short lines in San Diego County, it is historically associated with the early development of interurban steam and electric rail transportation in San Diego's South Bay. During its period of historic significance, 1888 to 1950, it served as a major contributor to the economic development of Coronado, as well as other suburban communities along its right-of-way, including National City, Chula Vista, and Imperial Beach. Through its various corporate lives as the *Coronado Railroad*, the *San Diego Southern*, the *San Diego & Southeastern*, the *San Diego & Arizona*, and finally the *SD & Arizona Eastern Railway*, the line provided the means for the transport of bulk agricultural and industrial raw materials from the region to San Diego's harbor and transcontinental rail links. A section of the line between National City and Chula Vista also shared service with an electric traction interurban passenger line. The forerunner of today's *San Diego Trolley*, it served as part of an essential rail link between the South Bay and downtown San Diego's business center. The line was also a critical hauler of strategic war materiel during both World Wars. A drastic reduction in use during the postwar years resulted in the abandonment and removal the tracks removed line north of Imperial Beach along the Silver Strand to Coronado to be. In limited use today, the surviving 113-year old 7.5-mile right-of-way from National City south to Imperial Beach continues to retain its historical significance. The right-of-way, including its roadbed, rails, ties, switches, and trestles, represents a type, period and method of late 19th and early 20th century railroad construction techniques and materials. It is through these materials that the resource has maintained its historic significance and integrity. This, combined with its location, design, and setting, helps to reinforce the overall feeling of its historic association with one of San Diego's key locally owned and operated short lines, which served as a vital interurban rail transportation corridor linking the South Bay with San Diego and Coronado.

See Continuation Sheets for more details.

- B11. Additional Resource Attributes (List attributes and codes):
HP37-Rail Road; HP11-Engineering Structure(s); HP19-Bridge(s)
*B12. References: See Continuation Sheet DPR 533L
B13. Remarks: Zoning: M, C & R1-3, Treats: abandonment and removal, vandalism (fire),
*B14. Evaluator: Alexander D. Bevil
Historian
4752 Mt. Longs Drive
San Diego, CA 92117
*Date of Evaluation: 12 April 2001

(Sketch Map with north arrow required.)

See Sketch Map DPR 523K

(This space reserved for official comments.)

LOCATION MAP 1

Primary #:

HRI#

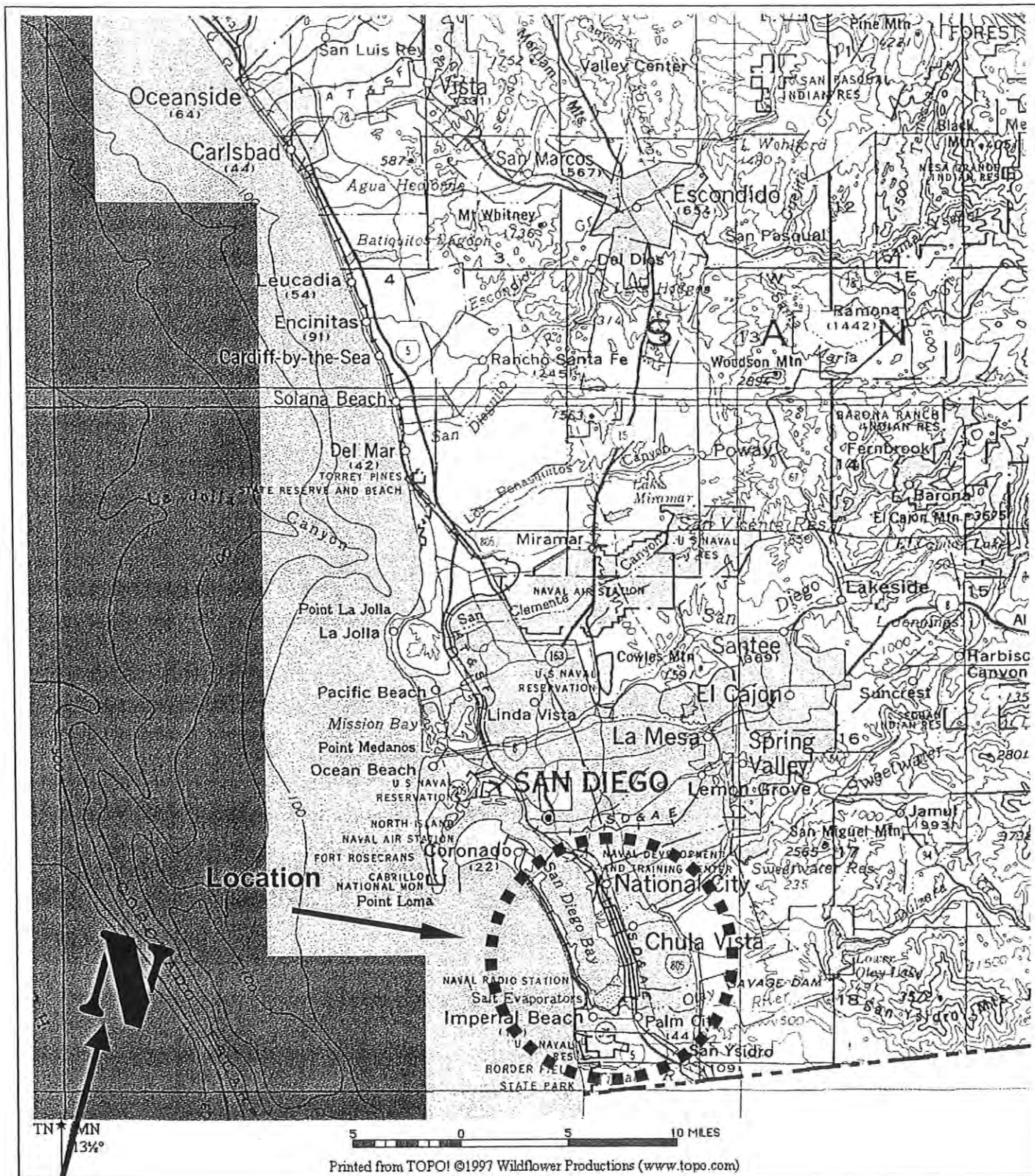
Trinomial:

Page 3 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Resource Location

*Scale: 1"=24,000m

*Date of Map: 12 April 2001



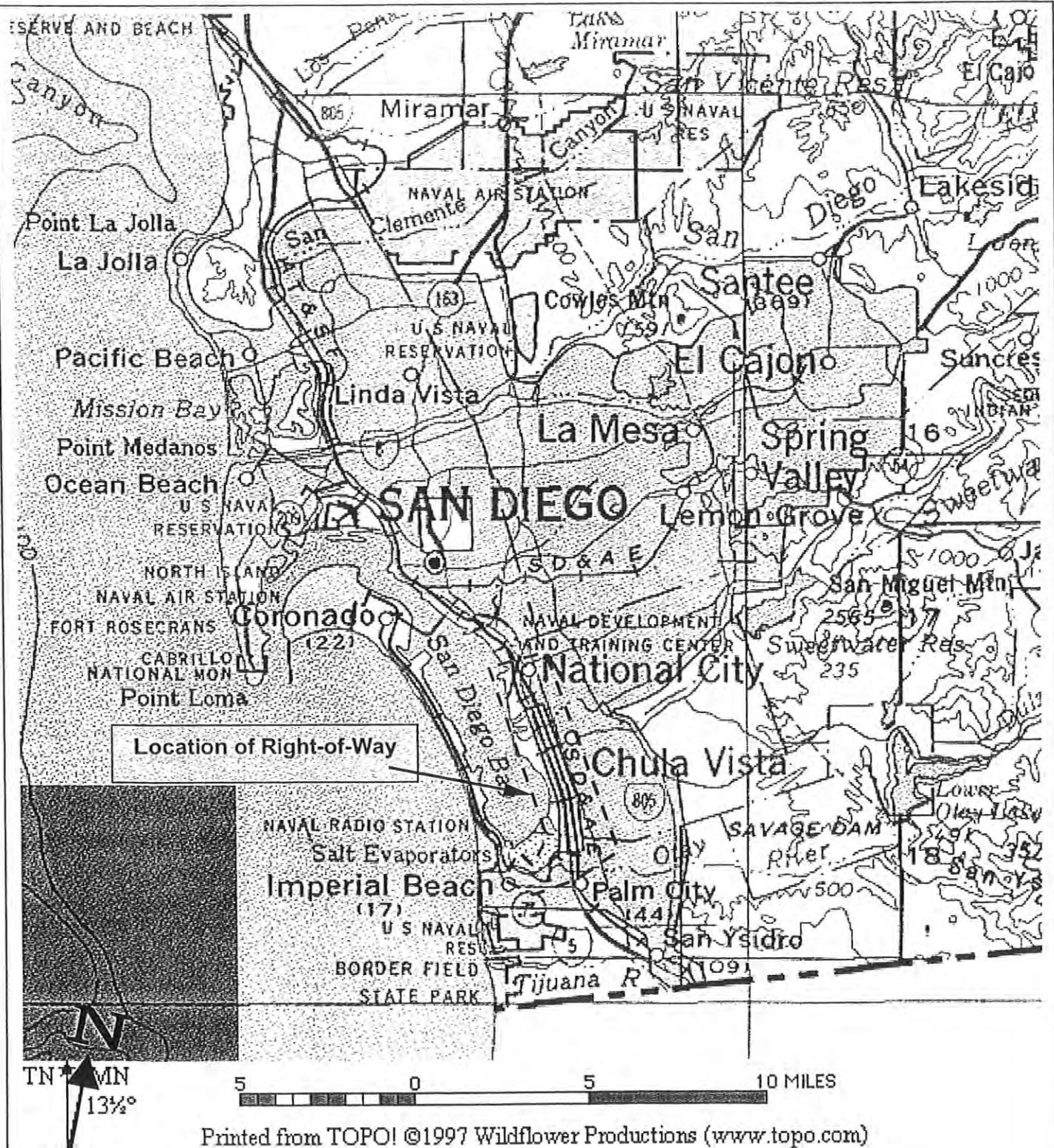
LOCATION MAP 2

Primary #:

HRI#

Trinomial:

Page 4 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way
*Map Name: San Diego County Topo Map *Scale: 1"=5miles *Date of Map: 1997



LOCATION MAP 3

Primary #:

HRI#

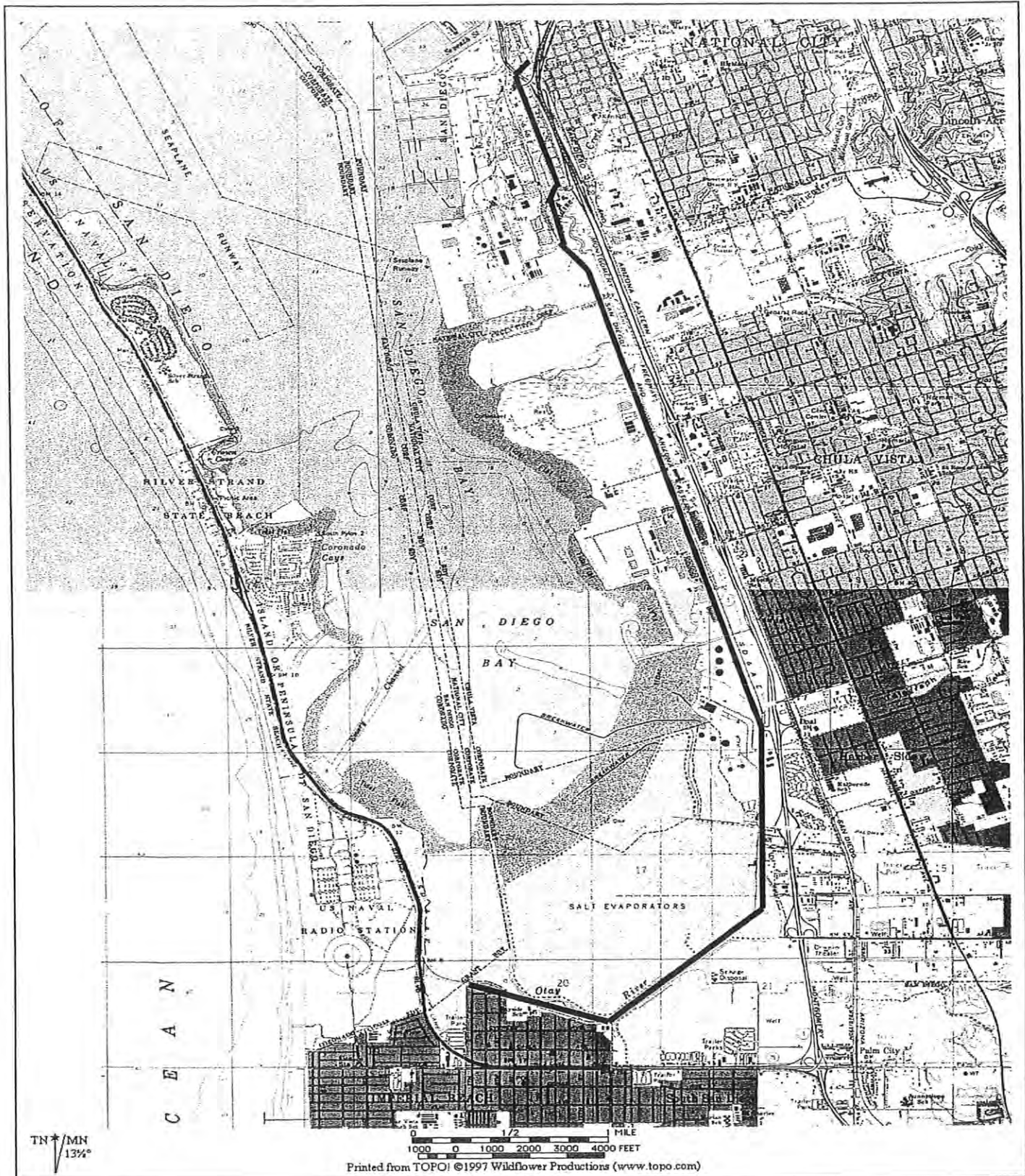
Trinomial:

Page 5 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Linear Resource

*Scale: 1"=24,000m

*Date of Map: 12 April 2001



LOCATION MAP 4

Trinomial:

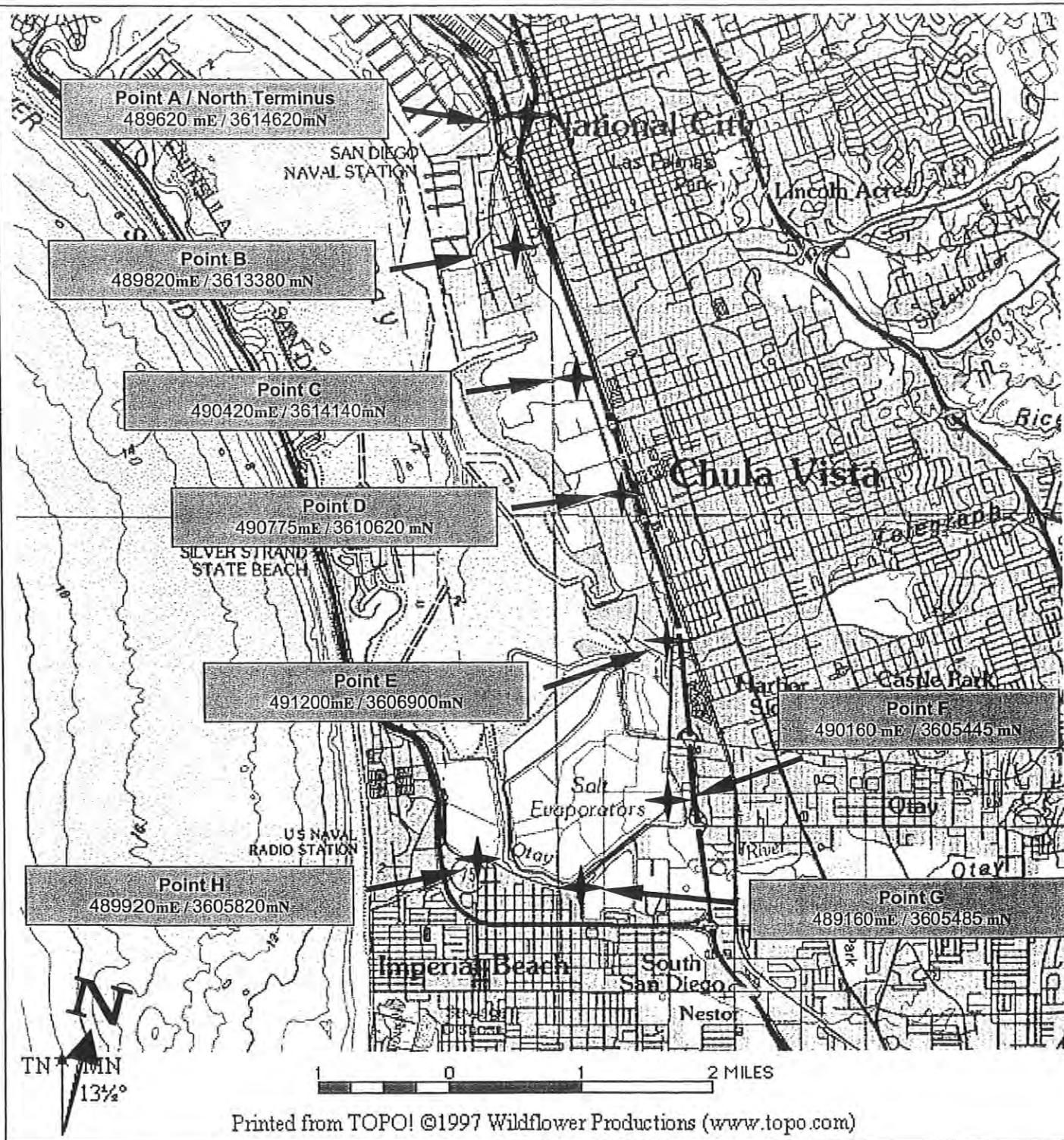
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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Right-of-Way UTM Points

*Scale: 1"=1mile

*Date of Map: 1997



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP 5

Primary #:
HRI#
Trinomial:

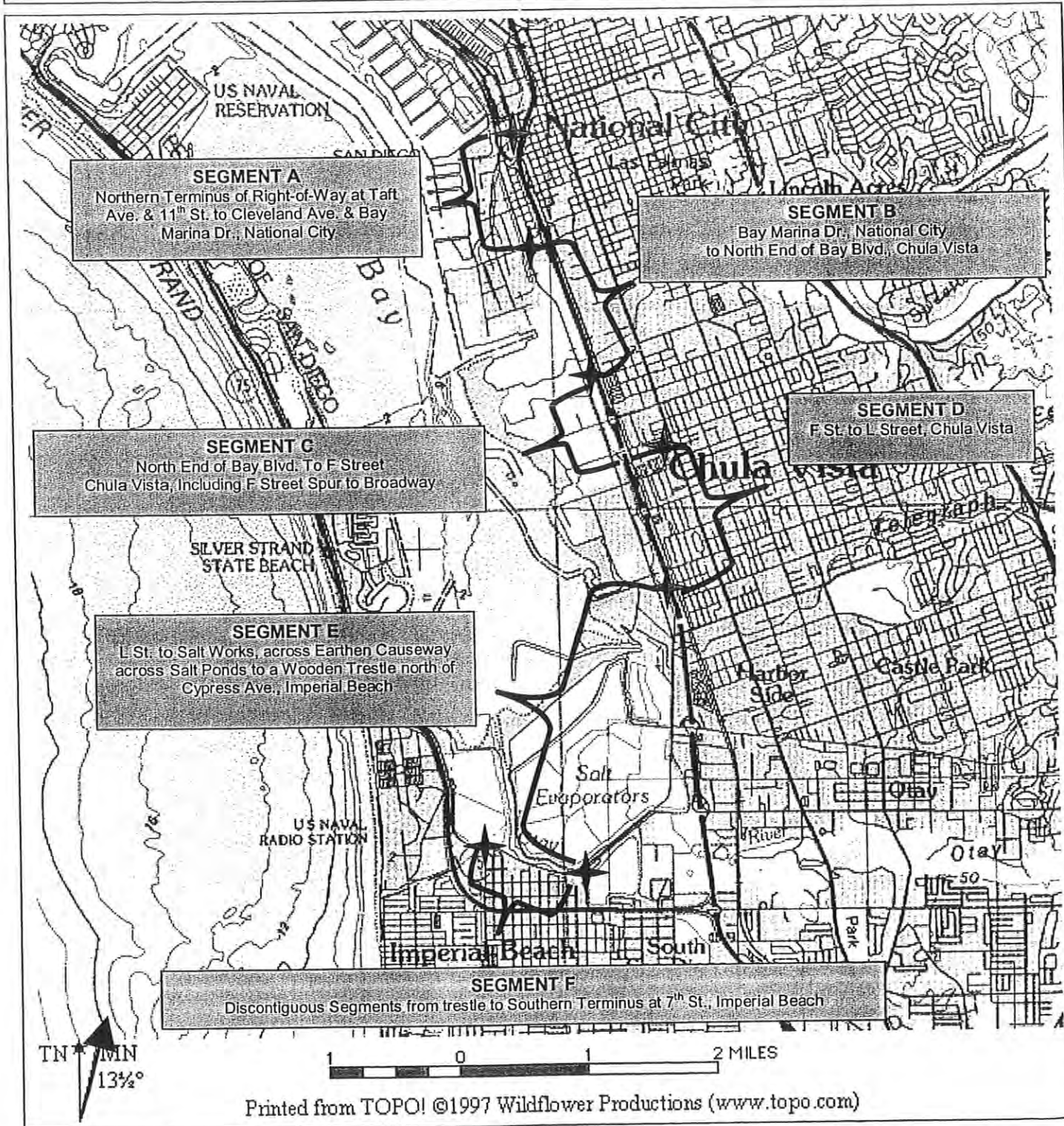
Page 7 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Right-of-Way Segments

*Scale: 1"=1mile

*Date of Map: 1997



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:
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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

***P3a. Description (Continued):**

For the sake of making the description of the historic right-of-way of the Coronado Branch Line, it will be divided into 5 segments.

SEGMENT A

This .87-mile segment represents the Northern "Industrial" Section of the Right-of-Way in National City. It begins at a point approximately 75' south of the SE corner of Taft Avenue and 11th Street (Street Closed) at the NEly terminus of a private approx. 25'-wide alleyway N of the intersection of 12th St. and McKinley Ave. (formerly 6th Ave.) in National City. Approximately 30' west of the San Diego Trolley's South Bay Line, it continues in a SWly direction along a reversed S shape curve to a point where it crosses Harbor Drive. Continuing across Harbor Drive, it resumes a short private right-of-way in a curving NE to SW direction to a point meeting the north terminus of Cleveland Ave. (formerly 8th Ave.) where it meets Civic Center Drive (formerly 13th St.). Continuing due south, it travels along a street easement down the middle of Cleveland Avenue through a light-industrial neighborhood for 9 blocks until it reaches the Bay Marina Drive (formerly 24th St.). North of the intersection, just south of W 23rd St., is a non-functioning left-hand switch turnout leading in a SWly direction to a siding entering a scrap metal yard. After crossing Bay Marina Drive along a NEly to SWly curve, the line again enters a private right-of-way where it meets a Y turnout. From here, a siding runs in a Nly direction for two blocks along 20'-wide alleys. Running parallel but discontinuous to the alley is a single line of track in a street easement from a point approx. 100' N of the Bay Marina Dr. and Harrison Ave. (formerly 9th Ave.) intersection to a point some 50' N of W23rd St., from which point it meets a left-hand turnout. The turnout acted as a means for the Coronado Belt Line to merge with that of the Santa Fe Railway's transcontinental main line from National City to San Diego and points north. Traveling at street level, the line's highest point is at 18th and 23rd Streets where it is some 6' above sea level. Character-defining historic features along the right-of-way include the rail alignment, intersection crossings, wooden warning signs, right and left-hand switch turnouts and x-crossings or "frogs," and overhead signal lights.

SEGMENT B

This 1.31-mile segment represents the Northern "Country section" of the Right-of-Way from National City south to the National City-Chula Vista border. It begins at a point 250' east of the intersection of Bay Marina Drive (formerly 24th St.) and Harrison Ave. (formerly 9th Ave.) some 75' due west of the middle of the intersection of Cleveland Ave. (ST CLSD) and Bay Marina Drive. The approximately 25 ft-wide private right-of-way travels in a SWly direction for some 200' to a left-hand switch junction, the left arm of which travels in a Nly direction to continue across Bay Marina Drive to a private Right-of-Way through a series of alley ways (See above). The right of way continues in a Sly direction south of the switch junction to a point near the intersection of Harrison Ave. and 25th St. (ST CLSD). Along the length of this section are various artifacts (functioning and non-functioning) that represent the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950). They include manual switch mechanisms, an electric switch sensor, concrete electrical junction boxes, signal towers, wooden ties and steel rails. Although covered with rust, some rails still show their manufacturer's name and date—"CARNEGIE (Steel) 1906" and "TENNESEE 8 1914." Although the right-of-way is only some 25-30' wide, it travels through some relatively open land, which gives the impression that it is much wider in scope. This feeling of openness takes on an almost rural character as the right-of-way progresses in a SEly manner towards the Paradise Creek. Now part of the Sweetwater Marsh Natural Wildlife Refuge, it acts as a buffer between the 50'-wide 10-13'-high elevated earthen roadbed and the parallel-running I-5 Freeway corridor. Approximately 350 south of the intersection of Harrison Ave. and 25th St. (ST CLSD), the tracks cross a 135' long wooden trestle across the creek's slough. Across the trestle, the right-of-way continues along a 1,200' S-shape curve some 13' above the marsh before straightening out in a Sly direction for another 1,000' along a 40' earthen right-of-way to a concrete bridge crossing the Sweetwater River Flood Control Channel. Continuing on the other side of the channel in Chula Vista, the tracks run in a SEly direction on a raised earthen roadway for another 1,600' before crossing the N. Sweetwater River Slough over a 120' long wooden trestle. The 40'-wide right-of-way continues for another 1,200' before reaching another 120'-long wooden trestle over the Sweetwater River's southern slough. From

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Description (Continued):

here, the earthen right-of-way travels another 500' in a Sly direction before it reaches and levels out on "dry" land near the NW terminus of Bay Blvd. in Chula Vista.

SEGMENT C

This .93 mi. segment represents the continuation of the Coronado Belt Line's "Country section" into Chula Vista along its own private right-of-way. It begins at a point some 20' SW of the Northern Terminus of Bay Blvd., and travels some 1,330' in a SEly direction to the intersection of Marina Parkway (formerly E St.) and Bay Blvd. The line continues in a SEly direction some 1,500' to the F Street Crossing. Some 100' north of the intersection, the right-of-way reaches a left-turn switch junction, where it branches in an easterly direction and crosses Bay Blvd. From Bay Blvd., the right-of-way crosses the I-5 Freeway over a concrete viaduct (non-contributing). Across the viaduct, the right-of-way travels some 200' across the main line of the San Diego Trolley (former San Diego & Arizona Railway's main line to Tijuana), where it reaches a right-hand turnout switch junction. At this junction, the private right-of-way ends as the line enters F Street. From here, the line travels along a street easement down the middle of F St. for approximately 1,200' in a NEly direction to a point shy of the intersection of F St. and Broadway. Along the length of Segment C are various artifacts that represent the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950). They include manual switch mechanisms, wooden ties, steel rails and signal towers. Although covered with rust, some rails still show their manufacturer's name and date. For example, the X-crossing frog that is part of the left-hand turnout switch junction reads: "AMSCO 1950," and a joint plate and section of steel rail crossing the I-5 Freeway viaduct reads, "1910," "OH TENNESSEE 1924" and "BSCO MARYLAND OH 1926 90LB," respectively. Although the concrete viaduct was built in fairly recent times, the tracks still follow the original right-of-way. Although the right-of-way is only some 25-30' wide, it travels along undeveloped salt marsh west of Bay Blvd. Screened by a row of Salt Cedars and other screen shrubs, the route seems much wider than it is. This feeling of openness takes on an almost rural character as the right-of-way progresses in a SEly manner towards the F St. switch junction, where after it crosses the freeway, it takes on the character of a suburban carrier. The single row of tracks along F St. to Broadway are reminiscent of the line's northern most section along Cleveland Avenue, from 24th St. to Civic Center Dr.

SEGMENT D

This 40'-wide, 2.8-mile segment, which consists of standard gauge steel rails affixed to wooden ties by steel plates and spikes, represents the continuation of the Coronado Belt Line through Chula Vista's western boundary along San Diego Bay along its own private right-of-way. Beginning at a point some 200' west of the intersection of F St. and Bay Blvd., the resource travels some 1438.4' in a SEly direction through the through the B.F. Goodrich Aerospace Industries plant's corporation yard to a private crossing at the end of G St. Just NW of the crossing is a left-hand turnout, with an upright switch mechanism, which once directed rail traffic into the plant's historic core. From here, it travels some 2,480' SEly along a fenced-off section to another private crossing at H St. Along the way, sections of rails stamped "CARNEGIE 1899" and "COLORADO 1915" reveal their age and origin. The Rt-of-Wy continues SEy through the plant's corporation yard and employee parking lots to another left-hand turnout and upright switch mechanism at a point near the western terminus of I St. Here, a rail is stamped "TENNESSEE 1925." Past another locked gate, the line travels .25-miles in a SEly direction through a light-industrial area to the Marina Parkway crossing. At the crossing are upright metal RR-crossing signals and drop bars. The Rt-of-Wy continues on for another .5-mile parallel to San Diego Bay's eastern shoreline past a large power plant to a point slightly west of the intersection of Bay Blvd. and L St. At this point, it jogs in a Sly direction, thought an area of recently built 1-2-story commercial/light industrial buildings along Bay Blvd., to a point west of the intersection of Palomar St. Along the way, the route contains two additional turn outs and their associative upright switch mechanisms. These, along with those mentioned previously, are artifacts (functioning and non-functioning) that represent the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950).

SEGMENT E

This 40'-wide, 1.5-mile segment, which consists of standard gauge steel rails affixed to wooden ties by steel plates and spikes, is closely associated with one of the most historic industries situated along the Rt-of-Wy. Beginning at a point some 10' west of the intersection of Palomar St. and Bay Blvd., the resource travels in a SEly direction along the SE quadrant of San Diego Bay along and across the historic salt ponds of the Western Salt Works. Organized in 1902, the 99-yr old salt processing plant is the oldest continuously operating businesses in the South Bay area. The symbiotic relationship between the Coronado Railroad and the salt works can be seen along the Rt-of-Wy. This includes right and left-hand turnouts and upright switch mechanisms associated with a partially buried non-functioning siding, and the

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Description (Continued):

vestiges of a narrow-gauge railroad crossing. Also associated with this segment is a 1-mile-long raised earthen embankment, which carries the Rt-of-Wy between two salt evaporation ponds to the Otay River trestle crossing. Approximately 210' long, the wooden timber trestle is in relatively good condition; however, a section of the SW earthen abutment has been removed, reportedly to prevent illegal aliens from using the embankment.

SEGMENT F

This .84-mile segment of the Coronado Railroad's Belt Line resembles more an archeological find more than a historic rail right-of-way. It consists of several discontinuous sections of partially buried standard-gauge RR tracks along a private Rt-of-Wy extending from a point north of the intersection of 13th St. and Cypress Ave. to the end of a partially buried section of railroad track NW of the intersection of 7th St and Boulevard Ave. While the tracks beyond this point have been removed, it can still be discerned along a narrow earthen embankment that was built in 1888 to carry the rail line across the salt marshes from the Silver Strand to what is now Imperial Beach. As seen in other segments of the surviving Rt-of-Wy, a section of the rust-coated steel rail reveals a manufacturer's stamp—"CARNEGIE 1899"—which indicates its age and origin (Carnegie Steel from Pittsburgh, PA) and represents the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950).

SUMMARY

Besides the obvious steel rails and wooden ties are a number of individual character-defining mechanical and engineering features that collectively contribute to the resource's historic significance. For example, the earthen embankments and wooden trestles, as well as the manual switches, crossovers frogs, and mechanical crossing signals, represent the use of mainstream late 19th to mid-20th century American railroad engineering and construction techniques. While there are several historic and non-historic concrete viaducts and culverts installed after the Period of Historical Significance, they do not constitute a drastic reduction in the resource's overall historic integrity. Likewise, the removal or covering of sections of track along the Imperial Beach section (Segment F) is a major intrusion, enough of the right-of-way remains and can still be discerned by the casual observer.

Verbal Boundary Description and Justification:

The resource's boundary are defined by the length and width of the various parcels that constitute the entire right-of-way from its northeastern terminus in National City to its southwestern terminus in Imperial Beach. Because of the distances involved, it would be necessary to consult with the attached legal parcel maps to describe each parcel's boundary. However, walking or riding along the right-of-way can give a rough feeling for the resources boundary. Normally, it runs approximately 10 to 20 feet away from the center of the tracks. Hard packed earth usually cleared of brush and debris, over, which a layer of crushed rock ballast has been laid, can usually discern the area within the boundaries. Across the trestles and bridges, however, the boundaries are limited to the structures' widths, including the abutments that they rest on. Because the right-of-way's boundaries along the street easements, however, are much more difficult to discern, they extend no further than the loading gauge—the width of the largest rolling stock that can pass along the tracks. On average, the type of steam locomotive or electric-traction interurban car was between 8 to 15 feet wide. Therefore, since the gauge or width of the rails is 4' 8½", the vehicles would need about an 8-foot clearance on either side. This can readily be seen in the 20-foot wide alleyways in which the right-of-way passes between Harrison and Cleveland Avenues in National City.

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Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Historical Background (Continued)

off the Oceanside junction was also being built to the new Escondido townsite, with plans to extend it south to Poway and El Cajon. Many real estate promoters were speculating that an existing or proposed railroad would turn their paper towns into major cities. By the end of 1886, San Diego gained 12,343 new residents. Some \$7 million of real estate had changed hands and new construction alone was worth \$2 million.⁴

Two of the earliest opportunists who hoped to cash in on the railroad boom were Elisha S. Babcock, a railroad financier from Evansville, Indiana, and his partner, Hampton L. Story, a piano manufacturer from Chicago. In 1884 they organized the *Coronado Beach Company*, a syndicate to purchase the former Mexican rancho known as the Peninsula of San Diego. Its 4,185 acres of land included both North and South Islands, which were separated from by a body of shallow water called "Spanish Bight," but connected to each other along the ocean by a narrow strip of sand. Below the South Island, a narrow sand spit connected it to the mainland at Coronado Heights, another Babcock and Story enterprise. Known as the "Silver Strand," it served as a natural breakwater and defined the southern half of San Diego Bay. It was Babcock and Story's express desire to subdivide their holdings into a premier West Coast resort community. They subdivided and renamed it "Coronado" (Sp. "Crowned"), brought a fresh water pipeline across the bay from San Diego, and hired architects James and Meritt Reed to design and built a magnificent hotel on Coronado Beach.⁵

In order to funnel guests (and potential lot buyers) to the hotel, Babcock and Story organized San Diego's first transit system. On April 15, 1886, they incorporated the *San Diego Street Car Company*, which first began to operate mule-drawn streetcars from 5th and D streets to a ferry wharf at the foot of D Street (today's Broadway Pier). Besides providing streetcar transportation between downtown San Diego's ever-expanding commercial and residential districts, the fledgling streetcar line picked up passengers arriving in San Diego from the transcontinental railroad depot at D St. near the ferry landing. Ferryboats belonging to Babcock and Story's *San Diego and Coronado Ferry Company* transported them across San Diego Bay to the Coronado Ferry landing at the foot of Orange Avenue. On one occasion, on November 13, 1886, as many as 6,000 visitors took free rides on the ferry and various commandeered yachts to attend a public auction on the island. As a result of this, and subsequent auctions, Babcock and Story sold between \$100,000 to \$400,000 worth of real estate, the profits of which went into the building of the hotel.⁶

Not expecting visitors to the island to have to walk more than a mile across the island, Babcock and Story had incorporated the *Coronado Beach Railroad* in July 1886. The railroad ran horse-drawn cars along Orange Avenue from the ferry landing to the hotel site. The railway had also extended its horse-car line north from the hotel site across the Spanish Bight to a racetrack on North Island. On August 19, 1886, a steam-powered "dummy" locomotive was used to pull larger passenger cars. Camouflaged to look like an enclosed coach, it was hoped that these "dummies" would not scare horses.⁷

Other, more conventional steam locomotives would be used along a newly built extension of the Coronado Beach Railroad. Branching south of the ferry landing, it ran along the shore of Glorietta Bay to the site of the hotel's power plant. Besides being used to carry supplies unloaded from wharves near the ferry landing, the locomotives carried oil, brick, milled lumber, and hardware from an oil storage yard, brickyard, planing mill, foundry and machine shop erected along the line. Established primarily for the construction of their new hotel, these Babcock and Story-owned establishments eventually supplied local homebuilders with heating oil, lumber and other building supplies and services. After it reached the hotel site in March 1887, Babcock and Story had the line extended south down the Silver Strand a distance of 7.60 miles, reaching Coronado Heights (another Babcock & Story enterprise), on December 15, 1887. At this location the railroad set up a small railroad station, post office, and construction camp, where hundreds of multi-national workmen lived in tents. A spur line led to a nearby sandpit. Sometime around March 1888, Babcock and Story reorganized the

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Primary #:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Historical Background (Continued)

Coronado Beach Railroad into the *Coronado Railroad Company*. The new steam motor road continued across a raised earthen embankment across a small marshy inlet to the townsite of South San Diego. The Coronado RR, linked South San Diego both physically and financially to Coronado and San Diego, skirting along that subdivision's northern boundary along the bay shore. The railroad's treasurer, O.S. Hubbell, also served as the subdivision's treasurer. Just before the approach to the present Otay River Trestle (north of the terminus of 13th Street and Cypress Avenue in present city of Imperial Beach), crews installed a right-hand turnout switch. At this point, a spur line extended in a southeast direction to a point near the tracks of the Otay (now NC&O) Railroad. Records seem to indicate that this was to be a connecting line to the proposed *Peninsular Railroad of Lower California*. The former was to be built from San Quentin Bay in Baja California, Mexico, north to Ensenada Bay, then to the Tijuana Valley. From here it would extending its line north to join the Coronado RR, which it was supposed to take over using its right-of-way to terminate at San Diego.⁸

While construction crews were busy extending the line northeast across the mudflats toward La Punta (Sp.: "The Point"), Babcock and Story began constructing a segment of the Coronado RR south from its terminus depot at 5th and L streets in downtown San Diego's wharf, citrus packing plants, and warehouse district. With connections to the California Southern and feeder streetcar lines, it would become an important part of San Diego's nascent interurban railroad system. As the line moved southward from San Diego, the company had to ask the National City Town Council for a franchise to build and operate a steam motor road through the town on its way to meet the right-of-way being built from Coronado. Surprisingly, the Council agreed, even though National City was already served by two railroads, the fore-mentioned California Southern, and the *National City & Otay Railroad*. Organized on December 27, 1886, the NC&O was owned and operated by the San Diego Land & Town Company. A syndicate controlled by the California Southern's parent company, the AT&SF, it had struck a deal with National City's founders, Frank and Warren Kimball, if the Santa Fe made National City its Southwestern Pacific terminus. Part of the deal was the Kimball brothers' transfer of most of their holdings of the former *Rancho de la Nación* to the syndicate. Like the Coronado RR was to Babcock and Story, the NC&O served as a suburban feeder railroad out to the syndicate's extensive holdings from National City south to the Mexican border.⁹

Beginning on June 15, 1887, the NC&O ran steam-powered dummies from its terminus in downtown San Diego, across from the Coronado RR's terminus depot, in a southerly direction to its main National City station and adjacent engine yard and shops at 24th Street (today's Bay Marina Drive) and 8th (Cleveland) Avenue. From here it traveled eastward from 24th Street uphill to a point overlooking the north side of the Sweetwater Valley at Warren Kimball's property, which was known then as the "Terrace." From here, the standard gauge steam motor road turned southeast down a sweeping grade down to a trestle that crossed the Sweetwater River. Across the river bed, it climbed up the embankment to the Sweetwater Junction, where a branch took it eastward toward the construction site of the Sweetwater Dam and the community of La Presa (Sp.: "The Dam"). The SD Land & Town Company was building the 60 (later 90) foot high dam in a narrow some eight miles upstream. Continuing southeast from the junction, the NC&O's main line ran up from the valley floor through a cut in the embankment to 2nd Avenue in Chula Vista, another suburban property being subdivided by SD Land & Town Company. After a short distance, the line looped eastward down 4th Avenue to C Street, before jogging west to 3rd Avenue, where it continued southeasterly to 8th Avenue. From here, it turned in a southerly direction along an old wagon road to the farming community of Otay, where it met the northbound tracks of the *Otay Railway Company*. Founded in 1887, the Otay Railway had been built to service the new rural communities in the Otay and Tijuana River valleys, which included Oneonta and Tia Juana [sic]. With its acquisition of the line in October 1888, the NC&O now had over 28 miles of track extending from downtown San Diego to the International Border.¹⁰

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Historical Background (Continued)

Because they served the same area between San Diego and National City, competition between the Coronado Belt Line's rival the National City & Otay Railway was keen. During their first year of operation, as many as 104 trains were running daily to National City from their 5th and L Street depots. Competition was reportedly also keen between engineers as they approached the lines' crossing in Chollas Valley approaching National City. A restraining order had to be issued against the engineers after a number of near misses occurred while racing to see which one could beat the other to the crossing. After reaching National City, the Coronado Belt Line paralleled the NC&O a block apart on 9th Avenue (now Harrison Avenue), while the latter traveled down the middle of 8th Avenue to its main depot just north of its 24th Street shops. A spur of the NC&O split off from the main line at a right-hand turnout on 8th Avenue between 20th and 21st Streets. Bisecting Blocks 278 and 279 to 23rd Street, it served as a siding for a number of lemon packing warehouses.¹¹

The Coronado Belt Line was also instrumental in the development of local industries. Not only did it serve a number of lemon packing houses in San Diego and National City, it also facilitated the movement of goods to and from other businesses along its right-of-way between 12th and 24th streets. Not willing to compete with the NC&O any further east of 9th Avenue, the directors of the Coronado Belt Line chose to extend the line in a southerly direction. This meant that it would have to build a raised earthen embankment approximately one mile through the low-lying marshes that formed the delta of the Paradise Creek and Sweetwater River. As the right-of-way proceeded across the marsh, it was necessary to construct a number of wooden trestles over both channels of the Paradise Creek and Sweetwater River estuaries. The embankment reached relatively higher and dryer ground just west of the current intersection of Bay Boulevard and D Street in Chula Vista. From here it continued in a southeasterly direction approximately 4 miles south to La Punta, site of the *La Punta Salt Works*. Developed by Elisha S. Babcock, and now known as the *Western Salt Works*, it is one of the oldest continuously operating industries in the South Bay. Marketed as "That Salty Salt," the company's table salt was sold throughout the American West. Besides table salt, Western Salt had many industrial uses, especially as a food preservative before the advent of home and commercial refrigeration. The plant, with its high wooden tower, can still be seen nearby buried by tall glistening white hills of sea salt. The salt was gathered from nearby man-made ponds, which were allowed to flood with bay water. Held back by a series of dams and earthen dikes, the water was allowed to evaporate. Workers then mined the thick layer of sea salt for processing and refining at the plant. In later years, as the network of dikes forming the salt evaporation ponds expanded along the bay's southern marshes, the plant used a network of narrow gauge tracks along the dikes on which a gasoline-powered industrial locomotive hauled hopper-loads of raw sea salt to the plant. Until fairly recent times, crystallized sea salt was loaded onto boxcars waiting alongside the plant on a Coronado Belt Line siding. While the plant now utilizes the use of trucks to ship processed salt, its association with the historic belt line is still apparent. Although the siding has been covered over, the two switches at either end, and a section of the siding north of the plant are extant. In addition, two "H" crossings, where the plant's narrow gauge industrial railroad crossed the spur and main lines, can still be seen.¹²

From La Punta, the Coronado RR traveled in a southwesterly direction along a narrow raised earthen embankment. The embankment bisected the low marshlands of the Otay River Estuary for about a ½ mile before reaching the junction of the Otay Wells spur track. Here, another earthen embankment (which can still be seen sans tracks) headed due east toward dry land at the mouth of the Otay Valley (at the present intersection of Bay Boulevard and Main Street, Chula Vista). The spur line continued eastward some 7 miles to Otay Wells, where Babcock and Story, through the *Otay Water Company*, were the company's plant was pumping water out of wells drilled into the riverbed. The company was also beginning work on the Otay Dam, which would impound the waters of the Otay River to supply water to Coronado, National City and Chula Vista. Returning to the Otay Wells Junction, the earthen embankment continued in a southwesterly direction to a

Historical Background (Continued)

wooden trestle across the Otay River estuary. Continuing onward, it reached and joined up with the other half of the right-of-way at the Peninsular Railroad Junction.¹³

Completed on June 14, 1888, the Coronado RR stretched some 20.30 miles around the South Bay from San Diego to Coronado. A rail connection was made to the California Southern near its National City terminus. Reportedly, excursion trains were run from Los Angeles directly to the newly built Hotel del Coronado. Motive power on the belt line consisted of eight small saddle-tank steam locomotives, half of which were camouflaged dummies, and a "normal" 4-4-0 steam locomotive (4 lead wheels and 4 drive wheels). The locomotives pulled 15 new St. Louis Car Company passenger coaches, two of which were ornate double-deckers used by the beach shuttle along Orange Avenue.¹⁴

The Coronado RR was now officially referred to as a "Belt Line," a railroad right-of-way with trackage starting and ending at two points that looped around the South Bay. Also known as a "Short Line," the Belt Line was used for "short" hauls of goods or passengers. Like other short lines built in San Diego during the Boom of the 1880s, including the short-lived *Park Belt Motor Road*, *Ocean Beach Railroad*, the *San Diego, Old Town & Pacific Beach Railroad*, and the *San Diego, Cuyamaca & Eastern Railway*, the Coronado Belt Line was used as a pickup, delivery or transfer feeder route with connections to a Trunk Line. The function of the Trunk or Main Line, in this case the California Southern, was for handling long-distance through traffic.¹⁵

No more than 5 or 6 blocks apart through Chula Vista, both the Coronado Belt Line and the National City & Otay Railway were instrumental in opening up new areas in San Diego's South Bay for agriculture and suburban residences. For example, the NC&O was responsible for providing rail service to and from new subdivisions being developed at *Fredericka Home*, *Rosebank*, *Cunningham*, and *Melrose*. No longer recognizable on the map, these communities are now part of the greater city of Chula Vista. However, due to its closeness to the bay, the area serviced by the Coronado Belt Line has still managed to maintain a semi-rural character. This can be seen especially in the run along the embankments across the Paradise Creek, Sweetwater and Otay River marshes and estuaries. Even the sections of right-of-way north and south of the present B.F. Goodrich Aerospace Industries Plant have managed to retain a semi-rural suburban line feeling. Leaving the mainland, the right-of-way traveled over a raised earthen embankment about a half-mile across what was once a salt marsh at the mouth of the Otay River, to a wooden trestle crossing the Otay River.¹⁶

Once completed, the Coronado Belt Line provided a direct rail connection between San Diego and Coronado. While the Orange Avenue shuttle between the ferry landing and the newly completed Hotel del Coronado carried the majority of the line's passenger rail traffic, the Belt Line was used to run special passenger excursions arriving directly from Los Angeles and San Francisco. The Belt Line's main function was to haul freight and materials to and from Coronado, especially during the hotel's construction.¹⁶

Typical of most railroad booms, it was over when the bottom fell out of the inflated real estate market. By 1889 the local economy could not support itself based solely on real estate speculation. Everyone, even old timers, had gambled on making it rich on the land boom. Many took their initial profits and reinvested in other land at highly inflated prices. Hoping to double or triple their investments, the majority held on a bit too long and lost as the boom collapsed upon itself. Before long, San Diego's population dropped from over 40,000 to a low of 16,000. Those who left who had any money to take with them withdrew over \$2 million from local banks. San Diego's local economy was in shambles. Exasperating the situation was a nation-wide depression during the early 1890s. Banks no longer lent money to found towns in the West, let alone in San Diego. Adding to the South Bay's woes was the closing of the AT&SF's shops and freight dispatch offices in National City and their relocation to San Bernardino. The decision was one of many that would eventually

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Historical Background (Continued)

elevate the greater Los Angeles area, as the nexus of the Southern Pacific and Santa Fe railroads, to a terminus city, ultimately reducing San Diego and National City to a dead end on a branch line south of Los Angeles.¹⁷

Taking advantage of the situation was a San Francisco capitalist and financier John D. Spreckels. The son of Claus Spreckels, San Francisco's immigrant "Sugar King," John D. Spreckels had established himself as a man of means developing the family's business interests in Hawaiian sugar cane plantations and shipping lines between the islands and the mainland. He had first come to San Diego in 1887 during the peak of the local land boom. Enticed by Coronado investor Elisha S. Babcock to invest in the area, Spreckels and his brother Adolph B. Spreckels organized the *Spreckels Brothers Commercial Company*, which imported building materials, and general merchandise. In order to provide a more efficient way of unloading coal and other supplies from offshore colliers and freighters, in 1889 the company built a modern coal-handling wharf and bunkers at the foot of G Street in San Diego. This was fortuitous for San Diego, the Spreckels company supplied coal on credit to the financially strapped *Southern California Railroad* (formerly the California Southern). Its parent company, the AT&SF was in receivership, and had been threatening to discontinue service to San Diego due to a lack of coal. Spreckels had kept the railroad running.¹⁸

Seeing that the Spreckels brothers were willing to invest outside capital into their town, Babcock approached Spreckels to invest in his own faltering companies. Within a year, the Spreckels' interests had bought out Hamilton L. Story's interests and obtained a controlling share of the Coronado Beach Company, including its subsidiaries the Coronado RR and the San Diego Street Car Company. Two years later, in 1891, it was reorganized the latter into the *San Diego Electric Railway Company*.¹⁹

In January 1892, the SDERY, began buying up all the remaining local horsecar and steam powered motor lines. It then electrified these lines merely by installing electric motors in the old horse cars. Included in the modernization program was the Coronado RR's shuttle between the ferry landing and the Hotel del Coronado, which was electrified in 1893. Visitors to the hotel could ride the San Diego Electric Railway's trolley cars to the San Diego & Coronado Ferry landing. Then board one of the ferryboats to Coronado. Here they could ride the newly electrified Coronado RR shuttle along Orange Avenue to the hotel—all of which were controlled by John D. Spreckels. Although the Coronado RR's Belt Line ceased regular passenger operations in 1896 due to poor ridership, it still carried freight around the South Bay. Plans were in the works for its connection to the *San Diego & Phoenix Railroad*, which proposed to construct a railroad from the end of the Otay Wells spur line, south to and across northern Baja California, then reentering the U.S. at Yuma, Arizona Territory, and continuing on to Phoenix. Nothing ever came of this line, however. Despite the reduction of passenger traffic on the Coronado RR's Belt Line, it still played an important role in hauling freight. This was especially true in 1893 and 1897, when it was used to haul tons of locally quarried rock during the construction of the Zuñiga and Hotel del Coronado jetties. The first, built on a 7,500-foot long narrow spit of land extending out into the ocean from the extreme northwest tip of North Island, would keep the entrance into San Diego Harbor from silting up. The second, a much shorter J-shaped structure, would keep currents from washing away the beach in front of the Hotel del Coronado. Steam locomotives pulled rock carrying flat cars onto temporary wooden trestles allowing them to dump their loads along their sides. Completed in 1912, the Zuñiga Jetty still protects the harbor's entrance, while the hotel's jetty is no longer extant.¹⁹

By the turn of the 20th Century, San Diego was slowly lifting itself out of the financial depression. A good deal of this had to do with Spreckels' infusion of vast sums into the local economy to improve its electric and steam-powered rail lines. One of these developments was the extension of the Coronado RR's electric line south

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Historical Background (Continued)

from the Hotel del Coronado's Boathouse to the junction of the belt line. Completed in 1901, it was to serve a new summer resort on the Silver Strand. Consisting of several hundred tents and palm frond-covered cottages, as well as a bath house, restaurant, dance hall, and other amusements, *Coronado Tent City* soon became famous the world over. The Coronado RR normally operated single and double-decker trolley cars to Tent City from the Orange Avenue shuttle, often pulling non-electrified passenger coach trains as required. There were exceptions, however. On July 4th, the railroad operated special Independence Day excursion steam trains around the bay between San Diego and Tent City.²⁰

By 1902, San Diego was practically a "one man town." John D. Spreckels, through his presidency of half a dozen companies, including two of the town's three newspapers. He also owned most of Coronado and North Island, several resort facilities in San Diego and Coronado, including the Hotel del Coronado, and supplied coal, water, and electricity, as well as public rail and ferry service to the region. After pouring millions into San Diego's economy and infrastructure, he was not content with having it serve as a stagnant backwater. For the next 24 years, he sought to transform San Diego's harbor and rail facilities into a trans-shipment entrepot that would rival San Francisco's, much less that upstart Los Angeles, which was developing harbor facilities of its own at Wilmington and San Pedro. While some may criticize him as a "Robber Barron," or "Monopolist," John D. Spreckels would continue to dominate San Diego's growth and economy until his death in 1926.²¹

The driving force behind Spreckels' drive to improve San Diego's rail and harbor facilities was the passing in Congress of the Spooner Act in 1902. It authorized President Theodore Roosevelt to proceed with building a canal through the Isthmus of Panama. The canal would allow the United States to control its newly acquired territories in the Caribbean and Pacific Ocean as a result of its victories during the Spanish-American War (1898). It would also make San Diego to be the first port of call for the Pacific Coast states, thereby increasing its economic and strategic importance.²²

After Spreckels moved his base of operations permanently San Diego after the disastrous April 18, 1906 San Francisco Earthquake and Fire, he devoted the remainder of his life in securing San Diego's place in the world's market. A key element in his plan was the December 14, 1906 announcement he was forming of the *San Diego & Arizona Railway Company*. Its purpose was to construct a standard gauge railroad from San Diego's harbor to a point at or near the Southern Pacific's Colorado River crossing at Yuma, Arizona Territory. Such a railroad would again link San Diego directly to a transcontinental railroad. What the SD&ARY's investors didn't know was that Spreckels was acting as an agent for the SP's President E.H. Harriman, who supported the railroad's building because it would provide a deepwater harbor for his company's rich farmlands in the Imperial Valley. Spreckels' railroad would actually be an international railroad, its right-of-way would proceed from downtown San Diego's Union Station (Broadway and Kettner Boulevard) southeast along the South Bay's eastern shore to the U.S.-Mexico International Border. It would then cross the border into Tijuana, Mexico, and travel eastward across Northern Baja California to Tecate, then reenter the U.S. near Campo, for its journey to the Imperial Valley. Little did Spreckels realize that it would take 13 years for the SD&ARY's completion, through revolution, labor disputes, war, and the death of his backer, E.H. Harriman.²³

In his bid to monopolize San Diego's transportation network, one year prior to his announcement of the SD&ARY's incorporation, Spreckels quietly took over the ownership of the rival NC&O. Spreckels bought the NC&O, not to eliminate it as a rival, but to supplement his ever expanding network of electric streetcar and interurban service. He saw that National City, Chula Vista and the rest of the South Bay as a vast semi-agricultural suburban area ready for renewed growth. In July 1906, an overhead trolley line was installed along the NC&O's right-of-way, including the segment from 11th to 24th Streets along 8th Avenue in National City. The NC&O now ran electric traction interurban passenger cars from San Diego to Chula Vista. It also combined steam freight service with the Coronado Belt Line to Coronado and the Mexican border.²⁴

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Historical Background (Continued)

In order to consolidate his holdings, in January 1908 Spreckels organized the *San Diego Southern Railway Company*. Its primary purpose was to provide a railroad link between San Diego and Ensenada Bay, Baja California. In order to do so, it took over the existing NC&O, including its electric traction (which was extended to Otay in 1909) and steam branches, as well as the steam division of Coronado RR, which included the Belt Line. Coincidentally, the Coronado RR transferred operation of its electric division to the SDERY at this time. The SDS utilized both the former NC&O's and Coronado RR's shops, as well as the SDERY's San Diego shops to upgrade and convert its steam locomotives, electric traction and rolling stock. Included in the SDS's upgrading program was the connection of former NC&O and Coronado RR Belt Line trackage. Between 1907 and 1911, connections were made between the two right-of-ways at on 12th Street, between 7th and 8th Avenues. Another connection was made by extending the Otay Wells spur line to link with the former NC&O right-of-way at Otay. The Coronado Belt Line now had direct access to the Mexican border. An important announcement occurred on July 18, 1910, when the company declared that the Coronado Belt Line would be sole carrier of steam-powered freight and passenger coach service in the South Bay (the SD&ARY had still not yet begun operations). This meant that, although the Coronado Belt Line no longer carried passenger trains to Coronado, it did provide a partial route for steam-powered passenger service to Tia Juana.²⁵

The SDS was one of four independent interurban short lines radiating out from San Diego's central urban core into suburban areas. Besides the SDS, which serviced the South Bay and Coronado, there was the *Point Loma Railroad*, the *San Diego, Cuyamaca & Eastern Railway*, and the *Los Angeles & San Diego Beach Railway*. All three lines were instrumental in opening up several suburban communities for settlement, including Point Loma, Pacific Beach, La Jolla, Spring Valley, La Mesa, Grossmont, and El Cajon. Besides providing rail transportation passenger service, these lines were important carriers of express packages and the U.S. Mail to outlying areas.²⁶

In addition to the previously mentioned short lines, there was another rather obscure short line whose history has a direct link to the Coronado Belt Line. Organized in December 1908, the *South San Diego & Imperial Beach Railway* operated a shuttle line from a ferry landing in South San Diego to the new beachfront community of Imperial Beach, just below Coronado Heights. Because the SDS did not operate scheduled passenger service to South San Diego except on special occasions, visitors had to board a small gasoline-powered launch at Market Street in San Diego, and sail down the bay to a man-made channel through the mud flats to the ferry landing. Here they transferred to a small open gasoline motor-powered passenger car for the ride to the beach. Around 1911, the line was reorganized into the *Mexico & San Diego Railway Company*. The ferry service was abandoned in favor of a direct connection to the SDS's Belt Line at South San Diego. From this point (estimates place it at the intersection of 10th Street and Boulevard Avenue in Imperial Beach), the M&SD's battery-powered passenger cars had joint use of the Coronado Belt Line right-of-way. Traveling across the Otay flats embankment to the NC&O (formerly the Otay Wells) Junction, the M&SD's cars provided a shuttle service for passengers transferring from the SDS's steam passenger train.²⁷

In 1912, the John D. Spreckels began an expansion of his railroad interests by acquiring, through the San Diego Southern, the San Diego, Cuyamaca & Eastern Railway. Incorporated in 1887, the line extended from downtown San Diego eastward, with stops at Spring Valley, La Mesa, Grossmont, El Cajon, Santee, and Lakeside, terminating at Foster, on the north side of the San Diego River. By 1909, it was under Spreckels control, and renamed the *San Diego & Cuyamaca Railway Company*. Three years later, Spreckels, through his railroad manager William Clayton, it merged with the SDS into the newly reorganized and renamed *San Diego & Southeastern Railway*. The SD&S, which was still intended to reach Ensenada Bay, was divided into three divisions: the Cuyamaca Line became the *Eastern Division*; the Coronado Belt Line and the NC&O steam lines became the *Southern Division*; and the electric-traction interurban line from San Diego to Otay became

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*B10. Significance (Continued):

Historical Background

The Coronado Belt Line right-of-way is historically significant under **Criterion A** due of its association with events that have made a significant contribution to the broad patterns of San Diego's local history. A remnant of the 1880s railroad boom, its historical significance extends from the early development of interurban steam and electric rail transportation in San Diego's South Bay to its vital role as a carrier of strategic war materials during World War II.

The direct cause for the building of the Coronado Belt Line was the coming of the transcontinental railroad to San Diego in 1885. That year, the *California Southern Railroad*, completed a direct rail link from its Western terminus at 23rd Street and 9th Avenue, National City (listed on the National Register), to a junction with the main line of the *Atchison, Topeka & Santa Fe Railroad* at Barstow. With its deep-water wharf, National City would also serve as the location of the railroad's California shops and general freight offices. Three years later, in 1888, a junction was installed connecting the National City-Barstow line at Oceanside to a coastal branch line to Los Angeles. As a result, San Diego, with its fine harbor, had direct links to two transcontinental railroads: the AT&SF at Barstow, and the *Southern Pacific Railroad* at Los Angeles and Colton.¹

The building of the transcontinental railroad links to San Diego was the result of the opening of the American West after the Civil War. After brief depression during the 1870s, the United States experienced a period of economic and industrial growth. Fueled by the second phase of the Industrial Revolution, American industry, especially its steel and railroad manufacturers, was booming. The completion of the first transcontinental railroad linking in 1869, plus a marked increase in population, sparked a migration from east to west. By 1886, competing railroad companies had millions of acres of land to sell or lease along their rights-of-way. To do so, they began a worldwide advertising program heavily describing the wonders of the American West, especially California. Through newsprint and posters they promoted California as "The Cornucopia of the Word," with over 43 million acres of government-owned lands held in trust that would provide enough "room for a million farmers" in "a climate of health and wealth without cyclones or blizzards."²

In 1887, the Santa Fe Railroad withdrew from the Transcontinental Traffic Association and instituted a price war with its rival the Southern Pacific Railroad. For example, the current passenger rate from the Missouri Valley to Southern California dropped to from \$125 to \$100. It continued to drop as each railroad company sought to undermine the other's rate until one could purchase a ticket for as low as \$1. The result of this price gouging was a rush to California that rivaled the 1849 Gold Rush. Passengers crowded incoming trains as well as ocean-going steamships. One such train, the *California Southern Cannonball*, arrived on July 4, 1885 with 400 passengers. The San Diego Chamber of Commerce reported that by midsummer 1887, over 41,000 persons had arrived. Those arriving by train alone between July 1886 and June 1887 had more than doubled from 2,213 to 4,755. Many stayed to live and invest in the area: at least 306 new homes had been built, with over 200 more under construction. Despite the building boom, newly built hotels and boarding houses could not keep up with the demand for temporary housing. The local *San Diego Union* reported that "the Transient population of our city is so large that notwithstanding our many good hotels, an unwary stranger who neglects to engage a room immediately on his arrival here is often compelled to sit in a chair through the night for want of a bed."³

In San Diego, as in the rest of California, those that arrived first sought to make a killing in real estate. Lots that originally went for \$125 in 1886 were being resold for \$1,000 just days later. A number of speculative entrepreneurs began buying up large tracts of public or former rancho lands and subdividing them into new communities. For example, between 1886 and 1888, the peak of the railroad boom, numerous speculative towns and subdivisions sprang up in San Diego County serviced by the California Southern: Elsinore, Temecula, Fallbrook, Oceanside, Carlsbad, Encinitas, Del Mar, San Diego, and National City. A branch line

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the *Electric Division*. The SD&SE continued to provide short line freight and interurban passenger service to and from the South Bay. This was especially true during the 1915-1916 Panama-California Exposition. Held in Balboa park, it heralded the opening of the Panama Canal by promoting San Diego's place as the nexus of a soon to be completed transcontinental rail link and an excellent harbor. The SD&SE played an important part in the Exposition's promotion. Particularly on April 19, 1915, when the entire City of National City was shut down so its citizens could attend *National City Day*. It has been estimated that, of the 5,000 people who visited the Exposition, between 1,000 to 1,250 were from National City. Many, if not all, rode partway to the Exposition along the SD&SE's Electric Division. During this time, the SDEry experimented with operating their smaller trolley cars along the SD&SE's Electric Division to the 24th Street station. Regular passengers used to the larger electric traction interurban cars were amused by the relatively diminutive trolley cars. However, it was a portent of things to come.²⁸

Disaster struck San Diego in January 1916. A series of torrential rain storms caused the San Diego River to flood its banks, washing away trestles and trackage of the SD&SE's Eastern Division at Foster, as well as that of the Santa Fe north of Old Town San Diego. The storms' most destructive results occurred in the South Bay, where both the Sweetwater and Otay Dams collapsed. The onrushing floodwaters and debris washed out the SD&SE's Southern and Electric Division's trestles and tracks across the Chollas Creek, and the Sweetwater, Otay and Tijuana River crossings. After the floodwaters subsided, the SD&SE's owners and engineers assessed the situation. They argued that the damage done to the Coronado Belt Line's trestles could be repaired, but that the financially troubled railroad could not afford to rebuild sections of the former NC&O right-of-way and they would have to be abandoned and the track taken up and salvaged. This included the line from 24th Street to the Sweetwater Junction, La Presa, as well as the section from the junction to 3rd Avenue, and south of 4th Street, Chula Vista to Otay. Also abandoned and salvaged was what remained of the tracks from Otay to Tijuana. Repair work began in earnest in June 1916, with SDEry crews doing the work. Bridge timbers for the trestles had to be shipped by rail due to longshoremen's strike, adding to the expense.²⁹

After the Coronado Belt Line's right-of-way was repaired across the last trestle, the SD&SE decided to reroute the Electric Division south of the 8th Avenue and 24th Street station to connect with the Coronado Belt Line on 9th Avenue. The line was electrified from 24th Street and 8th Avenue south, across the Paradise Creek and Sweetwater River marshes and estuary embankment and trestles, to F Street in Chula Vista. Here, at Marmarosa Junction, a point just north of F Street, the railroad installed a new left-hand turnout switch and tracks east over their own private right-of-way to a point where it crossed the SD&A's right-of-way. It was at this point in time that the Coronado Belt Line shared joint steam freight and electric interurban passenger service, with the first SDEry trolley cars running over the right-of-way on June 1, 1916. The electric line continued east from the SD&A crossing, where it turned onto an easement down the middle of F Street to 3rd Avenue. From here, it only ran as far south as the farm produce packing plants at K Street in Chula Vista, the tracks to Otay were abandoned and eventually pulled up and recycled. The SD&SE then turned over its operation of the Electric Division to the SDEry, while the Coronado Branch continued to operate steam-powered freight service to La Punta, then on to Coronado and North Island.³⁰

Unable to recoup its losses in its infrastructure and patronage due to the steady increase in automobile and buses, the SD&SE was forced into receivership and in 1917 the San Diego and Arizona Railway absorbed and consolidated it as part of its own operations. With this, the then 29-year-old Coronado Belt Line would become an integral part of the SD&A. Referred to as John D. Spreckels' "Impossible Railroad," because of the "impossible" conditions under which it was built, when completed it would link the South Bay directly to national and world markets.³¹

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Historical Background (Continued)

Even before the SD&A was completed in November 1919, the significance that the Coronado Belt Line had on the South Bay's place in the world was already underway. In 1916, the *Hercules Powder Company* began construction of an enormous \$7 million plant on 12-hectares of salt marsh just west of Marmarosa Junction in Chula Vista. Described as "the largest and most successful" producer of raw materials for explosives in the world, the plant was one of eleven built in Southern California that processed sea kelp into potash for use in explosives. With the outbreak of war in 1914, the Allied Powers were in desperate need for sources of ammunition. The Hercules Powder Company's harvester ships gathered the kelp growing in beds off San Diego's coast. After shipping their cargo to the plant's pier located off what was now called "Gunpowder Point," it was unloaded onto gondola cars pulled by Belt Line locomotives throughout the plant. The raw kelp was then processed into potash, an active ingredient in the manufacture of black gunpowder. Another important kelp byproduct produced at the plant was acetone, essential for the manufacture of cordite, a smokeless powder favored by the British military. From a new "Y" turnout at Potash Junction, just north of Marmarosa Junction, Coronado Belt Line locomotives hauled out 30-ton carloads of potash, acetone, and other strategic chemicals. In addition to acting as a hauler of strategic war materials, the line served another important role. The SDERy electrified a section of the spur so that it could run its "Potash Specials," express shuttle service between San Diego and Chula Vista for plant workers. As a result, both the Coronado Belt Line's steam and electric service were strategically important contributors to the war effort, especially after the United States joined the Allies in April 1917. During that year alone, the Potash Specials carried over 285,195 passengers. Overall, the plant produced and shipped tons of potash and acetone from the plant. However, with the signing of the Armistice in 1918, the demand for kelp-produced munitions ended, and two years later the Hercules Powder Company disassembled its plant. All that is left of the Gunpowder Point plant are the remains of a 2 million-gallon concrete reservoir for storing weak kelp liquor, which can be seen from the nearby Chula Vista Nature Center. It is quite possible that the shuttle busses used to carry visitors to the nature center may be traveling on an elevated dirt embankment was the original Potash Junction spur into the plant.³²

After the war, despite inroads by automobile and truck hauling services, the Coronado Belt Line continued to contribute to San Diego and the South Bay's economic development. Besides hauling lemons and other produce from the South Bay packing houses, as well as salt from the works at La Punta, the line shipped raw materials and finished products from two new plants built along the line at the foot of G Street. Spur tracks branched off the main line into the *Pacific Cottonseed Products Corporation*, which processed cottonseed into oil and other byproducts. Another serviced the nearby Pioneer Pyrophyllite Manufacturing Company, which processed magnesite and pyrophyllite into ceramic products and firebrick. Concurrently, the SDERy continued to carry passengers as well as run express service for hauling mail and small packages. This reflected a general increase in freight and passenger service experienced by the SD&A, as well as the SDERy, which was due to a proportional increase in the local economy. A general reflection of a booming national market, the 1920s also reflected the apex of Spreckels monopoly over San Diego's public transit operations. Except for the Santa Fe Railroad's main line, the Spreckels interests controlled all of San Diego's steam interurban and electric streetcar systems.³³

Ironically, during the peak of his control over San Diego's local rail transportation system, John D. Spreckels passed away. It appears that his death on June 7, 1926 took the life force out of the rail "empire" he had almost single-handedly created back in 1889. However, closer scrutiny of the situation reveals that it was already slowly dying. In June 1925, the SDERy discontinued electric streetcar service from 24th Street in National City to Chula Vista, having replaced it with buses. While the company abandoned and removed evidence of the tracks, poles and overhead wires, it left most of the track in place from Marmarosa Junction along F Street and 3rd Avenue for the SD&A steam freight service to the packing plants. Five years later, on

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Historical Background (Continued)

January 9, 1930, it curtailed electric streetcar service from San Diego to National City, ending the Coronado Belt Line's 14-year association with electric transit in the South Bay.³⁴

During the 1930s, following the 1929 Stock Market Crash and worldwide depression, local rail operations across the nation practically ground to a halt. In San Diego, the slowdown manifested itself in a reduction in the need for hauling passengers or freight. As a result, the Spreckels Estate chose to divest itself of its failing railroad interests by selling its majority shares to the Southern Pacific Railroad. The latter dissolved the SD&A, reorganizing it on February 1, 1933 as the *San Diego & Arizona Eastern Railway Company*. By doing so, it became a branch of the SP's southwestern route between Yuma, Arizona and Los Angeles. Despite its promise, the SD&A never lived up to its promises. Shippers were unwilling to send freight on the line, especially if it were traveling across the border.³⁵

Of the three SD&AE divisions operating in San Diego County—the Coronado Belt, Eastern, and Southern—it was the Coronado Belt Line that kept the company from going under. During World War I the Spreckels interests sold North Island to the U.S. government so that it could develop it into a U.S. Army airfield. After the war, control of the base slowly shifted to the U.S. Navy, which, by the 1930s, had developed it into a major naval facility where sea planes and aircraft carrier squadrons were stationed. Because of the U.S. Naval Air Station at North Island, the Coronado Belt Line carried such bulk material to North Island as fuel oil, aviation gasoline, ammunition, and aircraft parts. Aerial photographs taken during this time reveal that the Coronado Belt Line had a network of spur lines reaching into the burgeoning facility, including hangars for maintaining wheeled and amphibian aircraft.³⁶

The rapid increase in aircraft manufacture and high levels of activity at navy and army installations along San Diego Bay brought an ever increasing amount of rail traffic to the SD&AE, especially on the Coronado Belt Line. The need to ship vital military related material over the rails reached critical proportions during World War II. Because of its strategic position, San Diego played a major role in the War as a training and supply center for troops fighting in the Pacific Theater. Besides supplying North Island, the Coronado Belt Line played an important role in the building and servicing of two new military facilities on the Silver Strand. The first was the Navy's Amphibious Training Base, which was built on fill land just south of the recently closed down Tent City. The second was Fort Emory at Coronado Heights. Co-leased to the Army and Navy, the latter had fortified it as part of its Coastal Defense batteries protecting San Diego Harbor. In 1942 the Navy expanded its 1920's-era Naval Radio Compass Station into the larger Navy Radio Receiving Station. The Navy also used the former subdivision as an adjunct of the Amphibious Base. The Coronado Belt Line bisected the 10,000-man naval facility, carrying tons of supplies and equipment.³⁷

Another important facility serviced by the SD&AE's Coronado Belt Line was the new *Rohr Aircraft Corporation* plant in Chula Vista. Originally located near San Diego's municipal airport at Lindbergh Field, in 1940 its owner, Fred H. Rohr, relocated his operations to Chula Vista. After first sharing space with the Pioneer Pyrophyllite Manufacturing Company plant at the foot of G Street along the bay, he purchased an adjacent 10-acre tract to the south. Although the City of Chula Vista had designated the land for a new airport, it believed that an industrial plant would provide a greater overall benefit to the community. Instead of constructing complete aircraft, Rohr specialized in assembling engine nacelles, ready to install aircraft power units. For example, the SD&AE would ship flatcars carrying Pratt & Whitney aircraft motors from a primary contractor, in this case *Consolidated Vultee Aircraft* of San Diego. Then Rohr technicians would manufacture and assemble over 2,400 parts, such as motor mounts, cowlings, electrical harnesses, etc., and install them into the final engine nacelles. Loaded back onto flatcars, the completed engine nacelles would be shipped back to Consolidated Vultee, where they would be mounted onto long-range land-based bombers, transports,

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Historical Background (Continued)

and flying boats. In 1944 alone, the SD&AE had carried 1,350 carloads of material for Rohr. By the war's end in 1945, Rohr Aircraft had become the largest manufacturer of aircraft power packages in the world, employing some 9,000 workers to produce over 38,000 units.³⁸

Another important local aircraft parts manufacturer who located his plant along the Coronado Belt right-of-way was the Solar Aircraft Corporation. Founded by Edmund T. Price for manufacturing aircraft, like Rohr, Price's company found a niche for itself specializing in aircraft exhaust manifolds. At the war's outbreak, Price was faced with a large order for heat resistant stainless steel manifolds and other parts that more than likely were sent to Rohr for assembly in engine nacelles. In order to meet production demands, Price operated an auxiliary plant in National City, on 12th Street, between Taft and McKinley Avenues, from 1942 until 1945.³⁹

Although the SD&AE experienced its peak rail activity during World War II, carrying over 50,000 carloads of freight and other war-related material, it was still operating at a loss. When added to the previous deficit incurred by the railroad when it took over the SD&A, the cost of trying to maintain outdated locomotives and rolling stock on outdated right-of-ways was very costly. After a slight increase in the transportation of war material during the Korean War (1950-53), the Coronado Belt Line, as did the rest of the SD&AE's branches, struggled to merely break even. During the post war era, the railroad was no longer able to compete in the local, let alone the regional markets. Added to this was the growing number of trucking firms, which continued to siphon off shipping revenue. Exasperating the situation was the federal government and the public's postwar support for freeway construction over rail transportation systems.⁴⁰

During the 1960s, except for the section of right-of-way connecting with the Santa Fe at National City to the Salt Works, the Coronado Belt Line was no longer a viable transportation corridor. Except for the occasional tank car of fuel oil for the Hotel del Coronado's power plant, and a rail fan passenger excursion train (the last in 1949), the line was dead. This was especially the case after the Navy cancelled its contracts, after which the SD&AE pulled out and sold the tracks along the Silver Strand for scrap. A final freight train ran in 1960 from the Marmarosa Junction, along F Street to the *Chula Vista Vegetable Exchange* at the end of 3rd Avenue. Refrigerated trucks had now taken over the railroad's former celery and citrus cargo. Three years later, the rails east of F Street and Broadway were either removed or paved over. All that remains is a 3-block long section on F Street west of Broadway. The rail connection between Marmarosa Junction and F Street was shifted slightly to the north over a concrete viaduct after the 1950s completion of the I-5 (Montgomery) Freeway during the early 1950s.⁴¹

As were most railroads in the United States, during the 1960s and 1970s strong federal regulations, high taxes and labor problems beset the SD&AE. Unable to get at least a low return on its investment, its parent company, the Southern Pacific, regarded it as a liability. In 1976 a major storm washed out much of the SD&AE's track in Eastern San Diego County. Instead of allowing the Southern Pacific to abandon the SD&AE, in 1979 the County of San Diego purchased the railroad, except for 18 miles of track between Plaster City and El Centro, for \$18.1 million. The County then transferred the operating and acquisition rights to the SD&AE to the *Metropolitan Transit Development Board*. Created in 1975 through State legislation, MTDB's purpose was to "plan, construct and operate a mass transit system using gasoline tax revenues made available for transit purposes." Comprised of board members representing all the cities serviced by the SD&AE, MTDB had looked into the feasibility for rail transit in the South Bay. The result was the conversion of the original San Diego & Arizona Railroad's main line from San Diego to Tijuana into an electric powered light rail system. One of the most successful systems of its kind in the United States, the affectionately but misnamed "Tijuana Trolley" is technically an interurban rail line that once again serves the growing communities of the South Bay, especially National City and Chula Vista.⁴²

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Historical Background (Continued)

Although the Tijuana Trolley does not travel over the Coronado Belt Line, it is still linked to the South Bay's rail transportation needs. Not wishing to engage in freight service, MTDB contracts out freight service on the former SD&AE to independent contractors. So as not to interfere with passenger operations, most of the freight is handled at night. Diesel-powered locomotives also pulled freight cars along what was remaining of the Coronado Belt line. That is the reason for the 3-block section of track in the middle of F Street. It is used to switch freight cars from a spur off the former SD&AE's Tijuana Branch to the Coronado Belt Line at Marmarosa Junction. This historic connection became especially important after the recent removal of the line's connection with the Santa Fe in National City, north of Bay Marina Way along Harrison Avenue. Although sections of the historic right-of-way are in need of repair, it has not been abandoned. It is still capable of carrying freight from Marmarosa Junction as far south as the Salt Works. In addition, a local rail-fan organization operates tourist-oriented train or rail car excursions on the 3-mile section between Bay Marina Way in National City and Marina Parkway in Chula Vista on a limited basis.⁴³

Despite its limited use, the surviving 113-year old 7.5-mile right-of-way from National City south to Imperial Beach continues to retain its historical significance under **Criterion C**. The right-of-way, including its roadbed, rails, ties, switches, and trestles, represents a type, period and method of late 19th and early 20th century railroad construction techniques and materials. It is through these materials that the resource has maintained its historic significance and integrity. This, combined with its location, design, and setting, helps to reinforce the overall feeling of its historic association with one of San Diego's key locally owned and operated short lines, which served as a vital interurban rail transportation corridor linking the South Bay with San Diego and Coronado.

The most distinguishing character-defining features of the historic right-of-way are its steel rails. While the argument can be made that even modern by modern 21st Century standards, the rails are not unique. However, those used in the Coronado Belt Line right-of-way display distinctive characteristics that are unique to the resource's period of construction and are indicators of a particular method of historic track construction that is no longer in vogue. First, they either weigh 60 to 75lbs per yard, while most modern rails are 141lbs/yd. Second, modern rails are welded into continuous lengths several thousand feet long to provide a better ride, reduce wear and damage to trains as well as eliminate the noise associated with rail joints. Attached to the ties by steel spikes nailed into canted steel "fish plates," the Coronado Belt Line's steel rails, on the other hand are 39-foot lengths of flat-bottom rail placed in staggered, spliced joints. The joints, which allowed the steel rails to expand and contract, were staggered for a reason. Railroad builders saw that a rail begins to drop when it has been in place for a time, creating a depression. When a train's wheels fall into the depression, they hit the opposing rail joint as it begins to climb out again. They determined that, if the two opposing rail joints were parallel, the resulting force might snap the rails.⁴⁴

The steel rails themselves are an indicator of the right-of-way's age and demonstrate the availability of standardized materials to the Coronado Belt Line's builders. In use for over twenty years in the United States, steel rails had a marked advantage in strength and wear over earlier iron rails. The sections of steel rail stamped "CARNEGIE STEEL—1899" indicate the availability of some of the best steel for use in the Coronado Belt Line's construction at the time. Produced by the innovative Bessemer Process, by the 1890s Carnegie Steel dominated the market. The date on the rail also indicates that it was the last of its kind available; in 1900 Andrew Carnegie sold his company to J.P. Morgan's newly formed United States Steel Corporation. The other stamped and dated rails are also indicators of where and when those sections of track or turnouts were installed, thereby helping to establish the right-of-ways growth and evolution over time.⁴⁵

Another prosaic character-defining feature of the Coronado Belt Line's right-of-way is the wooden "crossties," or "ties." Besides keeping the rails at the correct distance apart (the gauge), they support the weight of passing trains on the ground below. Normally impregnated with preservative, under good conditions wooden ties last

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Historical Background (Continued)

up to 25 years. Due to the Coronado Belt Line's operators' financial difficulties, this might not have been the case. Several of the wooden ties appear to be much older. Nevertheless, their existence shows the American railroad industries 165-year old reliance on wooden ties, which is slowly being phased out by the use of concrete, steel, or composite ties. While not necessarily cheaper, these materials reduce the liability of welded track to deform under stress. Another alternative to individual ties is the use of concrete slab track. The use of both concrete ties and slab track can be seen along the San Diego Trolley line running along the former SD&AE Tijuana Branch. In addition, during the latter's construction, its single track was removed so that double track could be installed. Therefore, an argument can be made that the Coronado Belt Line has kept its integrity while the former has not.⁴⁵

The increased use of slab track on the San Diego Trolley's new extensions through Mission Valley also negate the need for another character-defining feature of the Coronado Belt Line's right-of-way, broken stone ballast. A crucial component in the operation of a safe railroad, clean and sharp stone ballast spreads the loading that occurs under the ties. An adequate depth of ballast, especially across the marshland traveled by the Coronado Belt Line, reduces the load to an amount that the ground could bear.⁴⁶

Another character-defining feature found on the Coronado Belt Line's right-of-way is the use of wooden trestles. The four wooden trestles are indicators that the line's owners were continuously beset by financial difficulties. Normally, wooden trestles were built first as a way to initially save money. They were often replaced with steel or concrete bridges when revenue and traffic increases and the need for new and more expensive steel box girder or I-beam crossings became worthwhile. Except for the relatively new steel box girder bridge across the Sweetwater Flood Control Channel, the surviving trestles date back to before the 1916 flood and are excellent examples of "no frills" railroad engineering. Basically a length of track supported by wood pole piers and timber abutments, the trestles are arguably the most defining features of the historic right-of-way. An interesting feature on the trestles is the use of concrete-filled 55-gallon oil drums as footings. This too shows the level of frugality inherent in the line. Normally the concrete for the footings would have been poured into wood-framed forms. After the concrete set, the wooden forms would have been removed. This evidently wasn't the case on the Coronado Belt Line's trestles. The oil drum footings can still be seen at low tide.⁴⁷

One of the best indicators of the "no frills" "bare bones" frugality of the surviving segment of the Coronado Belt Line is the survivability of the upright manual lever-operated switches at various turn outs along the route. While most have thick coats of paint or layers of rust over their surfaces, they manufacturer's name can still be discerned. Known as "StarStands," they were made by the *Pettibine-Mullicen Company* of Chicago and in use on American rail lines between 1890 and 1950. Normally fitted with pole-mounted lamps or signal panels, the StarStands had to be switched manually instead of automatically by electric relay like most modern and up-to-date railroads. While archaic and time-consuming, manual switching seems to have been the norm for the Coronado Belt Line and the rest of the Spreckels-owned railroads. Archival photographs show similar upright manual lever switch mechanisms being used throughout his railroad empire.⁴⁷

Finally, two interesting accessories that seem to exemplify the railway's frugality, as well as qualify as character-defining features, are the two intersections along Cleveland Avenue marked with upright wooden "Windmill"-style RR crossing signs. Instead of installing warning lights or descending barrier arms, approaching motorists have to "LOOK OUT FOR THE CARS," which is stenciled on the posts. The Coronado Belt Line's surviving "low-tech" approach to operating a railroad can be seen throughout the entire length of the right-of-way and indicate the way each element of the line relates to each other by the choice and/or availability of materials and the technology available at the time.

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Integrity

Despite war, floods, and financial depression, the surviving segment of the Coronado Belt Line's historic right-of-way has managed to maintain its historic integrity. This can be seen in the survival of certain physical characteristics that existed during the resource's period of historic significance. Combined, these physical characteristics help to retain the resource's historic integrity through its Location, Setting, Materials, Workmanship, Feeling, and Association.

Location

Despite the disastrous damage caused to the NC&O branch by the 1916 flood, the historic Coronado Belt Line's right-of-way has remained relatively unchained along its original right-of-way since its 1888 completion.

Setting

Combined with its location, the resource's setting still evokes the feeling of a suburban railroad transitioning through light-industrial/warehouse, open country, and residential areas. This is especially true along the marshland between National City and Chula Vista, and between Chula Vista and Imperial Beach.

Materials

Besides the obvious steel rails and wooden ties are a number of individual character-defining mechanical and engineering features that collectively contribute to the resource's historic significance. For example, the earthen embankments and wooden trestles, as well as the steel manual switches, crossovers frogs, and mechanical crossing signals, represent the use of mainstream late 19th to mid-20th century American railroad engineering and construction techniques. The Coronado Belt Line's surviving "low-tech" approach to operating a railroad can be seen throughout the entire length of the right-of-way and indicate the way each element of the line relates to each other by the choice and/or availability of materials and the technology available at the time.

Workmanship

Until fairly recent times, the Coronado Belt Line's right-of-way has supported the operation of main line engines and rolling stock. This, in addition to wear and damage from floods, fire, salt spray, tide, and vandalism, underlies the skill and workmanship of the multi-national workforce that built and maintained it over the years.

Feeling

Whether if one is riding or hiking along the rails, the right-of-way's location, setting, materials, and workmanship instill a sense of place and time. Taken together, these attributes convey the resource's historic character as a semi-rural suburban rail line.

Association

The above attributes contribute to maintain the right-of-way's historic association with one of the earliest independent short lines in San Diego County. Despite having almost half of its original length removed between Imperial Beach and Coronado, the remainder of the surviving right-of-way continues to evoke a particular place and time in San Diego and the South Bay region's history.

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***B12. Endnotes:**

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2. Richard F. Pourade, *The Glory Years, The History of San Diego*, vol. 4 (San Diego: Union-Tribune Publishing Company, 1964), 168-169.
3. Pourade, *The Glory Years*, 168-173 and 177.
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5. Elizen Carlin and Ray Brandes, *Coronado: the Enchanted Island* (Coronado: Coronado Historical Association, 1987), 47; Pourade, *The Glory Years*, 170 and 172; Dodge, 15; and Hanft, 20.
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7. Dodge, 18; Fickewirth, 32; Hanft, 13-14 and Pourade, *The Glory Years*, 184-185.
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14. Fickewirth, 87; Hanft, 20; and Pourade, *The Glory Years*, 212.

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Endnotes (Continued):

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16. Forty, 10; Hanft, 8; USC&GS, *Part of San Diego Bay*, 1887 and *San Diego Bay, California*, 1889; and San Diego & Arizona Eastern, Plat Maps, sheets 5-6.
17. MacPhail, 100; and Pourade, *The Glory Years*, 215-216, and 223-224.
18. Dodge, 15-17; MacPhail, 101; and Pourade, *The Glory Years*, 178.
19. T.A. Beasely, *Map of the City of San Diego*, 1910; Carlin and Brandes, 68-69, 81, 86 and 100; Dodge, 23; and Fickewirth, 124.
20. Ibid., 31; Hanft, 21; and MacPhail, 129.
21. Carlin and Brandes, 100; and Richard F. Pourade, *Gold in the Sun, The History of San Diego*, vol. 5 (San Diego: Union-Tribune Publishing Company, 1965), 15, 112 and 237.
22. Pourade, *Gold in the Sun*, 34 and 44; *Panama Canal*, [Infoplease.com](http://www.infoplease.com/ce6/world/A0837445.html) (<http://www.infoplease.com/ce6/world/A0837445.html>, *The Columbia Electronic Encyclopedia*, Copyright © 1994, 2000, Columbia University Press); and Spooner, John (Coit), *Encyclopaedia Britannica* (<http://www.britannica.com/seo/john-coit-spooner/>, © 1999-2000 Britannica.com Inc.).
23. Dodge, 39; and Pourade, *Gold in the Sun*, 72, 87 and 91.
24. Dodge, 41; Fickewirth, 32, 87 and 125; and Forty, 11 and 15-17.
25. Dodge, 41 and 50; and Fickewirth, 32, 87, 125; Forty, 13 and 24; Hanft, 8; and Sanborn, *National City, California*, 1911, sheet 1.
26. Dodge, 44-45; 46-45; and Forty, 21.
27. Dodge, 50.
28. Dodge, 55 and 58; Fickewirth, 122; and Forty, 25, 37-39; Hanft, 27.
29. Dodge, 64-65; and Forty, 47-48; and San Diego Historical Society Photograph Collection, *Flood Damage to San Diego & Arizona and San Diego & Southeastern Railroads at Crossing near Palm City*, January 2, 1916, Photograph #6009.
30. Dodge, 64-65; and Fickewirth, 125.
31. Dodge, 67.
32. Forty, 54; Peter Neushul, *The Hercules Powder Company*. In *Chula Vista: The Early Years* (vol. 1, San Diego: Tecolote Publications, 1992), 29-36; Richard F. Pourade, *The Rising Tide, The History of San Diego*, vol. 6 (San Diego: San Diego: Union-Tribune Publishing Company, 1967), 88; and San Diego

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*Resource Name or Number (Assigned by recorder): Coronado Railroad Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Endnotes (Continued):

Historical Society Photograph Collection, *Hercules Powder Company*, ca. 1917, Photograph #9640; and #11891-B; and #11891-C.

33. Dodge, 79; Forty, 66 and 68; and Sanborn Map Publishing Company, *Chula Vista, California*, 1945-1951, sheet 15.
34. Dodge 89 and 91; Forty 71 and 73; and U.S. Department of the Interior, U.S. Geological Survey, *Topographic Map of San Diego Quadrangle, San Diego County, California*, 1930.
35. Dodge 89, 90; Fickewirth, 121; and Pourade, *The Rising Tide*, 123; and 156-157.
36. Pourade, *The Rising Tide*, 123; and 136-137; San Diego Historical Society Photograph Collection, *North Island*, ca. 1924, Photograph #8660; *North Island*, ca. 1935, Photographs #81:12528; #90:18138-169; and #90:18138-530; and U.S. Department of Commerce, U.S. Coast & Geodetic Survey, *United States—West Coast, California, San Diego Bay*, 1937.
37. Carlin and Brandes, 212-214; Hanft, 114; Barry Allan Joyce, *A Harbor Worth Defending: A Military History of Point Loma* (San Diego: Cabrillo Historical Foundation, 1955), 56; Pourade, *The Rising Tide*, 237 and 245; U.S. Department of the Interior, U.S. Geological Survey, *Topographic Map of the Point Loma Quadrangle, San Diego County, California*, 1942 and *Topographic Map of the National City Quadrangle, San Diego County, California*, 1944.
38. *Chula Vista Heritage*, 75; Hanft, 114; *Jane's Fighting Aircraft of World War II* (New York: Random House, 1989, reprint, originally published as *Jane's All the World's Aircraft*, Leonard Bridgman, ed., London: Jane's Pub. Co., 1946/7), 214-218; Richard F. Pourade, *City of the Dream, The History of San Diego*, vol. 7 (San Diego: Copley Books, 1977), 168; "5000 Steps to Berlin," [Advertisement for Rohr Aircraft Corporation, Chula Vista, California] *National Geographic* 85 (February 1944): 261; *San Diego City and County Business Directory*, 1940-1945; and Sanborn, *Chula Vista*, sheet 15; and.
39. Pourade, *The Rising Tide*, 147, 167 and 224; and *San Diego City and County Business Directory*, 1940-1945.
40. Hanft, 114 and 125.
41. Hanft, 148; and U.S. Geological Survey, *Topographic Map of the National City Quadrangle, San Diego County, California*, 1953 and 1967.
42. Hanft, 156-157; Fickewirth, 121, 123-124; Forty, 76-82; O.S. Nock, ed., *Encyclopedia of Railroads* (New York: Galahad Books, 1977), 65; Metropolitan Transit Development Board, *Board of Directors Meeting Agenda*, Item No. 32 (San Diego, 11 January 2001).
43. Fickewirth, 63, 121 and 123; and Robert Recks, *San Diego Electric Railway Association*, Interview with Author, February-April 2001.
44. *Carnegie, Andrew, Encyclopaedia Britannica*, <http://www.britannica.com/eb/article?eu=20716&tocid=0> (Britannica.com, Copyright © 1999-2001), *Glossary of Modern Railway Terminology*, <http://www.trainweb.org/railwaytechnical/index.html>. (Railway Technical Web Pages, Copyright © 1998, 1999, 2000, 2001), *Track Page*, <http://www.trainweb.org/railwaytechnical/track.htm>; and Nock, 208; Nock, 211.

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*Resource Name or Number (Assigned by recorder): Coronado Railroad Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Endnotes (Continued):

45. Nock, 65 and 211; and Gena Holle, *The San Diego Trolley* (Glendale: Interurban Press, 1990), 37 and 48.
46. Nock, 211-212.
47. Ibid., 213 and 218.
48. Recks, February-April; Dodge, 101; Hanft, 41 and 147.

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

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Hercules Powder Company, ca. 1917. Photograph #9640

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*B10.Significance (Continued):

Chronology and Corporate Ownership of the Coronado Belt Line

Coronado Beach Railroad – 1886-1888

- Organized in 1886 by Elisha Babcock & H.L. Story
 - Standard gauge line on private right-of-way extending from the Coronado Ferry Landing Via Orange Avenue to Ocean Front, site of Babcock & Story's Hotel Del Coronado
 - Distance: 1.40 Miles
 - Motive Power
 - Horse-drawn passenger cars until August 19th Arrival of Steam-powered "Dummy" locomotives
 - Line extended from Ferry Landing to Babcock and Story-owned North Island racetrack and Zuñiga Point
 - Line used to haul stone rip rap for the construction of the Zuñiga Shoal and Hotel del Coronado jetties
 - Steam Main Line extended south of Ferry landing from Pomona Avenue around Glorietta Bay, then down the Silver Strand Peninsula to Coronado Heights (Present U.S. Naval Radio Station) December 1888
 - Distance: 7.60 miles

Coronado Railroad – 1888-1908

- Reorganized Coronado Beach Railroad Company
 - Articles of incorporation amended march 1888 to include the building of a standard gauge belt line around the head of San Diego Bay and north to meet transcontinental railroad connections at National City and downtown San Diego
 - Spur line built from main line at La Punta junction to water pumping plant in Otay Valley
 - Proposed to meet the *San Diego & Phoenix* and the *Peninsular Railroad of Lower California* and serve as their connection into San Diego
 - Spur line also extended to Palm City from Otay River crossing junction
 - Constructed wooden trestles over the Otay and Sweetwater Rivers, and the Paradise and Chollas Creeks
 - Began passenger & freight service along San Diego's South Bay between San Diego and Coronado, June 14, 1888
 - Distance: 20.30 miles
 - Motive power: steam engine locomotives
 - Connecting horse-drawn streetcar service in National City
 - Instrumental in early development of South Bay and Coronado
 - Lemon packing houses in National City
 - La Punta Salt Works
 - Coronado's Tent City
 - J.D. Spreckels acquired controlling interest in 1889
 - Beginning of his railroad "empire" in San Diego
 - Orange Avenue line electrified from ferry landing to Hotel del Coronado in 1893
 - Sold to the Spreckels-owned *San Diego Electric Railway*, July 1, 1908
 - Steam division leased to *National City & Otay Railway Company*, August 1, 1906
 - Spreckels acquired NC&O in 1905

San Diego Southern Railway – 1908-1912

- Incorporated February 2, 1908
 - Controlled by J.D. Spreckels interests
 - Proposed to Build from San Diego to Ensenada, Baja California, Mexico

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Chronology (Continued)

- Consolidated steam and electric traction operations in South Bay
 - Acquired the steam division of the Coronado Belt Line
 - Acquired the NC&O, July 1, 1908
 - Motive power:
 - Steam locomotives
 - Steam Division from San Diego to Tijuana, La Presa and Sweetwater Dam
 - Rail connections made to Coronado Belt Line
 - 9th (Harrison) Ave. & 13th St. (Civic Center Dr.), National City
 - La Punta (later NC&O) Junction (Main St. & Bay Blvd.), south of the salt works, Chula Vista
 - Electric traction interurban passenger coaches
 - Operated interurban passenger line ran between San Diego, National City, Chula Vista and Otay on same trackage

San Diego & South Eastern Railway – 1912-1917

- Incorporated March 2, 1912
 - Merger of SDS with the *San Diego & Cuyamaca Railway* to Foster
 - Motive Power:
 - Electric traction interurban coaches on NC&O line from San Diego to Otay
 - Steam-powered locomotives on Coronado Belt Line, NC&O, and SD&C branches
 - Gasoline Motor Car on SD&C Branch
- Sustained heavy damage during torrential January 1916 rain and flooding
 - Trestles and tracks washed out along river crossings
 - Abandoned former NC&O trackage between Sweetwater River and F St. and 3rd Ave. intersection, Chula Vista
 - Abandoned NC&O and Palm City junctions
 - Abandoned line NC&O line from Chula Vista to Otay
 - New trestles built and tracks laid connecting former NC&O trackage to Coronado Belt Line in National City and Chula Vista
 - 24th St. & Cleveland Ave., National City
 - F St. & Bay Blvd, Chula Vista
- Continued to operate steam-powered locomotives on Coronado Belt Line's right-of-way
- Electric division transferred to former Coronado Railroad track between National City and Chula Vista
 - Coronado Belt Line from 24th St. & Cleveland Ave., National City to F Street, Chula Vista electrified
 - Agreement made with the Spreckels-owned *San Diego Electric Railway* to operate interurban electric trolley cars between San Diego and Chula Vista
 - Cars ran along Cleveland Ave. to 24th St. Junction
 - Switched to electrified section of Coronado Belt Line south to (Marmosa) F St. junction, Chula Vista
 - Then east on F St. Easement to 3rd Ave., Chula Vista
 - At 3rd St., line ran SEly on street easement to K St., Chula Vista

San Diego & Arizona Railroad – 1917-1933

- Incorporated Dec. 15, 1906, John D. Spreckels interests
- Proposed to build from San Diego to Tijuana, Baja California, then to Tecate, where it would reenter the U.S. near Campo and continue to Southern Pacific's transcontinental route at El Centro
- Completed December 1, 1919
- Acquired SDSERY, Nov. 17, 1917

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Chronology (Continued)

- Operation effective December 15, 1917
 - Including Coronado Branch Steam Line Right-of-Way
 - Coronado Belt Line became part of Spreckels' transcontinental RR link to eastern markets
- Operated as Coronado branch of the SD&ARY main line

- Shipped strategic war material during WWI
 - Potash from Hercules Powder Company at Gunpowder Point
 - Supplied U.S. Army and Navy bases on Silver Strand and North Island
 - Salt and food products
- Termination of electric trolley passenger service
 - To Chula Vista, 1925
 - To National City, 1930
- Continuation of freight service on Coronado Belt Line

San Diego & Arizona Eastern Railway – 1933-1977

- Reorganized by the Southern Pacific Railroad February 1, 1933 after dissolution of partnership with Spreckels' interests
- Continued to operate Coronado Belt Line
 - Shipped strategic war material during WWII
 - Supplied North Island Naval Air Base
 - Supplied US Navy radio station at Coronado Heights
 - Shipped engine nacelles to and from Rhor aircraft plant in Chula Vista
- Service reduced drastically during post-war period
 - Trucking companies now hauling more local freight
 - Passenger service on main line from San Diego to El Centro discontinued January 11, 1951
 - Reduction of the railroad's importance as a local carrier
 - Abandoned freight operations on Coronado Belt Line in 1969
 - Abandoned and removed section of belt line along Silver Strand, from Imperial Beach to Coronado the following year

Metropolitan Transit Development Board – 1977-Present

- Acquired rights to former SD&AE right-of-way, including Coronado Belt Line
 - SD&AE Railway Board issues track warrants
 - Kyle Railway hauled freight over Coronado Belt Line under 10-year contract beginning in 1979
 - Leased operations RailTex of San Antonio, Texas, October 1984
 - RailTex changed to San Diego & Imperial Valley Railroad
 - Took over freight operations in 1989

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LINEAR FEATURE RECORD

Primary #:

HRI #:

Trinomial

Page 36 of 149 Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way / Segment A

L1. Historic and/or Common Name: Coronado Railroad Belt Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: Structure—Railroad Right-of-Way

b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map): 489620 mE / 3614620mN to 489820mE / 3613380 mN. See Continuation Sheet for more information.

L3. Description (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate): This .87-mile segment represents the Northern "Industrial" Section of the Right-of-Way in National City. It begins at a point approximately 75' south of the SE corner of Taft Avenue and 11th Street (Street Closed) at the NEly terminus of a private approx. 25'-wide alleyway N of the intersection of 12th St. and McKinley Ave. (formerly 6th Ave.) in National City. Approximately 30' west of the San Diego Trolley's South Bay Line, it continues in a SWly direction along a reversed S shape curve to a point where it crosses Harbor Drive. Continuing across Harbor Drive, it resumes a short private right-of-way in a curving NE to SW direction to a point meeting the north terminus of Cleveland Ave. (formerly 8th Ave.) where it meets Civic Center Drive (formerly 13th St.). Continuing due south, it travels along a street easement down the middle of Cleveland Avenue through a light-industrial neighborhood for 9 blocks until it reaches the Bay Marina Drive (formerly 24th St.). North of the intersection, just south of W 23rd St., is a non-functioning left-hand switch turnout leading in a SWly direction to a siding entering a scrap metal yard. After crossing Bay Marina Drive along a NEly to SWly curve, the line again enters a private right-of-way where it meets a Y turnout. From here, a siding runs in a Nly direction for two blocks along 20'-wide alleys. Running parallel but discontinuous to the alley is a single line of track in a street easement from a point approx. 100' N of the Bay Marina Dr. and Harrison Ave. (formerly 9th Ave.) intersection to a point some 50' N of W23rd St., from which point it meets a left-hand turnout. The turnout acted as a means for the Coronado Belt Line to merge with that of the Santa Fe Railway's transcontinental main line from National City to San Diego and points north. Traveling at street level, the line's highest point is at 18th and 23rd Streets where it is some 6' above sea level. Character-defining historic features along the right-of-way include the rail alignment, intersection crossings, wooden warning signs, right and left-hand switch turnouts and x-crossings or "frogs," and overhead signal lights.

L4. Dimensions (In feet for historic features, and meters for prehistoric features):

a. Top Width: 5' 1 1/2"-track gauge

b. Bottom Width: N/A

c. Height or Depth: At street level

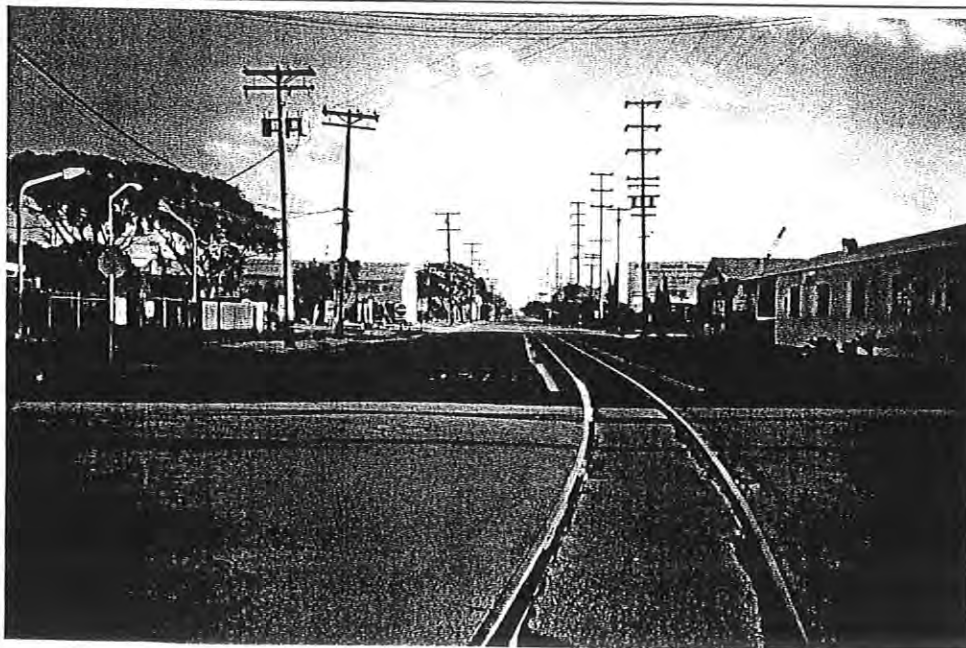
d. Length of Segment: .87 mile

L4e. Sketch of Cross-Section (include scale) Facing:
See Continuation Sheet

L5. Associated Resources: There are no previously recorded resources historically associated with the use of this resource.

L6. Setting (Describe natural features, landscape characteristics, slope, etc., as appropriate.): The resource extends through a neighborhood of light industrial buildings that present a linear façade of warehouses and light-manufacturing plants along the historic right-of-way.

L7. Integrity Considerations: Although this section of right-of-way is no longer used for commercial rail transportation purposes, it has retained its historic integrity in terms of setting, location, feeling, and materials associated with a historic railroad right-of-way that contributed to the area's development.



L8b. Description of ☒ Photo

☐ Map ☐ Drawing (View,

scale, etc.): # 9a Accession #

N2JW_001.JPG; View:

Looking SE from

Intersection of Cleveland

Ave. (8th Ave.) & Civic

Center Dr. (11th St.);

L9. Remarks: The resource is in fair to good condition

L10. Form Prepared by (Name, Affiliation, and Address):

Alexander D. Bevil

Save Our Heritage

Organisation

4752 Mt. Longs Drive

San Diego, CA 92117

L11. Date: 12 April 2001

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L2b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map):

Segment A

UTM Coordinates: 489620 mE / 3614620mN to 489820mE / 3613380 mN

A Segment of Railroad Right-of-Way from its Northern Terminus at the intersection of Taft Avenue and 11th Street (Street Closed) to the Intersection of Bay Marina Drive and Cleveland Avenue, all in National City, California

Legal Description

APN 555-090-09

Status: Non-taxable

Legal Description: Blk 204 PAR 64 SBE (State Board of Equalization) MAP 863-37-7P IN ST & ALLEY CLSD ADJ & I MAP348-NATIONAL CITY RE-FILED

Adjacent Land Use: Vacant Industrial

Owner: CONS (Company No Status)# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

Metropolitan Transit Development Board (MTDB)

1255 Imperial Avenue, Suite 1000

San Diego, CA 92101-7490

APN 559-021-08

Status: Non-taxable

Legal Description: Blk 244 (EX ST & MIN RTS) PAR 5 SBE (State Board of Equalization) MAP 863-37-19a IN ST & ALLEY CLSD ADJ & I MAP348-NATIONAL CITY RE-FILED

Adjacent Land Use: Vacant Industrial

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

Street Easement

Status: Non-assessed/Non-taxable

From the Intersection of Civic Center Drive (formerly 13th St.) and Cleveland Avenue (formerly 8th Avenue) south to Bay Marina Drive (formerly 24th St.) MAP348-NATIONAL CITY RE-FILED

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

Spur Line from Bay Marina Drive to W21st St. (CLSD) along Alleyways

Easement through alleys, Blks 280, 279 and 278 MAP348-NATIONAL CITY RE-FILED

Street Easement across W21st St. (CLSD) from Blk 279 to 278 MAP348-NATIONAL CITY RE-FILED

Status: Non-assessed/Non-taxable

Land Use: Industrial

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

Spur Line Midway from Bay Marina Drive to W21st St. (CLSD) along Harrison Ave. (formerly 7th Avenue.)

Street Easement along Harrison Avenue adjacent to western perimeters of Blks 280, 279 and 278 MAP348-NATIONAL CITY RE-FILED

Non-assessed/Non-taxable

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

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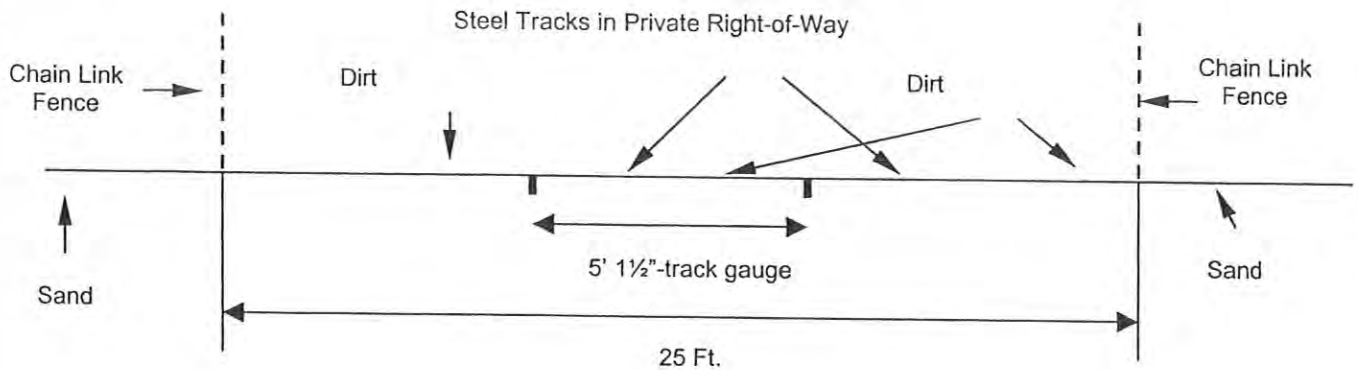
*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

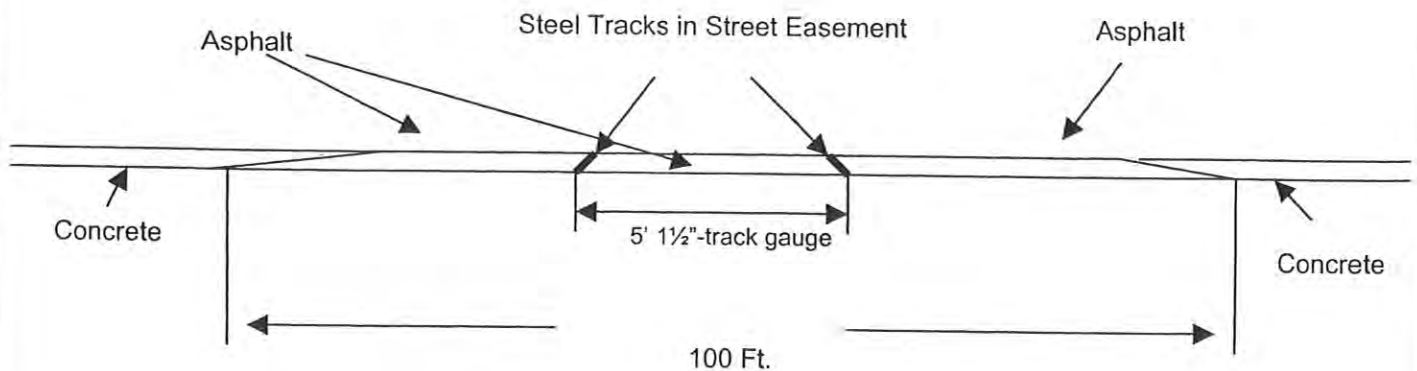
☒ Continuation

☐ Update

L4e. Sketch of Cross-Section (include scale) Facing: Southeast



Point # 2a South of Northern Terminus in Private Right-of-Way South of Intersection of Taft Avenue and 11th Street



Point 9a Street Easement down Cleveland Ave.

SKETCH MAP A

Primary #:

HRI#

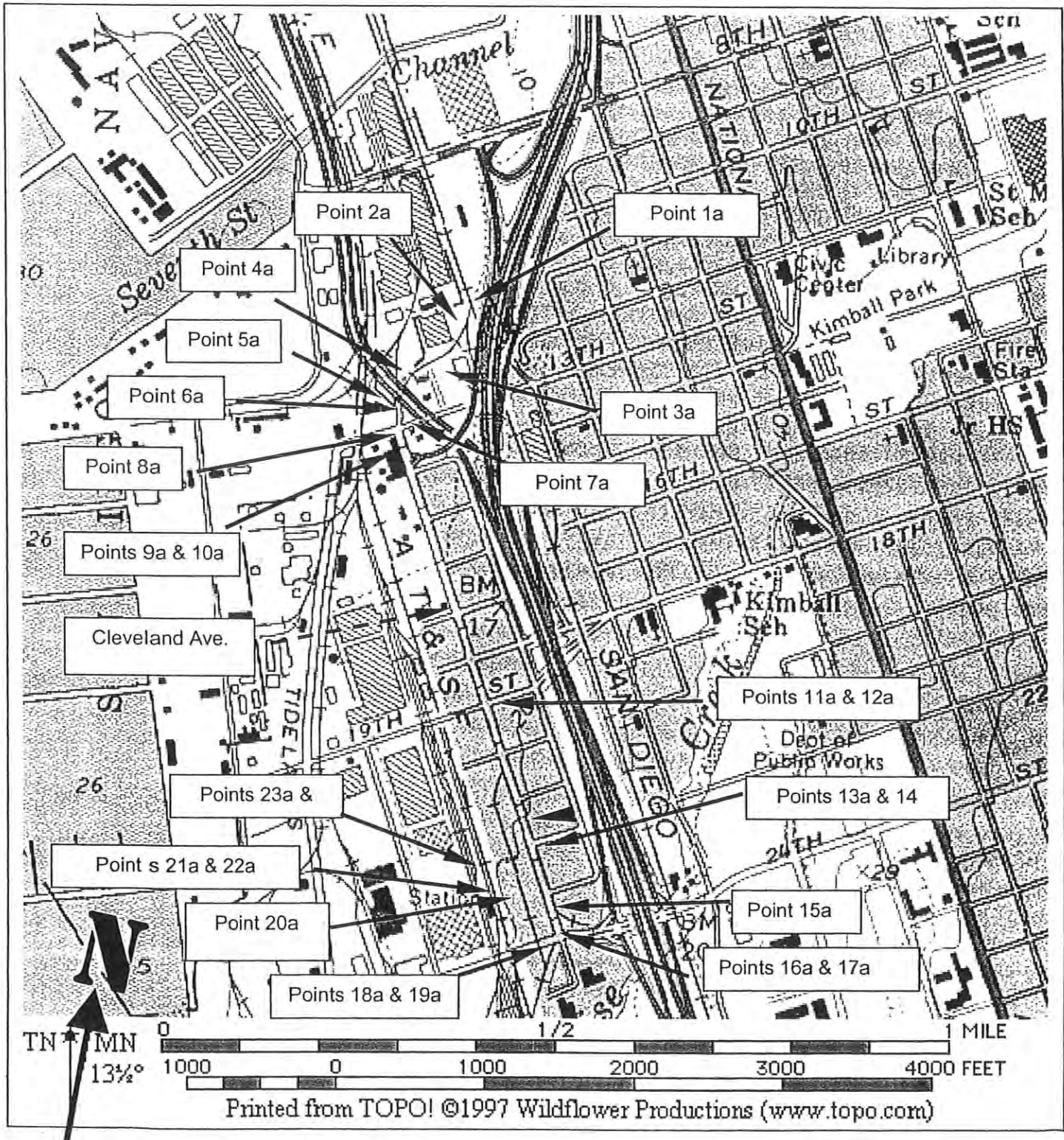
Trinomial:

Page 39 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Segment A Points

*Scale: 1'=24,000m

*Date of Map: 12 April 2001



PHOTOGRAPH RECORD

Page 40 of 149 Project Name (Assigned by Recorder): Coronado Belt Line Right-of-Way / Segment A

Year: 2001

Roll Number: 7-8

Camera Format: SLR

Photographer(s): Alexander D. Bevil

Lens Size: N/A

Film Type and Speed: 35mm 100ASA

Images: 300 DPI JPG

Negatives Kept at: In Possession of Photographer

Mo.	Day	Time	Frame	Site #/Locus	Subject/Description	View	Accession #
02	11	15:45	1a	Point 1a	Northern Terminus where Coronado Belt Line once met main line to San Diego. View of passing San Diego Trolley on former San Diego & Arizona right-of-way	Looking NORTH	N2JW_017.JPG
02	11	15:40	2a	Point 2a	South of Northern Terminus in Private Right-of-Way South of Intersection of Taft Avenue and 11th Street	Looking North	N2JW_016.JPG
02	11	15:46	3a	Point 3a	Street Easement at Intersection of 12th and McKinley Streets Connecting Private Right-of-Way Segments between trolley line and Harbor Drive	Looking North	N2JW_021.JPG
02	11	15:45	4a	Point 4a	Connecting Street Easement Crossing Harbor Drive between Private Right-of-Way Segments	Looking SW	N2JW_019.JPG
02	11	15:27	5a	Point 5a	Free-standing Metal Post Dual-arm RR Crossing Warning Light	Looking SE	N2JW_008.JPG
02	11	15:26	6a	Point 6a	Nly edge of Private Right-of-Way Connecting Street Easement Crossing at Harbor Drive and Cleveland Avenue	Looking North	N2JW_007.JPG
02	11	15:25	7a	Point 7a	Private Right-of-Way Segment between Harbor Dr. and Cleveland Ave.	Looking South	N2JW_006.JPG
02	11	15:23	8a	Point 8a	Private Right-of-Way Connecting Harbor Dr. & Cleveland Ave.	Looking North	N2JW_005.JPG
02	11	15:20	9a	Point 9a	Street Easement down Cleveland Ave. from Intersection of Civic Center Drive	Looking SE	N2JW_001.JPG
02	11	15:21	10a	Point 10a	Close up of Scrap Rail Laid on its Side Used as a Check Rail alongside Running Rail in Cleveland Ave. Street Easement South of Civic Center Dr.	Facing SE	N2JW_002.JPG
02	11	15:28	11a	Point 11a	"Windmill"-style RR Crossing Sign with LOOK OUT FOR THE CARS stenciled on Post Sides at NE Corner of Cleveland Ave. and W19th St.	Looking East	N2JW_0009.JPG
02	11	15:29	12a	Point 12a	"Windmill"-style RR Crossing Sign with LOOK OUT FOR THE CARS stenciled on Post's East Side at SW Corner of Cleveland Ave. and W19th St.	Looking South	N2JW_0011.JPG
02	11	15:30	13a	Point 13a	"Windmill"-style RR Crossing Sign with LOOK OUT FOR THE CARS stenciled on Post's East Side at SW Corner of Cleveland Ave. and W22nd St	Looking South	N2JW_0012.JPG
02	11	15:31	14a	Point 14a	"Windmill"-style RR Crossing Sign with LOOK OUT FOR THE CARS stenciled on Post's East Side at NE Corner of Cleveland Ave. and W22nd St.	Looking East	N2JW_0013.JPG
02	11	16:26	15a	Point 15a	Left-hand Turnout on Cleveland Ave. South of W23rd St.	Looking SE	MMGF_022.JPG
02	11	16:27	16a	Point 16a	Intersection of Cleveland Ave. and Bay Marina Dr.	Looking SE	N2JW_023.JPG
02	10	09:05	17a	Point 17a	Intersection of Cleveland Ave. and Bay Marina Dr.	Looking East	R749_015.JPG
02	11	16:23	18a	Point 18a	Rails along Bay Marina Dr. Street Easement between Cleveland Ave. & Harrison Ave. Historic Rail Car Plaza Building on Right	Looking South	MMGF_011.JPG
02	11	16:24	19a	Point 19a	Private Right-of-Way through Alley between Harrison St. & Cleveland Ave. North of Bay Marina Dr.	Looking NW	MMGF_009.JPG
02	11	16:29	20a	Point 20a	Segment of Rails along Harrison St. Street Easement North of Bay Marina Dr.	Looking NW	MMGF_017.JPG
02	11	16:27	21a	Point 21a	Segment of Rails along Harrison St. Street Easement North of Bay Marina Dr.	Looking NW	MMGF_012.JPG
02	11	16:30	22a	Point 22a	Historic 1881 California Southern/Santa Fe Railway National City Depot	Looking North	MMGF_021.JPG
02	11	16:25	23a	Point 23a	Left Turnout North of W 23 rd St. in Street Easement	Looking SE	MMGF_014.JPG
02	11	16:28	24a	Point 24a	Left Turnout Leading NW to Burlington and Santa Fe Mainline to San Diego and End of Spur	Looking NE	MMGF_015.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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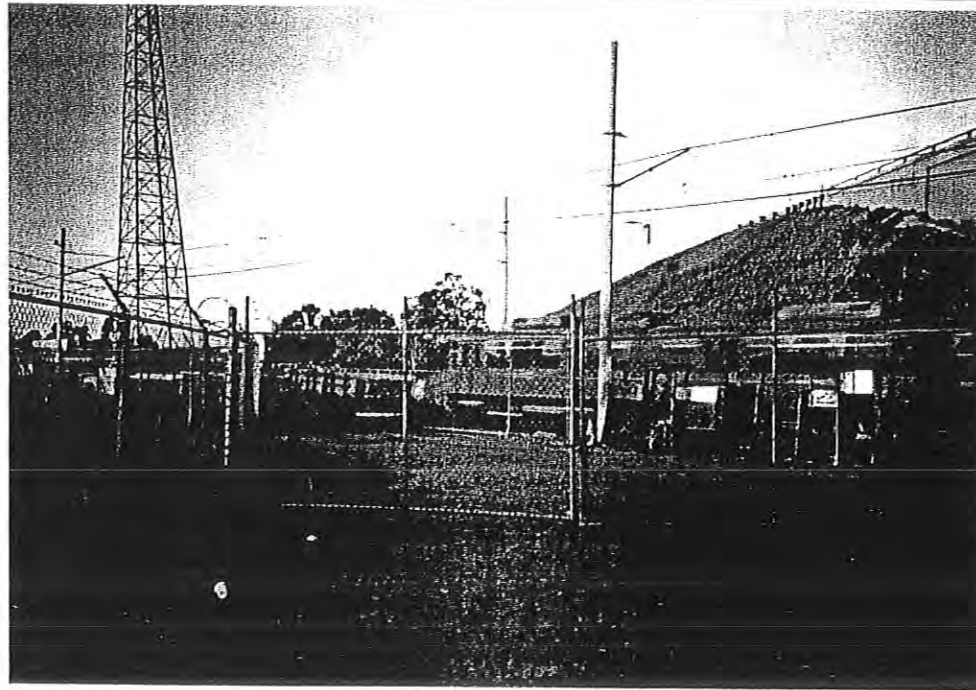
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 March 2001

☒ Continuation

☐ Update



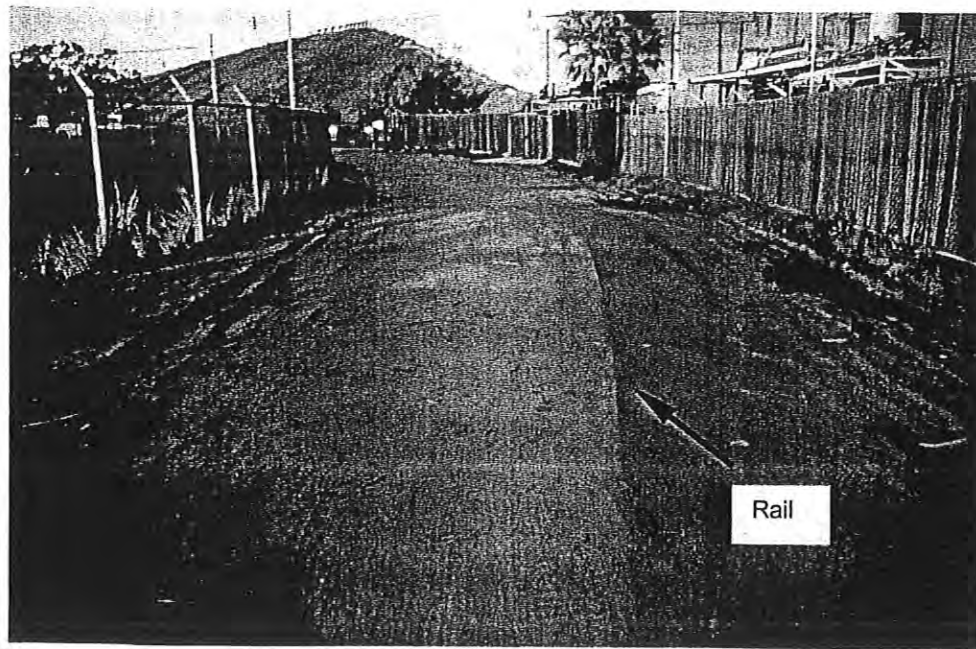
Photograph #1a

Point 1a

Northern Terminus of
Coronado Belt Line at
Former Rail Junction
with San Diego &
Arizona Railway Main
Line to San Diego and
Tijuana

View: Looking North

Accession #
N2J#_017.JPG



Photograph #2a

Point 2a

South of Northern
Terminus in Private
Right-of-Way South of
Intersection of Taft
Avenue and 11th
Street

Rails almost buried
completely

View: Looking North

Accession #
N2JW_016.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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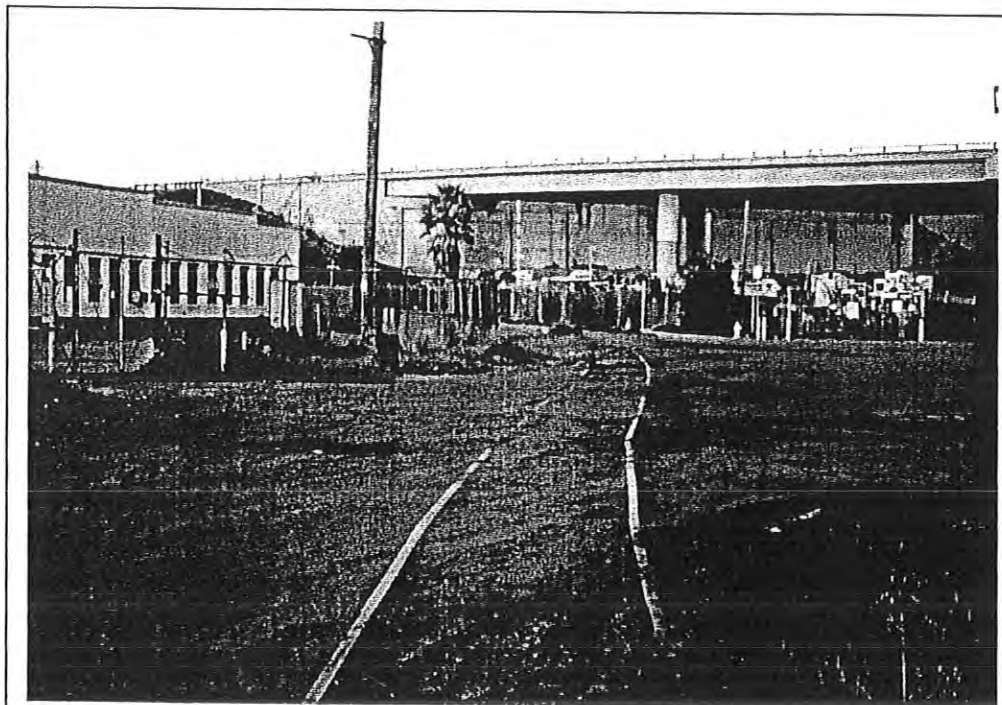
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



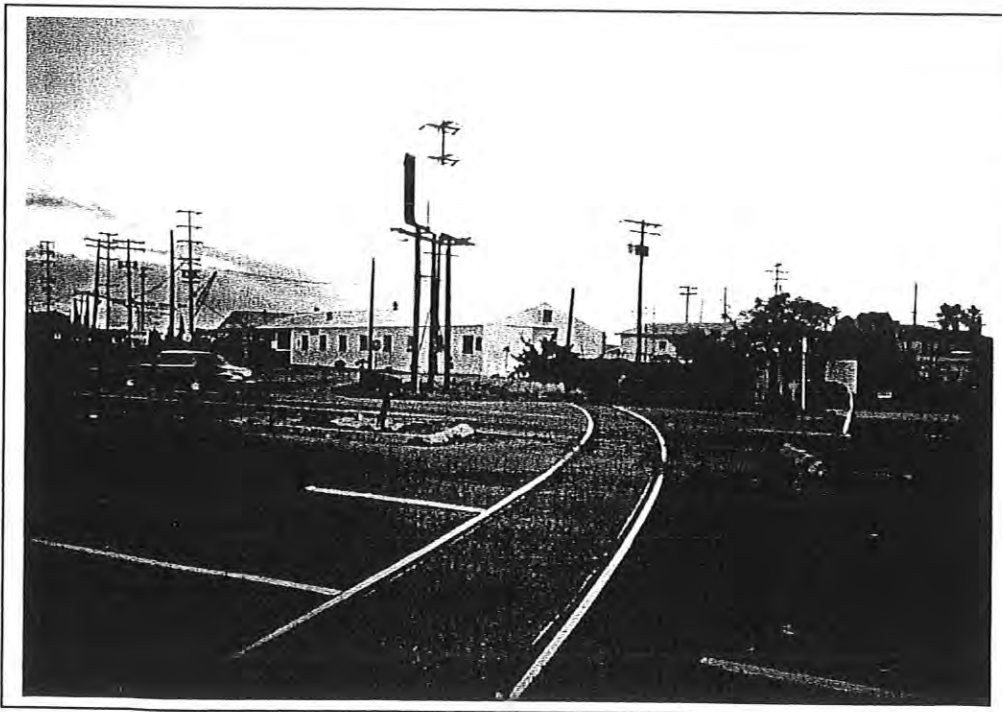
Photograph #3a

Point 3a

Street Easement at
Intersection of 12th
and McKinley Streets
Connecting Private
Right-of-Way
Segments between
trolley line and Harbor
Drive

View: Looking North at
I-5 Freeway Overpass

Accession #
N2JW_021.JPG



Photograph #4a

Point 4a

Connecting Street
Easement Crossing
Harbor Drive
between Private
Right-of-Way
Segments

View: Looking South
at Harbor Drive
Crossing

Accession #
N2JW_019.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



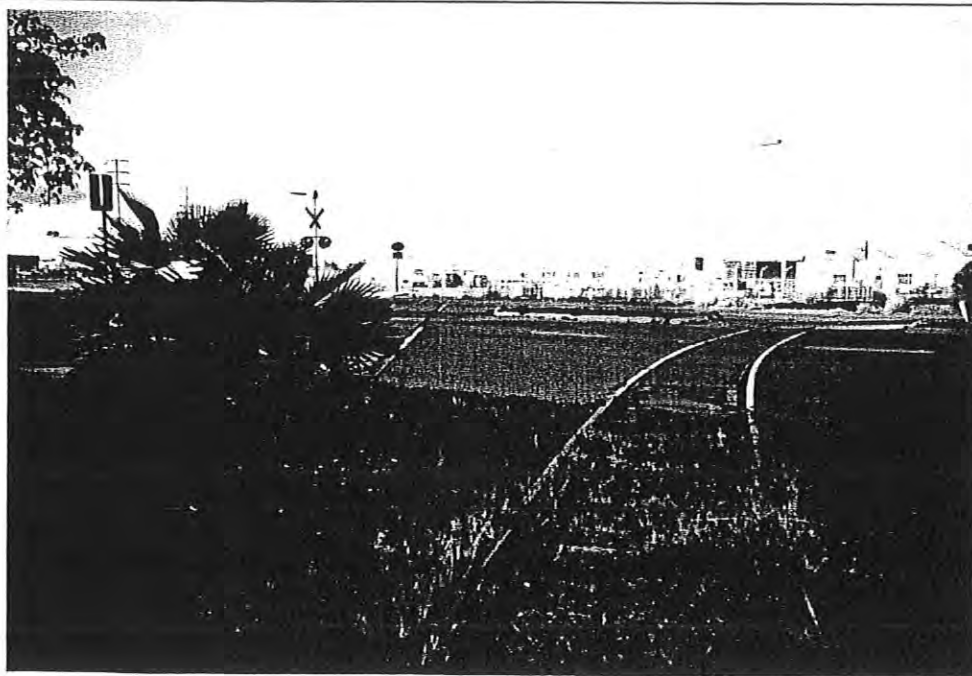
Photograph #5a

Point 5a

Free-standing Metal
Post Dual-arm RR
Crossing Warning
Light

View: Looking SE at
Harbor Dr. & Civic
Center Dr. Intersection

Accession #
N2JW_008.JPG



Photograph #6a

Point 6a

Nly edge of Private
Right-of-Way
Connecting Street
Easement Crossing at
Harbor Drive and
Cleveland Avenue

View: Looking NE at
Harbor Dr.

Accession #
N2JW_007.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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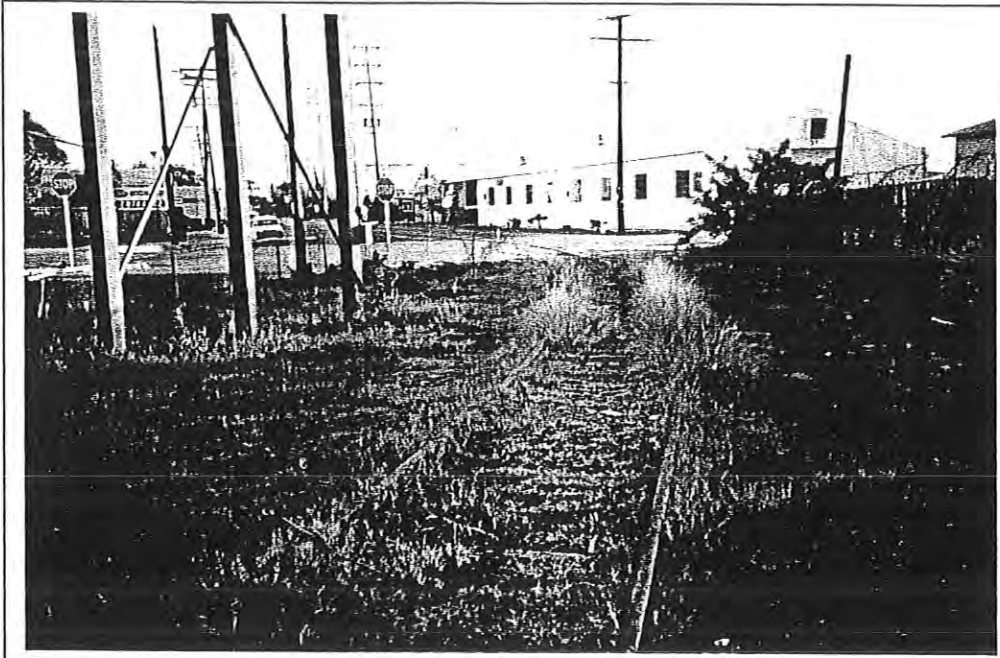
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



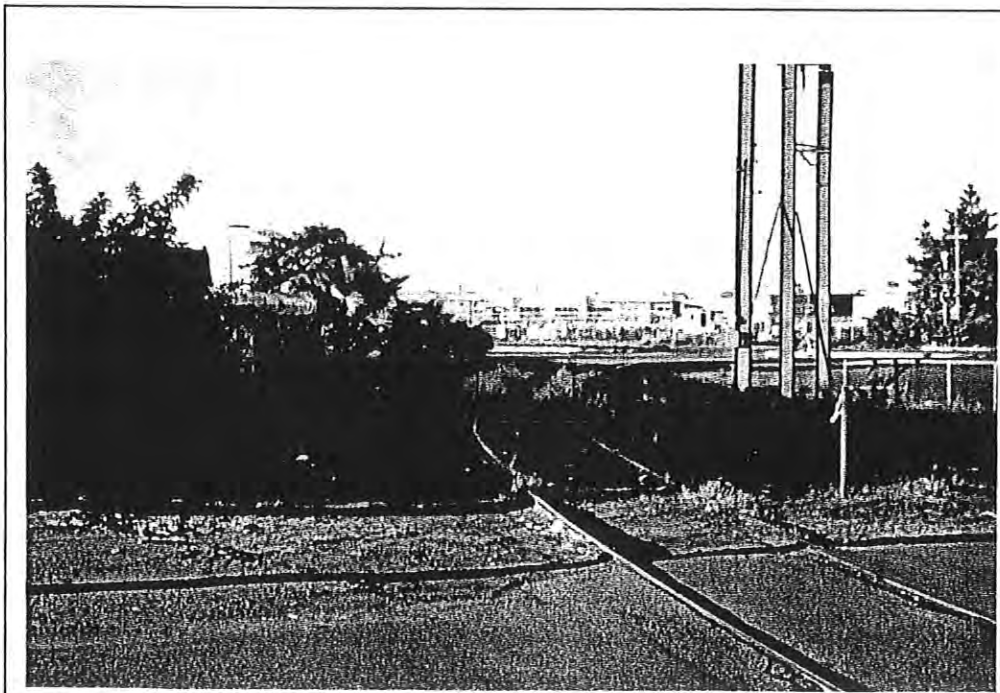
Photograph #7a

Point 7a

Private Right-of-Way
Segment between
Harbor Dr. and
Cleveland Ave.

View: Looking South
at Intersection of
Cleveland Ave. &
Civic Center Dr.

Accession #
N2JW_006.JPG



Photograph #8a

Point 8a

Private Right-of-Way
Connecting Harbor Dr.
& Cleveland Ave.

Accession #
N2JW_005.JPG

View: Looking North

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



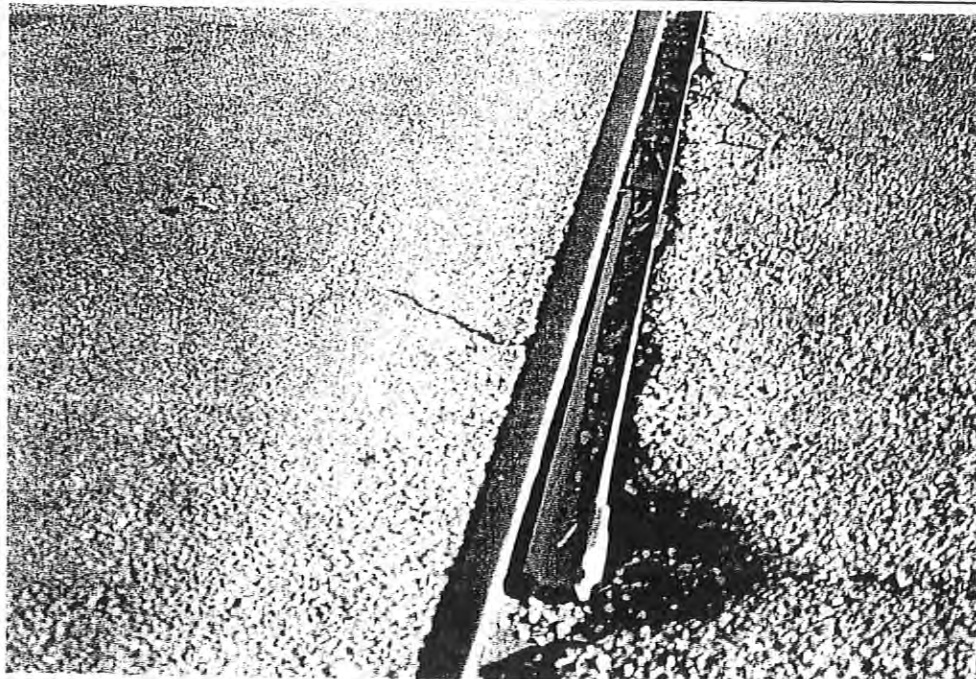
Photograph #9a

Point 9a

Street Easement
down Cleveland Ave.

View: Looking SE
from Intersection of
Cleveland Ave. (8th
Ave.) & Civic Center
Dr. (11th St.)

Accession #
N2JW_001.JPG



Photograph #10a

Point 10a

Close up of Scrap Rail
Laid on its Side Used
as a Check Rail
alongside Running
Rail in Cleveland Ave.
Street Easement
South of Civic Center
Dr.

View: Facing SE

Accession #
N2JW_002.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Left
Photograph #11a

Point 11a

"Windmill"-style RR
Crossing Sign with
LOOK OUT FOR THE
CARS stenciled on
Post Sides at NE
Corner of Cleveland
Ave. and W19th St.

View: Looking East

Accession #
N2JW_0009.JPG

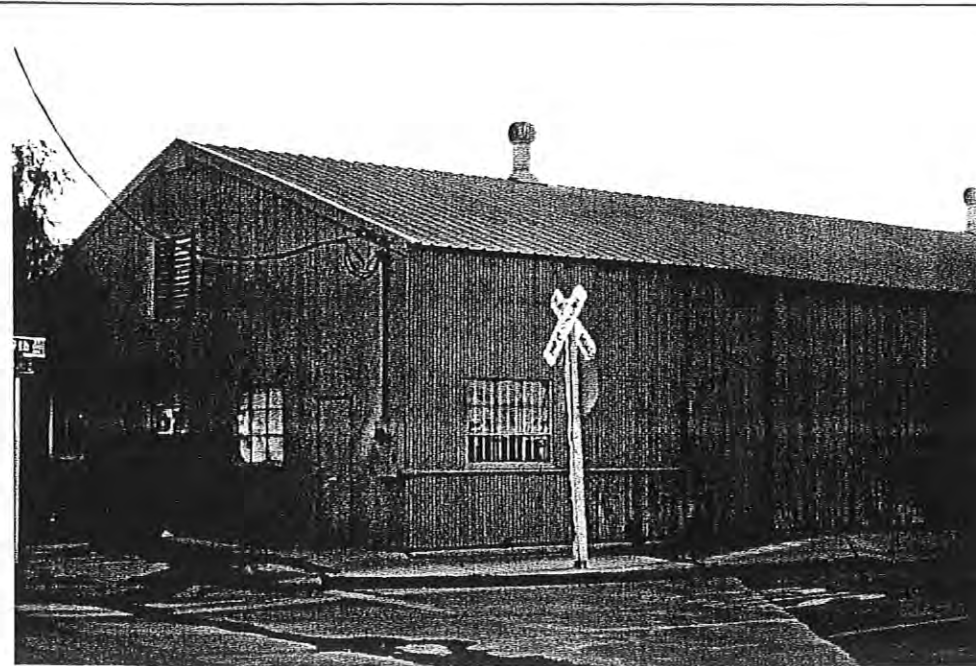
Below Left
Photograph #12a

Point 12a

"Windmill"-style RR
Crossing Sign with
LOOK OUT FOR
THE CARS stenciled
on Post's East Side
at SW Corner of
Cleveland Ave. and
W19th St.

View: Looking South

Accession #
N2JW_0011.JPG



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #13a

Point 13a

"Windmill"-style RR Crossing Sign with LOOK OUT FOR THE CARS stenciled on Post's East Side at SW Corner of Cleveland Ave. and W22nd St.

View: Looking South

Accession #
N2JW_0012.JPG



Photograph #14a

Point 14a

"Windmill"-style RR Crossing Sign with LOOK OUT FOR THE CARS stenciled on Post's East Side at NE Corner of Cleveland Ave. and W22nd St.

View: East

Accession #
N2JW_0013.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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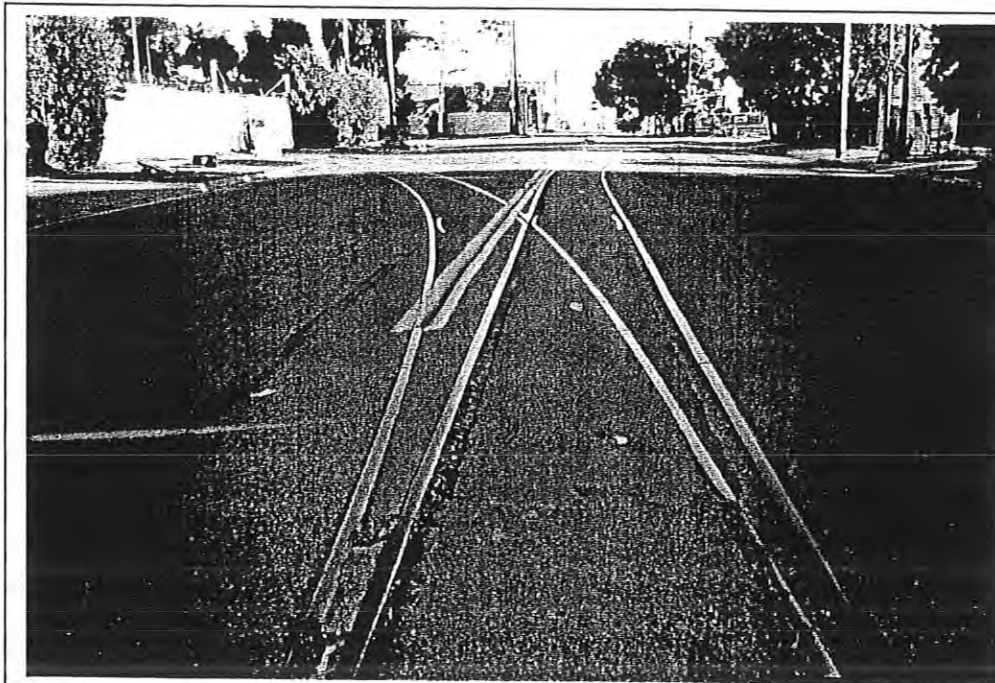
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



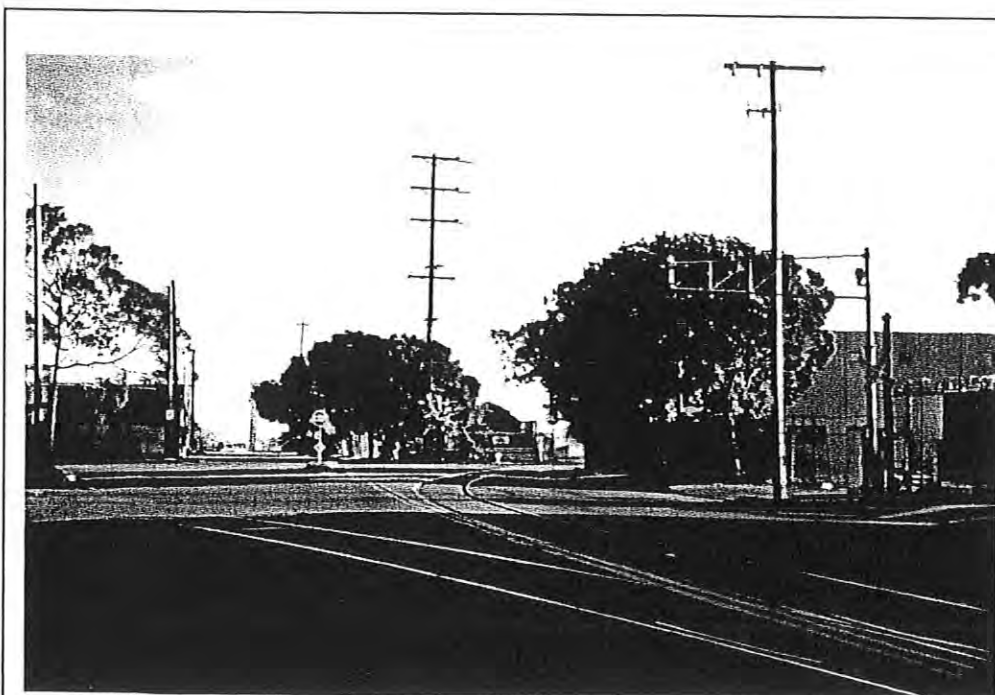
Photograph #15a

Point 15a

Left-hand Turnout on
Cleveland Ave. South
of W23rd St.

View: SE toward
Cleveland Ave. & Bay
Marina Dr. (24th St.)

Accession #
MMGF_022.JPG



Photograph #16a

Point 16a

Intersection of
Cleveland Ave. and
Bay Marina Dr.

View: Looking SE

Accession #
N2JW_023.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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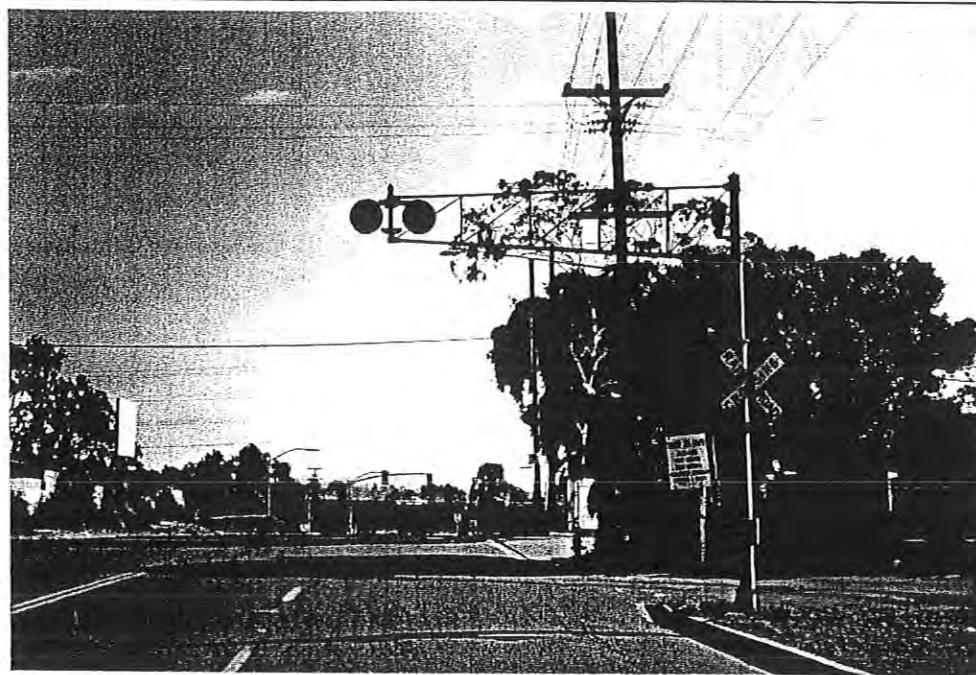
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



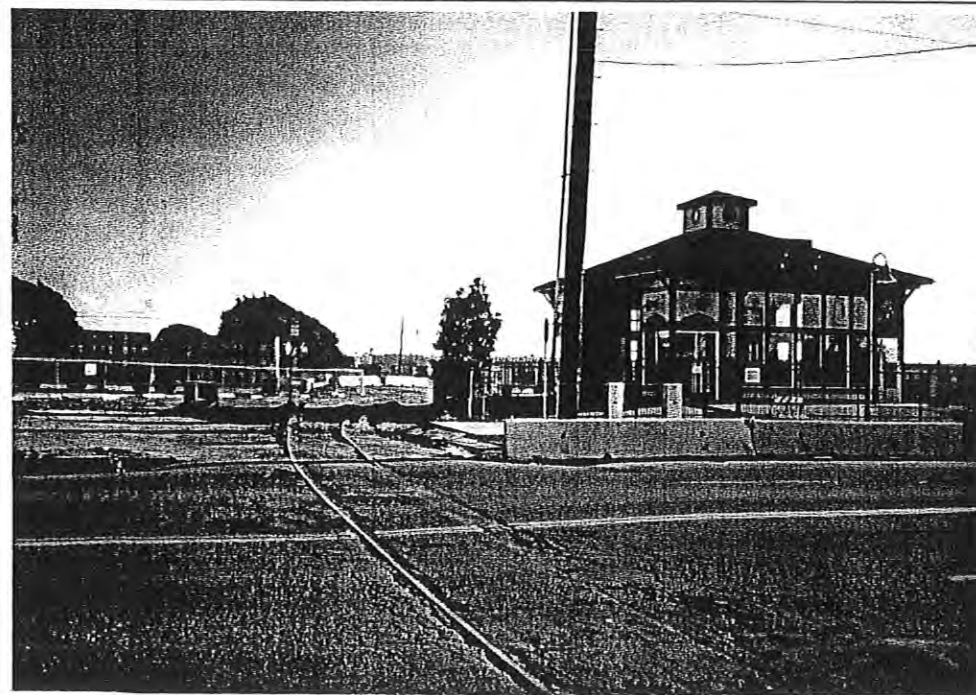
Photograph #17a

Point 17a

Intersection of
Cleveland Ave. and
Bay Marina Dr.

View: Looking East

Accession #
R749_015.JPG



Photograph #18a

Point 18a

Rails along Bay
Marina Dr. Street
Easement between
Cleveland Ave. &
Harrison Ave.
Historic Rail Car Plaza
Building (Non-
Contributing) on Right

View: Looking South

Accession #
MMGF 011.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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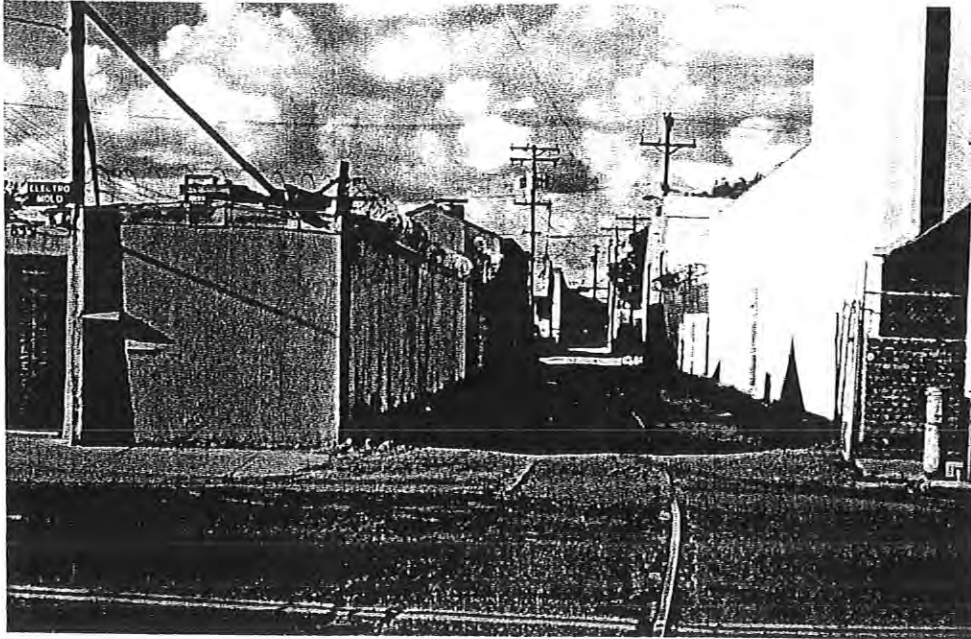
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



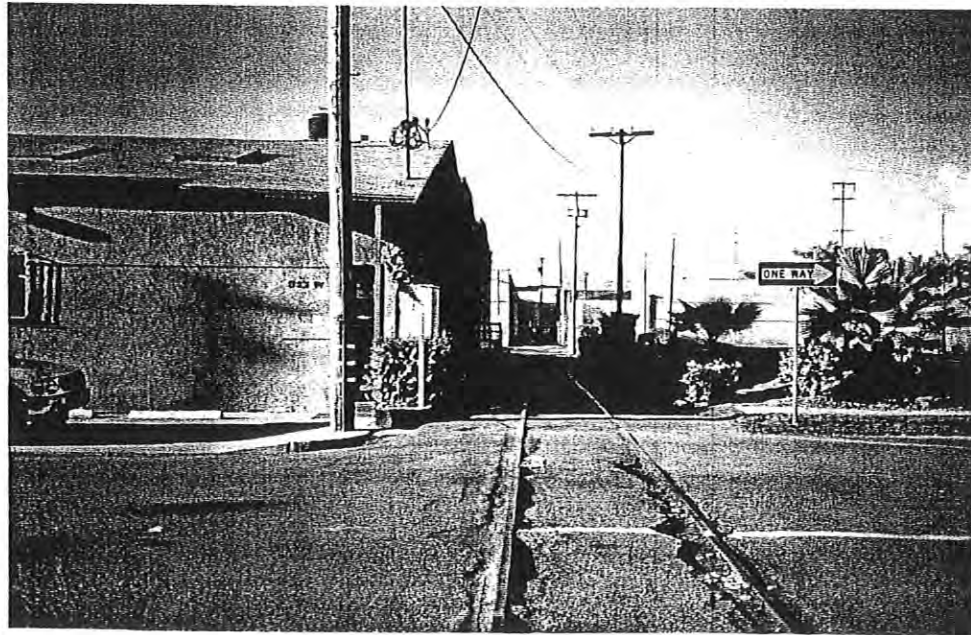
Photograph #19a

Point 19a

Private Right-of-Way
through Alley between
Harrison St. &
Cleveland Ave.

View: Looking NW
from Bay Marina Dr.
toward W23rd St.

Accession #
MMGF_009.JPG



Photograph #20a

Point 20a

Private Right-of-Way
through Alley between
Harrison Avenue &
Cleveland Avenue

View: Looking NW
from W23rd St. toward
W22nd St. (St.)

Accession #
MMGF_017.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



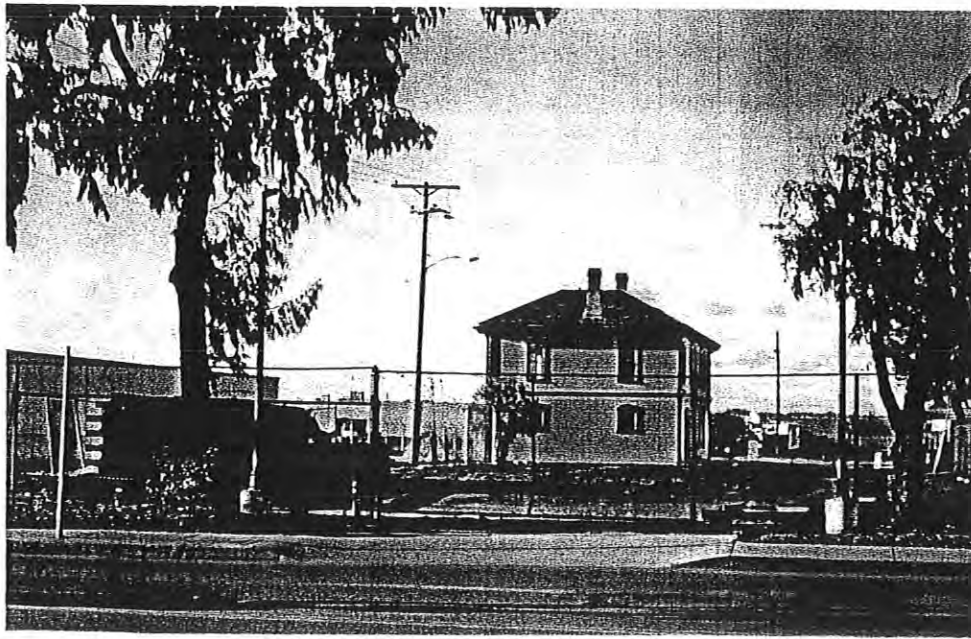
Photograph #21a

Point 21a

Segment of Rails
along Harrison St.
Street Easement
North of Bay Marina
Dr.

View: Looking NW
toward W23rd St.

Accession #
MMGF_012.JPG



Photograph #22a

Point 22a

Historic 1881
California
Southern/Santa Fe
Railway National
City Depot (Non-
Contributing)

View: Looking North
at Depot's South
Elevation

Accession #
MMGF_021.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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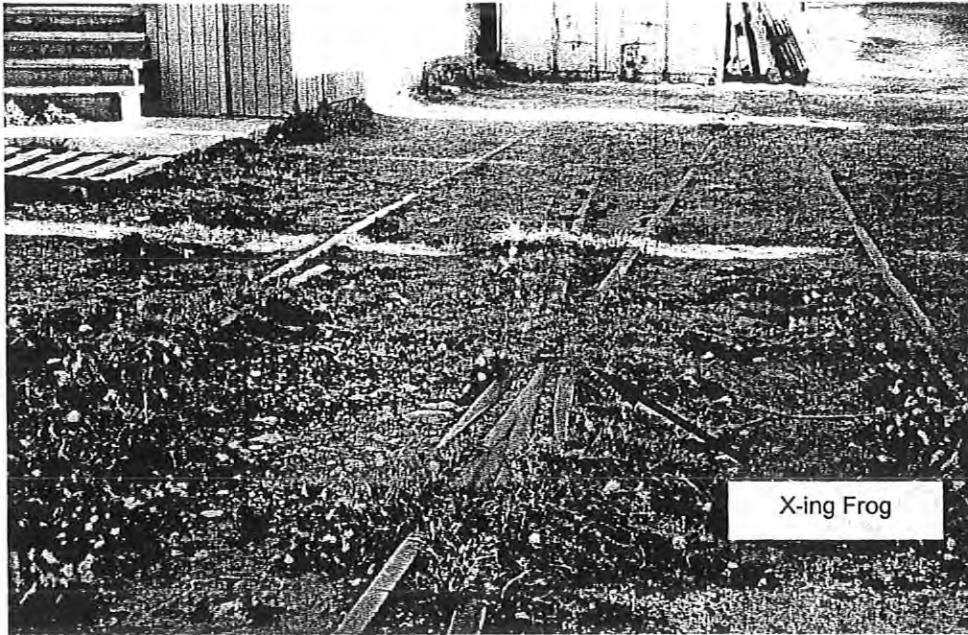
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



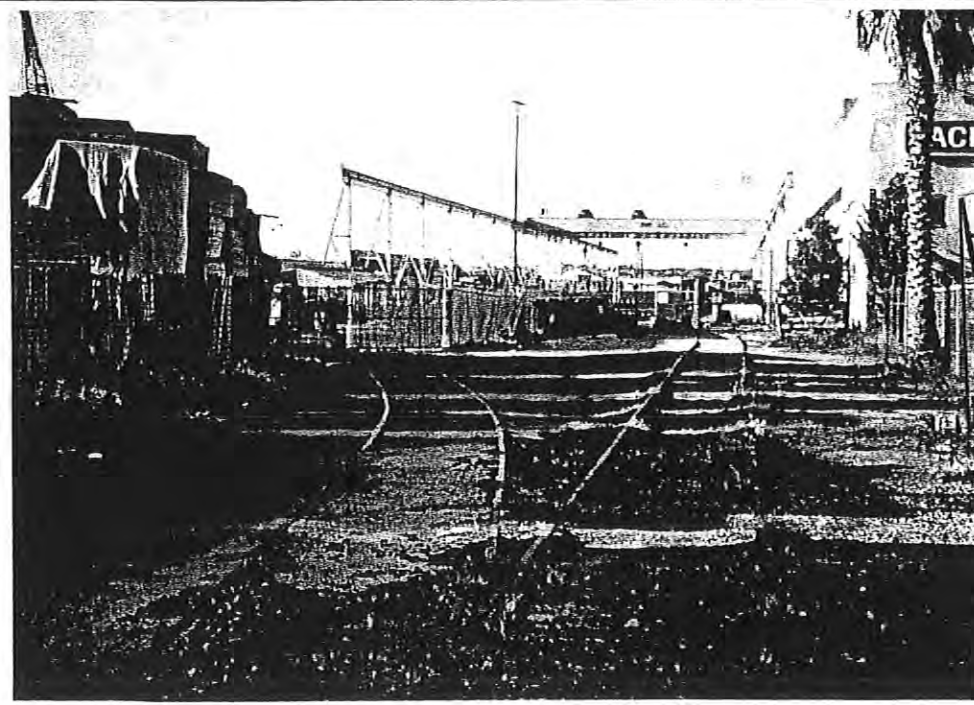
Photograph #23a

Point 23a

Left Turnout and
Crossing Frog North
of W 23rd St. in Street
Easement

View: Looking SE at
Close up of X-crossing
Frog and Check Rails

Accession #
MMGF_014.JPG



Photograph #24a

Point 24a

Left Turnout Leading
NW to Burlington and
Santa Fe Mainline to
San Diego and End of
Spur

View: Looking NE at
End of Spur and Left
Turnout

Accession #
MMGF_015.JPG

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary #:

HRI #:

Trinomial

Page 53 of 1149 Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way / Segment B

L1. Historic and/or Common Name: Coronado Railroad Belt Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: Structure—Railroad Right-of-Way

b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map): 489820mE / 3613380 mN to 490420mE / 3614140mN. See Continuation Sheet for more information.

L3. Description (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate): This 1.31-mile segment represents the Northern "Country section" of the Right-of-Way from National City south to the National City-Chula Vista border. It begins at a point 250' east of the intersection of Bay Marina Drive (formerly 24th St.) and Harrison Ave. (formerly 9th Ave.) some 75' due west of the middle of the intersection of Cleveland Ave. (ST CLSD) and Bay Marina Drive. The approximately 25 ft-wide private right-of-way travels in a SWly direction for some 200' to a left-hand switch junction, the left arm of which travels in a Nly direction to continue across Bay Marina Drive to a private Right-of-Way through a series of alley ways (See above). The right of way continues in a Sly direction south of the switch junction to a point near the intersection of Harrison Ave. and 25th St. (ST CLSD). Along the length of this segment are various artifacts (functioning and non-functioning) that represent the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950). They include manual switch mechanisms, an electric switch sensor, concrete electrical junction boxes, signal towers, wooden ties and steel rails. Although covered with rust, some rails still show their manufacturer's name and date—"CARNEGIE (Steel) 1906" and "TENNESEE 8 1914." Although the right-of-way is only some 25-30' wide, it travels through some relatively open land, which gives the impression that it is much wider in scope. This feeling of openness takes on an almost rural character as the right-of-way progresses in a SEly manner towards the Paradise Creek. Now part of the Sweetwater Marsh Natural Wildlife Refuge, it acts as a buffer between the 50'-wide 10-13'-high elevated earthen roadbed and the parallel-running I-5 Freeway corridor. Approximately 350 south of the intersection of Harrison Ave. and 25th St. (ST CLSD), the tracks cross a 135' long wooden trestle across the creek's slough. Across the trestle, the right-of-way continues along a 1,200' S-shape curve some 13' above the marsh before straightening out in a Sly direction for another 1,000' along a 40' earthen right-of-way to a concrete bridge crossing the Sweetwater River Flood Control Channel. Continuing on the other side of the channel in Chula Vista, the tracks run in a SEly direction on a raised earthen roadway for another 1,600' before crossing the N. Sweetwater River Slough over a 120' long wooden trestle. The 40'-wide right-of-way continues for another 1,200' before reaching another 120'-long wooden trestle over the Sweetwater River's southern slough. From here, the earthen right-of-way travels another 500' in a Sly direction before it reaches and levels out on "dry" land near the NW terminus of Bay Blvd. in Chula Vista.

L4. Dimensions (In feet for historic features, and meters for prehistoric features):

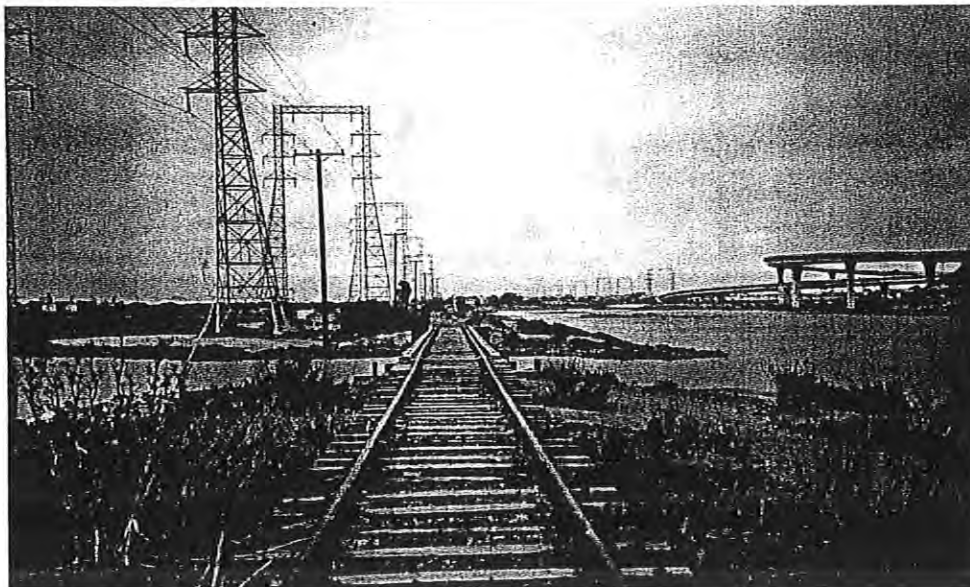
- a. Top Width: 5' 1½"-track gauge
- b. Bottom Width: 25-50' earth base
- c. Height or Depth: Street level to 10-13' above sea level
- d. Length of Segment: 1.31 mile

L4e. Sketch of Cross-Section (include scale) Facing:
See Continuation Sheet

L5. Associated Resources: There are no previously recorded resources historically associated with the use of this resource.

L6. Setting (Describe natural features, landscape characteristics, slope, etc., as appropriate.): The resource runs along a 25-50'-wide right-of-way across a low, marsh river estuary.

L7. Integrity Considerations: Although no longer used for commercial rail transportation purposes, it has retained its historic integrity in terms of setting, location, feeling, and materials associated with a historic suburban railroad right-of-way.



L8b. Description of ☒ Photo

☐ Map ☐ Drawing (View, scale, etc.): # View: Looking NW toward Southern approach to wooden trestle #2 over S. Sweetwater River Slough; Accession # N6QE_018.JPG

L9. Remarks: The resource is in fair to good condition

L10. Form Prepared by (Name, Affiliation, and Address):
Alexander D. Bevil
Save Our Heritage
Organisation
4752 Mt. Longs Drive
San Diego, CA 92117

L11. Date: 12 April 2001

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

L2b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map):

Segment B

UTM Coordinates: 489820mE / 3613380 mN to 490420mE / 3614140mN

A Segment of a Railroad Right-of-Way from beginning at the Intersection of Bay Marina Drive and Cleveland Avenue, National City, California, to a Point near the Northern Terminus of Bay Boulevard, Chula Vista, California Intersection of Bay Marina Drive and Cleveland Avenue, National City, California, to a Point near the Northern Terminus of Bay Boulevard, Chula Vista, California

Legal Description

APN 559-117-10

Status: Non-taxable

Legal Description: Blk 281 (EX MIN RTS) PAR 13 SBE (State Board of Equalization) 863-37-20H IN ST & ALLEY
CLSD MAP348-NATIONAL CITY RE-FILED

Adjacent Land Use: Vacant Industrial & Specialized/Miscellaneous Industrial

Owner: CONS (Company No Status)# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

Metropolitan Transit Development Board (MTDB)

1255 Imperial Avenue, Suite 1000

San Diego, CA 92101-7490

Street Easement

Status: Non-assessed/Non-taxable

From the Intersection of Harrison Ave. (formerly 7th Avenue.) and 26th St. (ST CLSD) MAP348-NATIONAL CITY RE-
FILED

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 559-160-20

Status: Non-taxable

Acres: 1.17

Legal Description: TERMINAL GROUNDS PAR 1 SBE MAP 863-37-21 IN MAP348-NATIONAL CITY RE-FILED

Adjacent Land Use: Vacant Industrial

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 562-210-14

Status: Non-taxable

Legal Description: 2.30 ACRES IN PAR 19 SBE MAP 863-47-21C SD & AE RR RW IN MAP348-NATIONAL CITY
RE-FILED

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 562-300-11

Status: Non-taxable

Legal Description: PAR 20 SBE MAP 863-37-21C QSEC 174 (EX FCC & MIN RTS) IN MAP 166 RANCHO DE LA
NACION

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Segment B (Cont.)

Acres: 1.47

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 565-290-39

Status: Non-taxable

Legal Description: 2.69 ACRES IN W H PAR 4 SBE MAP 863-37-21 & ST CLSD ADJ IN QSEC 161 (EX FCC & MIN
RTS) IN MAP 505 CHULA VISTA-POR QSEC 161

Acres: 2.69

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:
HRI#/Trinomial:

Page 56 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

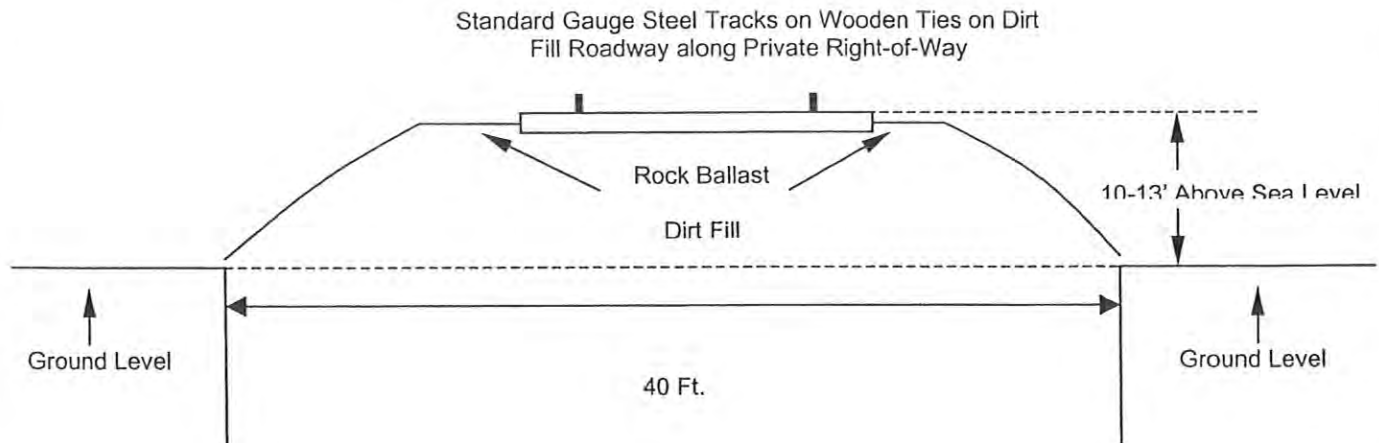
*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

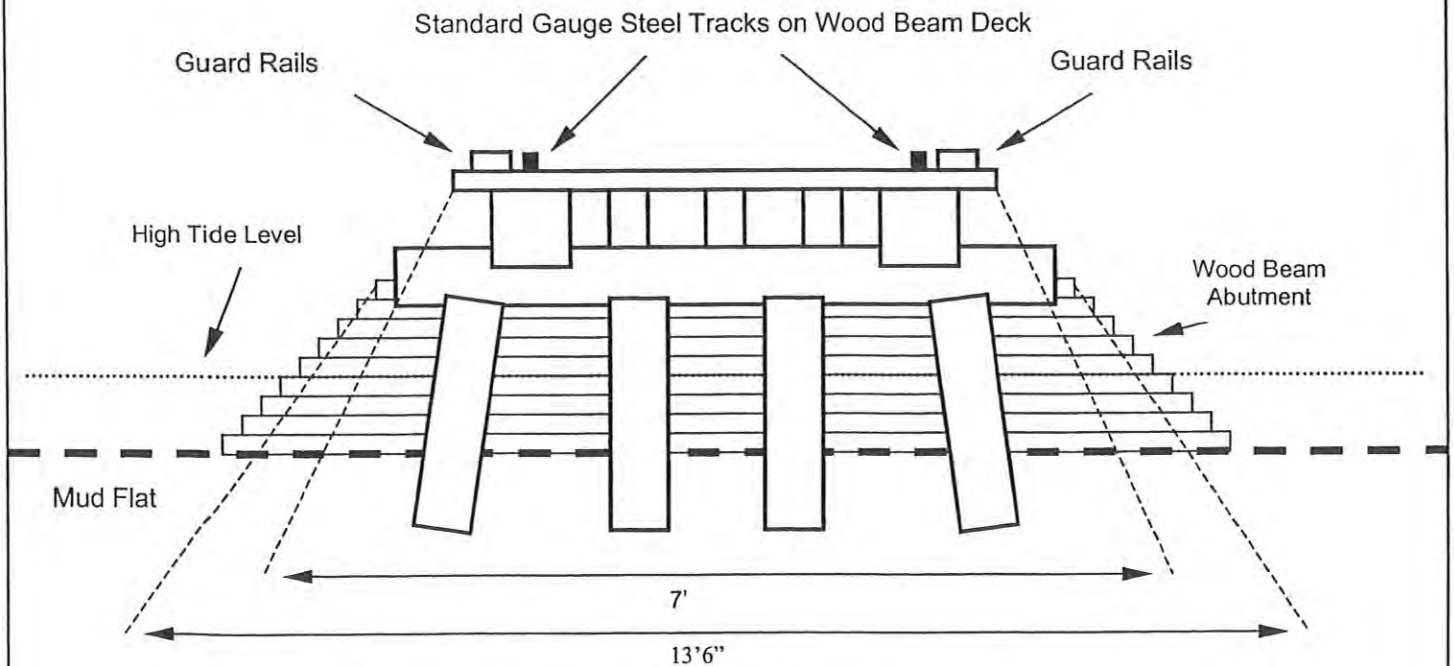
☒ Continuation

☐ Update

L4e. Sketch of Cross-Section (include scale) Facing: Southeast



Point # 14b Elevated Roadbed along Sweetwater Marsh
Sketch Not to Scale



Point 18b Wooden Trestle #2 Crossing N. Sweetwater River Slough
Sketch Not to Scale

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP B

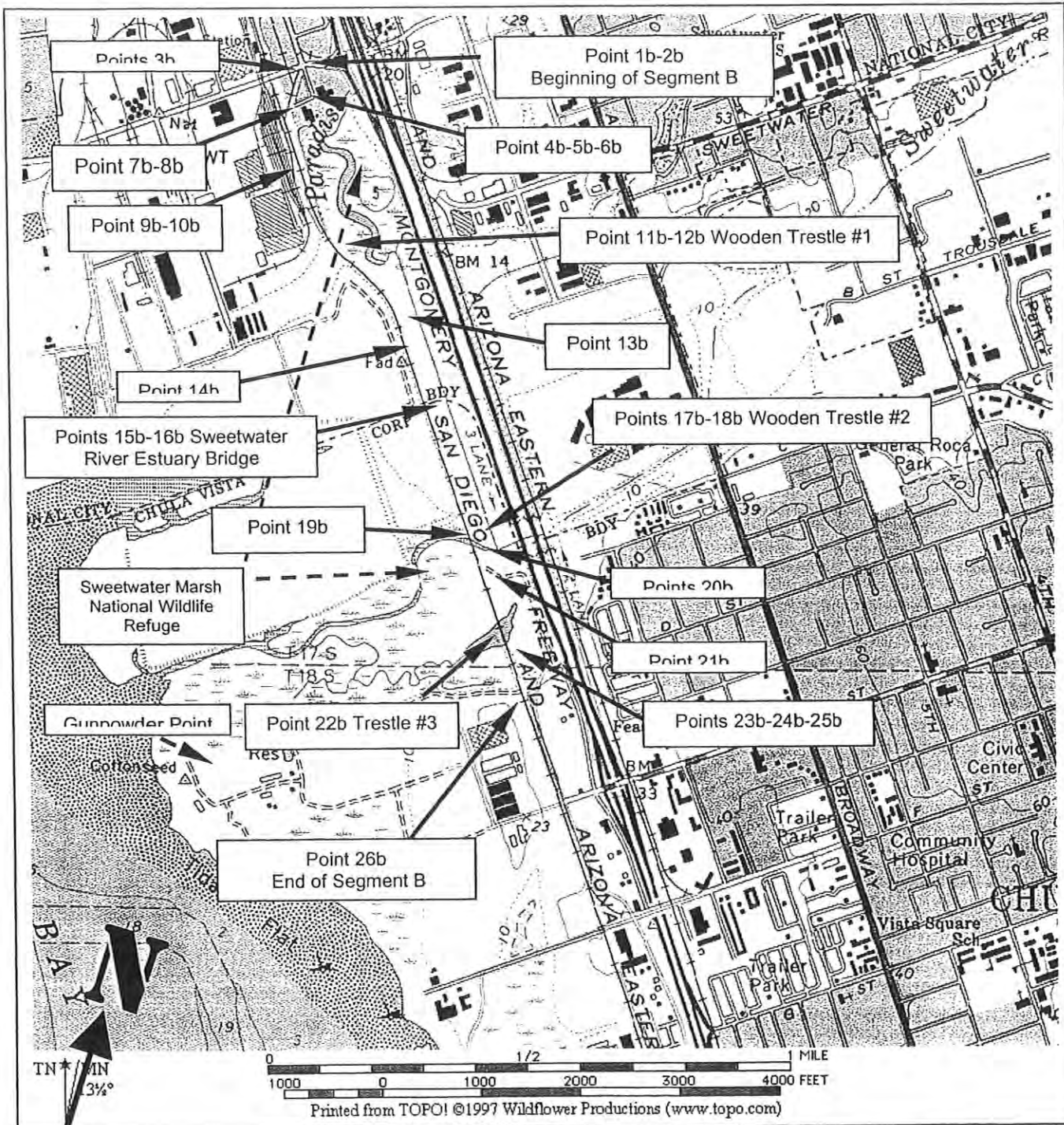
Primary #:
HRI#
Trinomial:

Page 57 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Segment B Points

*Scale: 1"=24,000m

*Date of Map: 12 April 2001



SKETCH MAP

Primary #:
HRI#

Trinomial:

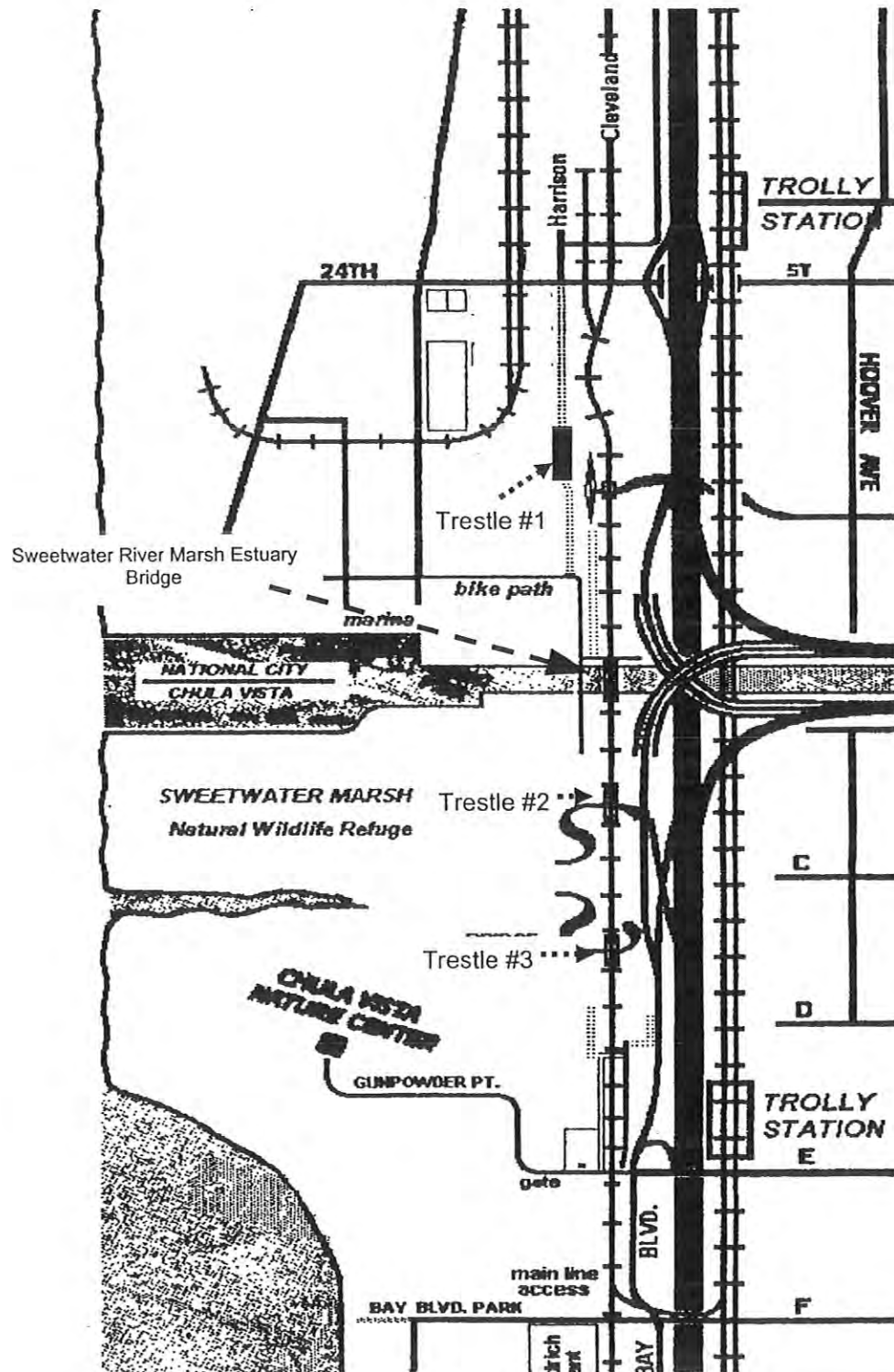
Page 58 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Trestle Locations

*Scale: No Scale

*Date of Map: 12 April 2001



PHOTOGRAPH RECORD

Page 59 of 149 Project Name (Assigned by Recorder): Coronado Belt Line Right-of-Way / Segment B

Year: 2001

Roll Number: 1-2

Camera Format: SLR

Photographer(s): Alexander D. Bevil

Lens Size: N/A

Film Type and Speed: 35mm 100ASA

Images: 300 DPI JPG

Negatives Kept at: In Possession of Photographer

Mo.	Day	Time	Frame	Site #/Locus	Subject/Description	View	Accession #
02	10	09:00	1b	Point 1b	Start of Segment B, Private Right-of-Way through Sweetwater Marsh Segment at Intersection of Cleveland Ave. and Bay Marina Dr.	Looking SE	R749_014.JPG
02	10	09:01	2b	Point 2b	Start of Private Right-of-Way South of Intersection of Cleveland Ave. and Bay Marina Dr. Close up of Pendant Signal Pole-Griswold Signal Co., Minn., Min.	Looking East	R749_015.JPG
02	10	16:22	3b	Point 3b	Close up of Switch Point Bar Approx. 3ft. South of Sidewalk along Bay Marina Dr.	Facing SW	MMGF_010.JPG
02	10	09:02	4b	Point 4b	Concrete Base of Electrical Junction Box and Upright Rails	Looking NE	R749_016.JPG
02	10	09:04	5b	Point 5b	Remains of Concrete Junction Box and Non-historic Car Stop Sign Pole	Looking SW	R749_017.JPG
02	10	09:06	6b	Point 6b	Close up of "Carnegie 1906" Steel Rail and Electrical Switch Sensor	Looking SW	R749_018.JPG
02	10	09:10	7b	Point 7b	Manual Switch and Left-hand Turnout South of Bay Marina Drive Leading North to Spur Line through Alleyway between Cleveland Ave. and Harrison Ave.	Looking North	R749_019.JPG
02	10	09:11	8b	Point 8b	Left Turnout and Crossing Frog Leading North to Harrison Avenue Spur(Rails Cut Immediately North of Left Turnout)	Looking North	R749_020.JPG
02	10	09:13	9b	Point 9a	Switch Point South of Left Turnout (Upright Manual Switch Lever Missing)	Looking SW	R749_021.JPG
02	10	09:15	10b	Point 10b	Steel-capped Concrete Street Drain Junction Box	Facing SW	R749_022.JPG
02	10	09:25	11b	Point 11b	Deck of Wooden Trestle #1, 135' across Paradise Creek Slough	Looking SE	R749_024.JPG
02	10	09:28	12b	Point 12b	Wooden Trestle #1 across Paradise Creek Slough	Looking NW	R749_025.JPG
02	10	09:35	13b	Point 13b	End of S curve Leading South from Trestle #1 toward Sweetwater Marsh	Looking North	N6QE_005.JPG
02	10	09:38	14b	Point 14b	Tracks Leading South on Elevated Roadbed along Sweetwater Marsh (Note Fire Damage) Rails Stamped "Tennessee 8 1914"	Looking SW	N6QE_006.JPG
02	10	10:00	15b	Point 15b	Approach to Sweetwater River Flood Control Channel Bridge	Looking SW	N6QE_008.JPG
02	10	10:05	16b	Point 16b	Sweetwater River Flood Control Channel Bridge	Looking SW	N6QE_009.JPG
02	10	10:45	17b	Point 17b	Approach to Wooden Trestle #2, 120ft. Crossing N. Sweetwater River Slough	Looking SE	N6QE_013.JPG
02	10	10:48	18b	Point 18b	Wooden Trestle #2 Crossing N. Sweetwater River Slough	Looking South	N6QE_014.JPG
02	10	10:50	19b	Point 19b	Wooden Trestle #2, Close up of Sheered-off Concrete Piling Pier	Looking South	N6QE_015.JPG
02	10	10:55	20b	Point 20b	Concrete Piling Pier Removed and Relocated to a Point NW of Trestle #2's North Abutment	Looking East	N6QE_016.JPG
02	10	11:05	21b	Point 21b	Southern Approach to Wooden Trestle #2 over N. Sweetwater River Slough	Looking NW	N6QE_018.JPG
02	10	11:20	22b	Point 22b	Wooden Trestle #3, 120ft. over S. Sweetwater Marsh Slough Approaching Gunpowder Point	Looking South	N6QE_020.JPG
02	10	11:40	23b	Point 23b	Wooden Trestle #3's Deck over S. Sweetwater Marsh Slough Approaching Gunpowder Point	Looking SE	N6QE_021.JPG
02	10	11:45	24b	Point 24b	Wooden Trestle #3 over S. Sweetwater River Slough	Looking NW	N6QE_022.JPG
02	10	11:50	25b	Point 25b	Private Right-of-Way South of Trestle #3 Approaching Gunpowder Point	Looking SE	N6QE_023.JPG
02	10	11:55	26b	Point 26b	Southern Terminus of Segment B at Gunpowder Point at Bay Blvd.	Looking SE	N6QE_023.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

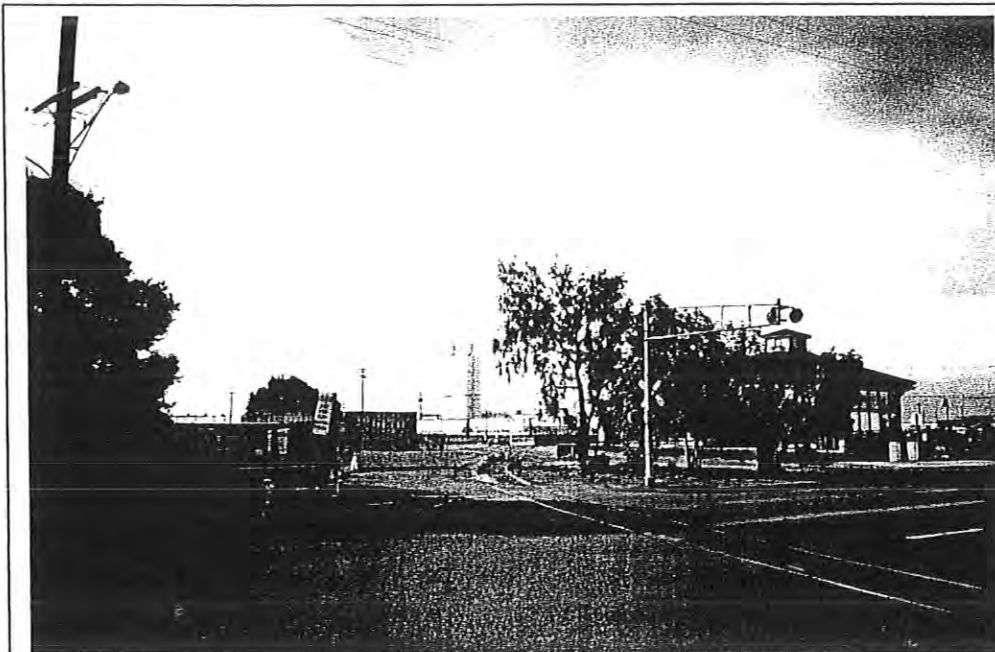
Page 60 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



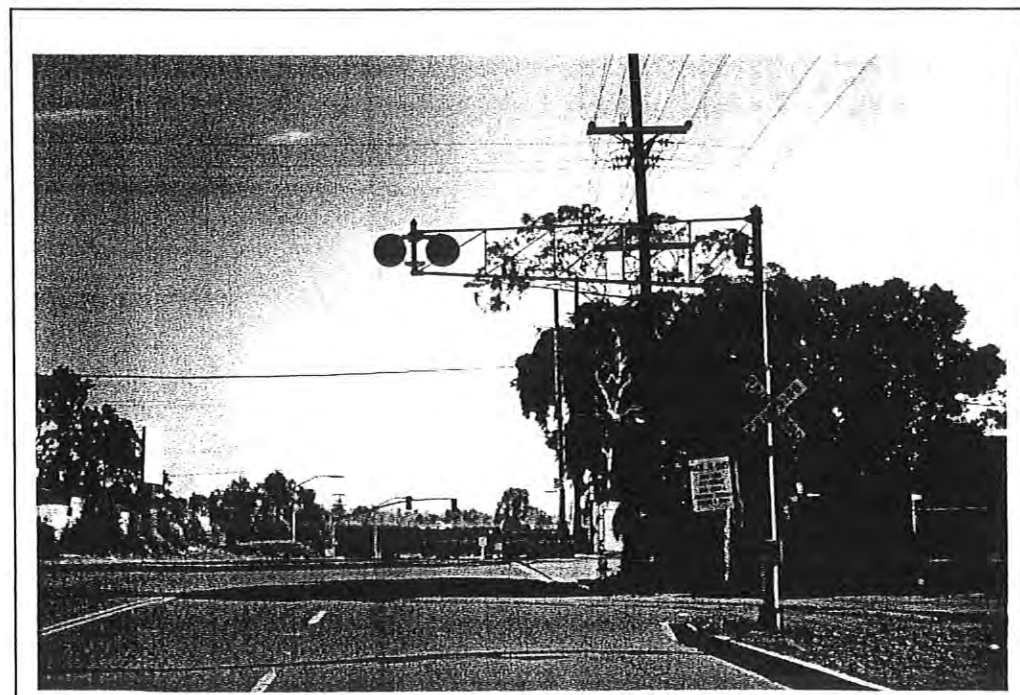
Photograph #1b

Point 1b

Start of Segment B,
Private Right-of-Way
through Sweetwater
Marsh Segment at
Intersection of
Cleveland Ave. and
Bay Marina Dr.

View: Looking South

Accession #
R749_014.JPG



Photograph #2b

Point 2b

Start of Private Right-
of-Way South of
Intersection of
Cleveland Ave. and
Bay Marina Dr.

Close up of Pendant
Signal Pole-Griswold
Signal Co., Minn., Min.

View: Looking East on
Bay Marina Dr.

Accession #
R749_015.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

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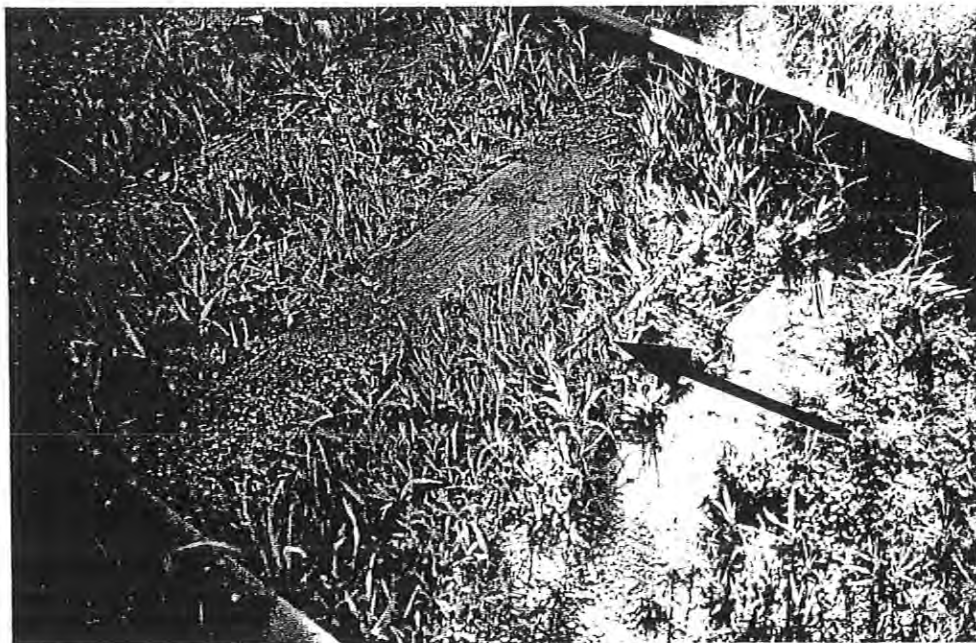
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



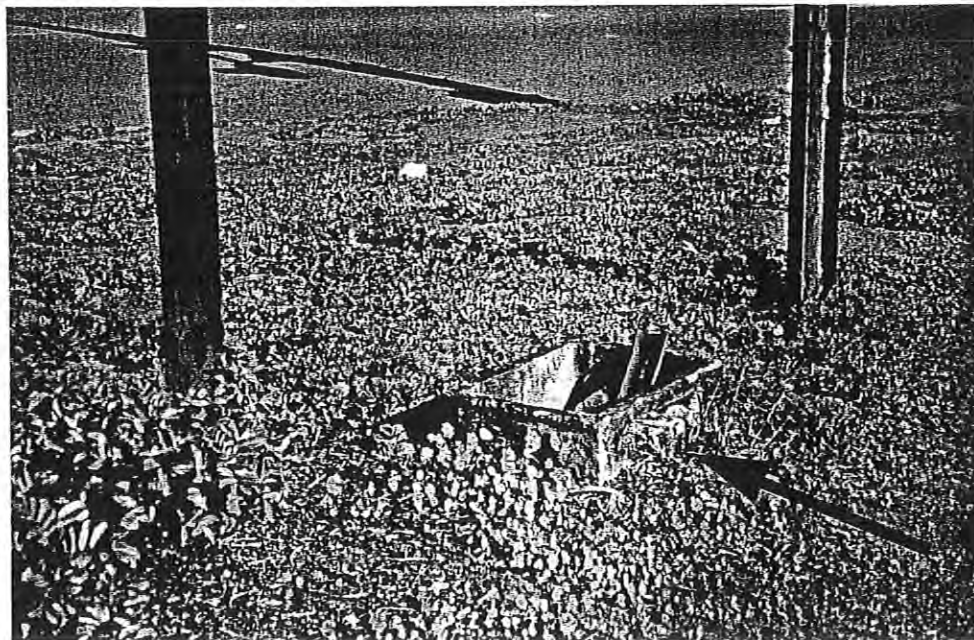
Photograph #3b

Point 3b

Close up of Switch
Point Bar Approx. 3ft.
South of Sidewalk
along Bay Marina Dr.

View: Facing SW

Accession #
MMGF_010.JPG



Photograph #4b

Point 4b

Concrete Base of
Electrical Junction Box
and Upright Rails

View: Looking NE

Accession #
R749_016.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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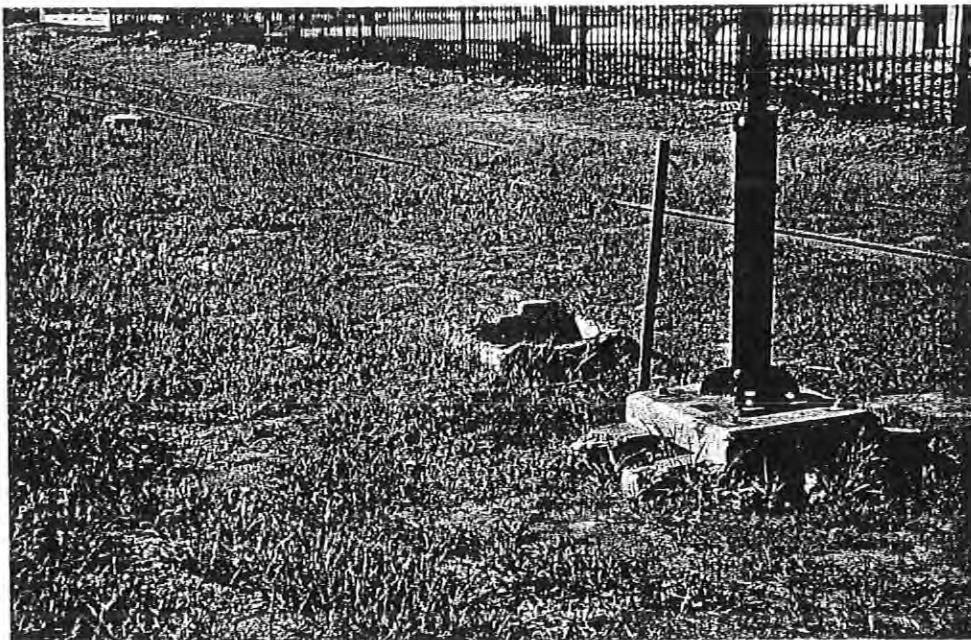
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #5b

Point 5b

Remains of Concrete
Junction Box and
Non-historic Car Stop
Sign Pole

View: Looking SW

Accession #
R749_017.JPG



Photograph #6b

Point 6b

Close up of "Carnegie
1906" Steel Rail and
Electrical Switch
Sensor

View: SW

Accession #
R749_018.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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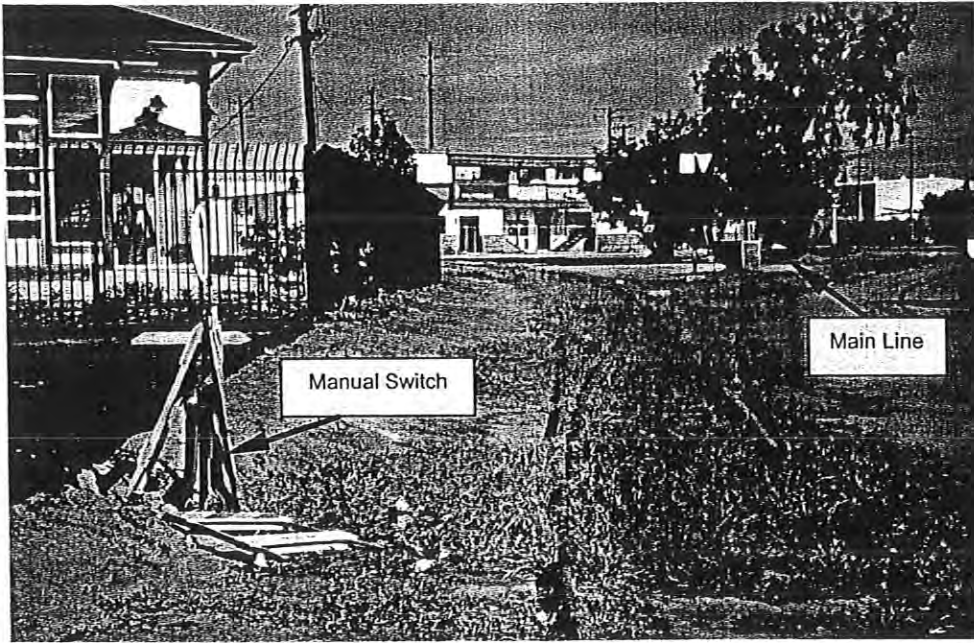
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #7b

Point 7b

Manual Switch and
Left-hand Turnout
South of Bay Marina
Drive Leading North to
Spur Line through
Alleyway between
Cleveland Ave. and
Harrison Ave.

View: Looking North at
Bay Marina Drive

Accession #
R749_019.JPG



Photograph #8b

Point 8b

Left Turnout and
Crossing Frog
Leading North
toward Harrison
Avenue Spur (Rails
Cut Immediately
North of Left
Turnout)

View: Looking North

Accession #
R749_020.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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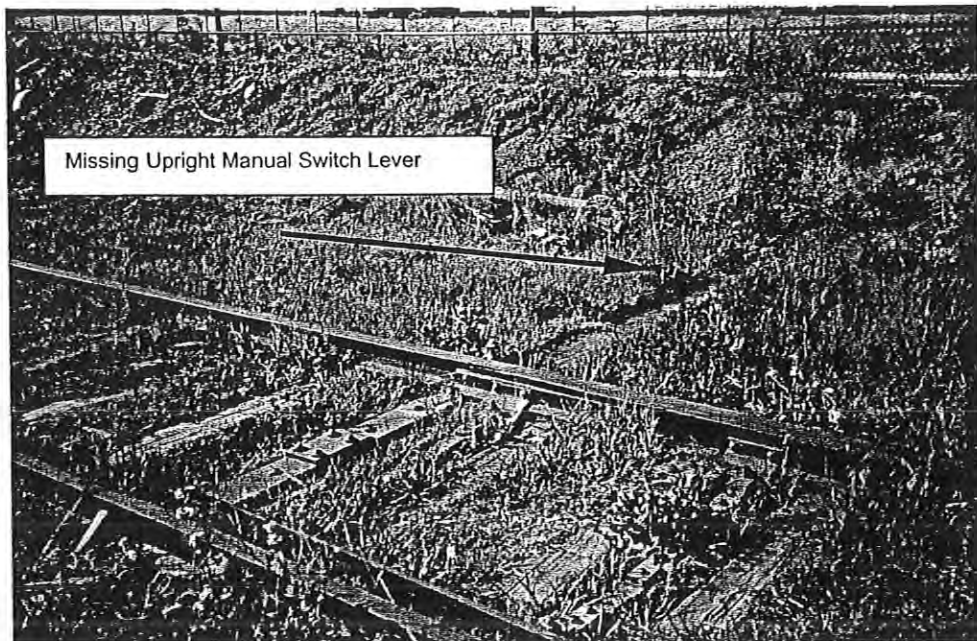
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #9b

Point 9b

Switch Point South of
Left Turnout (Upright
Manual Switch Lever
Missing)

View: Looking SW
toward Harrison
Avenue

Accession #
R749_021.JPG



Photograph #10b

Point 10b

Steel-capped
Concrete Street Drain
Junction Box

View: Looking SW
toward Harrison
Avenue

Accession #
R749_022.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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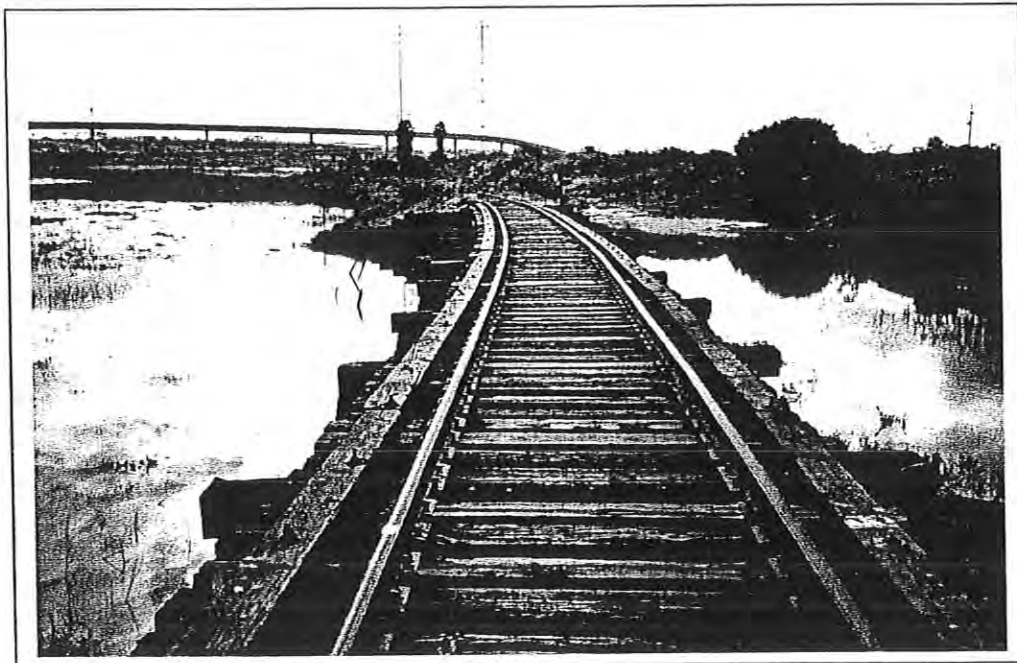
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*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



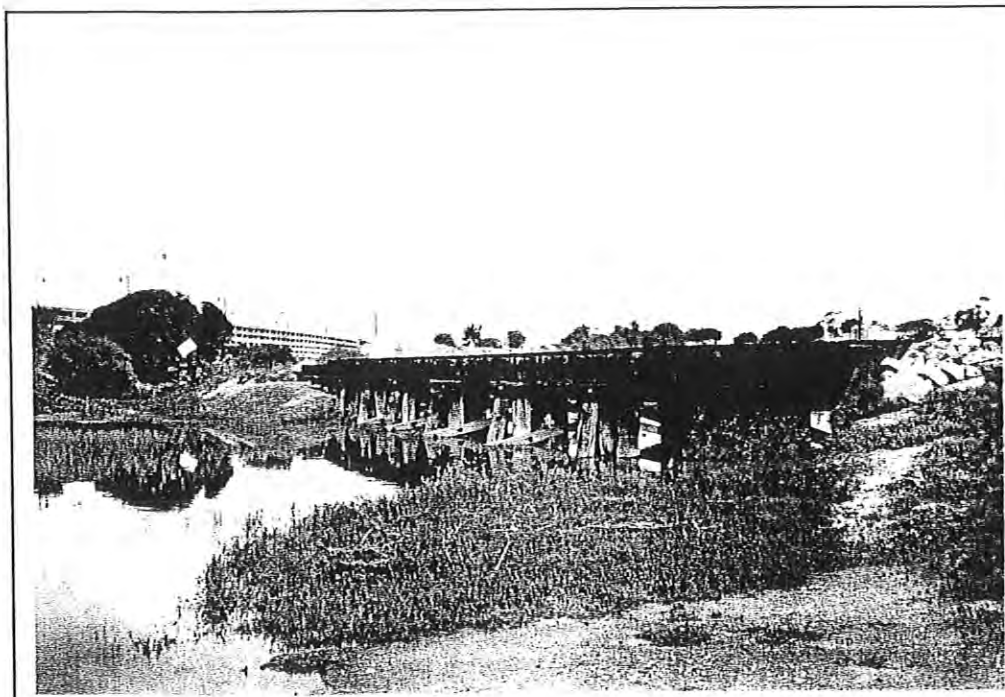
Photograph #11b

Point 11b

Deck of Wooden
Trestle #1, 135'
across Paradise
Creek Slough

View: Looking SE

Accession #
R749_024.JPG



Photograph #12b

Point 12b

Wooden Trestle #1
across Paradise
Creek Slough

View: Looking NW

Accession #
R749_025.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

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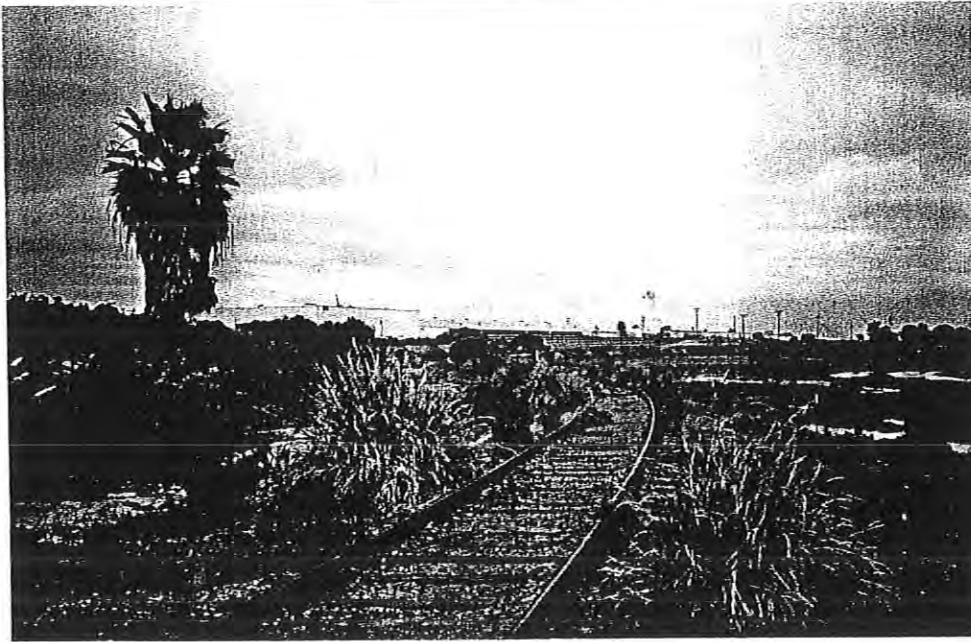
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #13b

Point 13b

End of S curve
Leading South from
Trestle #1 toward
Sweetwater Marsh

View: Looking North

Accession #
N6QE_005.JPG



Photograph #14b

Point 14b

Tracks Leading South
on Elevated Roadbed
along Sweetwater
Marsh (Note Fire
Damage) Rails
Stamped "Tennessee
8 1914"

View: SE

Accession #
N6QE_005.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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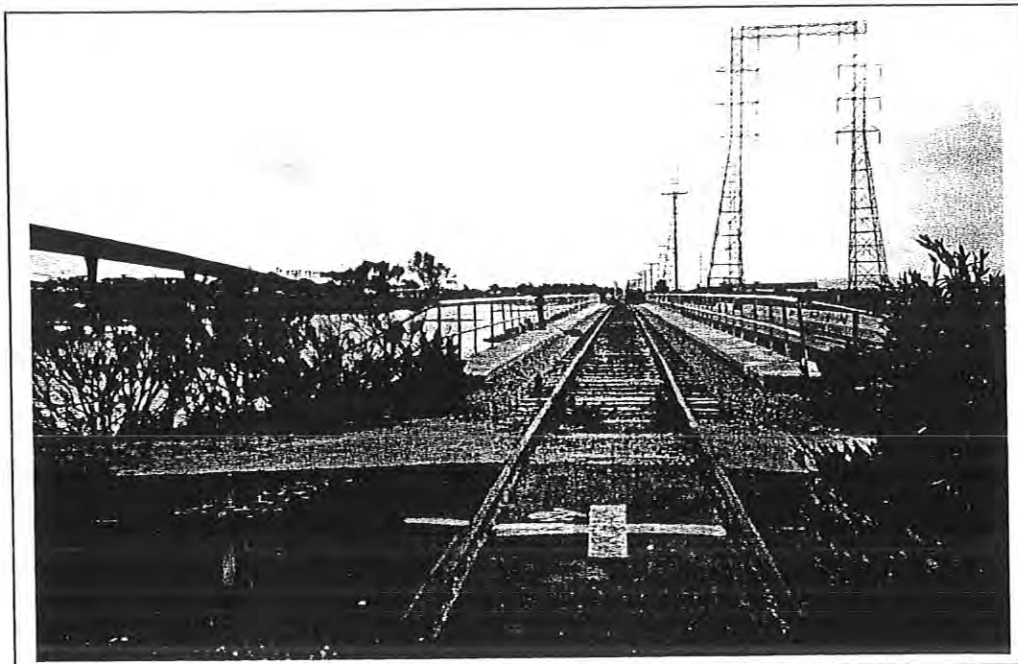
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*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



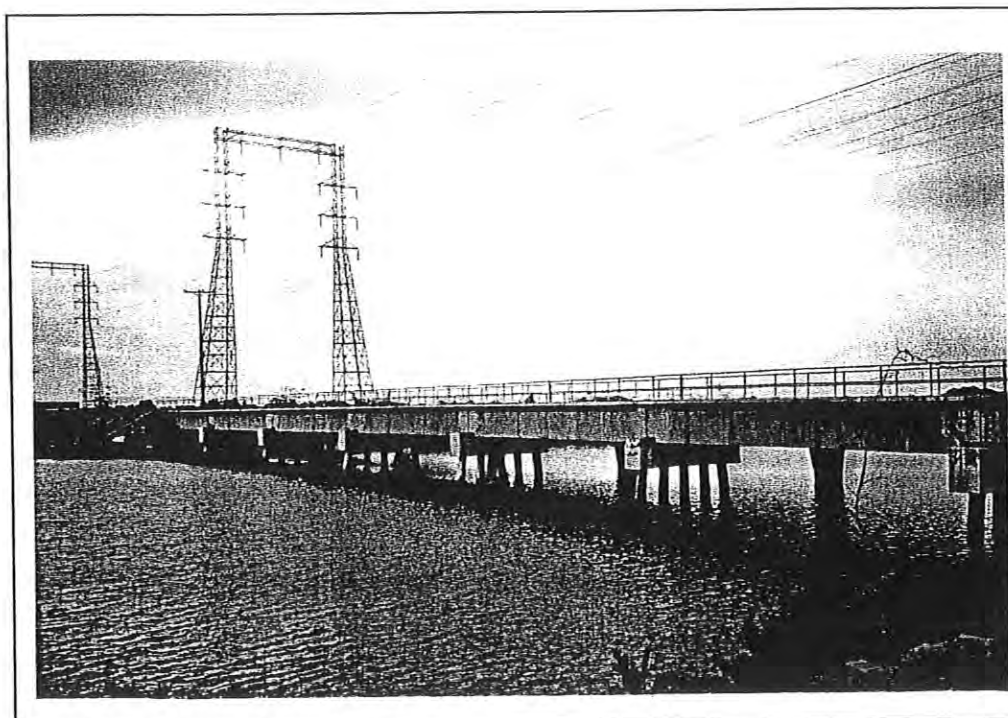
Photograph #15b

Point 15b

Approach to
Sweetwater River
Flood Control Channel
Bridge

View: SE from Bike
Path

Accession #
N6QE_008.JPG



Photograph #16b

Point 16b

Sweetwater River
Flood Control Channel
Bridge

View: Looking SW

Accession #
N6QE_009.JPG

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DEPARTMENT OF PARKS AND RECREATION
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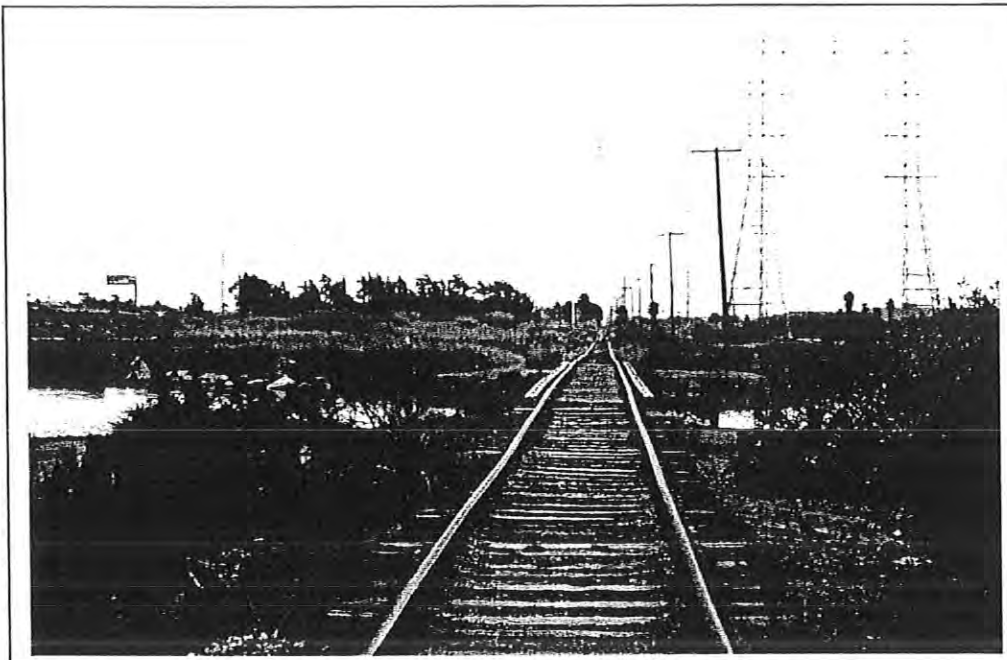
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



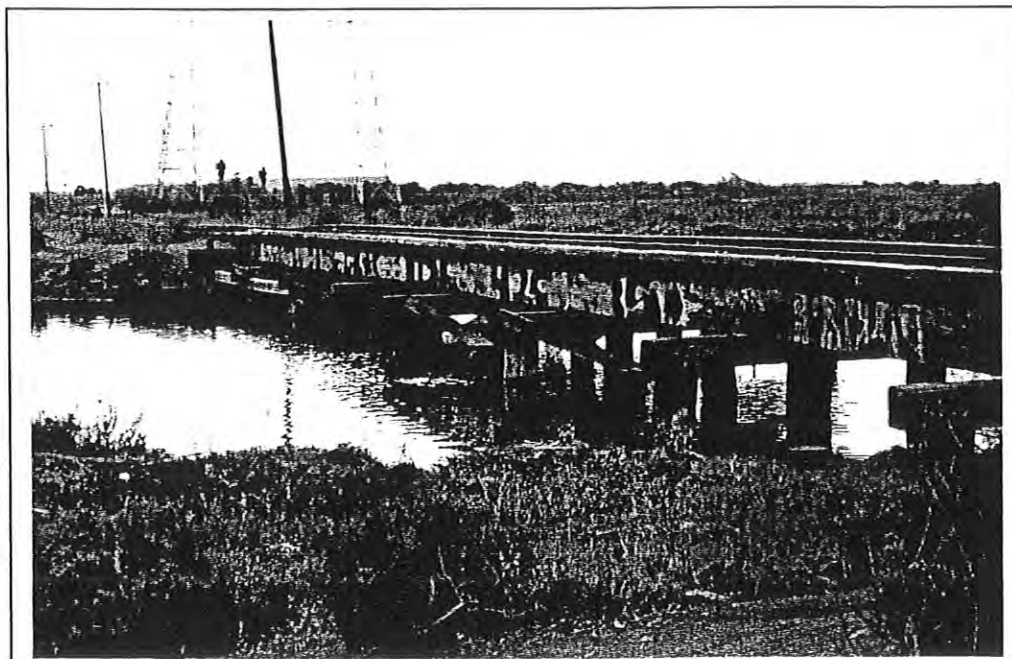
Photograph #17b

Point 17b

Approach to Wooden
Trestle #2, 110 ft.
Crossing N.
Sweetwater River
Slough

View: Looking SE

Accession #
N6QE_013.JPG



Photograph #18b

Point 18b

Wooden Trestle #2
Crossing N.
Sweetwater River
Slough

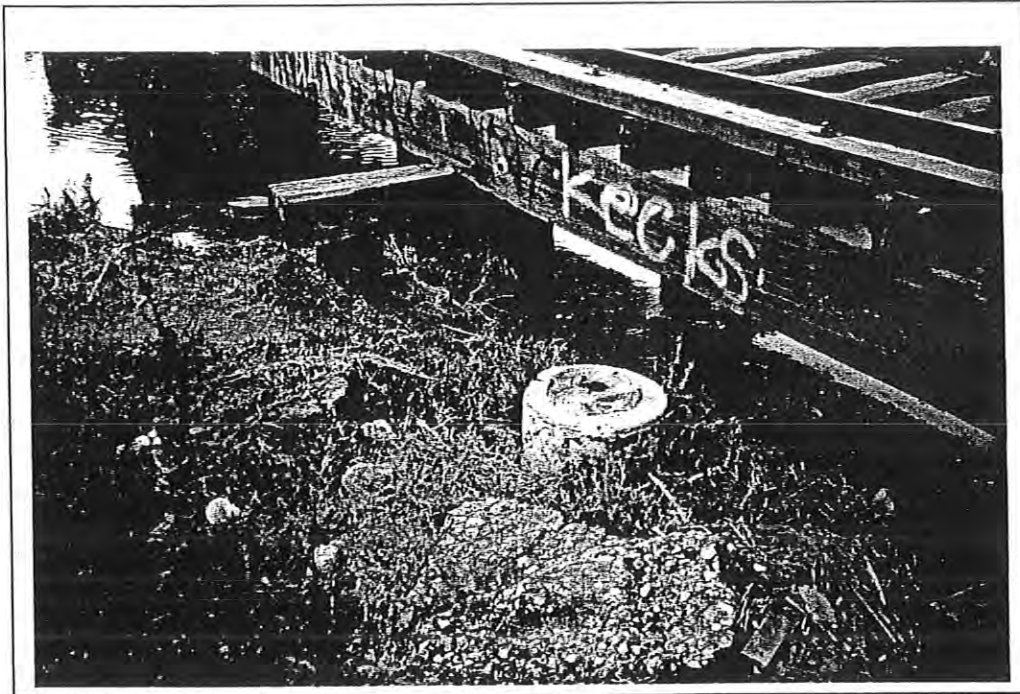
View: Looking South

Accession #
N6QE_014.JPG

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DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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Page 69 of 136 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way
*Recorded by: Alexander D. Bevil *Date: 12 April 2001 ☒ Continuation ☐ Update



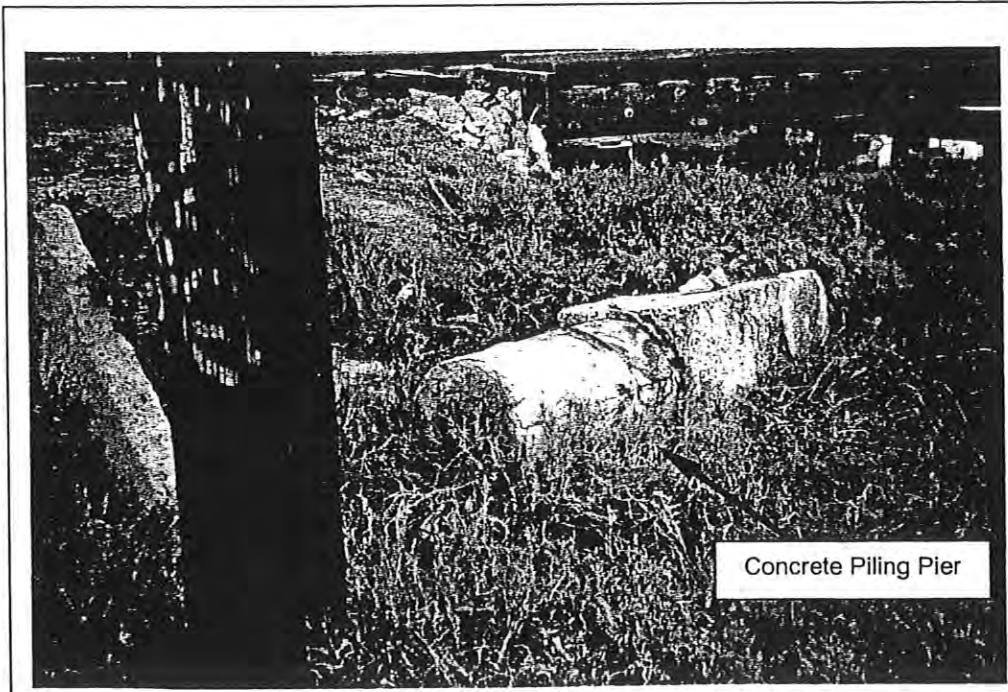
Photograph #19b

Point 19b

Wooden Trestle #2,
Close up of Sheered-
off Concrete Piling
Pier

View: Facing South,
SE of North Abutment

Accession #
N6QE_015.JPG



Photograph #20b

Point 20b

Concrete Piling Pier
Removed and
Relocated to a Point
NW of Trestle #2's
North Abutment

View: Looking East

Accession #
N6QE_016.JPG

Concrete Piling Pier

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Primary #:
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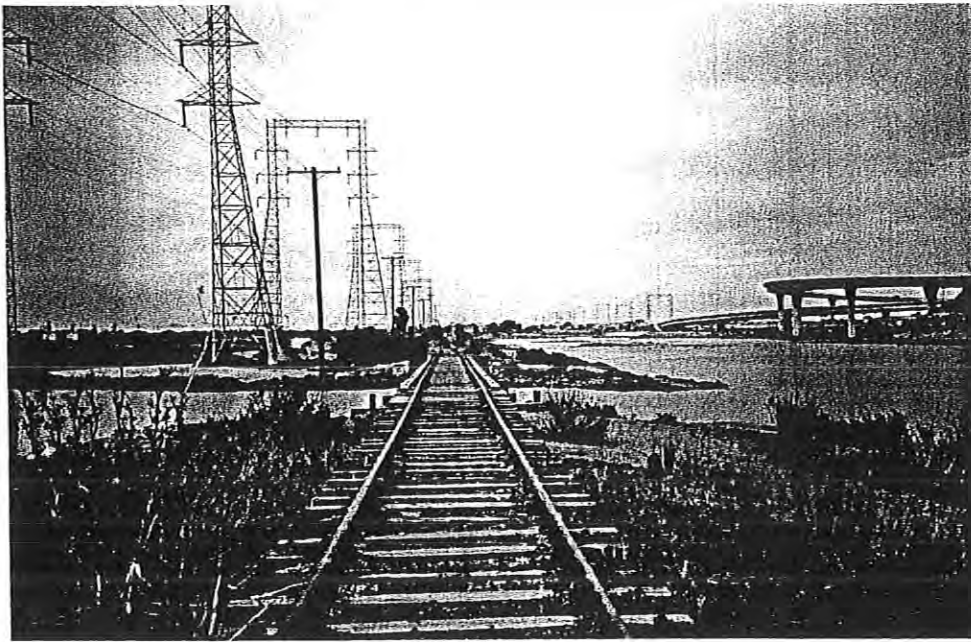
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



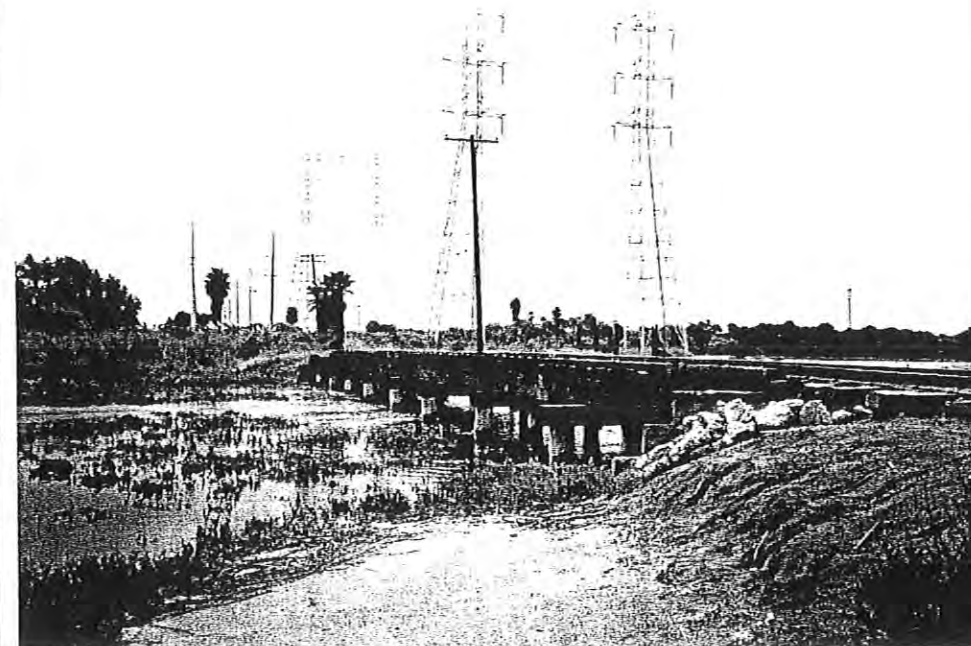
Photograph #21b

Point 21b

Southern Approach to
Wooden Trestle #2
over S. Sweetwater
River Slough

View: Looking NW

Accession #
N6QE_018.JPG



Photograph #22b

Point 22b

Wooden Trestle #3,
120ft. over S.
Sweetwater River
Slough Approaching
Gunpowder Point

View: Looking South
at Gunpowder Point

Accession #
N6QE_020.JPG

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #23b

Point 23b

Wooden Trestle #3's
Deck over S.
Sweetwater River
Slough Approaching
Gunpowder Point
(Note Fire Damage
Midway across Span

View: SE

Accession #
N6QE_021.JPG



Photograph #24b

Point 24b

Wooden Trestle #3
over S. Sweetwater
Slough

View: Looking NW
toward Sweetwater
Marsh National
Wildlife Refuge

Accession #
N6QE_022.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

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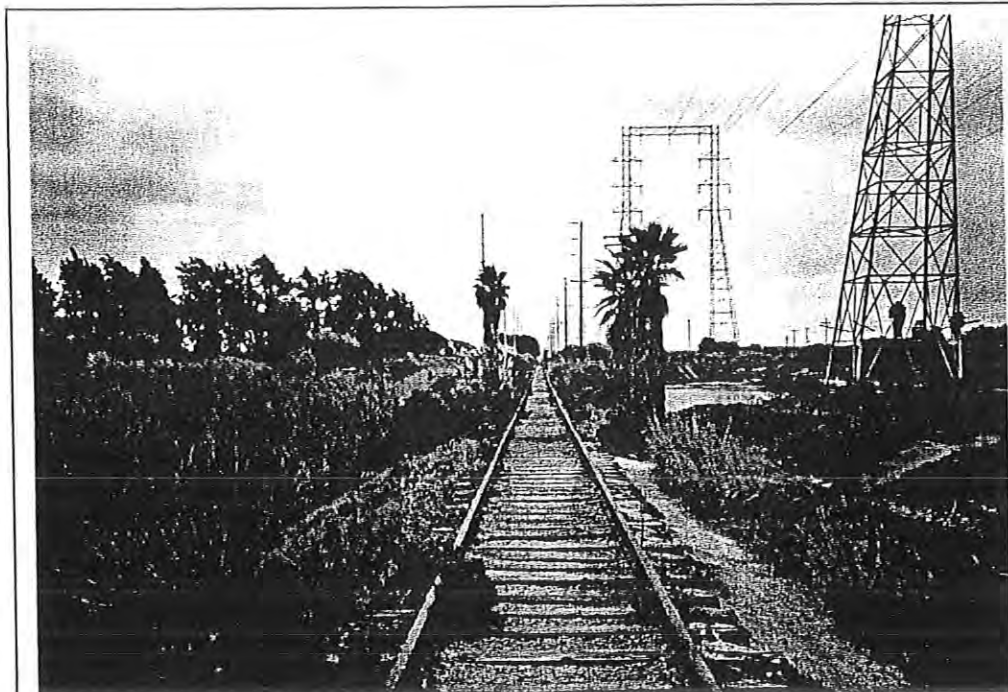
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



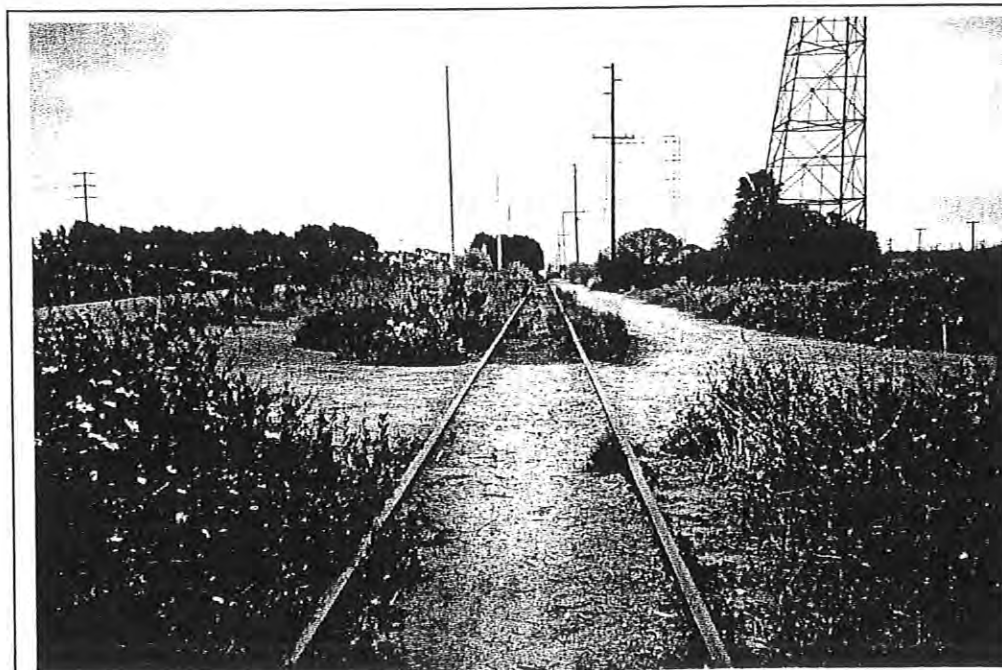
Photograph #25b

Point 25b

Private Right-of-Way
South of Trestle #3
Approaching
Gunpowder Point

View: Looking SE

Accession #
N6QE_022.JPG



Photograph #26b

Point 26b

Southern Terminus of
Segment B at
Gunpowder Point

View: Looking SE/NW
Terminus of Bay Blvd.
at Left, Dirt Service
Road at Right

Accession #
N6QE_025.JPG

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DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:

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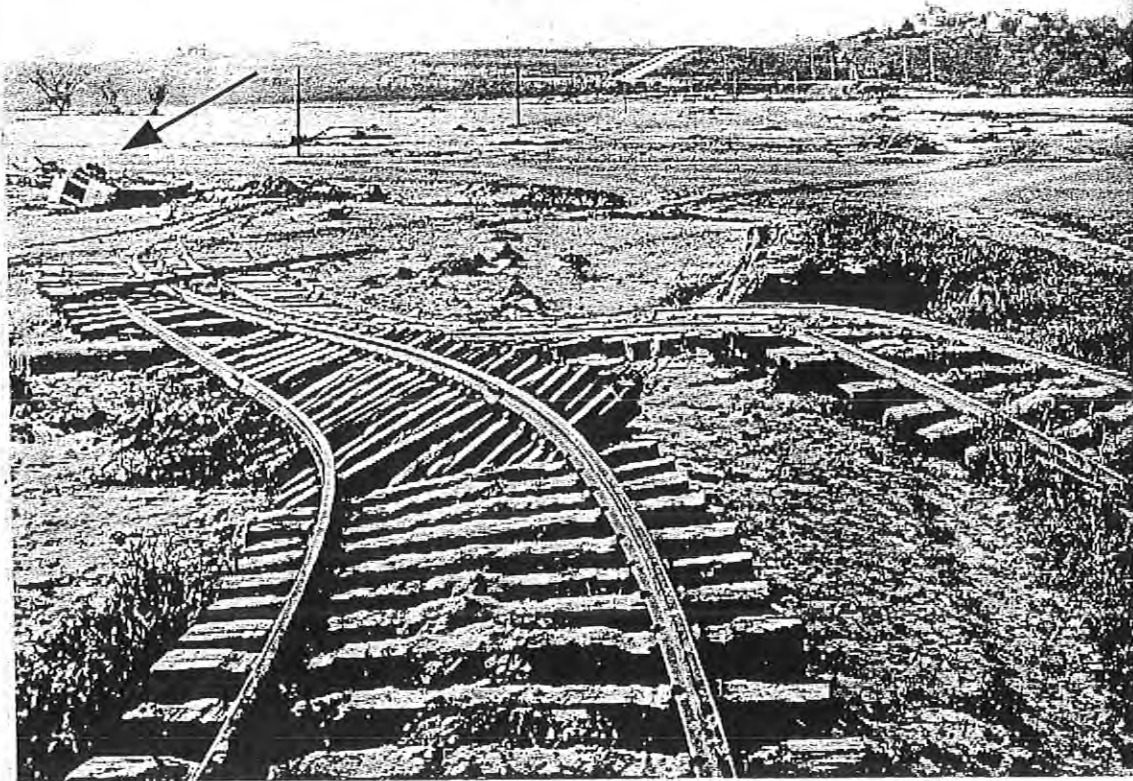
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Result of the Catastrophic 1916 Flood on the SD&SERy's National City and Otay Branch's Right-of-Way and Tracks crossing the Sweetwater River upstream of the Coronado Belt Line's crossing. The SD&SERy abandoned the right-of-way, rerouting electric interurban traffic along the Coronado Branch. Note trolley car mired in the mud to the left of the tracks.

Source: Hanft, San Diego & Arizona: The Impossible Railroad, 1984, 40.

CONTINUATION SHEET

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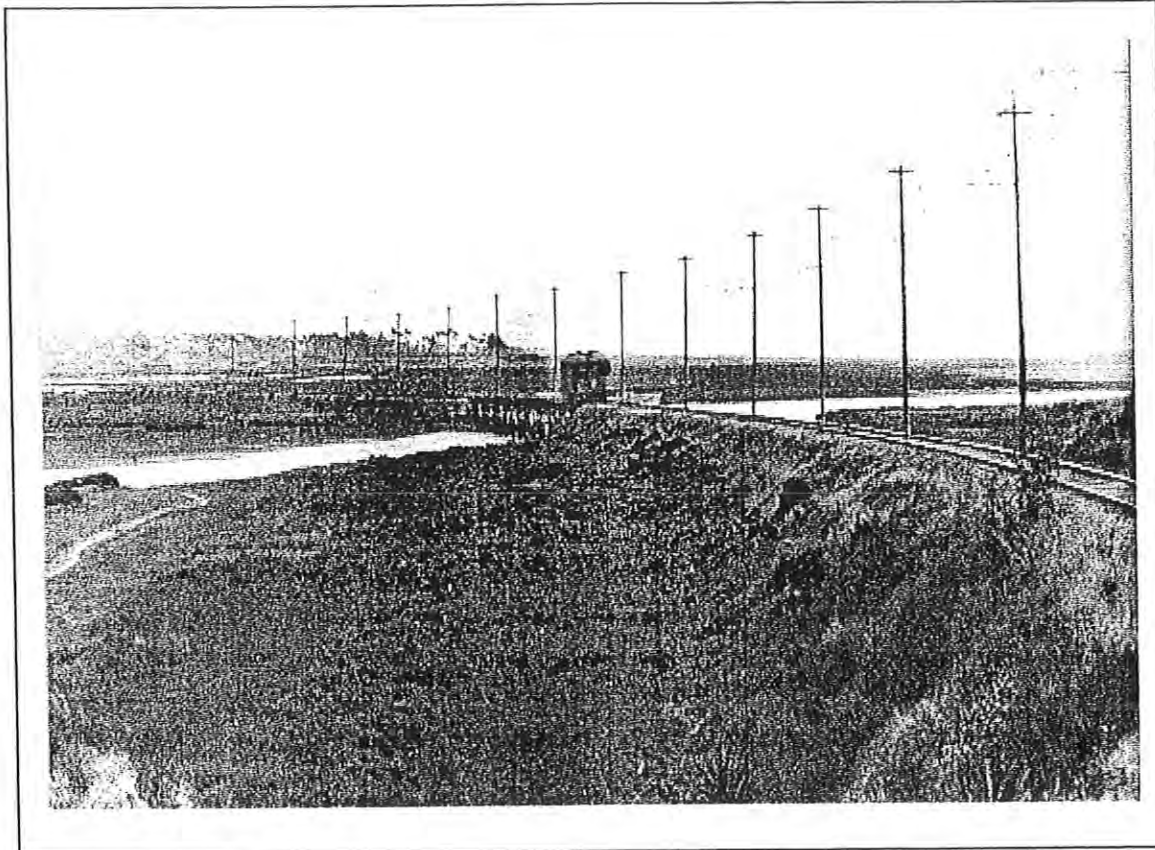
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



This Photograph Shows the Newly Electrified Coronado Belt Line Ca. 1917 As a SDERy Interurban Trolley Car Crosses Trestle #2 over Paradise Creek Slough, National City. Gunpowder Point, Chula Vista, Is Visible in the Distance. Although The Poles and Wires Are Gone, the Tracks, Earthen Roadbed, and Trestle Still Remain.

Source: Hanft, San Diego & Arizona: The Impossible Railroad, 1984, 40.

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DEPARTMENT OF PARKS AND RECREATION
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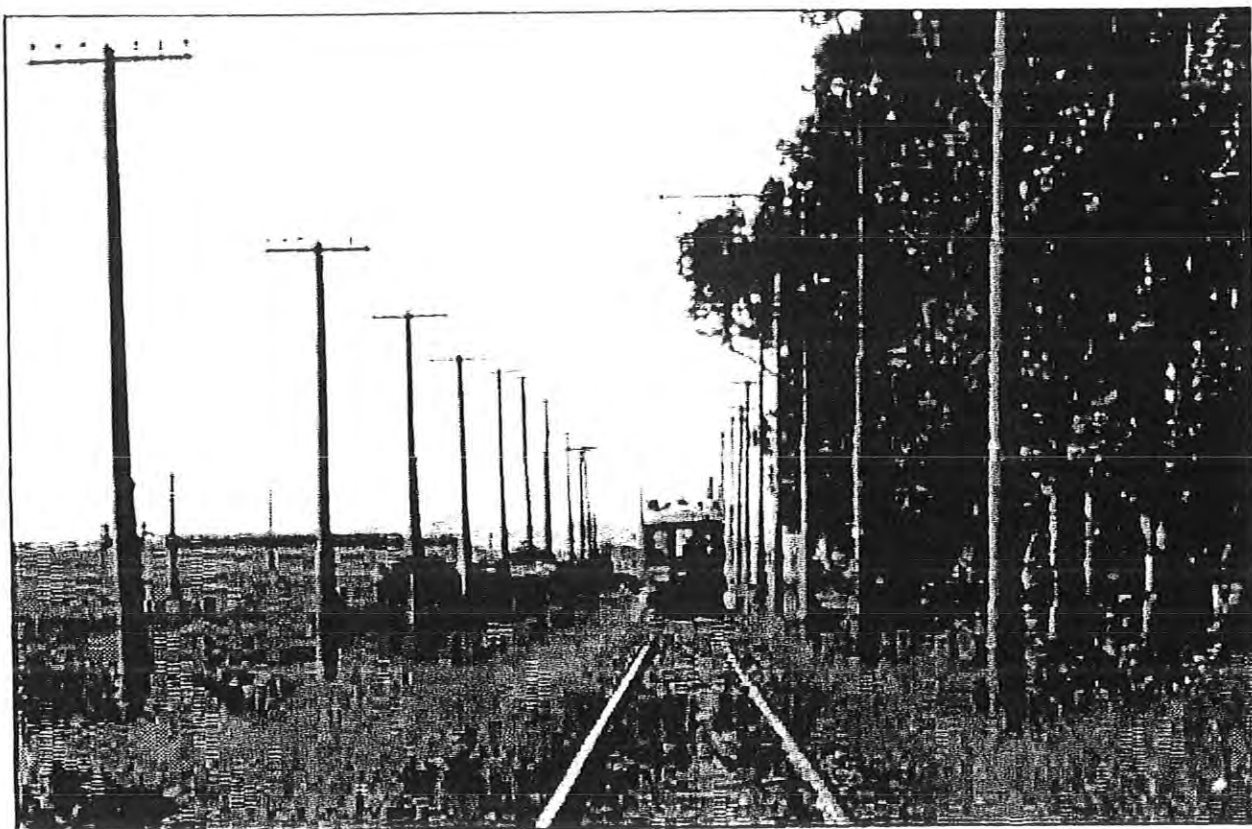
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



SDERY Interurban Trolley Car Southbound on Electrified Section of Coronado Belt Line Southeast of Gunpowder Point, ca. 1923.

Seventy-eight Years Later, the Right-of-Way Still Runs through Some of the only Remaining Open Space between San Diego and The International Border along San Diego Bay's Eastern Shoreline.

Source: Forty, *San Diego's South Bay Interurban*, 1987, 67.

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary #:

HRI #:

Trinomial

Page 76 of 149 Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way / Segment C

L1. Historic and/or Common Name: Coronado Railroad Belt Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: Structure—Railroad Right-of-Way

b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map): 490420mE / 3614140mN to 490775mE / 3610620 mN to 491260mE / 361840 mN See Continuation Sheet for more information.

L3. Description (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate): This .93 mi. segment represents the continuation of the Coronado Belt Line's "Country section" into Chula Vista along its own private right-of-way. It begins at a point some 20' SW of the Northern Terminus of Bay Blvd., and travels some 1,330' in a SEly direction to the intersection of Marina Parkway (formerly E St.) and Bay Blvd. The line continues in a SEly direction some 1,500' to the F Street Crossing. Some 100' north of the intersection, the right-of-way reaches a left-turn switch junction, where it branches in an easterly direction and crosses Bay Blvd. From Bay Blvd., the right-of-way crosses the I-5 Freeway over a concrete viaduct (non-contributing). Across the viaduct, the right-of-way travels some 200' across the main line of the San Diego Trolley (former San Diego & Arizona Railway's main line to Tijuana), where it reaches a right-hand turnout switch junction. At this junction, the private right-of-way ends as the line enters F Street. From here, the line travels along a street easement down the middle of F St. for approximately 1,200' in a NEly direction to a point shy of the intersection of F St. and Broadway. Along the length of Segment C are various artifacts that represent the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950). They include manual switch mechanisms, wooden ties, steel rails and signal towers. Although covered with rust, some rails still show their manufacturer's name and date. For example, the X-crossing frog that is part of the left-hand turnout switch junction reads: "AMSCO 1950," and a joint plate and section of steel rail crossing the I-5 Freeway viaduct reads, "1910," "OH TENNESEE 1924" and "BSCO MARYLAND OH 1926 90LB," respectively. Although the concrete viaduct was built in fairly recent times, the tracks still follow the original right-of-way. Although the right-of-way is only some 25-30' wide, it travels along undeveloped salt marsh west of Bay Blvd. Screened by a row of Salt Cedars and other screen shrubs, the route seems much wider than it is. This feeling of openness takes on an almost rural character as the right-of-way progresses in a SEly manner towards the F St. switch junction, where after it crosses the freeway, it takes on the character of a suburban carrier. The single row of tracks along F St. to Broadway are reminiscent of the line's northern most section along Cleveland Avenue, from 24th St. to Civic Center Dr.

L4. Dimensions (In feet for historic features, and meters for prehistoric features):

a. Top Width: 5' 1½"-track gauge

b. Bottom Width: N/A

c. Height or Depth: At street level

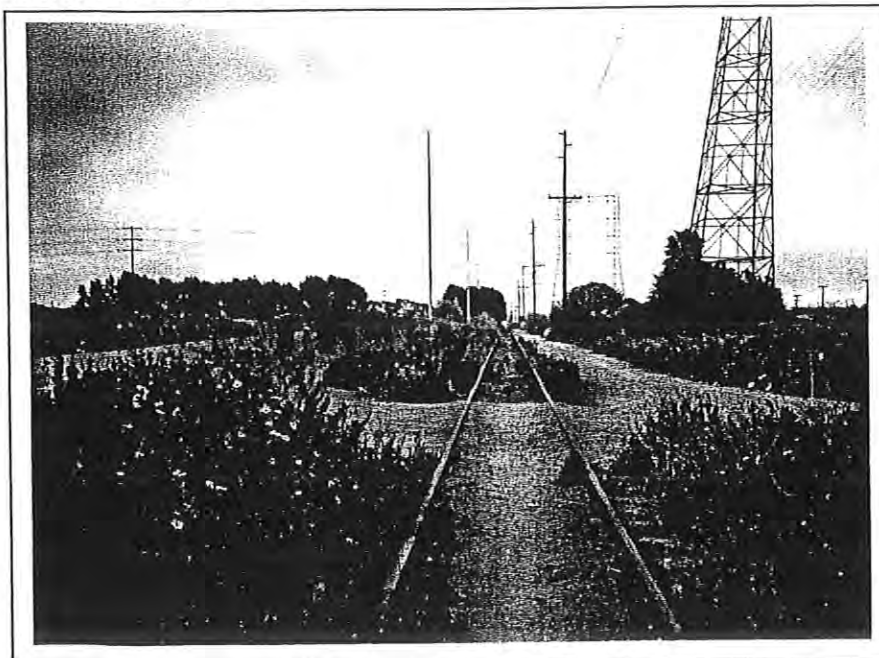
d. Length of Segment: .93 mile

L4e. Sketch of Cross-Section (include scale) Facing:
See Continuation Sheet

L5. Associated Resources: There are no previously recorded resources historically associated with the use of this resource.

L6. Setting (Describe natural features, landscape characteristics, slope, etc., as appropriate.): The resource runs between a salt marsh and a light industrial/residential neighborhood. This semi-rural character imparts a feeling of openness along the historic right-of-way.

L7. Integrity Considerations: Although no longer used for commercial rail transportation purposes, the right-of-way has retained its historic integrity in terms of setting, location, feeling, and materials associated with a historic railroad line that contributed to the area's development.



L8b. Description of ☒ Photo

☐ Map ☐ Drawing (View, scale, etc.): Accession # QECZ_001.JPG; View: Looking SE at Beginning of Segment between Bay Blvd. and Service Road to Gunpowder Point, Chula Vista

L9. Remarks: The resource is in fair to good condition

L10. Form Prepared by (Name, Affiliation, and Address):
Alexander D. Bevil
Save Our Heritage
Organisation
4752 Mt. Longs Drive
San Diego, CA 92117

L11. Date: 12 April 2001

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

Page 77 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

L2b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map):

Segment C

UTM Coordinates: 490420mE / 3614140mN to 490775mE / 3610620 mN

A Segment of a Railroad Right-of-Way from a Point near the Northern Terminus of Bay Boulevard, SEly to a Point near the Intersection of F Street and Bay Boulevard, then Ely to a Point near the Intersection of F Street and Broadway, all in Chula Vista, California

Legal Description

APN 565-290-39

Status: Non-taxable

Legal Description: QSEC 161 WH PAR 4 PER SBE (State Board of Equalization) MAP 863-37-21 & ST CLSD ADJ IN, MAP505-CHULA VISTA—POR QSEC 161

Adjacent Land Use: Vacant Industrial

Acres: 2.61

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

Metropolitan Transit Development Board (MTDB)

1255 Imperial Avenue, Suite 1000

San Diego, CA 92101-7490

APN 567-021-11

Status: Non-taxable

Legal Description: QSEC 162 (EX ST & MIN RTS) PAR 6 SBE MAP 863-37-21 MAP 166 (M 505) RHO DE LA NACION POR QSEC 162

Adjacent Land Use: Vacant Industrial

Acres: 1.18

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

MTDB

APN 567-031-23

Legal Description: QSEC 162 NWQ (EX MIN RTS) PAR 15 SBE MAP 872-37-8A IN MAP 166(M 505) RHO DE LA NACION POR QSEC 162

Note: The only concern is that part of the parcel which the Coronado RR Belt Line Rt-of-Way Crosses

Owner: CONS# Union Pacific Railroad Co/CA State Assessed
c/o

APN 567-031-25

Legal Description: QSEC 162 NWQ (EX MIN RTS & FEE BELOW 500 FT) E 15 FT of W 70 FT OF A POR OF PAR 18 SBE MAP 883-37-8E MAP 166 (M 505) RHO DE LA NACION POR QSEC 162

Note: The only concern is that part of the parcel which the Coronado RR Belt Line Rt-of-Way Crosses

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

MTDB

APN 567-021-33

Legal Description: QSEC 162 NWQ (EX HWY & Doc 78-446632) PAR 3 SBE MAP 863-37-22B MAP 166 (M 505) RHO DE LA NACION POR QSEC 162

Including Street Easement across Bay Boulevard at F Street

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

Page 78 of 136

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 March 2001

☒ Continuation

☐ Update

Segment C (Cont.)

c/o
MTDB

APN 567-021-33-02

Legal Description: QSEC 162 NWQ FEE BELOW 500 FT PER PAR 5 SBE MAP 872-37-B MAP 166 (M 505) RHO
DE LA NACION POR QSEC 162

Including Street Easement across Bay Boulevard at F Street

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o
MTDB

APN 567-031-18

Legal Description: QSEC 162 NWQ (EX STS & MIN RTS) PAR 16 SBE MAP 863-37-8E IN MAP 166(M 505) RHO
DE LA NACION POR QSEC 162

Note: The only concern is that part of the parcel which the Coronado RR Belt Line Rt-of-Way
Crosses

Acres: 1.99

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o
MTDB

APN 567-031-22

Legal Description: QSEC 162 NWQ (EX MIN RTS) PAR 2 SBE MAP 863-37-22 IN MAP 166(M 505) RHO DE LA
NACION POR QSEC 162

Note: The only concern is that part of the parcel which the Coronado RR Belt Line Rt-of-Way
Crosses

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o
MTDB

Street Easement

Status: Non-assessed/Non-taxable

From a Point where Parcel 567-031-22 Meets the North Side of F Street, to a Point near the Intersection of F Street
and Broadway, all in Chula Vista

Owner: Easement Granted to the San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o
MTDB

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

Page 79 of 136

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

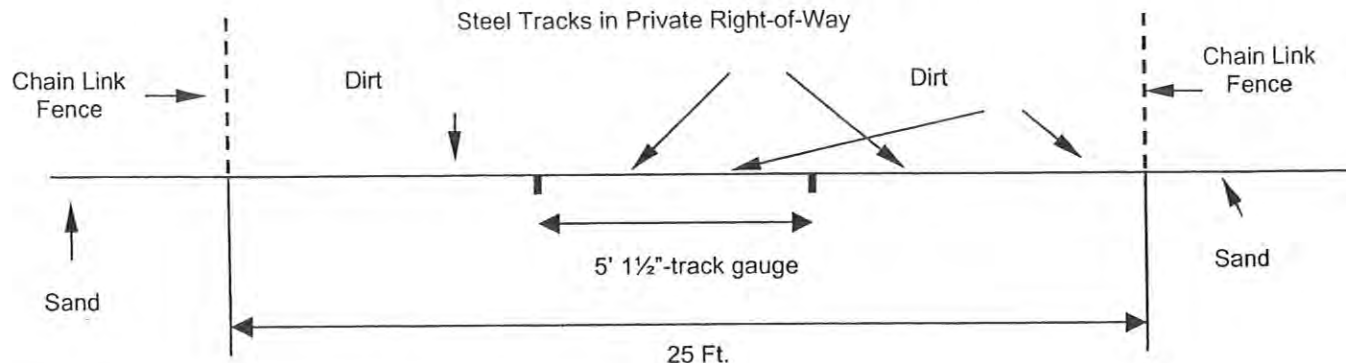
*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

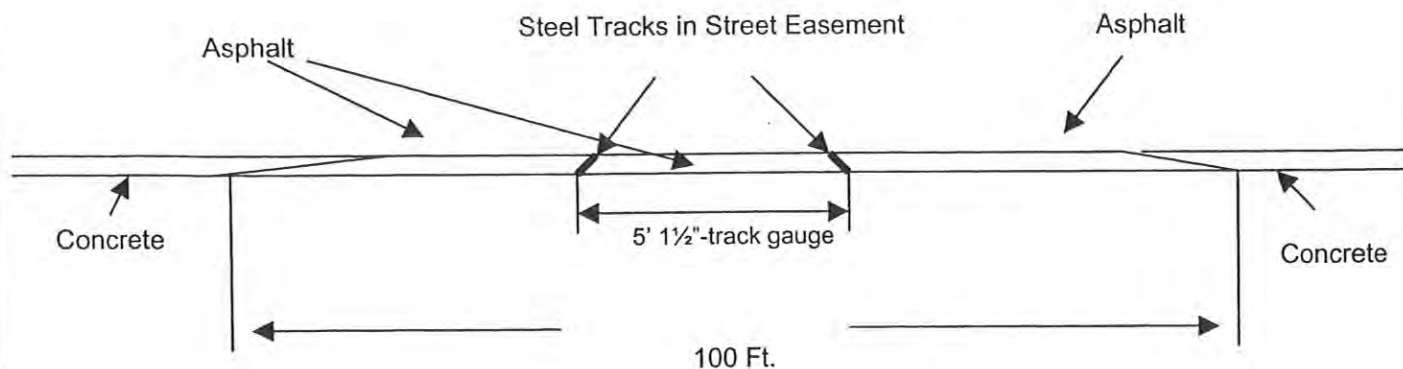
☒ Continuation

☐ Update

L4e. Sketch of Cross-Section (include scale) Facing: Southeast



Point # 2a South of Northern Terminus in Private Right-of-Way South of Intersection of Taft Avenue and 11th Street



Point 9a Street Easement down Cleveland Ave.

*Date of Map: 12 April 2001

Images: 300 DPI JPG

[illegible]

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

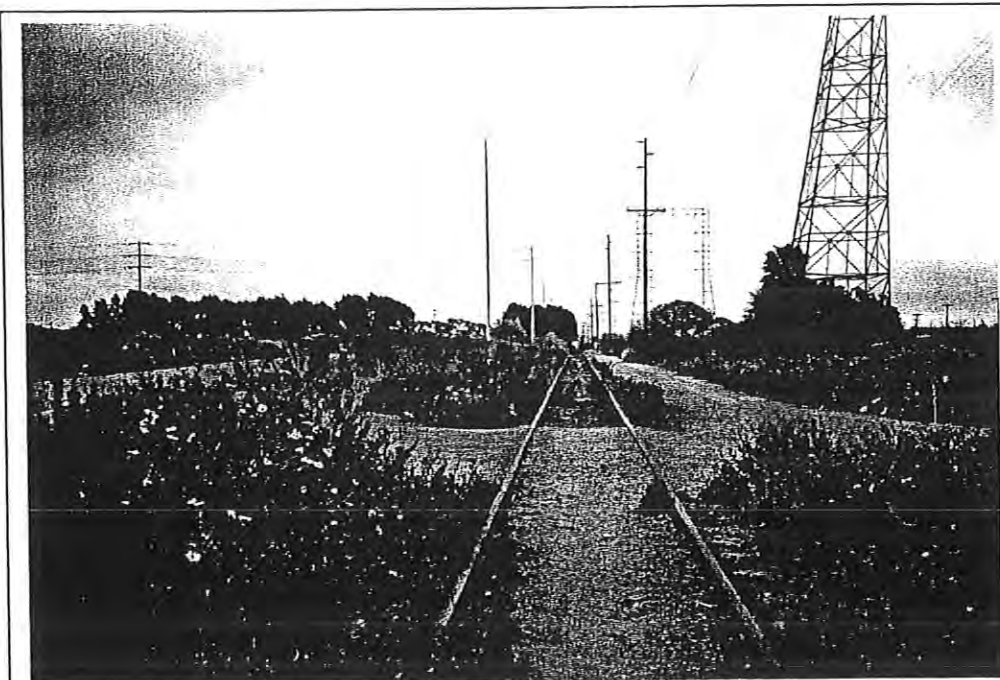
Page 82 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



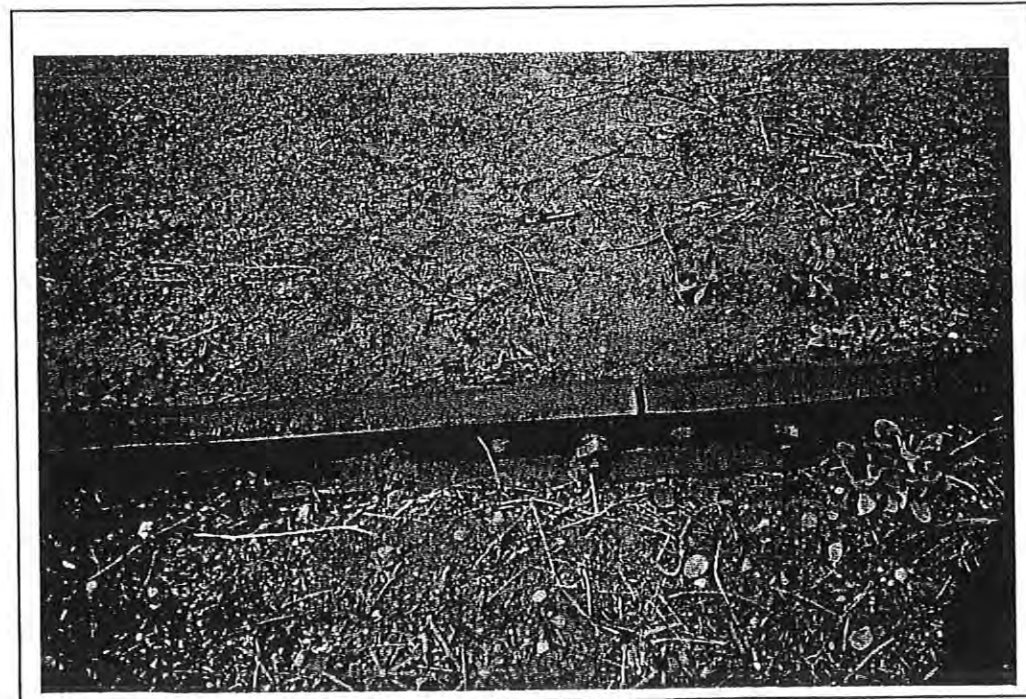
Photograph #1c

Point 1c

Start of Segment C,
Private Right-of-Way
at Northern Terminus
of Bay Blvd. near
Gunpowder Point,
Chula Vista / Dirt
Service Road at Right

View: Looking SE

Accession #
QECZ_001.JPG



Photograph #2c

Point 2c

Close up of Rail Joint
Showing Staggered
Bolt Pattern / Rail
Stamped "Carnegie
09"

View: Facing West

Accession #
QECZ_003.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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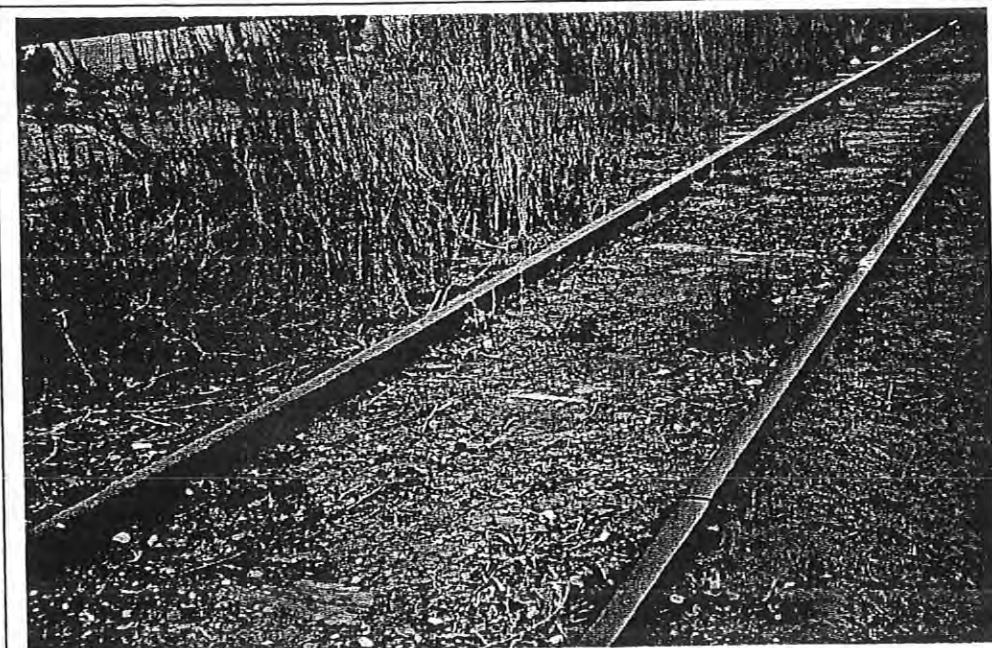
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



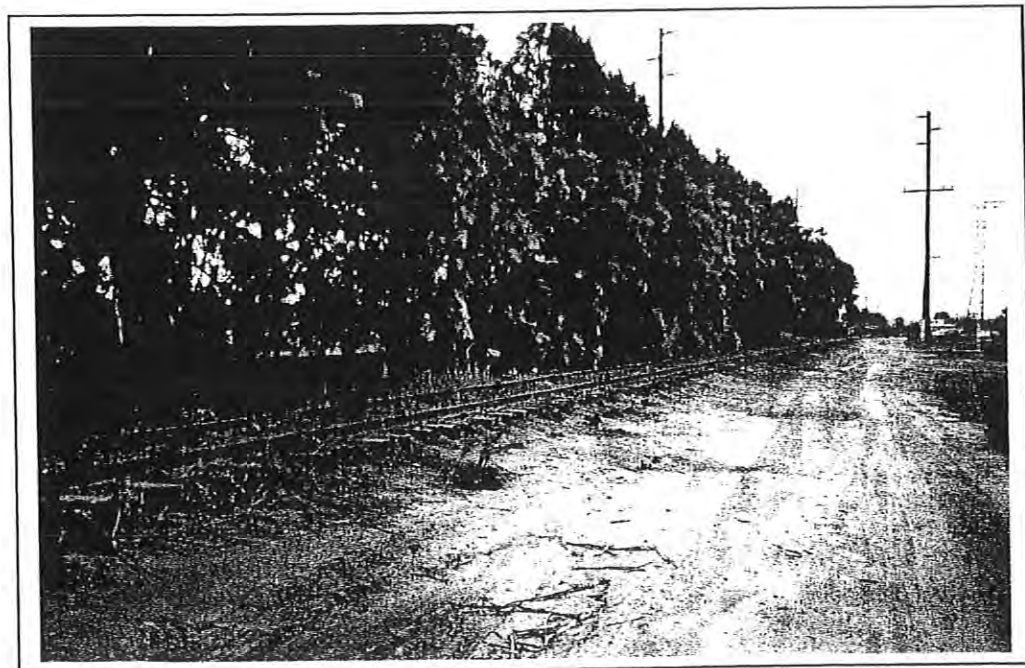
Photograph #3c

Point 3c

Track Showing
Condition of Right-of-
Way / Ties Partially
Buried Under Clay Soil

View: Facing SE

Accession #
QECZ_004.JPG



Photograph #4c

Point 4c

Tamarisk Windscreen
Growing along Right-
of-Way 600' NE of E
St.

View: Looking SE

Accession #
QECZ_005.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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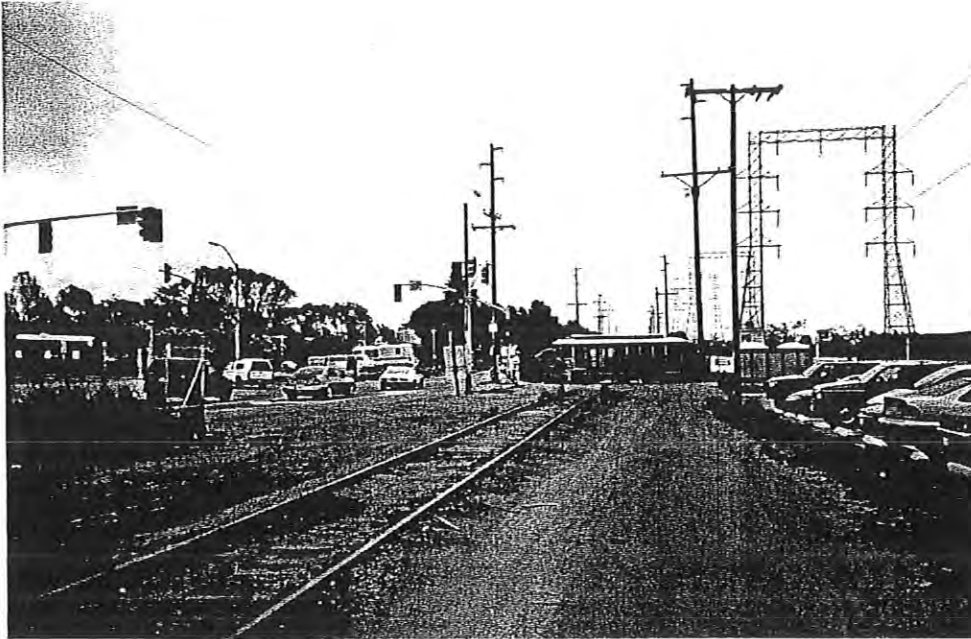
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #5c

Point 5c

Approach to E St.
Crossing at Site of
Former Potash Junction
Spur Line to
Gunpowder Point

View: Looking South at
Nature Center Shuttle
Bus

Accession #
QECZ_007.JPG



Photograph #6c

Point 6c

E St. Crossing

View: South

Accession #
QECZ_006.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 85 of 149

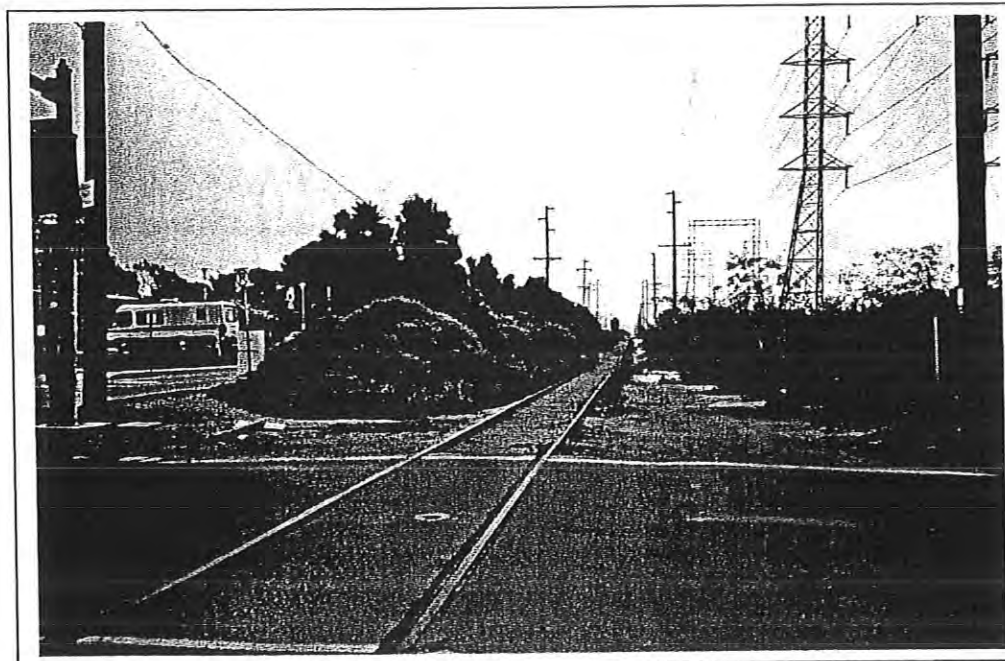
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



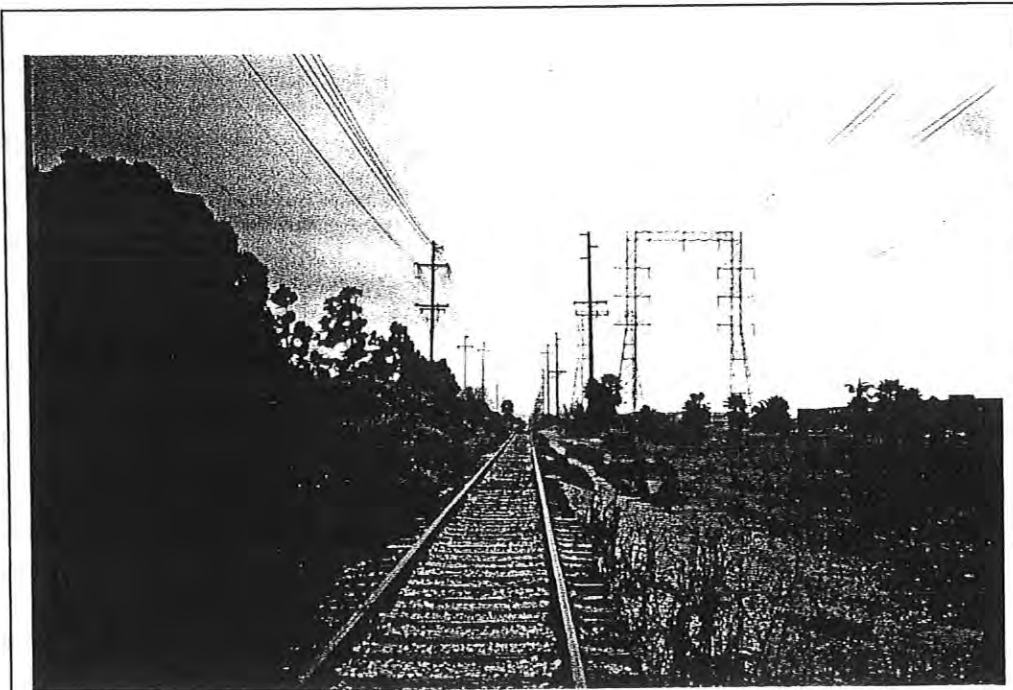
Photograph #7c

Point 7c

Continuation of Right-of-Way Past E St. Crossing

View: SE

Accession #
QECZ_008.JPG



Photograph #8c

Point 8c

Right-of-Way South of
E St. Crossing
heading toward F St.
Junction

View: Looking SE

Accession #
QECZ_009.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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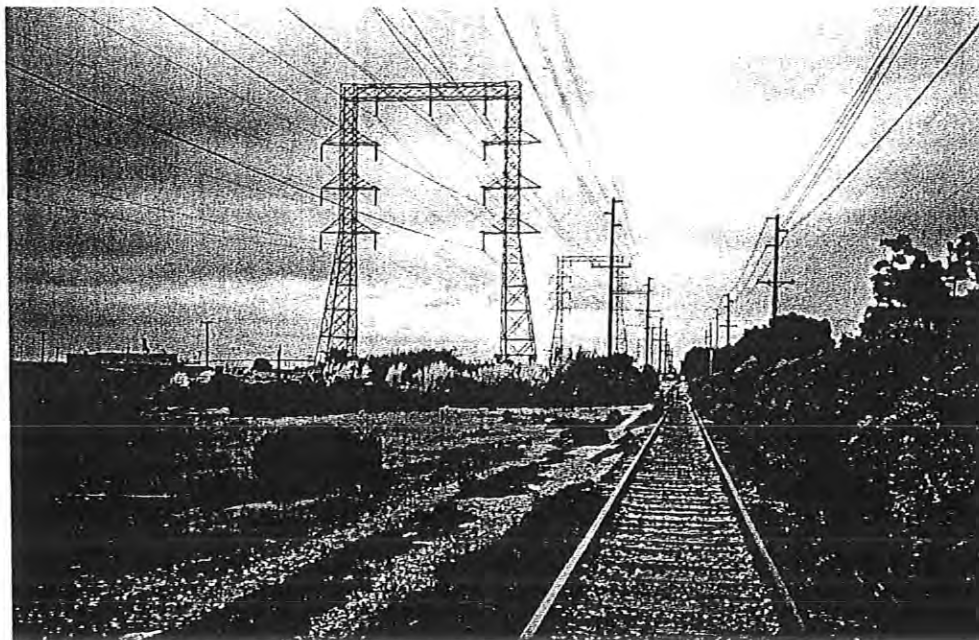
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #9c

Point 9c

Right-of-Way South
of E St. Crossing
approaching F St.
Junction

View: Looking NW

Accession #
QECZ_013.JPG



Photograph #10c

Point 10c

Left Turnout Switch
at Marmarosa
Junction to F St.

(Note Upright
Manual Switch
Mechanism and Tie
Bar Leading to
Switch Blades)

View: Looking SW

Accession #
QECZ_009.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



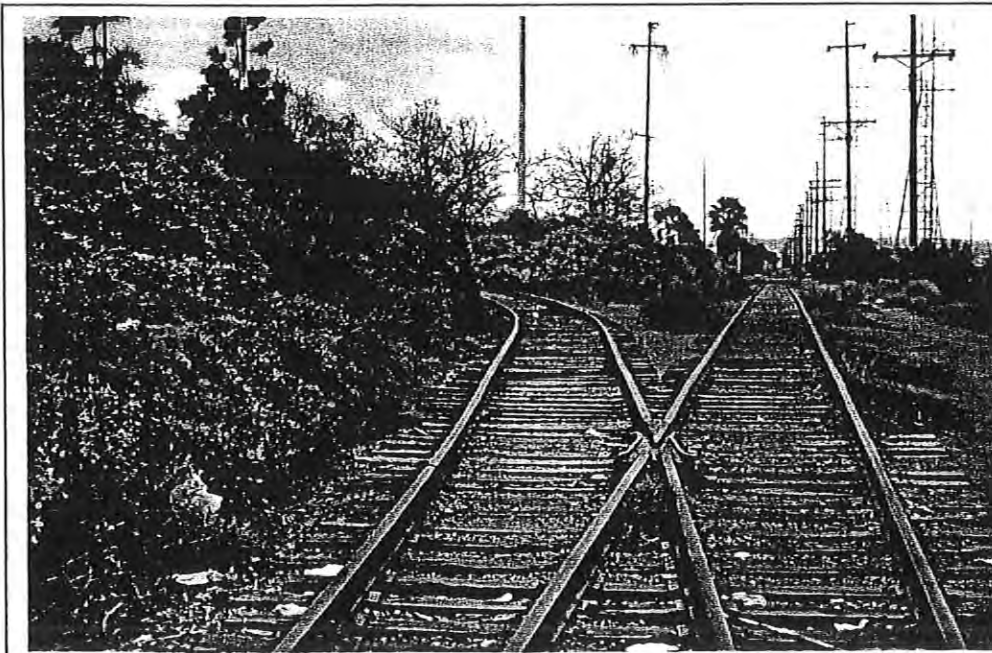
Photograph #11c

Point 11c

F Street Junction
View of Upright
Manual Switch
Mechanism

View: Looking NE

Accession #
QECZ_014.JPG



Photograph #12c

Point 12c

F St. Junction
View of X-ing
Note X-shaped
Crossing Rails or
"Frog"
Frog Dated 1950

View: Looking SE

Accession #
QECZ_015.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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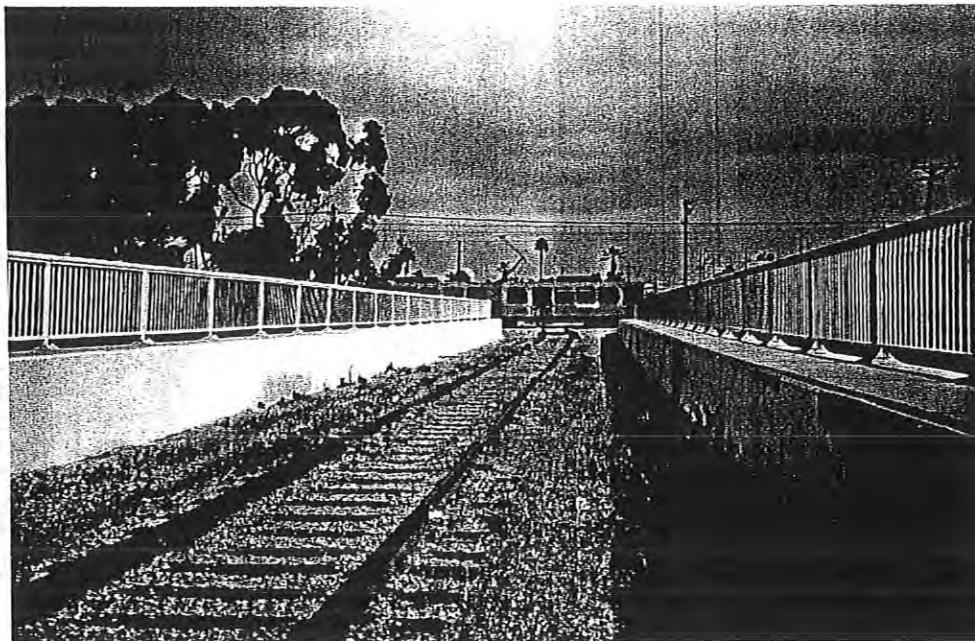
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



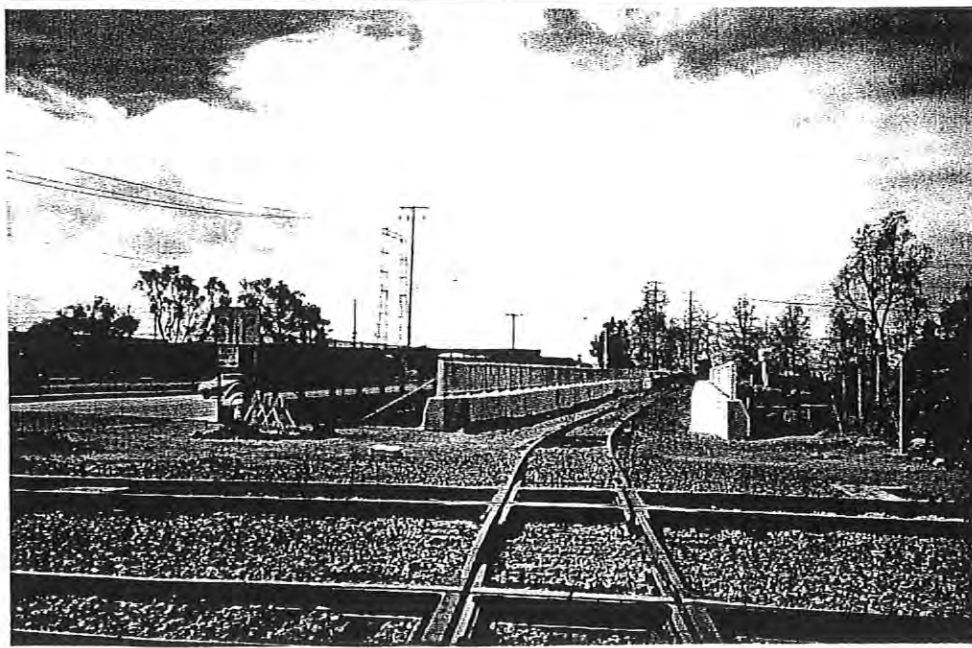
Photograph #13c

Point 13c

Concrete Viaduct
over
I-5 Freeway Leading
toward Former
Right-of-Way of the
San Diego & Arizona
Railway Main Line to
Tijuana
Rail Stamped
"TENNESSEE 1924"
"MARYLAND OH
1926"

View: Looking East
at San Diego Trolley
Crossing Junction

Accession #
QECZ_019.JPG



Photograph #14c

Point 14c

F Street Viaduct and
Tracks Crossing San
Diego Trolley Main
Line to Tijuana

View: Looking West

Accession #
QECZ_019.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #15c

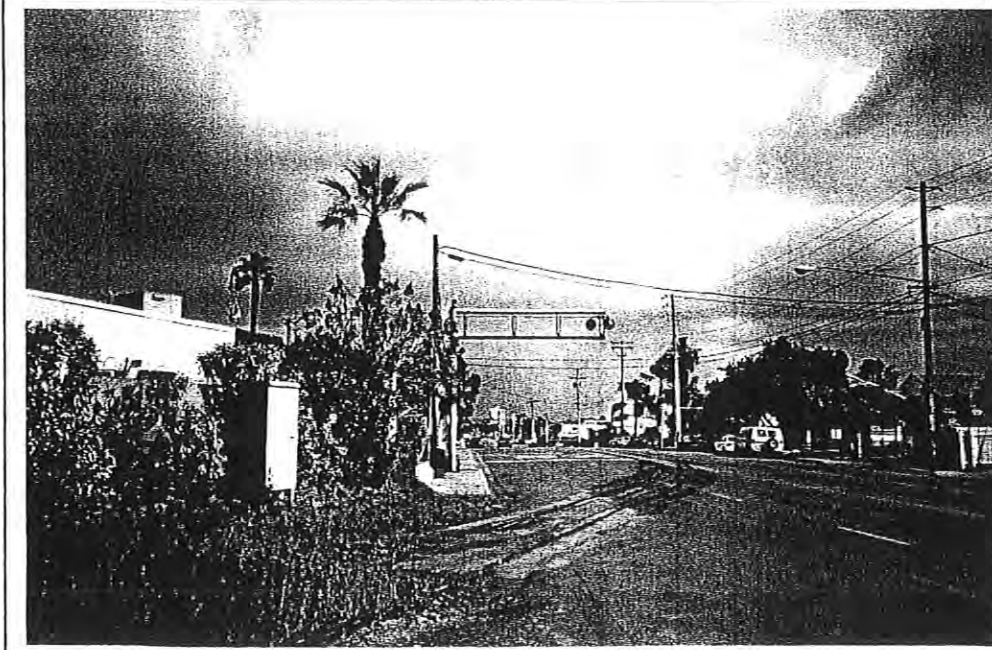
Point 15c

Chula Vista Junction--
Access Point for
Connecting Service
between Former
SD&ARY Main Line to
Tijuana and Coronado
Branch and F St.
Street Easement

Note Upright Manual
Switch Mechanism at
Right

View: West

Accession #
QECZ_022.JPG



Photograph #16c

Point 16c

Chula Vista Junction
Private Right-of-Way
Entering F St.
Easement
Approaching
Woodlawn Ave.

View: Looking East

Accession #
QECZ_021.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

Page 90 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



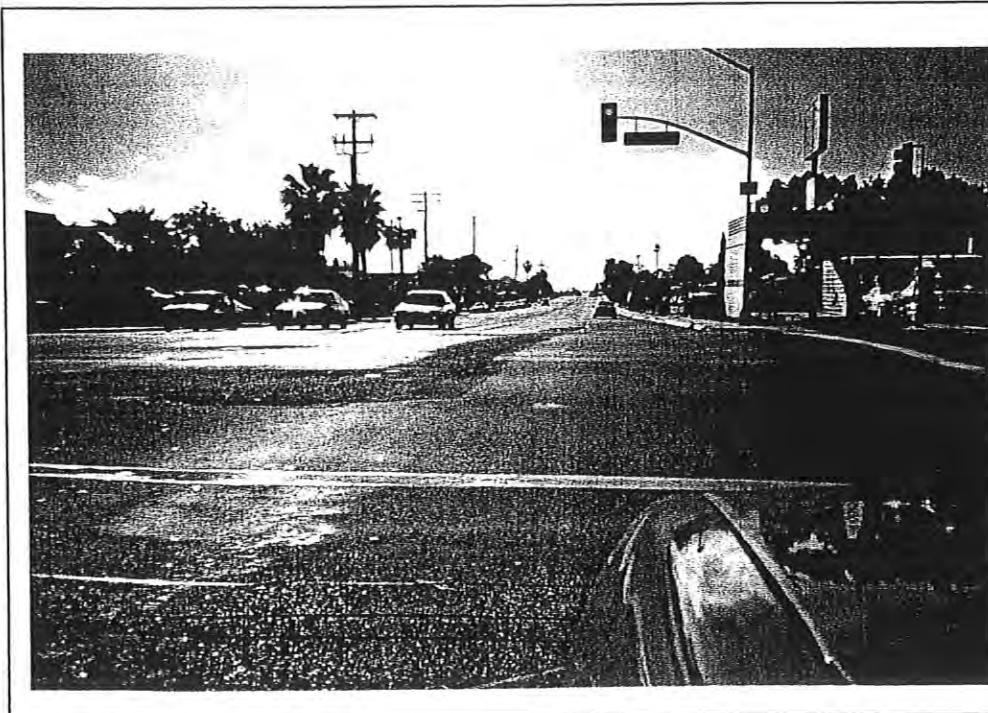
Photograph #17c

Point 17c

Chula Vista Junction
at F St. Easement
Approaching
Woodlawn Ave.

View: Looking West

Accession #
MMGF_008.JPG



Photograph #18c

Point 18c

Terminus of F St.
Street Easement at
Broadway, Chula
Vista

View: Looking West

Accession #
N6QE_006.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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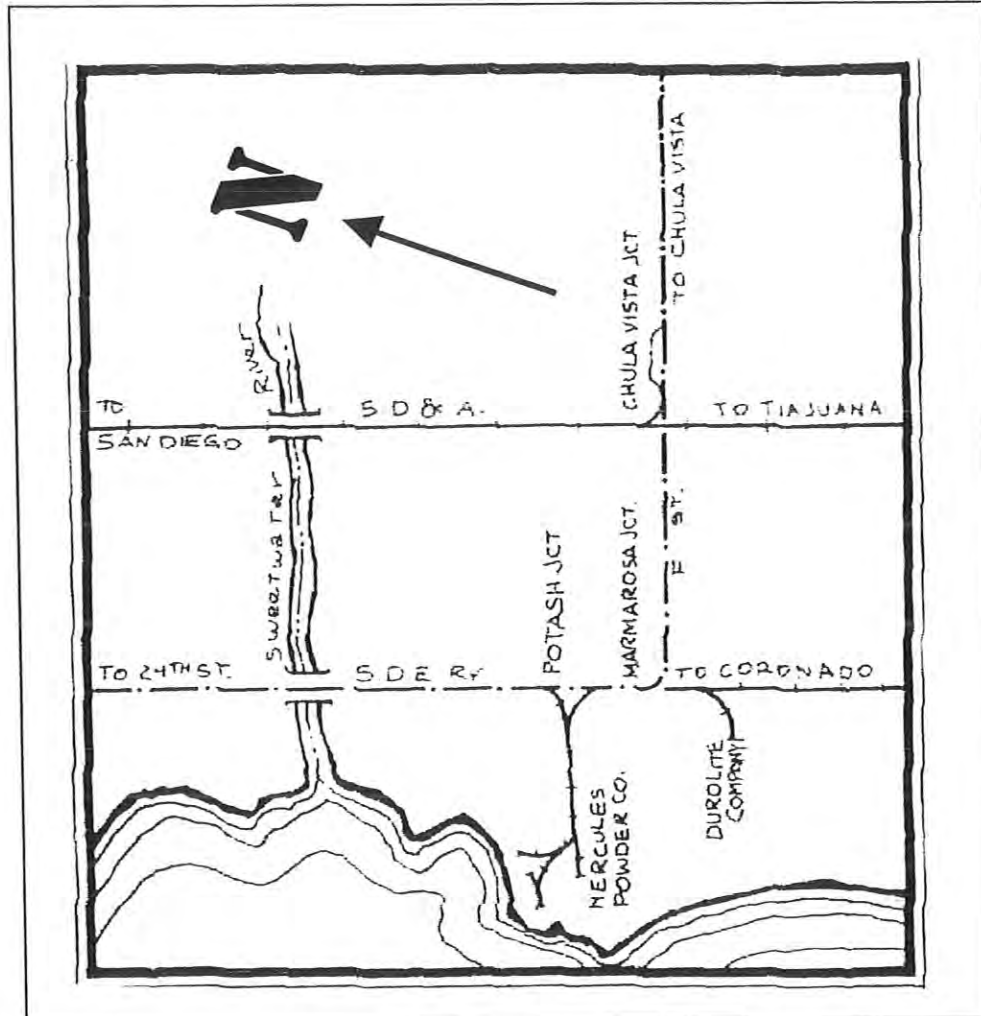
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Map of Coronado Belt Line Showing Spur Line to Hercules Powder Co. at Gunpowder Point, Spur Line to Durolite Company, and Left-hand Turnout onto F St. at Marmarosa Junction, ca. 1918.

Source: Forty, *San Diego's South Bay Interurban*, 1987, 55.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:
HRI#/Trinomial:

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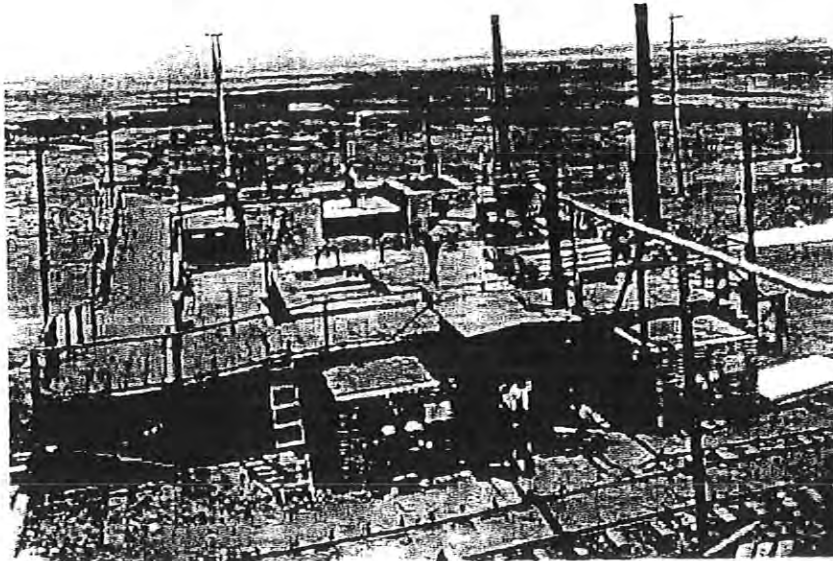
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Fusing furnaces and pans for fusing of sodium acetate.

Hercules Powder
Company Plant
Operations at
Gunpowder Point,
ca. 1918

Note Coronado Belt
Line Spur along
Bottom of Picture

Source: Neushul, *the
Hercules Powder
Company*, 1992, 33

Change in Sunday Car Schedule

POTASH SPECIALS
National City, Chula Vista Line

On Sunday, September 1 (to-morrow), on account of change in shifts at the Potash Plant, the present week-day schedule on National City, Chula Vista Line and Potash Specials will be in effect, beginning at 7:07 a.m. from Chula Vista and 6:39 a.m. from Union Depot, San Diego.

These cars now operate to and from Union Depot via Broadway and Third streets.

**SAN DIEGO ELECTRIC
RAILWAY COMPANY**

1918

Left:
Advertisement Announcing that the San Diego Electric Ry Co. Will Be Running "Potash Specials" Directly from Downtown San Diego and Chula Vista to the Hercules Powder Co. Plant at Gunpowder Point.

Date: 1918

Source: Forty, *San Diego's South Bay Interurban*, 1987, 55.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:

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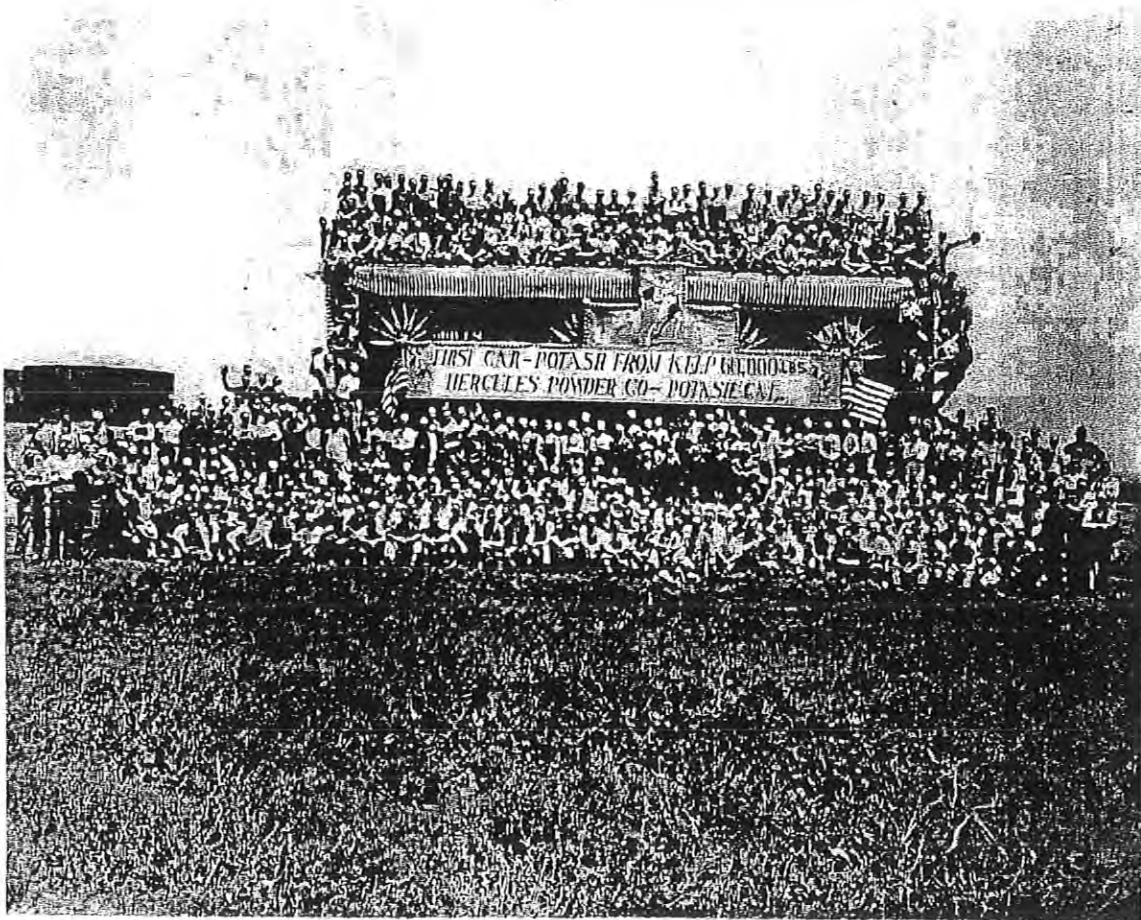
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Workers Celebrating First Carload of 60,000 lbs. of Potash Manufactured from Kelp at the Hercules Powder Plant, ca. 1917.

Source: Photograph #9640, San Diego Historical Society Photograph Archives

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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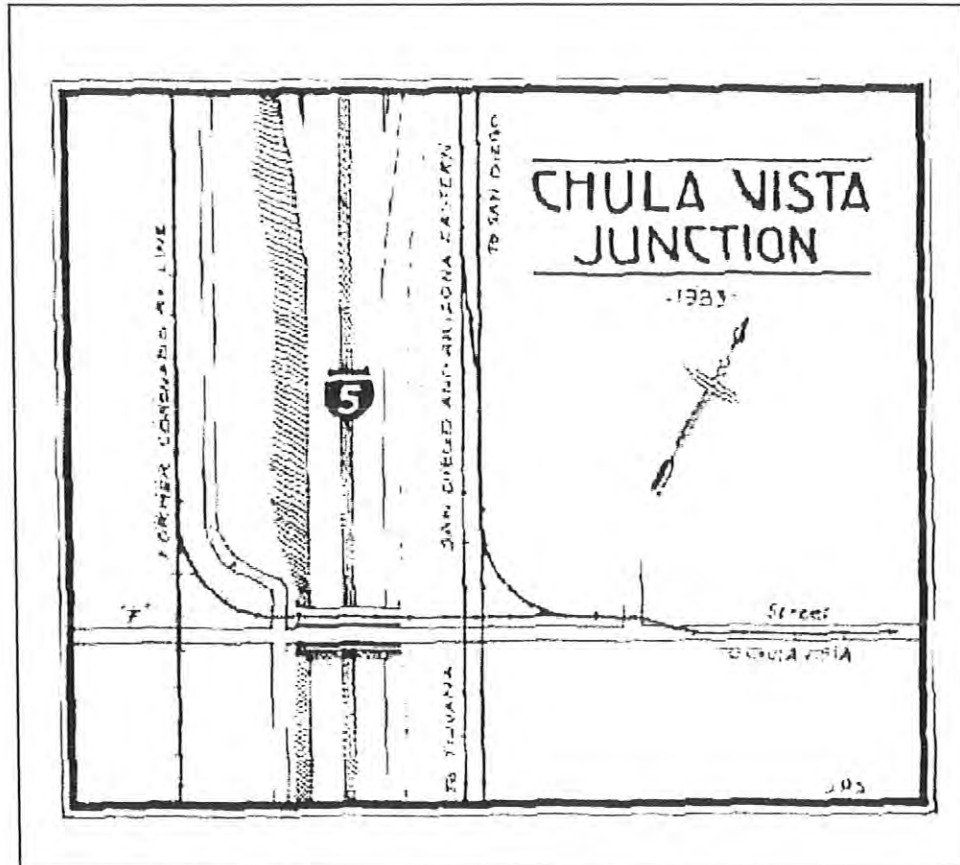
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Map Showing Realignment of Right-of-Way along F Street, 1983

Source:

Hanft, *San Diego & Arizona: The Impossible Railroad*, 1984, 164

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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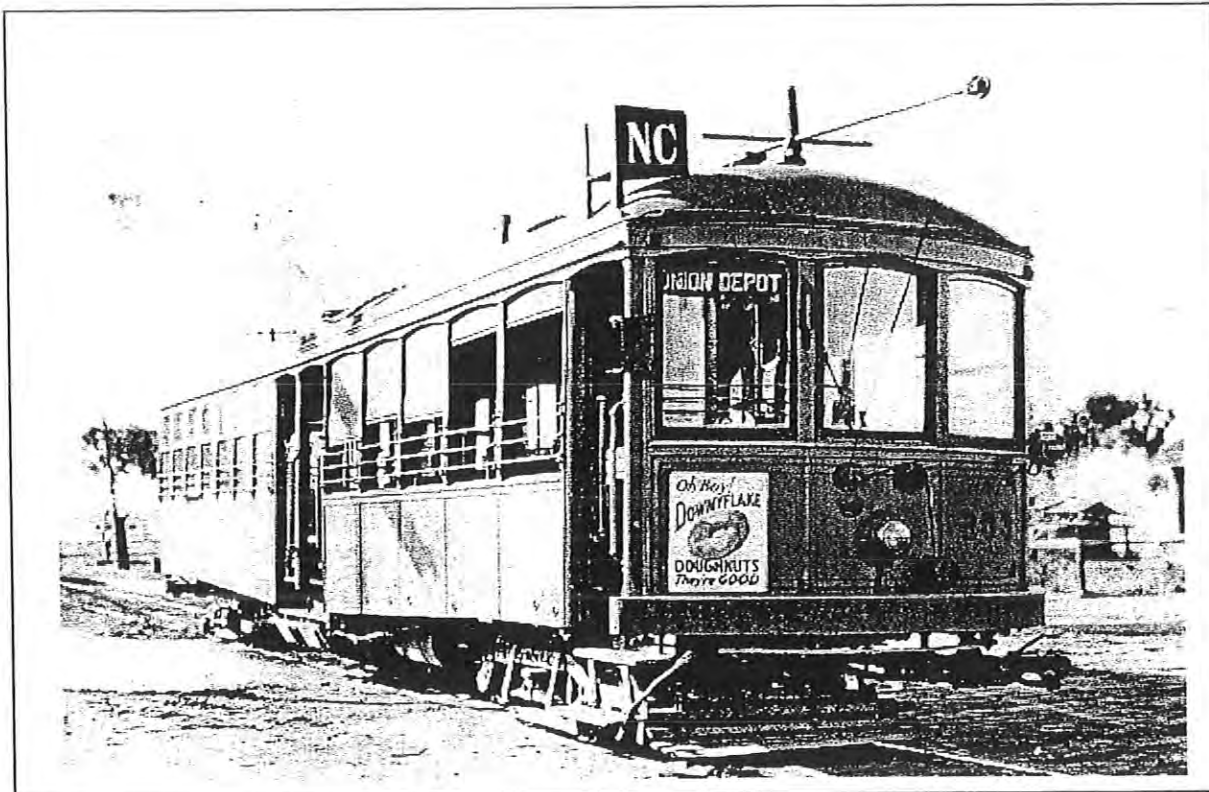
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



San Diego Electric Railway Trolley Car #203 at 24th Street Station, National City, ca. 1918
An Example of the Type of Electric Traction Running between San Diego and Chula Vista on the Electrified
Section of the Coronado Belt Line.

Source: Hanft, San Diego & Arizona: The Impossible Railroad, 1984, 41

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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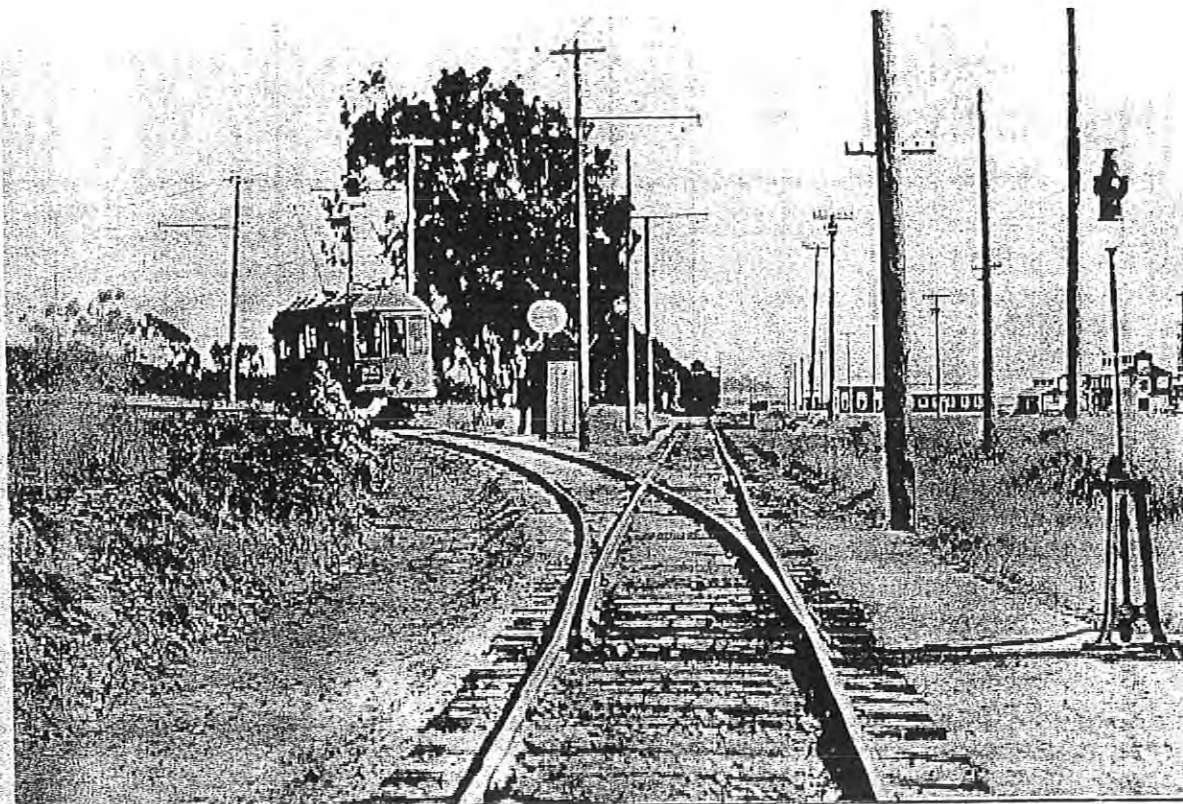
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Marmarosa Junction (Chula Vista Junction) at F Street, ca. 1923
Electric Passenger Service Continued Eastward on F St. to 3rd Avenue.
Tracks South of this Point on Main Line (Coronado Branch) Were Primarily for Steam-powered Trains.
Note Manual Switch Mechanism and Tie Bar Leading to Switch Point Blades
Durolite Plant at far Right

Source: Forty, *San Diego's South Bay Interurban*, 1987, 67.

LINEAR FEATURE RECORD

Primary #:

HRI #:

Trinomial

Page 97 of 149 Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way / Segment D

L1. Historic and/or Common Name: Coronado Railroad Belt Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: Structure—Railroad Right-of-Way

b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map): 490775mE / 3610620 mN to 491200mE / 3606900mN. See Continuation Sheet for more information.

L3. Description (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate): This 40'-wide, 2.8-mile segment, which consists of standard gauge steel rails affixed to wooden ties by steel plates and spikes, represents the continuation of the Coronado Belt Line through Chula Vista's western boundary along San Diego Bay along its own private right-of-way. Beginning at a point some 200' west of the intersection of F St. and Bay Blvd., the resource travels some 1438.4' in a SEly direction through the through the B.F. Goodrich Aerospace Industries plant's corporation yard to a private crossing at the end of G St. Just NW of the crossing is a left-hand turnout, with an upright switch mechanism, which once directed rail traffic into the plant's historic core. From here, it travels some 2,480' SEly along a fenced-off section to another private crossing at H St. Along the way, sections of rails stamped "CARNEGIE 1899" and "COLORADO 1915" reveal their age and origin. The Rt-of-Wy continues SEy through the plant's corporation yard and employee parking lots to another left-hand turnout and upright switch mechanism at a point near the western terminus of I St. Here, a rail is stamped "TENNESSEE 1925." Past another locked gate, the line travels .25-miles in a SEly direction through a light-industrial area to the Marina Parkway crossing. At the crossing are upright metal RR-crossing signals and drop bars. The Rt-of-Wy continues on for another .5-mile parallel to San Diego Bay's eastern shoreline past a large power plant to a point slightly west of the intersection of Bay Blvd. and L St. At this point, it jogs in a Sly direction, thought an area of recently built 1-2-story commercial/light industrial buildings along Bay Blvd., to a point west of the intersection of Palomar St. Along the way, the route contains two additional turn outs and their associative upright switch mechanisms. These, along with those mentioned previously, are artifacts (functioning and non-functioning) that represent the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950).

L4. Dimensions (In feet for historic features, and meters for prehistoric features):

a. Top Width: 5' 1½"-track gauge on 40' Rt-of-Wy

b. Bottom Width: N/A

c. Height or Depth: Some 3-13' above sea level

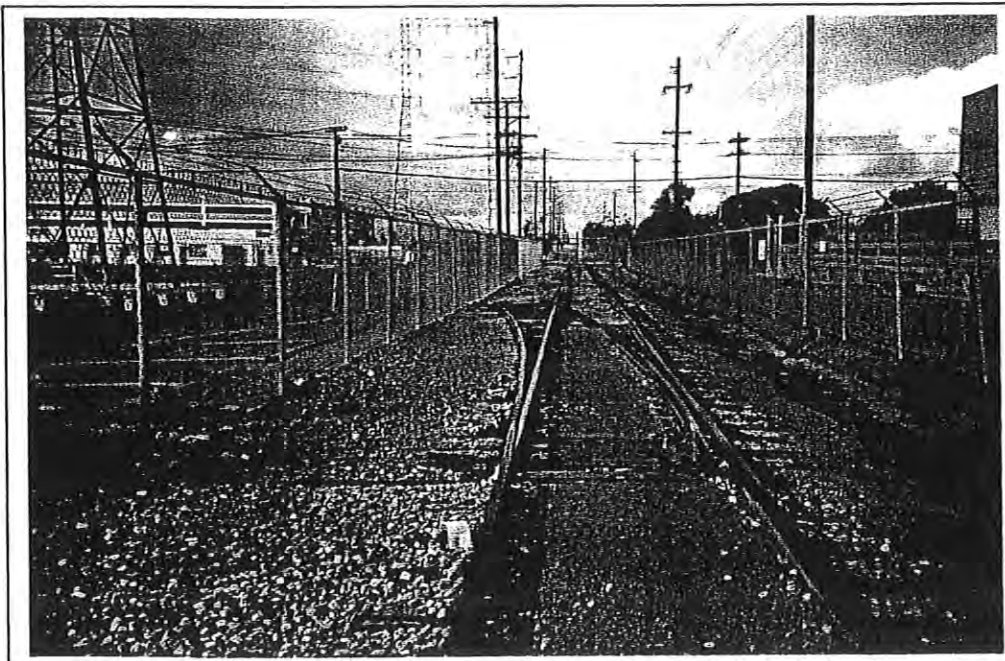
d. Length of Segment: 2.8 mile

L4e. Sketch of Cross-Section (include scale) Facing:

L5. Associated Resources: There are no previously recorded resources historically associated with the use of this resource.

L6. Setting (Describe natural features, landscape characteristics, slope, etc., as appropriate.): The resource extends through a landscape of heavy to light industrial buildings and electric power plants that present a linear landscape representative of the development of Chula Vista's economic growth along the historic right-of-way.

L7. Integrity Considerations: Although no longer used for commercial rail transportation purposes, the right-of-way has retained its historic integrity in terms of setting, location, feeling, and materials associated with a historic railroad line that contributed to the area's development.



L8b. Description of ☒ Photo

☐ Map ☐ Drawing (View, scale, etc.): # 4d Accession #

PZBD_005.JPG; View:

Looking NE at Left-hand

Turnout Switch, B.F.

Goodrich Aerospace North of
G Street Crossing, Chula
Vista, CA

L9. Remarks: The resource is in
fair to good condition

L10. Form Prepared by (Name,
Affiliation, and Address):

Alexander D. Bevil

Save Our Heritage

Organisation

4752 Mt. Longs Drive

San Diego, CA 92117

L11. Date: 12 April 2001

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

L2b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map):

Segment D

UTM Coordinates: 490775mE / 3610620 mN to 491200mE / 3606900mN

A Segment of a Railroad Right-of-Way from a Point south of the Intersection of F Street and Bay Boulevard, then SEly to a Point west of the Intersection of Palomar Street and Bay Boulevard, all in Chula Vista, California.

Legal Description

APN 567-022-16

Status: Non-taxable

Legal Description: QSEC 172 SEQ (EX MIN RTS) PAR 8 PER SBE (State Board of Equalization) MAP 863-37-21
In SWQ of Q, MAP 166 (M 505) RHO DE LA NACION—POR QSEC 162, 172

Adjacent Land Use: Vacant Industrial

Acres: 1.13

Owner: CONS (Company No Status)# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

Metropolitan Transit Development Board (MTDB)

1255 Imperial Avenue, Suite 1000

San Diego, CA 92101-7490

APN 571-330-16

Status: Non-taxable

Legal Description: QSEC 171 (EX ST OPS) PAR 10 SBE MAP 863-37-21 In QSEC S163 &, MAP 166 (M 505) RHO
DE LA NACION—POR QSEC 163, 164 & 170 THRU 172 TIDELANDS RECLAIMED

Adjacent Land Use: Vacant Industrial

Acres: .54

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

MTDB

APN 571-170-11

Status: Non-taxable

Legal Description: QSEC 164 (EX ST&MIN RTS) PAR 40 SBE MP 863-37-9J LY BET J & K STS IN MAP 166 (M
505) RHO DE LA NACION POR QSEC 162

Acres: 1

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

MTDB

APN 571-170-14

Status: Non-taxable

Legal Description: QSEC 164 (EX ST) PAR 30 SBE MP 872-37-9B LY BET J & K STS IN MAP 166 (M 505) RHO
DE LA NACION POR QSEC 162

Acres: 1

Owner: CONS# Union Pacific Railroad Co/CA State Assessed
c/o

MTDB

APN 571-170-15-01

Status: Non-taxable

Legal Description: QSEC 164 (EX FEE BELOW 500 FT) 0.83 AC M/L IN E H OF MAP 166 (M 505) RHO DE LA
NACION POR QSEC 162

Acres: 1

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Segment D, Cont.

c/o
MTDB

APN 617-011-05

Status: Non-taxable

Legal Description: QSEC 169 PAR 2 SBE MAP 863-37-23 IN QSEC 168 & IN MAP505-CHULA VISTA—POR
QSEC 168, 169

Adjacent Land Use: Industrial

Acres: 3.43

Owner: CONS (Company No Status)# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o
MTDB

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP D

Primary #:

HRI#

Trinomial:

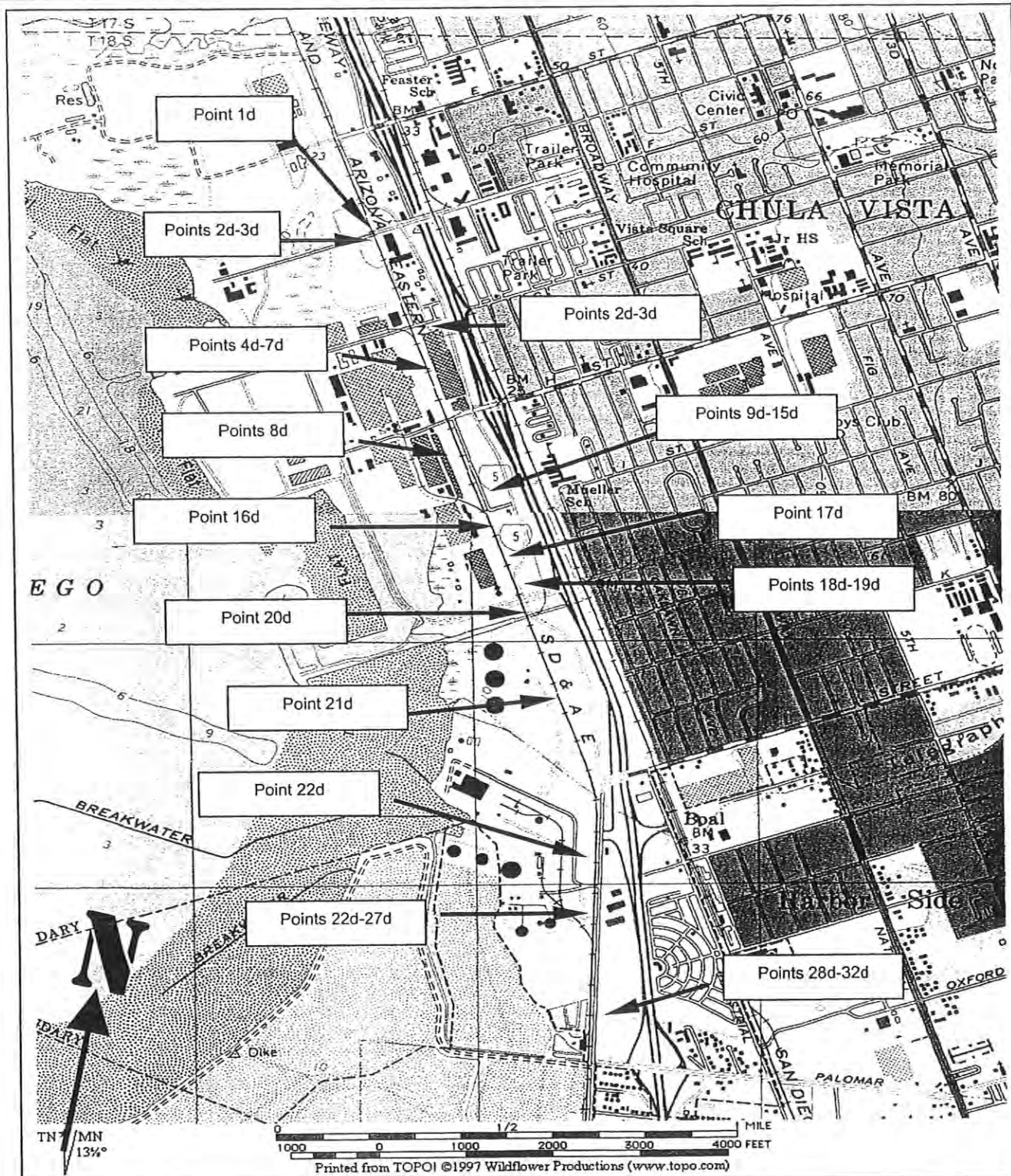
Page 100 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Segment D Points

*Scale: 1"=24,000m

*Date of Map: 12 April 2001



PHOTOGRAPH RECORD

Page 101 of 149 Project Name (Assigned by Recorder): Coronado Belt Line Right-of-Way

Year: 2001

Roll Number: 3, 4 & 5

Camera Format: SLR

Photographer(s): Alexander D. Bevil

Lens Size: N/A

Film Type and Speed: 35mm 100ASA

Images: 300 DPI JPG

Negatives Kept at: In Possession of Photographer

Mo.	Day	Time	Frame	Site #/Locus	Subject/Description	View	Accession #
02	10	13:45	1d	Point 1d	Start of Segment D Coronado Belt Line Right-of-Way at F St. Crossing	Looking SE	QECZ_021.JPG
02	10	13:50	2d	Point 2d	Locked Gate Inside to B.F. Goodrich Aerospace Industries (Formerly Rhor Aerospace) Plant South of F St. Crossing	Facing NE	QECZ_024.JPG
02	10	13:55	3d	Point 3d	Right-of-Way SEly of Locked Gate	Looking SE	QECZ_025.JPG
02	10	14:05	4c	Point 4d	Non-functioning Left-hand Turnout and Switch Point, B.F. Goodrich Aerospace Industries (Formerly Rohr Aircraft Plant) NW of Gate #19 at G St. Crossing	Looking NW	PZBD_005.JPG
02	10	14:10	5d	Point 5d	Close up of Rail and Tie Plate Rail Stamped "COLORADO 1915 OH"	Looking East	PZBD_008.JPG
02	10	14:15	6d	Point 6d	Right-of-Way through Formerly Rohr Aircraft Plant Location: South of Gate #19 (H St.)	Looking SE	PZBD_010.JPG
02	10	14:20	7d	Point 7d	Close up of Rail Stamped "Carnegie 1899 ET" Location: Right-of-Way through Former Rohr Aircraft Plant South of Gate #19	Looking East	PZBD_011.JPG
02	10	14:25	8d	Point 8d	Concrete Culvert South of H Street Crossing through Former Rohr Aircraft Plant South of Gate #19	Looking SW	PZBD_012.JPG
02	10	14:30	9d	Point 9d	Left-hand Turnout in former Rohr Aircraft Plant at I St., Crossing Note Missing Right Running Rail	Looking SE	PZBD_013.JPG
02	10	14:35	10d	Point 10d	Left-hand Turnout With Missing Running Rail to Right of Left Running Rail	Looking NW	PZBD_014.JPG
02	10	14:40	11d	Point 11d	Left-hand Turnout Switch Point Rail Stamped "OH TENNESSEE-90 20-ARA-A-1925"	Looking NE	PZBD_015.JPG
02	10	14:45	12d	Point 12d	Left-hand Turnout South Rohr Parking Lot North of Locked Gate at I St.	Looking SE	PZBD_016.JPG
02	10	14:50	13d	Point 13d	Left-hand Turnout South Rohr Parking Lot, North of Locked Gate at I St. Close up of X-ing Frog	Looking South	PZBD_017.JPG
02	10	14:55	14d	Point 14d	Left-hand Turnout South Rohr Parking Lot North of Locked Gate at I St. Upright Manual Switch Mechanism on Left	Looking NW	PZBD_019.JPG
02	10	15:00	15c	Point 15c	Upright Manual Switch Mechanism at Switch Point Left-hand Turnout South Rohr Parking Lot North of Locked Gate at I Street	Looking SW	PZBD_018.JPG
02	10	15:05	16d	Point 16d	Continuation of Right-of-Way at Private Crossing south of I St.	Looking SE	PZBD_020.JPG
02	10	15:10	17d	Point 17d	Continuation of Right-of-Way South of I St. toward Marina Parkway	Looking SE	PZBD_021.JPG
02	10	15:15	18d	Point 18d	North Approach to Marina Parkway (formerly J St.) Crossing	Looking NW	PZBD_022.JPG
02	10	15:18	19d	Point 19d	Marina Parkway Crossing	Looking SE	PZBD_023.JPG
02	10	15:20	20d	Point 20d	Culvert South of Marina Parkway Crossing	Looking SE	PZBD_025.JPG
02	11	08:30	21d	Point 21d	Right-of-Way between Marina Parkway Crossing and K St.	Looking SE	MHKE_002.JPG
02	11	09:15	22d	Point 22d	Private Crossing into Duke Energy's South Bay Plant (Former San Diego Gas & Electric) SE of L St.	Looking SE	MHKE_010.JPG
02	11	08:50	23d	Point 23d	Right-of-Way South of Duke Energy Crossing Bay Blvd. on Right	Looking NW	MHKE_006.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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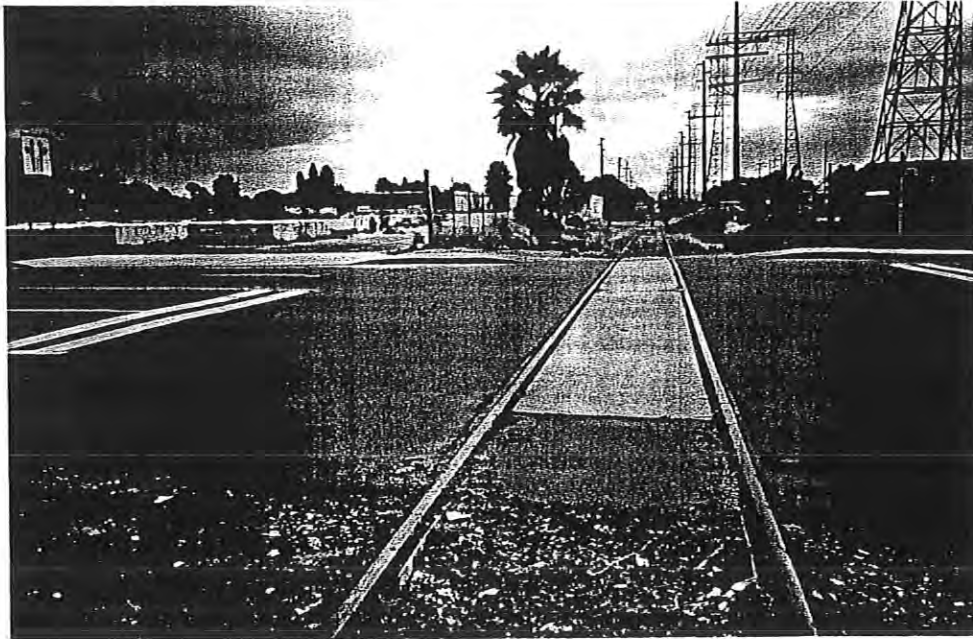
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



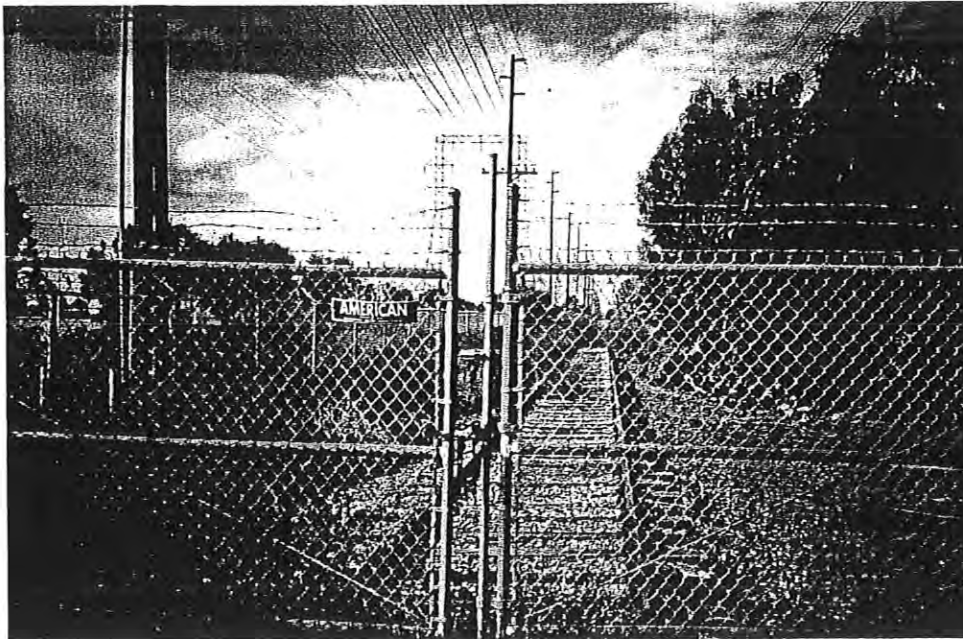
Photograph #1d

Point 1d

Northern Terminus of
Segment D
Coronado Belt Line
Right-of-Way at F St.
Crossing

View: Looking SE

Accession #
QECZ_021.JPG



Photograph #2d

Point 2d

Locked Gate Inside B.F.
Goodrich Aerospace
Industries (Formerly
Rhor Aerospace) Plant
South of F St. Crossing

View: Looking NE

Accession #
QECZ_024.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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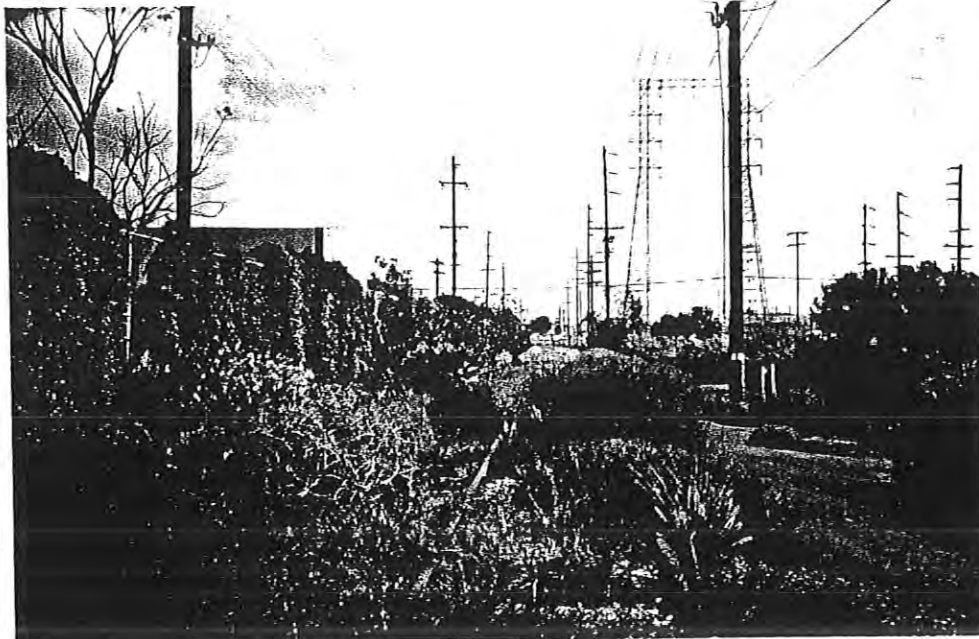
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



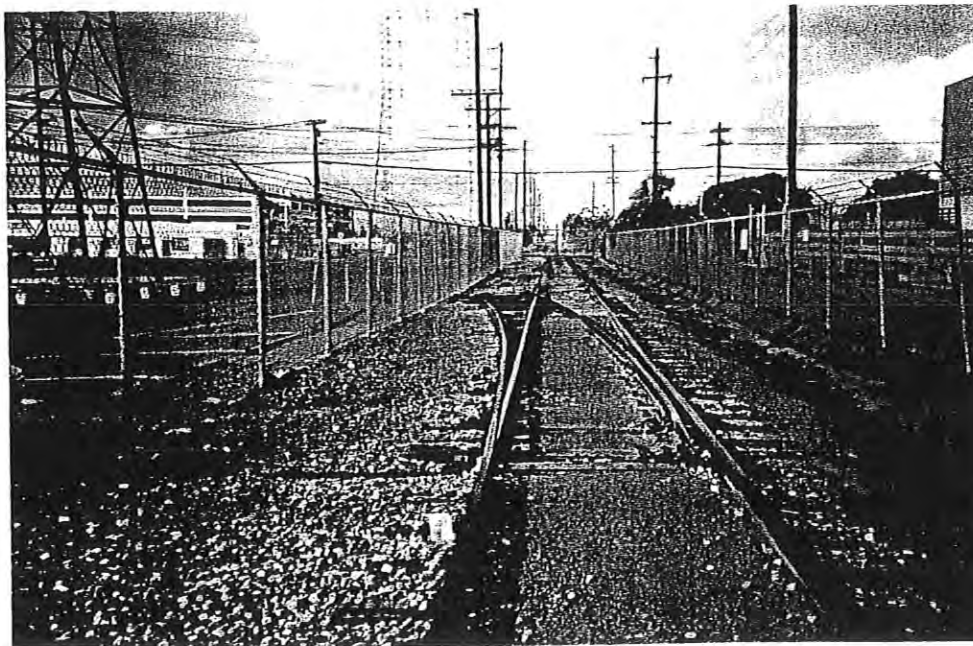
Photograph #3d

Point 3d

Right-of-Way SE of
Locked Gate

View: Looking SE

Accession #
QECZ_025.JPG



Photograph #4d

Point 4d

Non-functioning Left-
hand Turnout and
Switch Point, B.F.
Goodrich Aerospace
Industries (Formerly
Rohr Aircraft Plant) NW
of Gate #19 at G St.

View: Looking NW

Accession #
PZBD_005.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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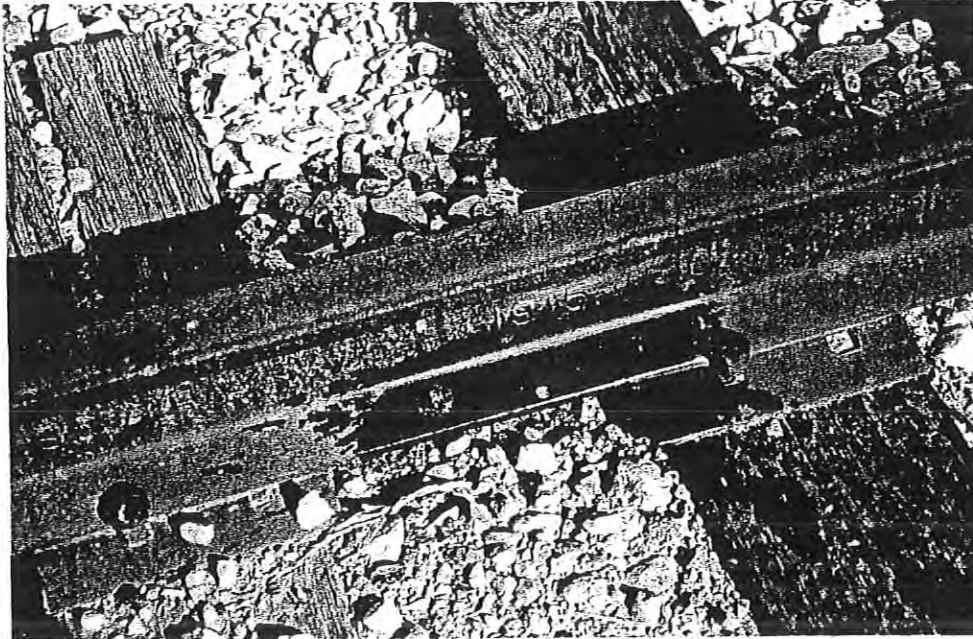
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #5d

Point 5d

Close up of Rail and Tie
Plate
Rail Stamped
"COLORADO 1915 OH"

View: Facing East

Accession #
PZBD_008.JPG



Photograph #6d

Point 6d

Right-of-Way through
Formerly Rohr Aircraft
Plant
Location: South of Gate
#19 (H St.)

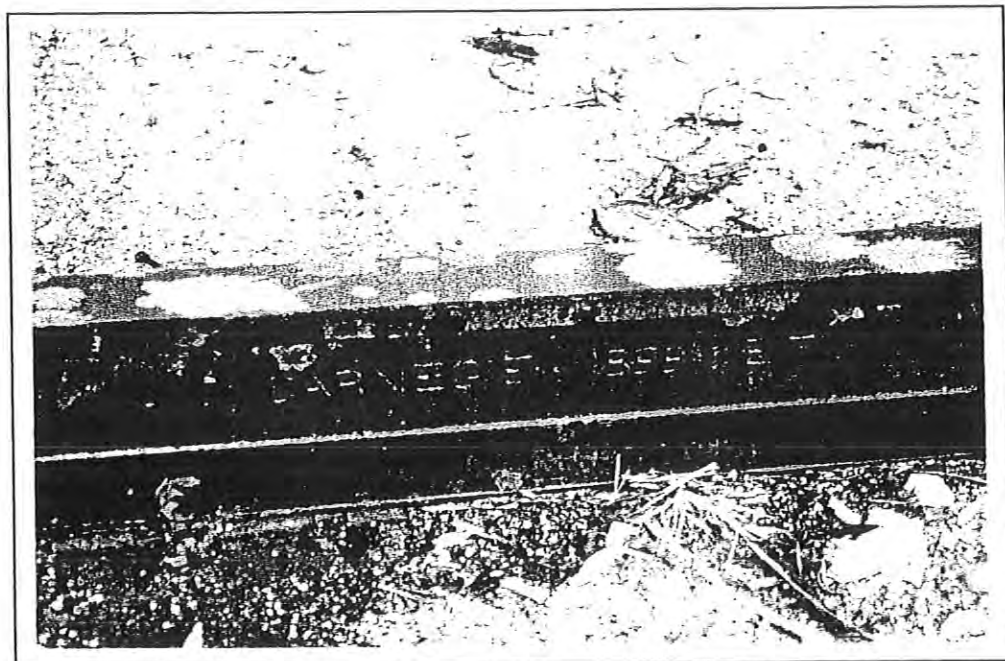
View: SE

Accession #
PZBD_010.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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Page 106 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way
*Recorded by: Alexander D. Bevil *Date: 12 April 2001 ☒ Continuation ☐ Update



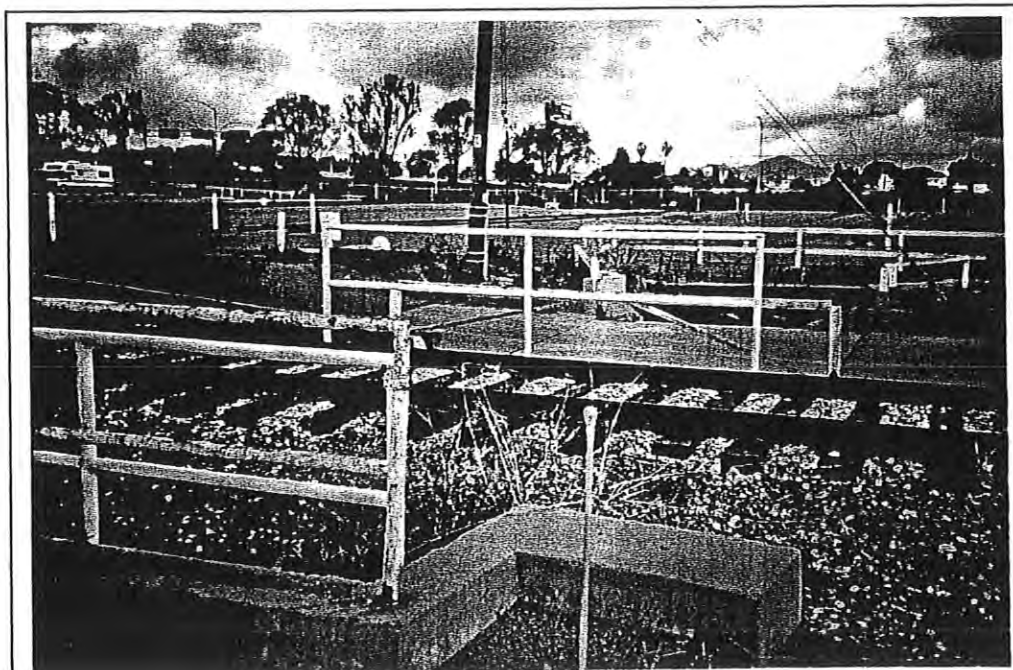
Photograph #7d

Point 7d

Close up of Rail
Stamped "CARNEGIE
1899"
Location: Right-of-
Way through Former
Rohr Aircraft Plant
South of Gate #19

Accession #
PZBD_011.JPG

View: East



Photograph #8d

Point 8d

Concrete Culvert
South of H Street
Crossing through
Former Rohr Aircraft
Plant South of Gate #19

View: Looking SW

Accession #
PZBD_012.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

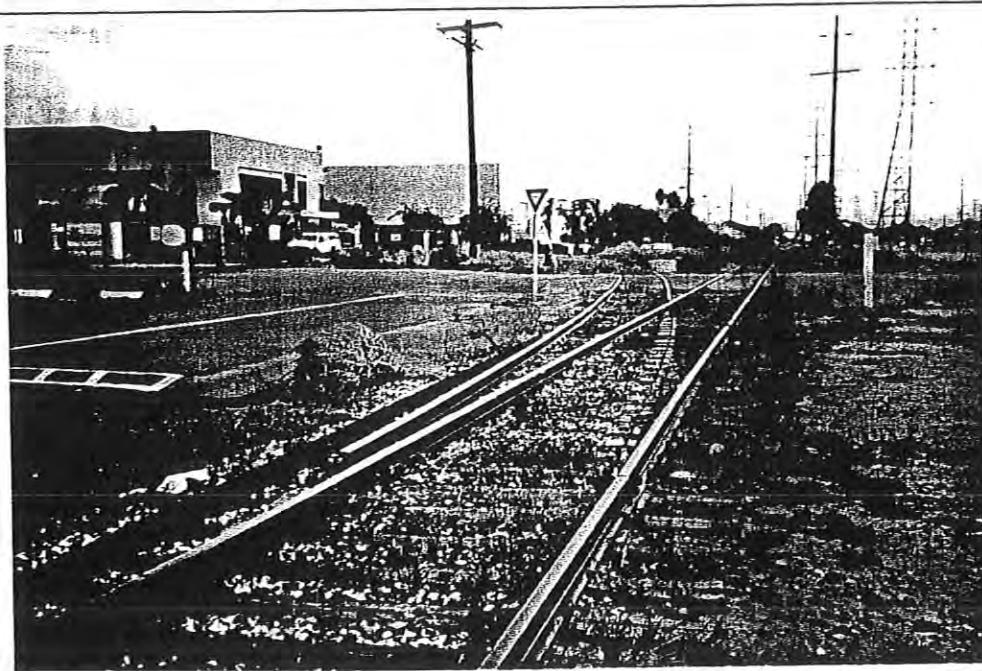
Photograph #9d

Point 9d

Left-hand Turnout in
former Rohr Aircraft
Plant at I St.. Crossing
Note Missing Right
Running Rail

View: Looking SE

Accession #
PZBD_013.JPG



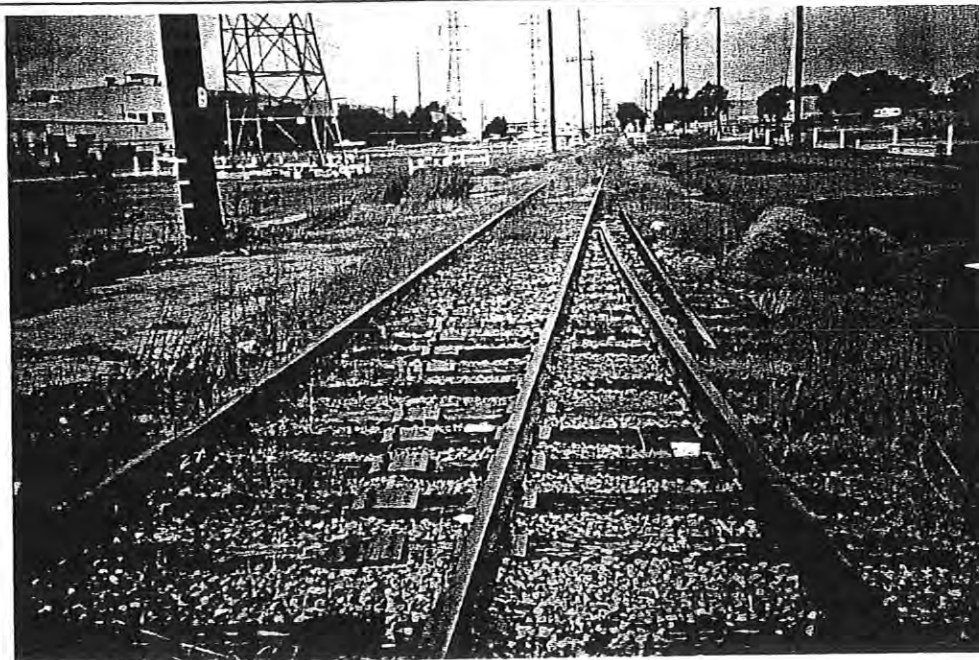
Photograph #10d

Point 10d

Left-hand Turnout
With Missing Running
Rail to Right of Left
Running Rail

View: Looking NW

Accession #
PZBD_014.JPG



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
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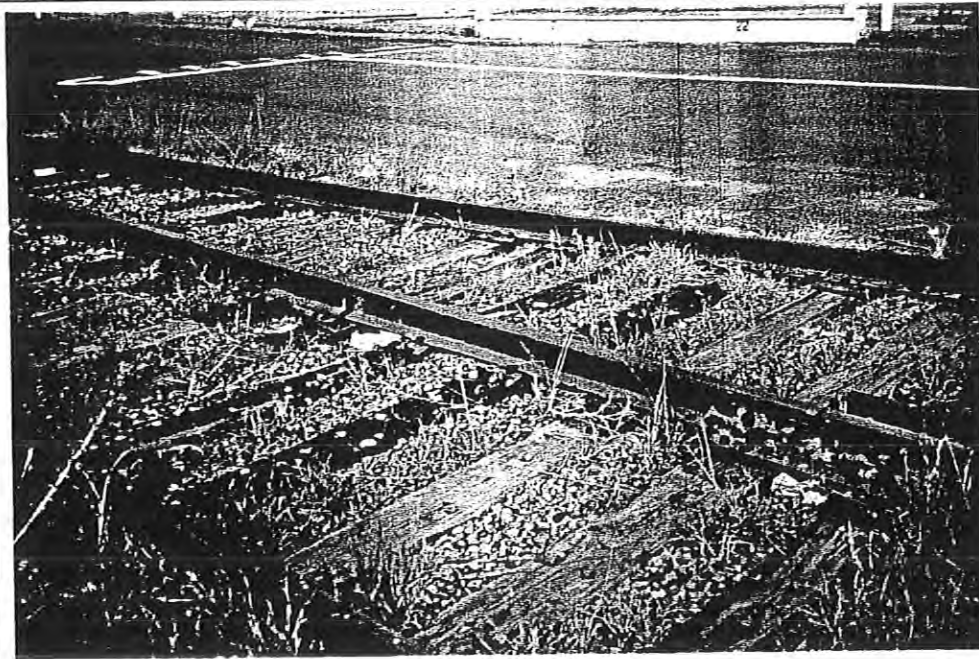
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*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #11d

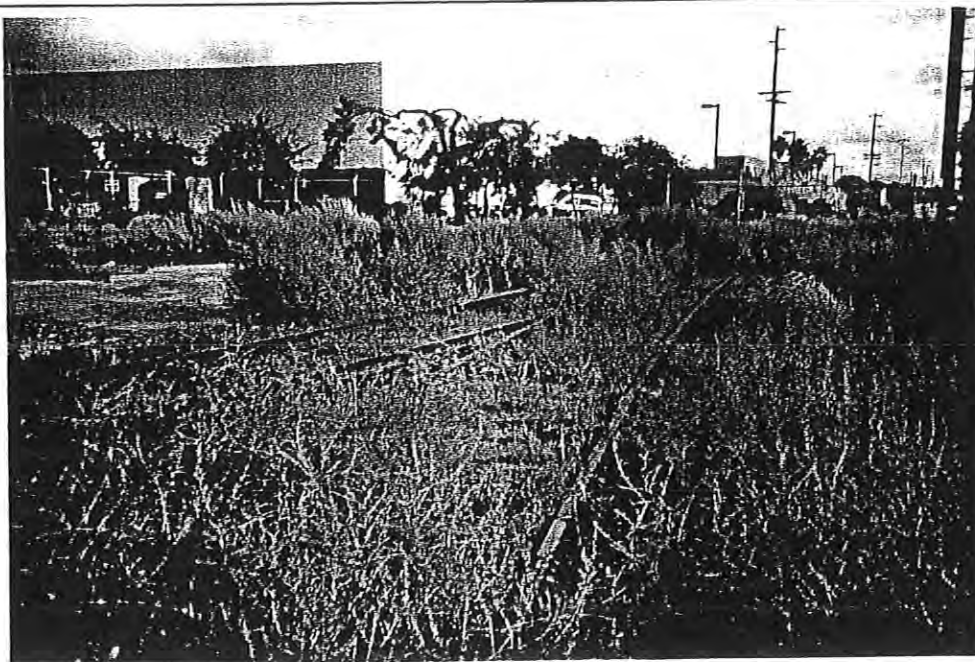
Point 11d

Left-hand Turnout
Switch Point
Rail Stamped "OH
TENNESSEE-90 20-
ARA-A-1925"

Rail Stamped "OH
TENNESSEE-90 20-
ARA-A-1925"

View: Looking NE

Accession #
PZBD_015.JPG



Photograph #12d

Point 12d

Left-hand Turnout
South Rohr Parking Lot
North of Locked Gate at
I St.

View: Looking SE

Accession #
PZBD_016.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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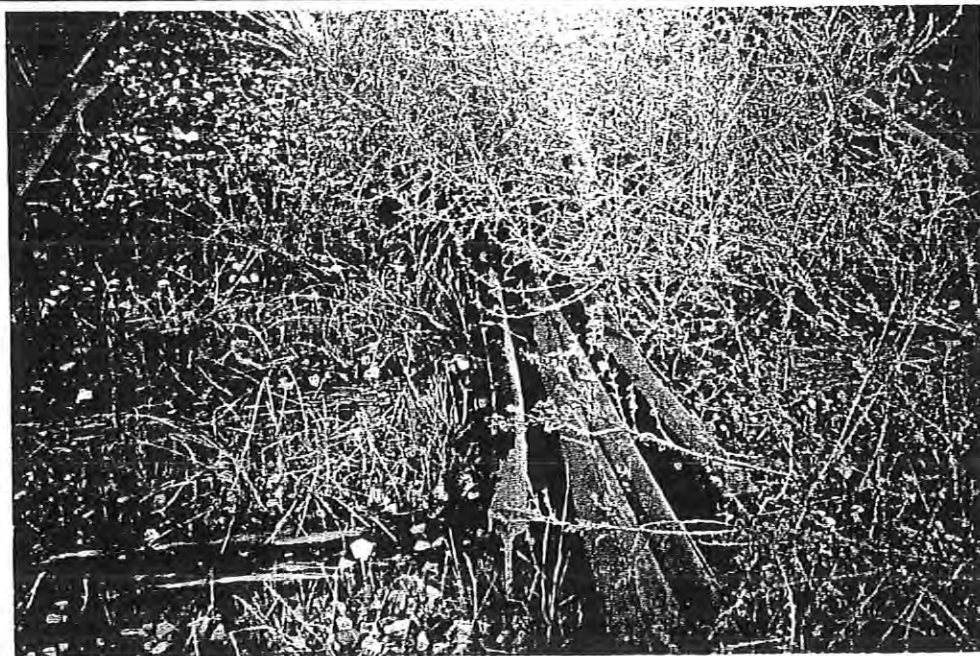
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*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



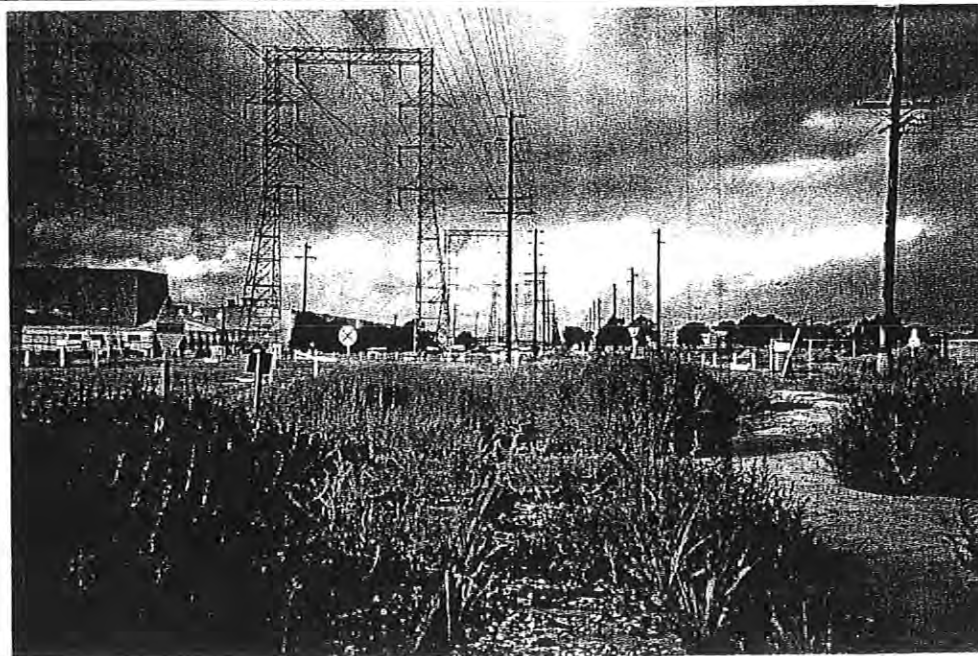
Photograph #13d

Point 13d

Left-hand Turnout
South Rohr Parking Lot
North of Locked Gate
Close up of X-ing Frog

View: Looking South

Accession #
PZBD_017.JPG



Photograph #14d

Point 14d

Left-hand Turnout
South Rohr Parking Lot
North of Locked Gate at
I St.
Upright Manual Switch
Mechanism on Left

View: Looking NE at
Parking Lot from
Locked Gate

Accession #
PZBD_019.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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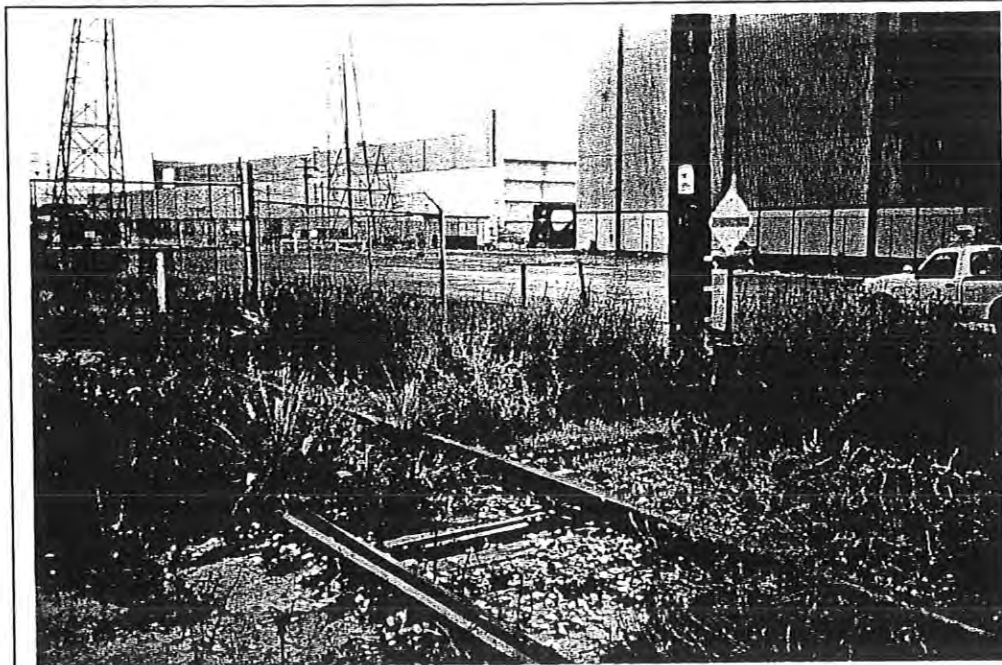
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



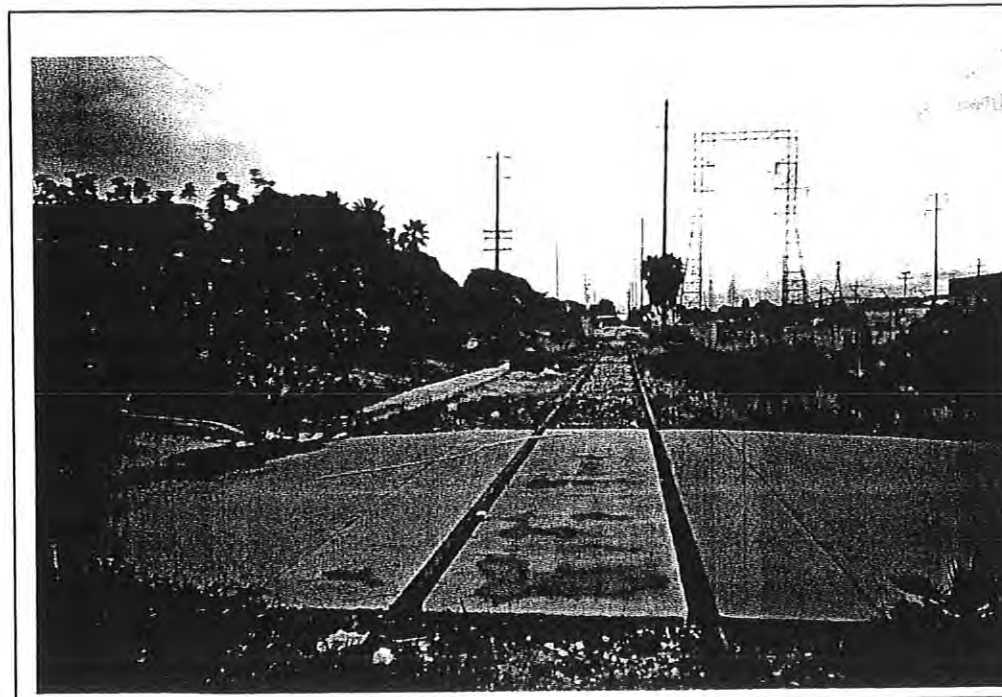
Photograph #15d

Point 15d

Upright Manual Switch
Mechanism at Switch
Point
Left-hand Turnout
South Rohr Parking Lot
North of Locked Gate at
I Street

View: Looking SW

Accession #
PZBD_018.JPG



Photograph #16d

Point 16d

Continuation of Right-
of-Way at Private
Crossing SE of I St.

View: Looking SE

Accession #
PZBD_020.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



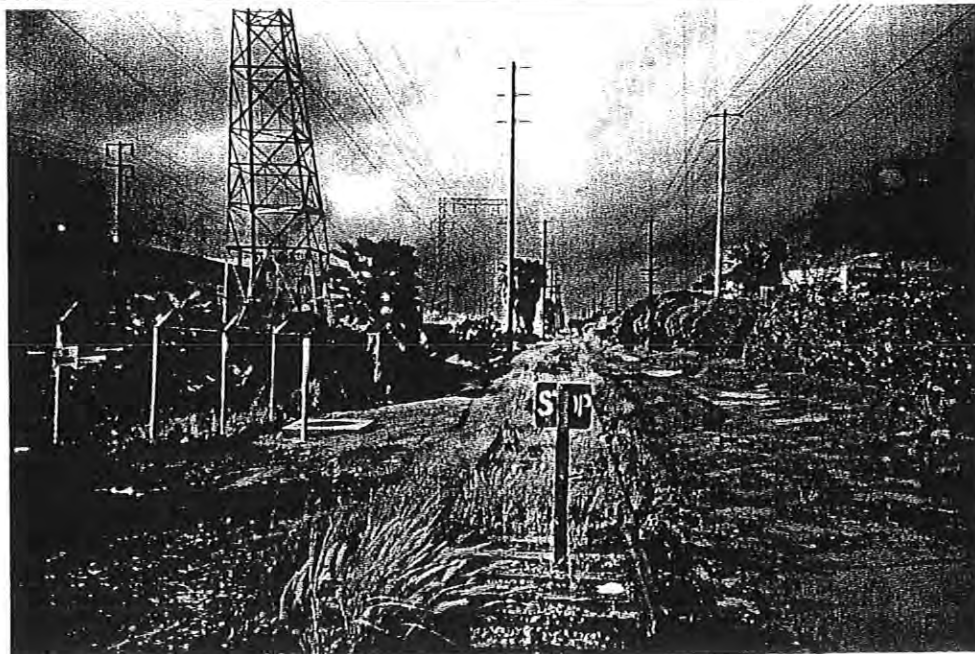
Photograph #17d

Point 17d

Continuation of Right-of-Way South of I St. toward Marina Parkway

View: Looking SE

Accession #
PZBD_021.JPG



Photograph #18d

Point 18d

North Approach to Marina Parkway Crossing

View: Looking NW

Accession #
PZBD_022.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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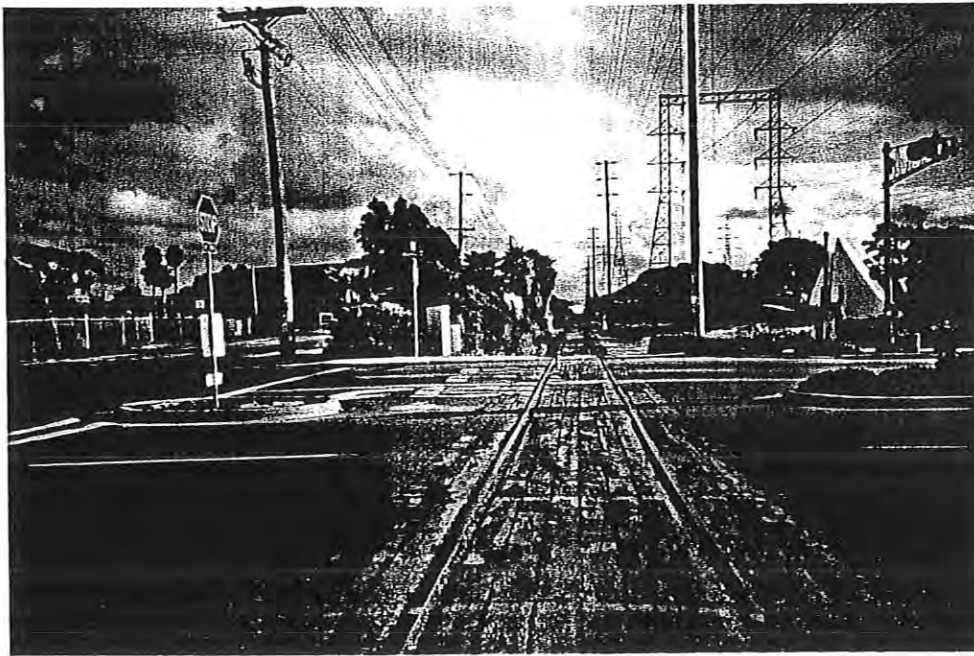
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*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



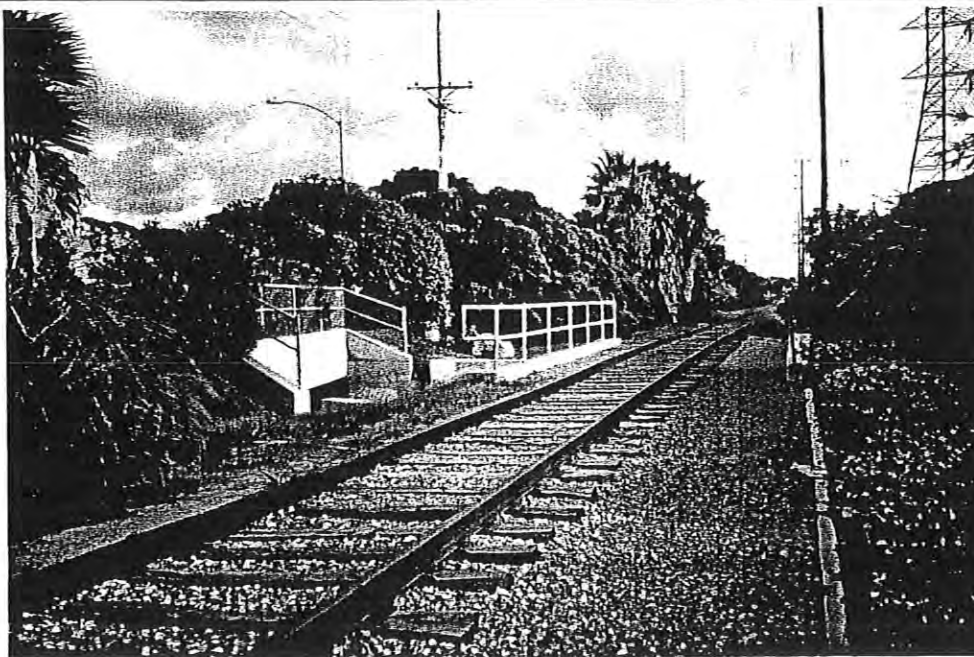
Photograph #19d

Point 19d

Marina Parkway
(formerly J St.) Crossing

View: Looking SE

Accession #
PZBD_023.JPG



Photograph #20d

Point 20d

Culvert South of Marina
Parkway Crossing

View: Looking SE

Accession #
PZBD_025.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 113 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way
*Recorded by: Alexander D. Bevil *Date: 12 April 2001 ☒ Continuation ☐ Update

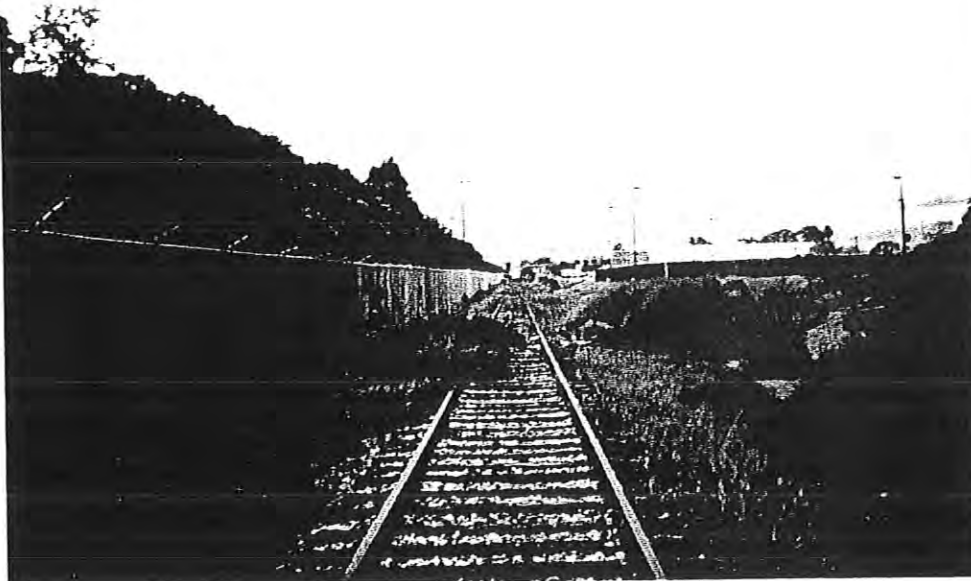
Photograph #21d

Point 21d

Right-of-Way between
Marina Parkway
Crossing and K St.

View: Looking SE

Accession #
MHKE_002.JPG



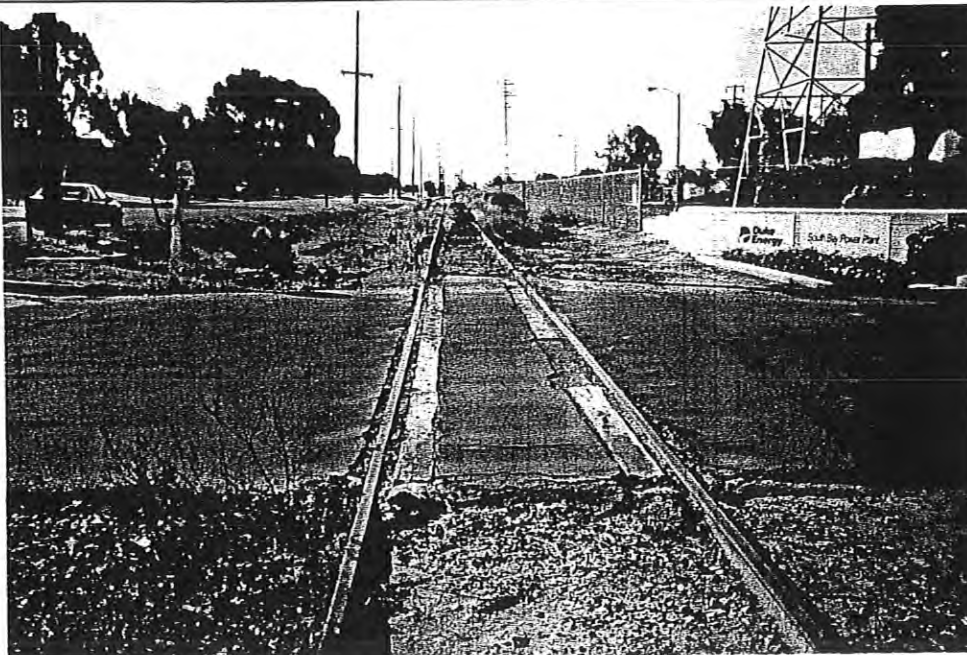
Photograph #22d

Point 22d

Private Crossing into
Duke Energy's South
Bay Plant (Former San
Diego Gas & Electric)
SE of L St.

View: Looking SE

Accession #
MHKE_010.JPG



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

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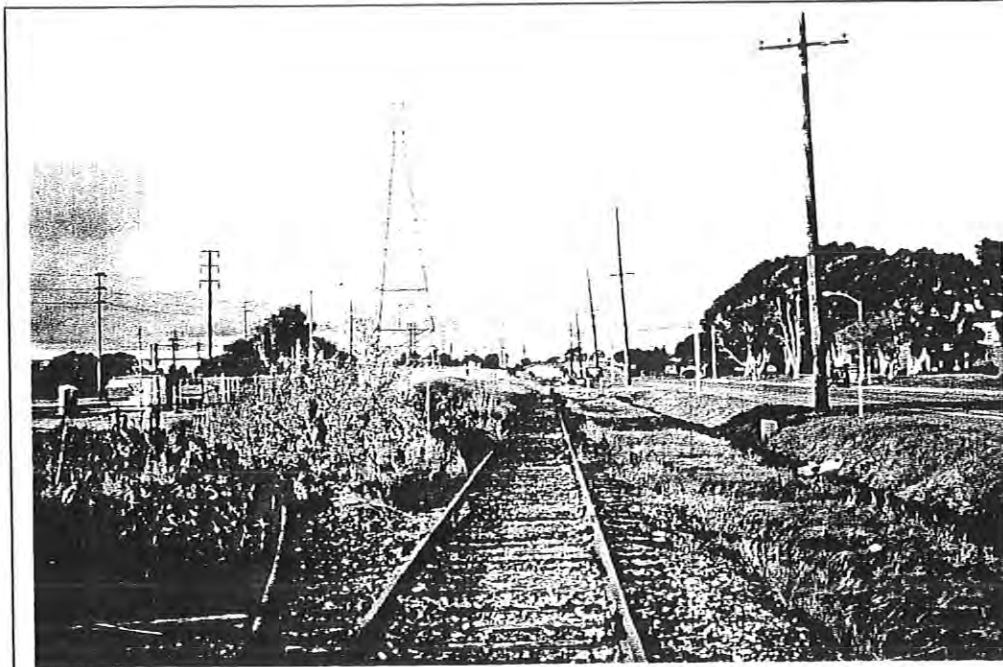
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #23d

Point 23d

Right-of-Way South of
Duke Energy Crossing
Bay Blvd. on Right

View: Looking NW

Accession #
MHKE_006.JPG



Photograph #24d

Point 24d

Left-hand Turnout
Switch Entering
Duke Energy Plant
North of Palomar St.

View: Looking NW

Accession #
MHKE_004.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

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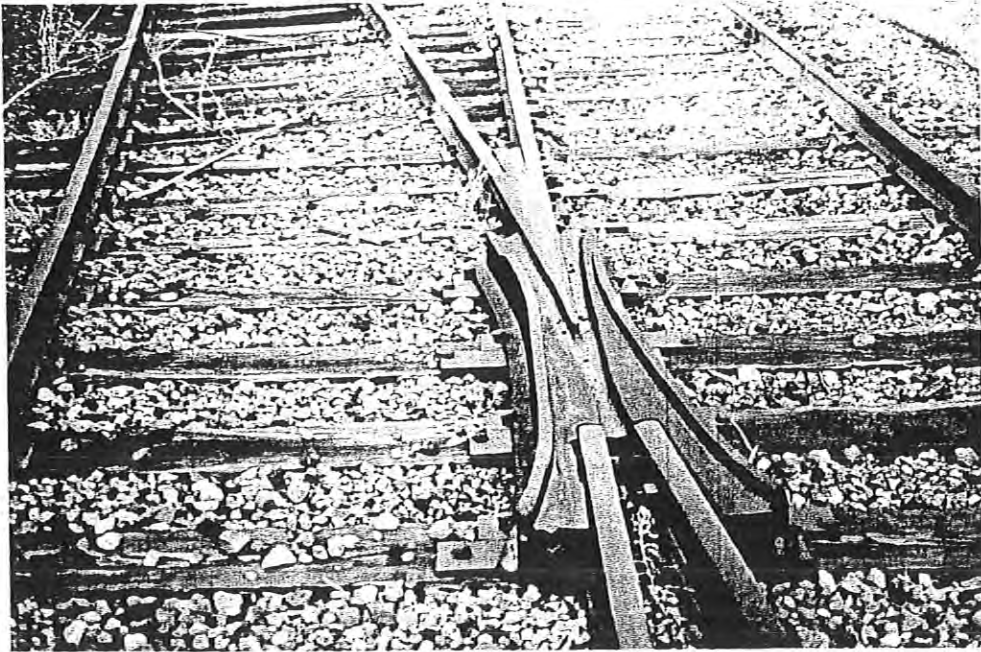
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



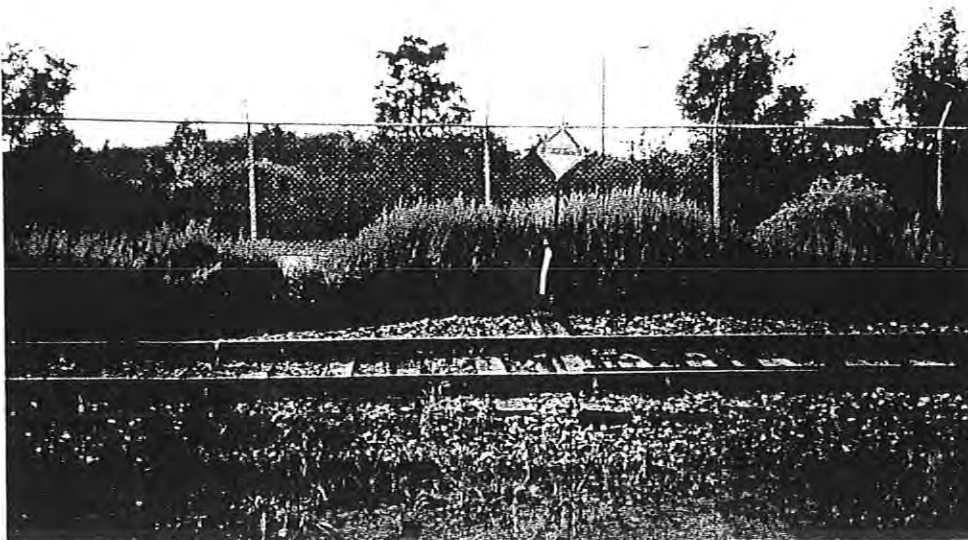
Photograph #25d

Point 25d

Close up of X-ing Frog

View: Looking North

Accession #
MHKE_005.JPG



Photograph #26d

Point 26d

Left-hand Turnout
Switch Point
Note Upright Manual
Switch Mechanism

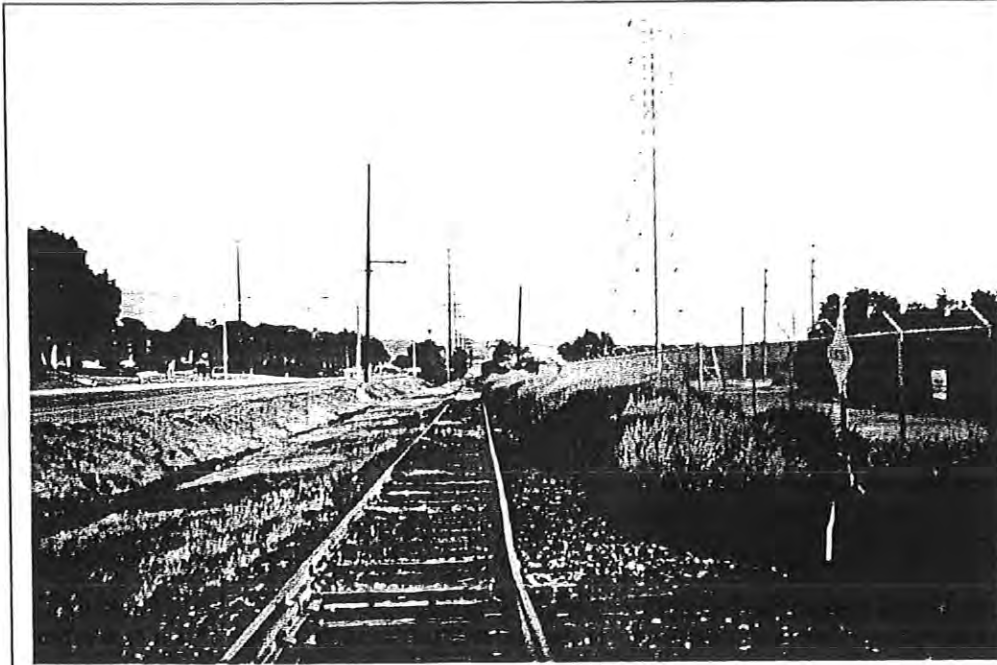
View: Looking West

Accession #
MHKE_003.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 116 of 149 *Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way
*Recorded by: Alexander D. Bevil *Date: 12 April 2001 ☒ Continuation ☐ Update



Photograph #27d

Point 27d

Right-of-Way South of
Switch Point

View: Looking SE

Accession #
MHKE_007.JPG



Photograph #28d

Point 28d

Unused Wood Plank
Track Crossing NW of
Palomar St. near 1120
Bay Blvd.

View: Looking SE

Accession #
MHKE_012.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

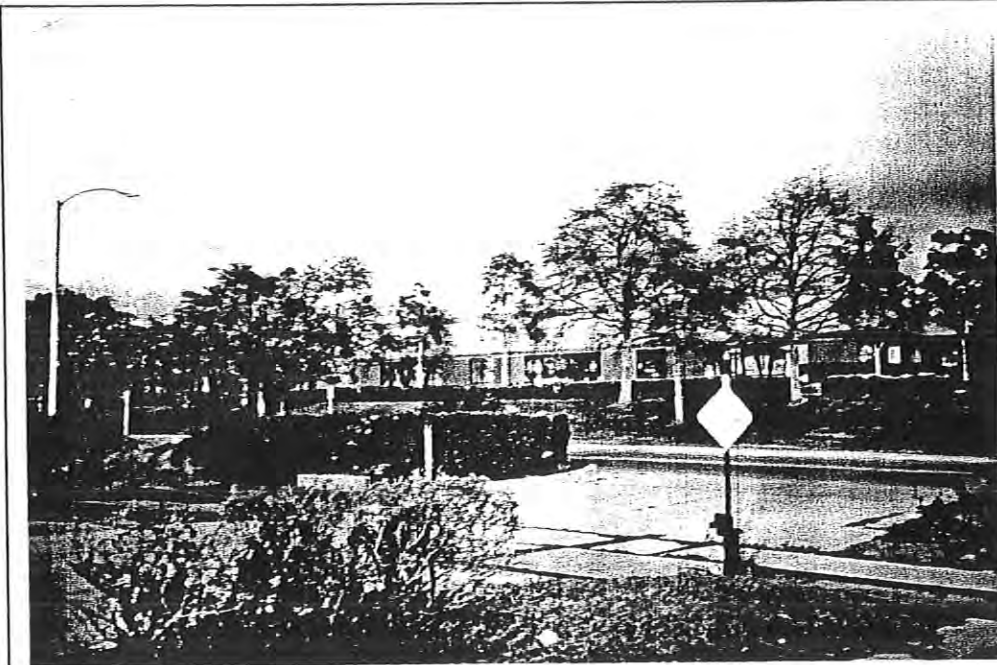
Photograph #29d

Point 29d

Upright Manual Switch
Mechanism at Right-
hand Turnout adjacent
to Private Driveway
Leading to 1120 Bay
Blvd. NE of Palomar St.

View: Looking NE

Accession #
MHKE_008.JPG



Photograph #29d

Point 29d

Right-hand Turnout SE
of Switch Junction
Leading to Abandoned
Siding

View: Looking SE

Accession #
MHKE_009.JPG



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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Primary #:
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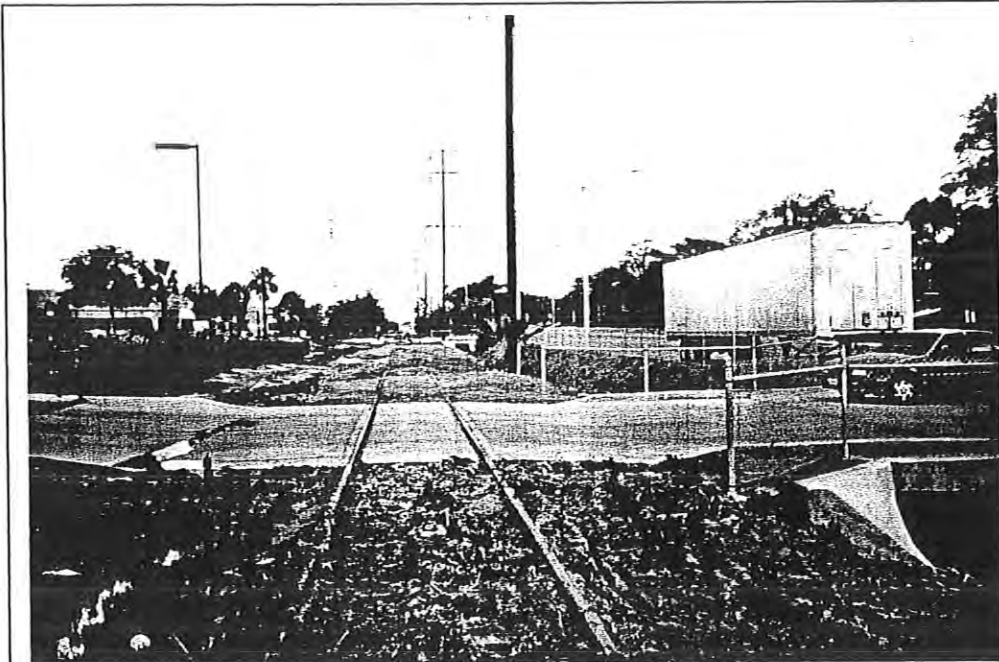
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #31d

Point 31d

Private Track Crossing
North of L Street

View: Looking NW

Accession #
MHKE_014.JPG



Photograph #32d

Point 32d

Track Crossing West of
Intersection of L Street
and Bay Blvd. West
Terminus of Segment D

Accession #
MHKE_015.JPG

View: Looking SE at
Salt Works and End of
Section D

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary #:

HRI #:

Trinomial

Page 119 of 149 Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way / Segment E

L1. Historic and/or Common Name: Coronado Railroad Belt Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: Structure—Railroad Right-of-Way

b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map): 491200mE / 3606900mN to 489160mE / 3605485 mN. See Continuation Sheet for more information.

L3. Description (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate): This 40'-wide, 1.5-mile segment, which consists of standard gauge steel rails affixed to wooden ties by steel plates and spikes, is closely associated with one of the most historic industries situated along the Rt-of-Wy. Beginning at a point some 10' west of the intersection of Palomar St. and Bay Blvd., the resource travels in a SEly direction along the SE quadrant of San Diego Bay along and across the historic salt ponds of the Western Salt Works. Organized in 1902, the 99-yr old salt processing plant is the oldest continuously operating businesses in the South Bay area. The symbiotic relationship between the Coronado Railroad and the salt works can be seen along the Rt-of-Wy. This includes right and left-hand turnouts and upright switch mechanisms associated with a partially buried non-functioning siding, and the vestiges of a narrow-gauge railroad crossing. Also associated with this segment is a 1-mile-long raised earthen causeway, which carries the Rt-of-Wy between two salt evaporation ponds to the Otay River trestle crossing. Approximately 210' long, the wooden timber trestle is in relatively good condition; however, a section of the SW earthen abutment has been removed, reportedly to prevent illegal aliens from using the causeway.

L4. Dimensions (In feet for historic features, and meters for prehistoric features):

a. Top Width: 5' 1½"-track gauge on a 40'-100'-wide Rt-of-Way

b. Bottom Width: N/A

c. Height or Depth: At street level, from 3' to 15' above seal level

d. Length of Segment: 1.5 mile

L4e. Sketch of Cross-Section (include scale)

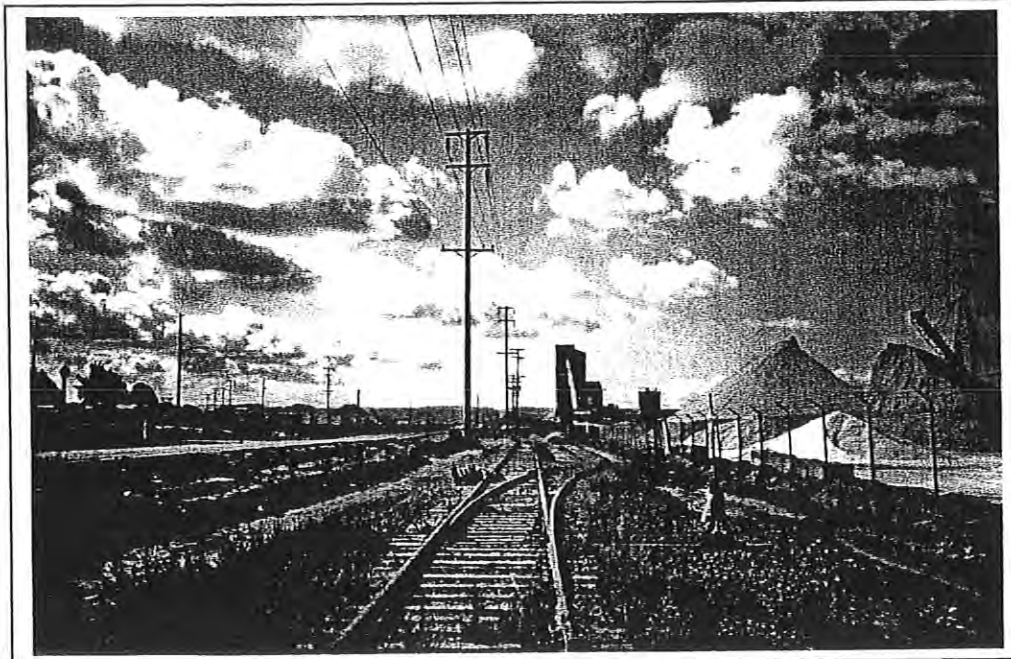
Facing:

See Continuation Sheet

L5. Associated Resources: There are no previously recorded resources historically associated with the use of this resource.

L6. Setting (Describe natural features, landscape characteristics, slope, etc., as appropriate.): The resource extends through a landscape of scattered single-family residences and a series of salt evaporation ponds to the mouth of the Otay River that has remained relatively unchanged for a number of years.

L7. Integrity Considerations: Although no longer used for commercial rail transportation purposes, the right-of-way has retained its historic integrity in terms of setting, location, feeling, and materials associated with a historic railroad line that contributed to the area's development.



L8b. Description of ☒ Photo

☐ Map ☐ Drawing (View, scale, etc.): # 9a Accession #

MHKE_020.JPG; View:

Looking SE at Rt-hand Turnout Switch Leading to Salt Works Siding, 10 Feb 01

L9. Remarks: The resource is in fair to good condition

L10. Form Prepared by (Name, Affiliation, and Address):

Alexander D. Bevil

Save Our Heritage

Organisation

4752 Mt. Longs Drive

San Diego, CA 92117

L11. Date: 12 April 2001

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

L2b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map):

Segment E

UTM Coordinates: 491200mE / 3606900mN to 489160mE / 3605485 mN

A Segment of a Railroad Right-of-Way from a Point west of the Intersection of Palomar Street and Bay Boulevard, Chula Vista, California, then SEly to a Point at the Northern Terminus of Cypress Ave., Imperial Beach, California.

Legal Description

APN 621-010-02

Status: Non-taxable

Legal Description: 5.01 ACRES IN PAR 3 PER SBE (State Board of Equalization) MAP 863-37-23 IN POR OF SEC 16-T 18 S-R 2W

Acres: 1.43

Adjacent Land Zoning: M SPEC/MISC IND

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

Metropolitan Transit Development Board (MTDB)

1255 Imperial Avenue, Suite 1000

San Diego, CA 92101-7490

APN 621-020-02

Legal Description: 5.01 ACRES IN PAR 4 PER SBE MAP 863-37-23 IN SEC 21-T18 S-R 2W-POR W 1/2

Acres: 5.01

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 621-020-03

Legal Description: 0.98 ACRES IN PAR 5 PER SBE MAP 863-37-23 IN SEC 21-T18 S-R 2W-POR W 1/2

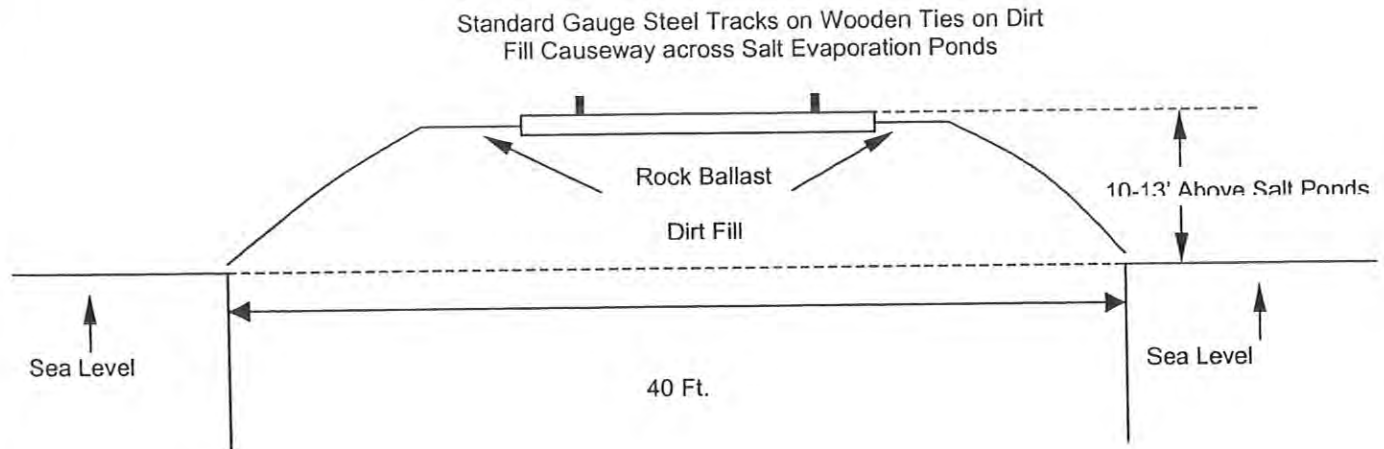
Acres: 0.98

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

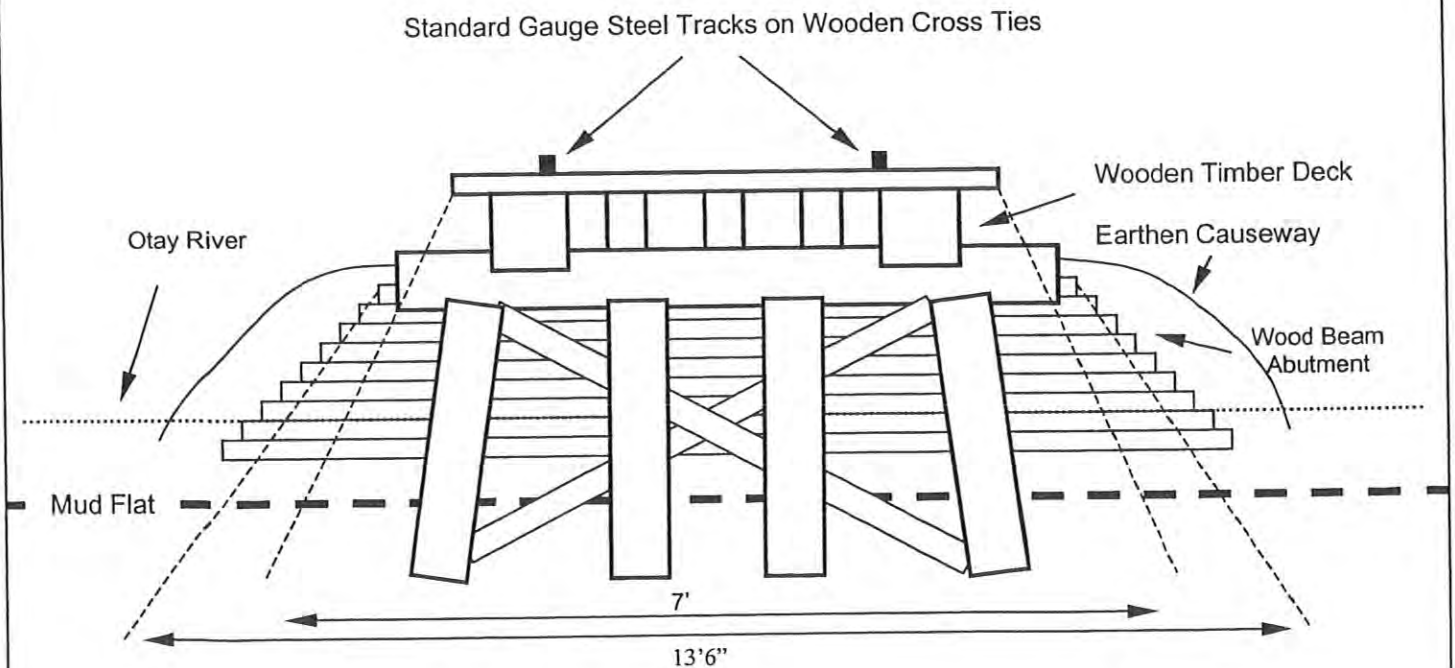
c/o

MTDB

L4e. Sketch of Cross-Section (include scale) Facing: Southeast



Point # 15e Elevated Roadbed through La Punta Salt Evaporation Ponds
Sketch Not to Scale



Point 17e Wooden Trestle #4 Crossing Otay River
Sketch Not to Scale

SKETCH MAP E

Primary #:
HRI#

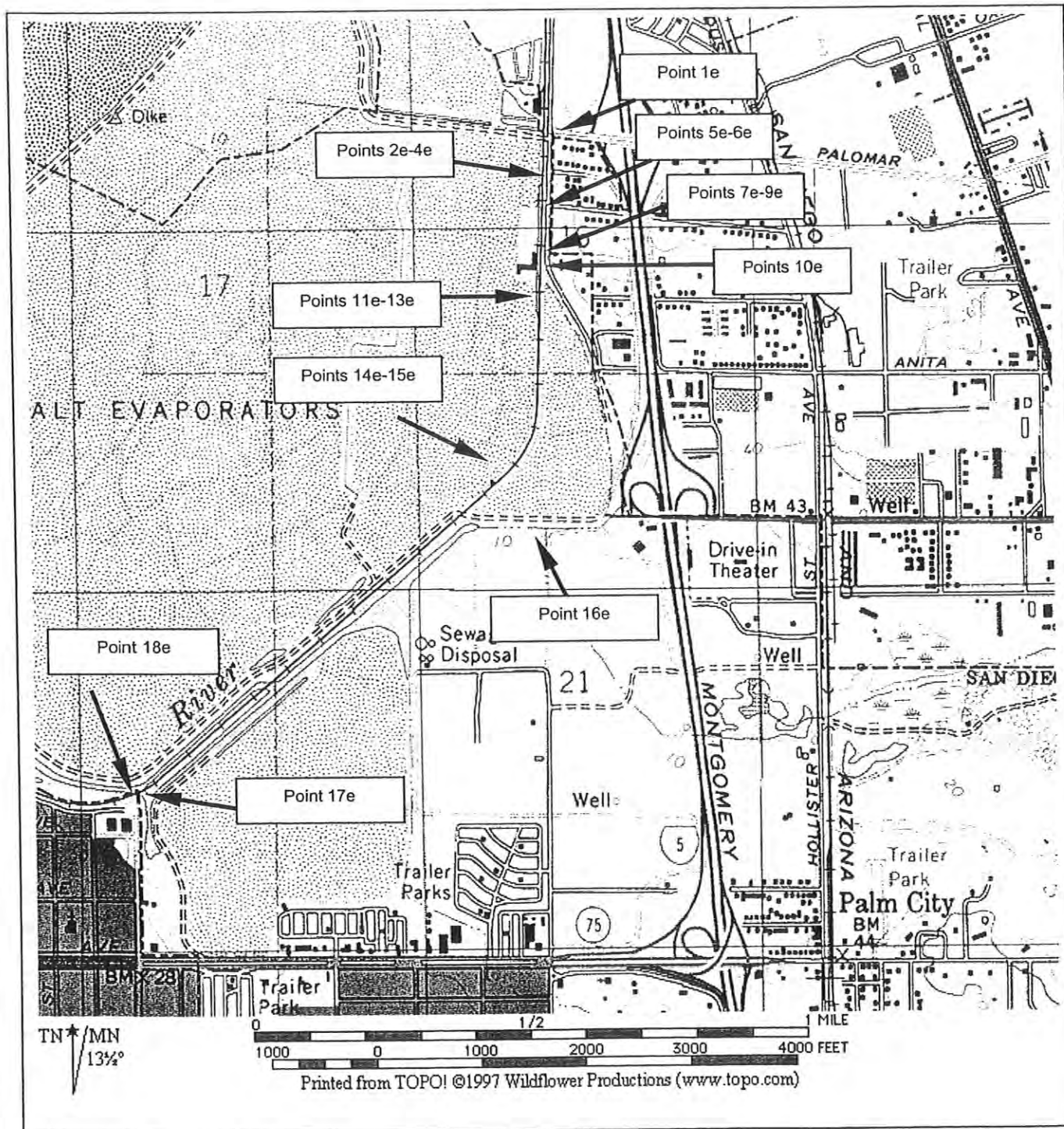
Trinomial:

Page 122 of 149
*Map Name: Segment E Points

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Scale: 1"=24,000m

*Date of Map: 12 April 2001



Images: 300 DPI JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



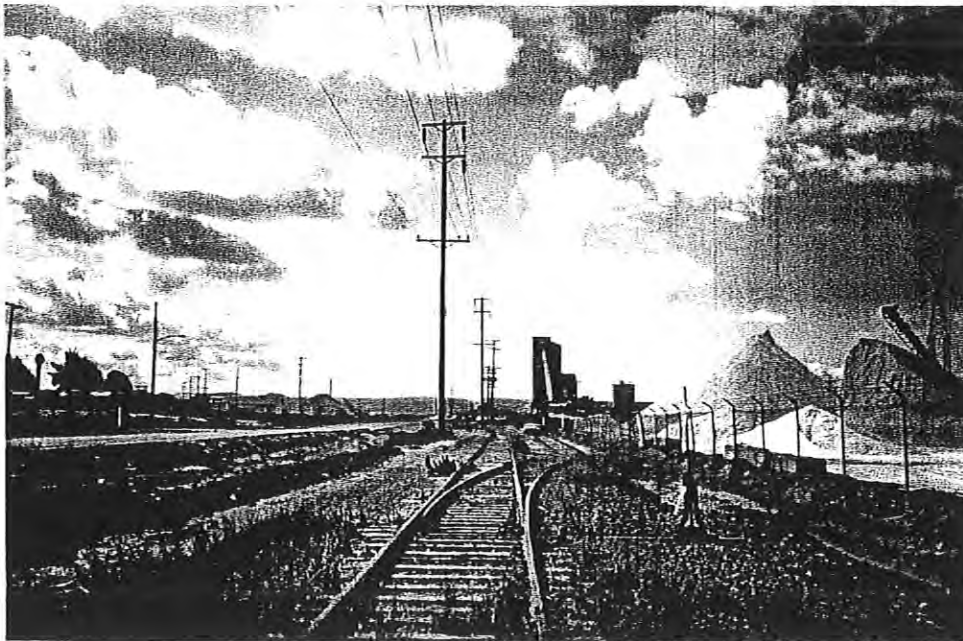
Photograph #1e

Point 1e

Start of Section E
Tracks Crossing
Concrete Culvert
Adjacent to NE Salt
Pond SW of
Intersection of Palomar
St. and Bay Blvd.

View: Looking West

Accession #
MHKE_017.JPG



Photograph #2E

Point 2E

Approaching Right-hand
Turnout and Switch
Point Leading to Salt
Works Siding
Note Upright Manual
Switch at Right

View: Looking SE at
Salt Plant

Accession #
MHKE_020.JPG

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DEPARTMENT OF PARKS AND RECREATION
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Primary #:
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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

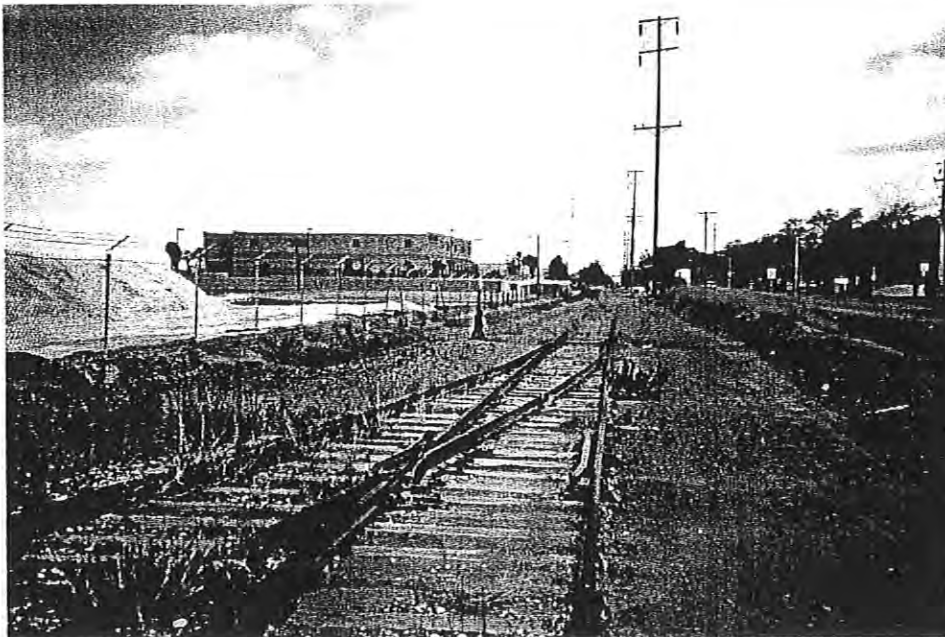


Photograph #3e

Point 3e

Close up of Switch
Point at Salt Works
Siding
Directly Adjacent to
Bay Blvd. between
Stella and Ada Belle
Sts.

View: Looking West at
Salt Mound



Photograph #4e

Point 4e

Right-hand Turnout
and Switch Junction
Leading to Salt
Works Siding, X-
Crossing Frog and
Check Rails

View: Looking NW

Accession #
MHKE_018.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

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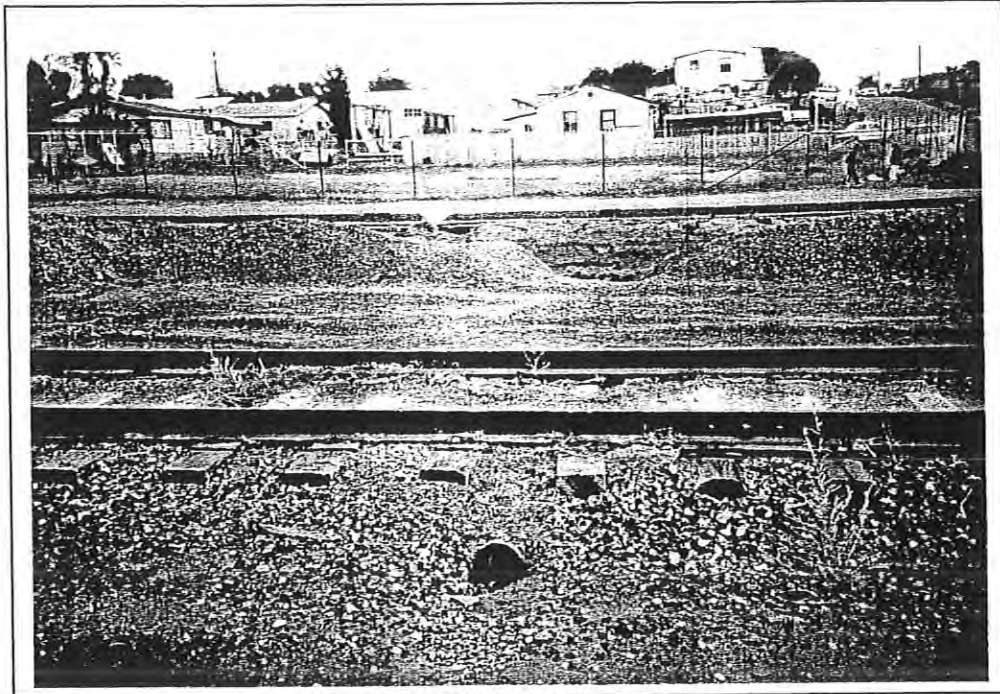
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #5e

Point 5e

Tracks SE of Switch
Turnout Crossing
Corrugated Pipe
Culvert

View: Facing East

Accession #
MHKE_021.JPG



Photograph #6e

Point 6e

Tracks SE of Switch
Turnout Passing
along Unused
Asphalt Driveway
Salt Works Siding
Tracks at Lower
Right

View: Looking East

Accession #
MHKE_023.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



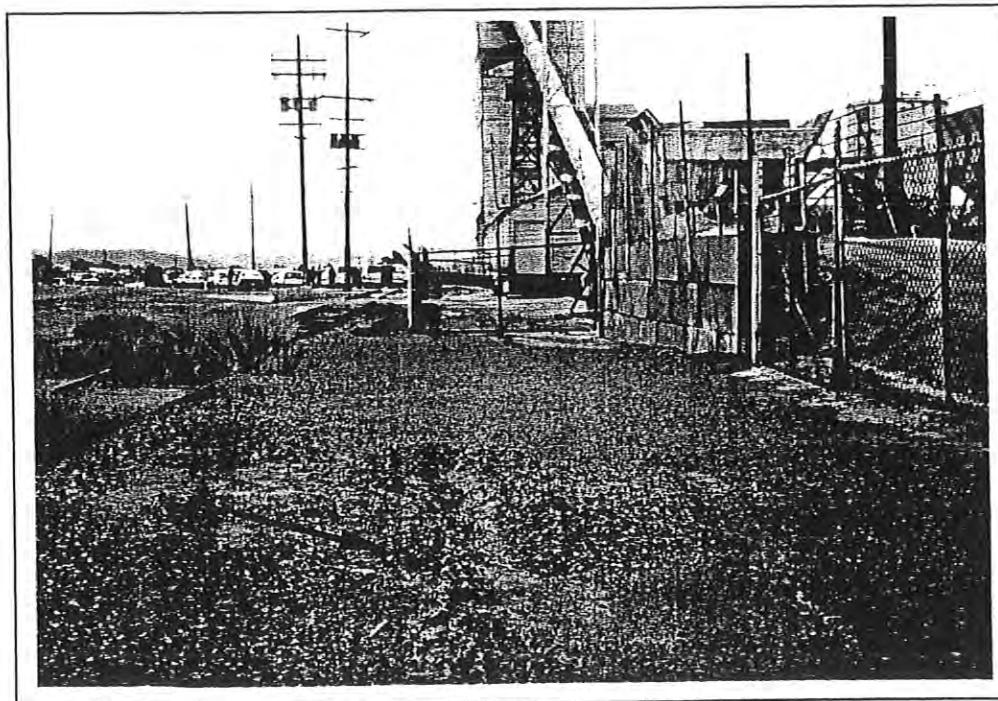
Photograph #7e

Point 7e

Tracks SE of Salt
Works Siding Switch
Junction
Main Line at Left
Siding at Right

View: Looking SE at
Salt Plant

Accession #
NN3P_001.JPG



Photograph #8e

Point 8e

Covered over Siding
Tracks alongside
Salt Works

Note Impressions of
Buried Siding Track
between Main Line
at Left and Gate at
Right

View: SE

Accession #
MHKE_025.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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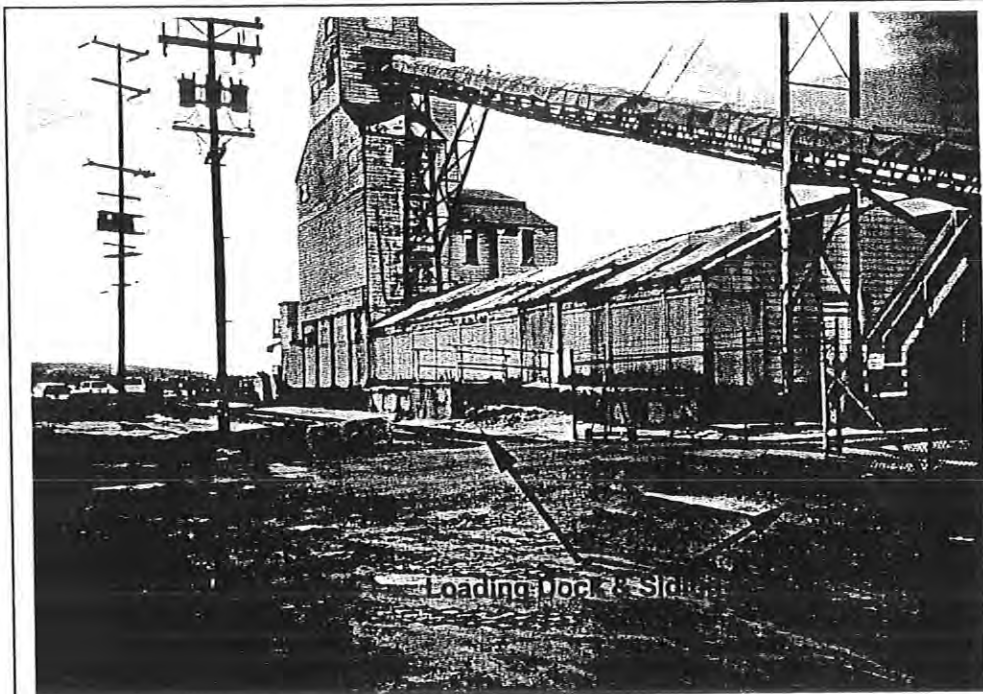
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #9e

Point 9e

Western Salt Works
Note Loading Dock
Siding Tracks Partially
Covered by
Decomposed Granite
Pavement

View: Looking SW

Accession #
MHKE_024.JPG



Photograph #10e

Point 10e

Remains of
Western Salt
Works Narrow
Gauge "H"
Railroad Crossing
over Coronado
Railroad Main Line

View: Looking
West

Accession #
MMGF_004.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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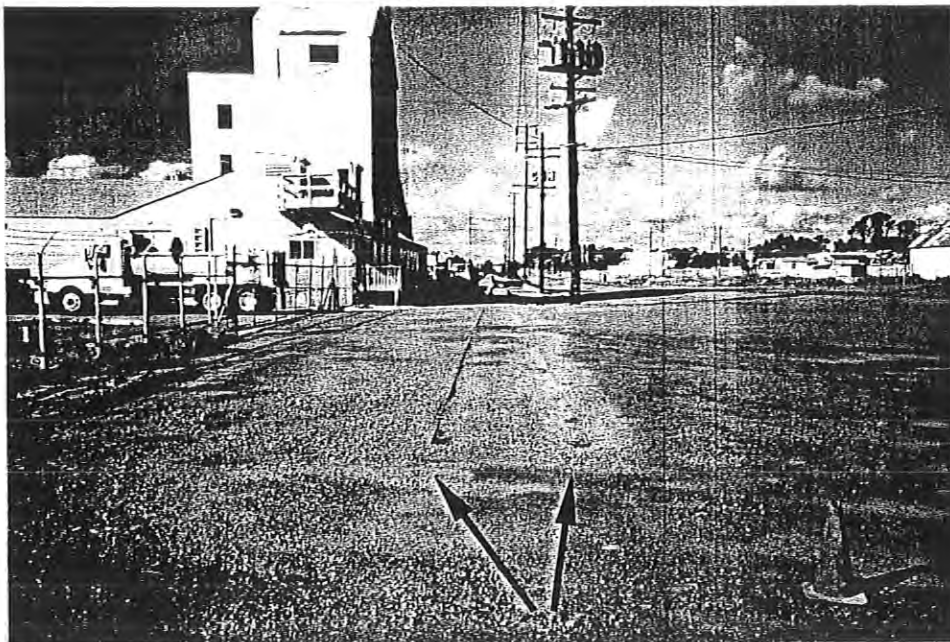
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



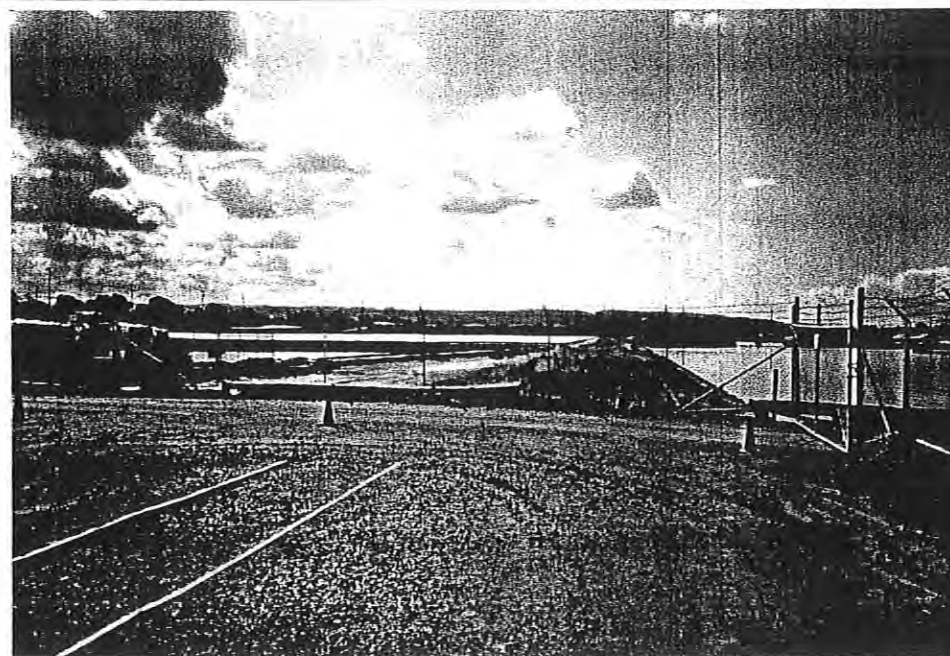
Photograph #11e

Point 11e

Partially Covered
Tracks SE of Salt
Works Approaching
Salt Pond Causeway

View: Looking NW

Accession #
MMGF_003.JPG



Photograph #12e

Point 12e

Approaching La Punta
Salt Evaporation
Ponds Causeway

View: Looking SE

Accession #
NN3P_003.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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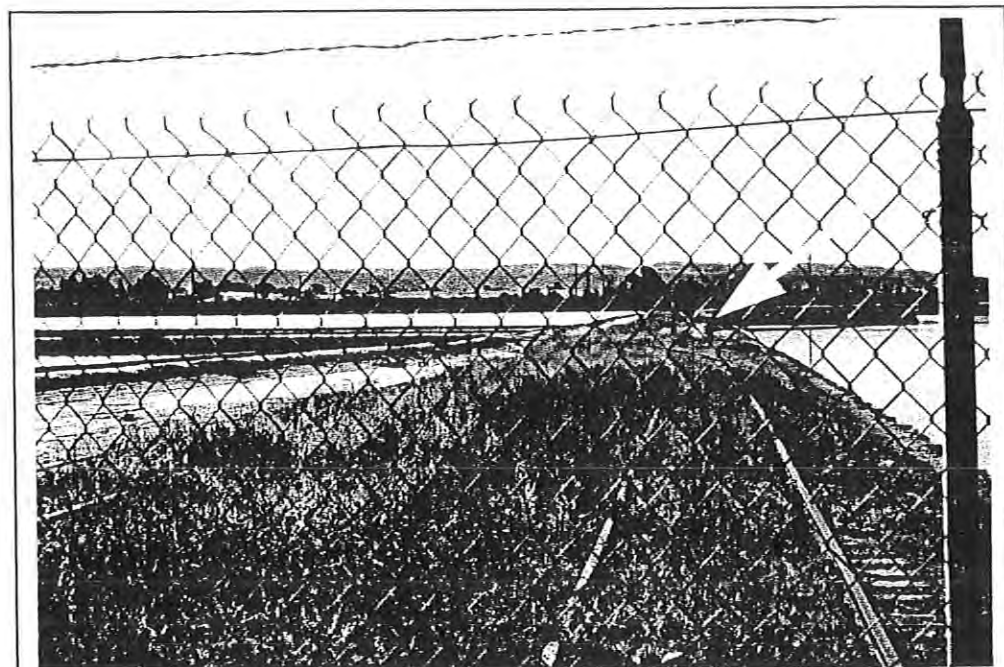
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



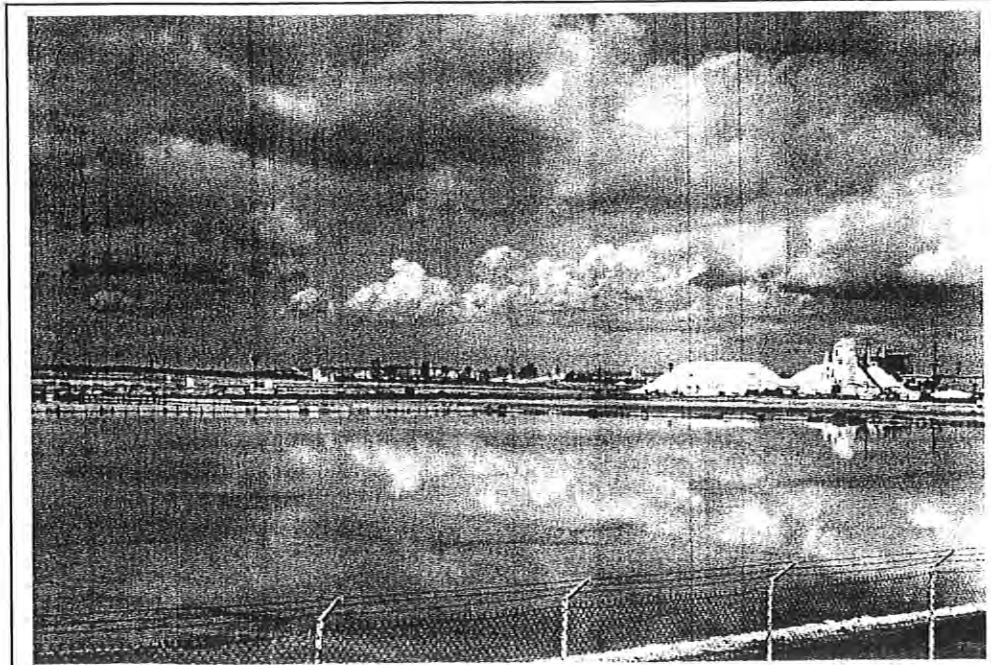
Photograph #13e

Point 13e

Earthen Causeway
through Salt Ponds
Arrow Pointing to Left-
hand Turnout Switch
to Siding
Main Line Obscured
by Weeds on Left

View: Looking SE

Accession #
NN3P_004.JPG



Photograph #14e

Point 14e

Earthen Causeway
Crossing La Punta
Salt Evaporation
Ponds SW of Salt
Plant

View: Looking NW
from Intersection of
Bay Blvd. & Main St.

Accession #
NN3P_005.JPG

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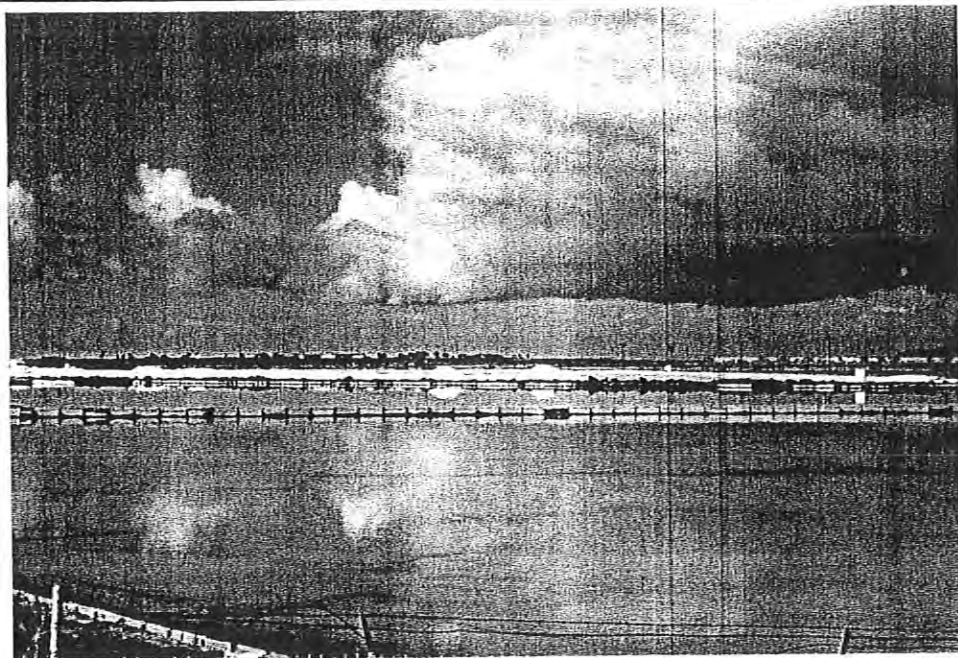
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



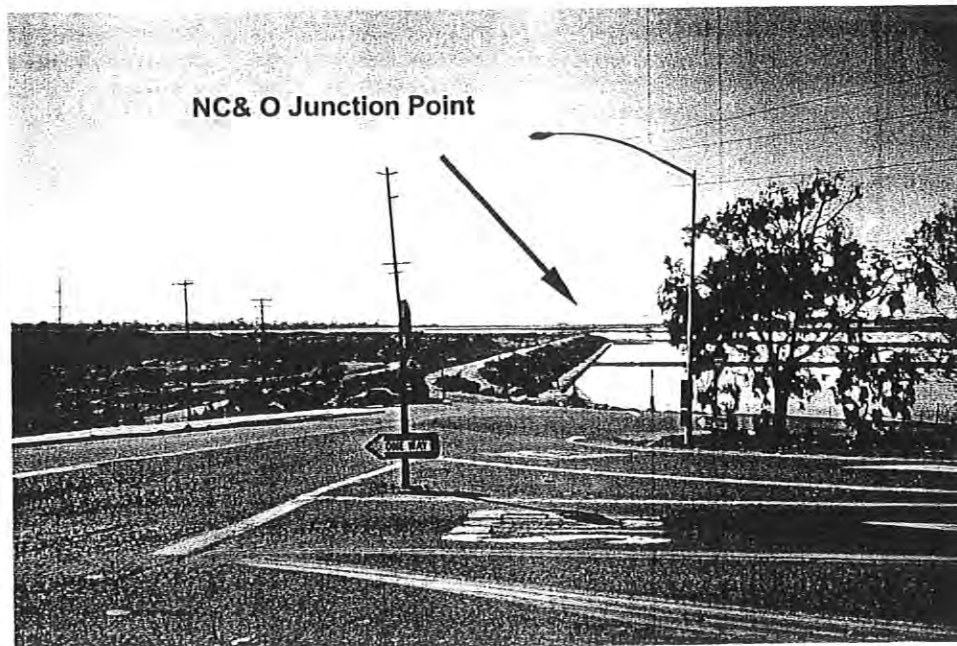
Photograph #15e

Point 15e

Continuation of Earthen Causeway SW of Salt Plant through La Punta Salt Evaporation Ponds

View: Looking West from Intersection of Bay Blvd. & Main St.

Accession #
NN3P_006.JPG



Photograph #16e

Point 16e

Earthen Causeway at Junction of Former Connecting Spur to NC&O Line

View: Looking West

Accession #
MMGF_001.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

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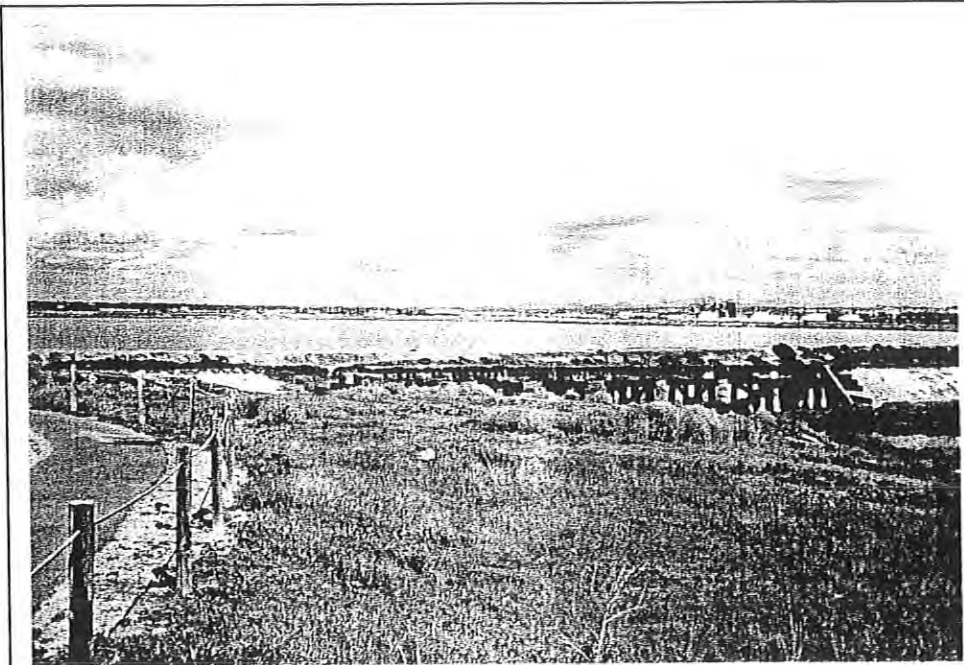
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



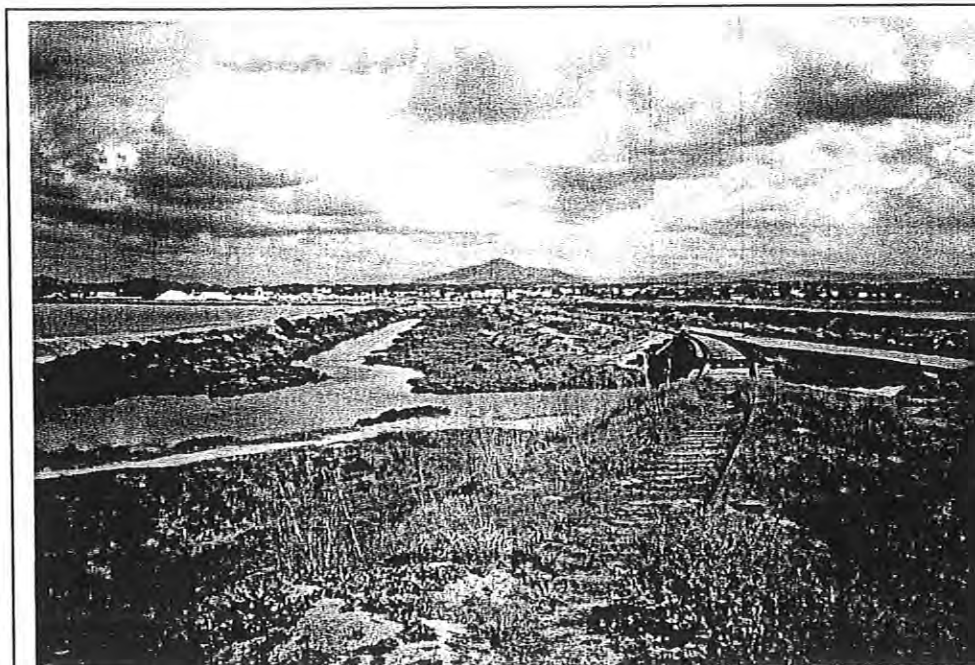
Photograph #17e

Point 17e

SW Terminus of
Earthen Causeway at
Wooden Trestle #4,
Chula Vista
Crossing Otay River
Bicycle Path N of 13th
St. at Lower Left

View: Looking North

Accession #
NN3P_007.JPG



Photograph #18e

Point 18e

SW Terminus of
Segment E at SW
Bank of Otay River
across from Wooden
Trestle #4
Site of Former
Junction of
Connecting Spur Line
to Otay Springs

View: Looking East

Accession #
NN3P_008.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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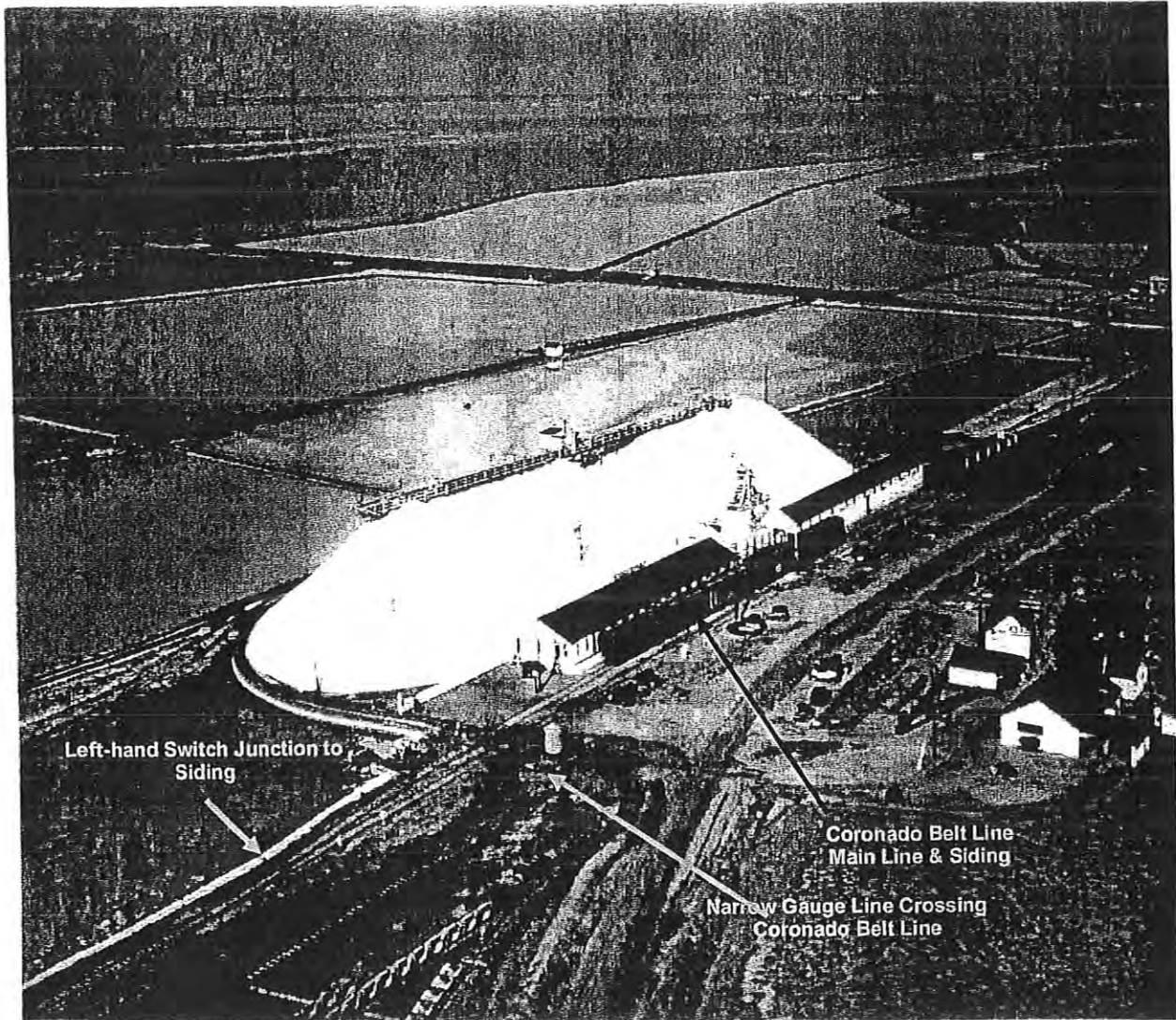
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Aerial View of Western Salt Works, ca. 1934. View: Looking NW

Note: RR Boxcars along Siding East of Warehouses and Salt Pile

Arrow Pointing to H-crossings of Western Salt Works' Narrow Gauge Line to Salt Ponds

Arrow Pointing to Left-hand Switch Junction to Siding

Source: San Diego Historical Society Photograph Archives.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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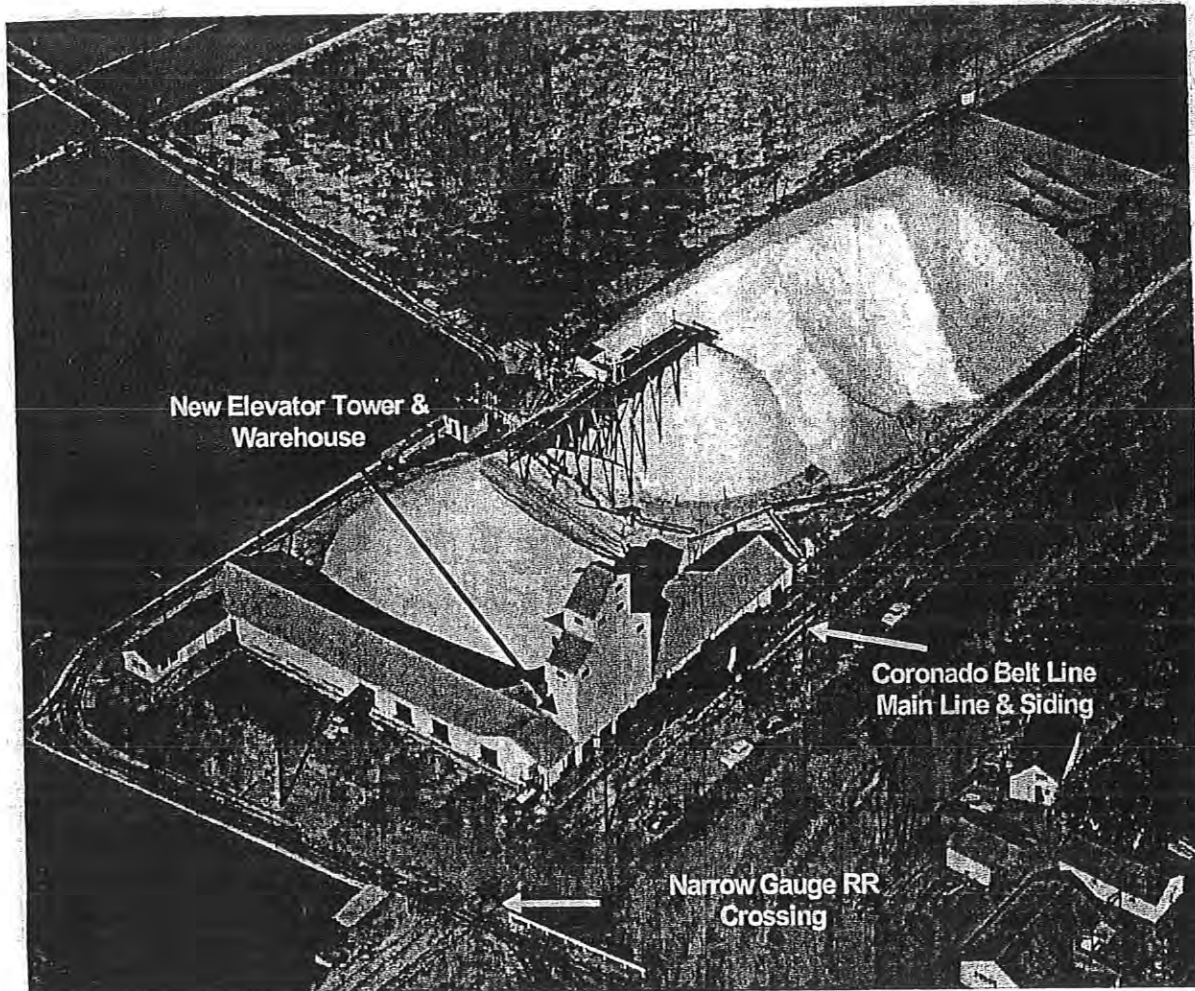
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Aerial View of Western Salt Works, ca. 1948. View: Looking NW

Note: New Plant Elevator Tower and Warehouse

RR Boxcars along Siding

Arrow Pointing to H-crossings of Western Salt Works' Narrow Gauge Line to Salt Ponds

Source: San Diego Historical Society Photograph Archives.

CONTINUATION SHEET

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*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

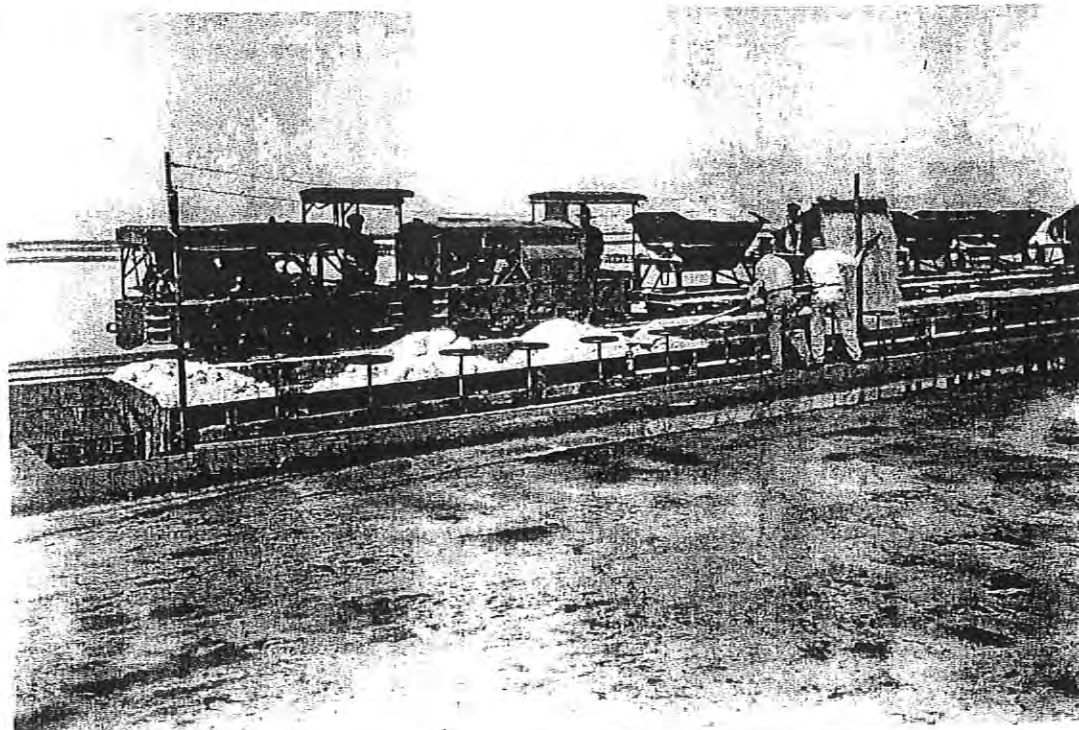
*Date: 12 April 2001

☒ Continuation

☐ Update



Top and Bottom: Western Salt Works' Narrow Gauge Train Operations at Salt Ponds, ca. 1925
Source: San Diego Historical Society Photograph Archives.



CONTINUATION SHEET

Primary #:

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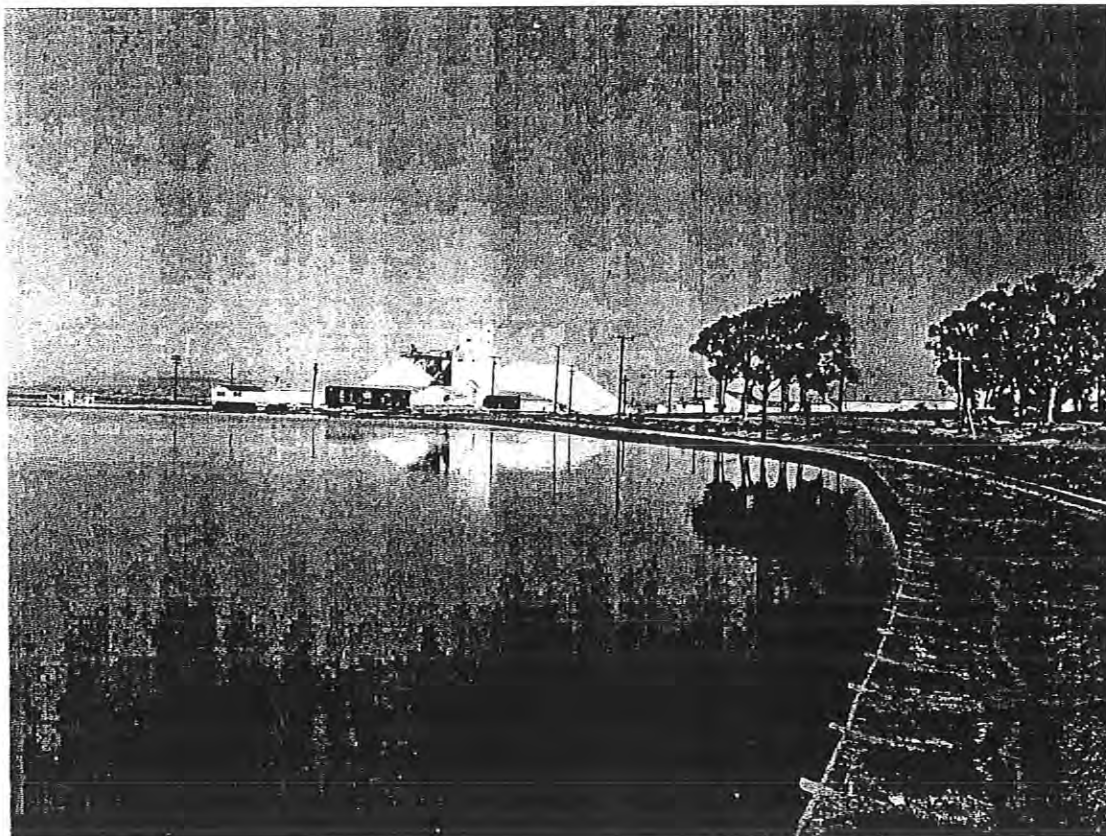
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Western Salt Works, ca. 1957

Note: RR Boxcars along Siding and at Mouth of Salt Pond Causeway
Salt Pond Levee and Narrow Gauge Track at Middle Right Picture Corner

Source: San Diego Historical Society Photograph Archives.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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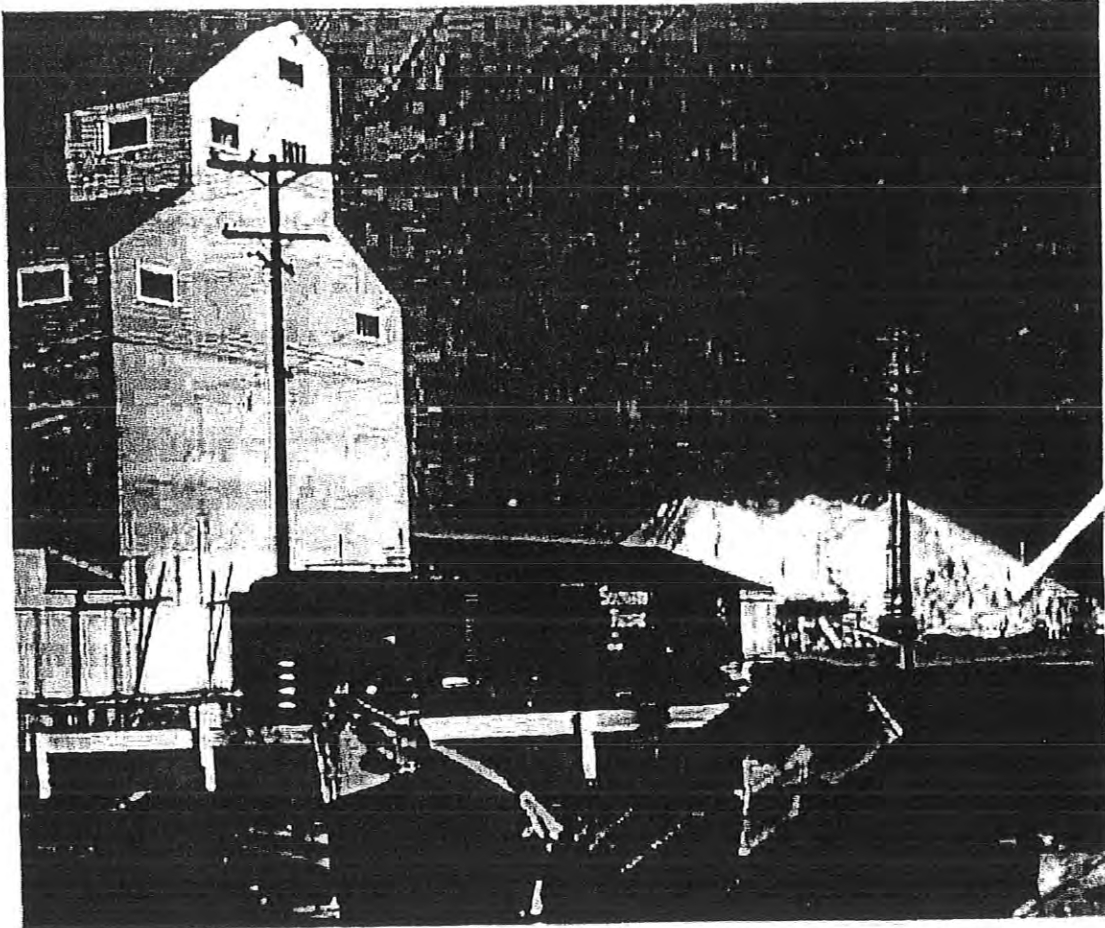
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Western Salt Works, ca. 1950s

Note: RR Boxcars along Siding Elevator Tower
Salt Mound

Source: Chula Vista, the Early Years, 1992, 53.

State of California The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary #:

HRI #:

Trinomial

Page 138 of 149 Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way / Segment F

L1. Historic and/or Common Name: Coronado Railroad Belt Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: Structure—Railroad Right-of-Way

b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map): 489160mE / 3605485 mN to 489920mE / 3605820mN. See Continuation Sheet for more information.

L3. Description (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate): This .84-mile segment of the Coronado Railroad's Belt Line resembles more an archeological find more than a historic rail right-of-way. It consists of several discontinuous sections of partially buried standard-gauge RR tracks along a private Rt-of-Wy extending from a point north of the intersection of 13th St. and Cypress Ave. to the end of a partially buried section of railroad track NW of the intersection of 7th St and Boulevard Ave. While the tracks beyond this point have been removed, it can still be discerned along a narrow earthen causeway that was built in 1888 to carry the rail line across the salt marshes from the Silver Strand to what is now Imperial Beach. As seen in other segments of the surviving Rt-of-Wy, a section of the rust-coated steel rail reveals a manufacturer's stamp—"CARNEGIE 1899"—which indicates its age and origin (Carnegie Steel from Pittsburgh, PA) and represents the level of rail engineering technology from the right-of-way's period of historic significance-1888-1950).

L4. Dimensions (In feet for historic features, and meters for prehistoric features):

a. Top Width: 5' 1½"-track gauge on a 45'-wide Rt-of-Wy

b. Bottom Width: N/A

c. Height or Depth: At or slightly below street level some 3' above sea level

d. Length of Segment: .84 mile

L5. Associated Resources: There are no previously recorded resources historically associated with the use of this resource.

L6. Setting (Describe natural features, landscape characteristics, slope, etc., as appropriate.): The resource extends along a 45' wide Rt-of-Wy between a low-to-medium density residential neighborhood and low-lying marshland along the southern-most part of San Diego Bay.

L7. Integrity Considerations: Although sections of the Rt-of-Wy have been covered with earth or sections of an A/C bicycle path, it can still be clearly identified. Because of this, it has retained its historic integrity in terms of setting, location, feeling, and materials associated with a historic railroad line's cultural landscape.

L4e. Sketch of Cross-Section (include scale)

Facing:

See Continuation Sheet



L8b. Description of ☒ Photo

☐ Map ☐ Drawing (View, scale, etc.): # 11f, Accession # NN3P_023.JPG; View: Looking East

L9. Remarks: The resource is in poor to fair condition

L10. Form Prepared by (Name, Affiliation, and Address):

Alexander D. Bevil
Save Our Heritage
Organisation
4752 Mt. Longs Drive
San Diego, CA 92117

L11. Date: 12 April 2001

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

Page 139 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

L2b. Location of Point or Segment (Provide UTM coordinates, legal description, and any other use full locational data. Show the area that has been field inspected on a Location Map):

Segment F

UTM Coordinates: 489160mE / 3605485 mN to 489920mE / 3605820mN

Several Discontiguous Segments of a Railroad Right-of-Way, from a Point near the Northern Terminus of Cypress Ave., to its Southwestern Terminus at a Point North of the Northern Terminus of 7th St., all in Imperial Beach, California.

APN 616-021-04

Status: Non-taxable

Legal Description: SEC 20-18-2W SEQ PAR 6 PER SBE (State Board of Equalization) MAP 863-37-23 IN NWQ OF SEC 20-T18S-R2W-POR

Acres: 0.74

Owner: CONS (Company No Status)# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

Metropolitan Transit Development Board (MTDB)
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101-7490

APN 616-021-05

Status: Non-taxable

Legal Description: SEC 20-18-2W WH PAR 11 PER SBE MAP 863-37-21 IN SEC 20-T18S-R2W-POR

ACRES: 0.52

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o

MTDB

APN 616-021-06

Status: Non-taxable

Legal Description: SEC 20-18-2W WQ PAR 28 PER SBE MAP 863-37-23B IN SEC 20-T18S-R2W-POR

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

Public Agency

c/o

MTDB

APN 626-121-01

Status: Non-taxable

Legal Description: SBE PAR 8 PER SBE MAP 863-37-23 IN MAP 497-SOUTH SD COS ADD TO SOUTH SD

Adjacent Land Zoning: RESIDENTIAL

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 626-050-02

Status: Non-taxable

Legal Description: SBE PAR 10 PER SBE MAP 863-37-23 IN MAP 497-SOUTH SD COS ADD TO SOUTH SD

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed

c/o

MTDB

APN 626-060-02

Status: Non-taxable

Legal Description: SBE PAR 9 PER SBE MAP 863-37-23 IN MAP 497-SOUTH SD COS ADD TO SOUTH SD

CONTINUATION SHEET

Primary #:

HRI#/Trinomial:

Page 140 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

Segment F (Cont.)

Owner: CONS# San Diego & Arizona Eastern Railway Co/CA State Assessed
c/o
MTDB

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #:
HRI#/Trinomial:

Page 141 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

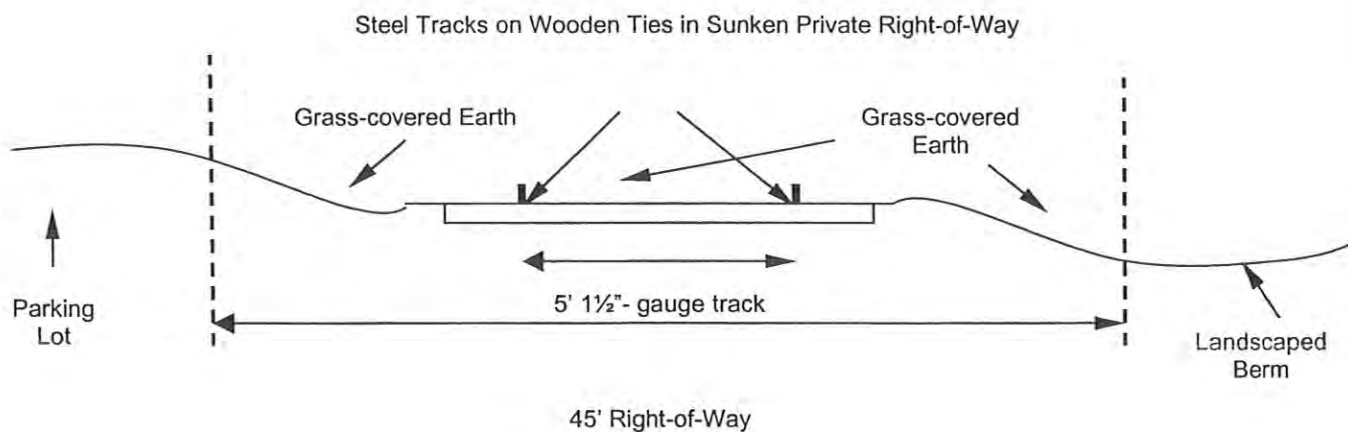
*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update

L4e. Sketch of Cross-Section (include scale) Facing: West



Point # 4f: Section of Private Right-of-Way between the Intersection of 11th Street and Cherry Ave and the Intersection of 10th Street and Boulevard Avenue, Imperial Beach, CA

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP F

Primary #:
HRI#
Trinomial:

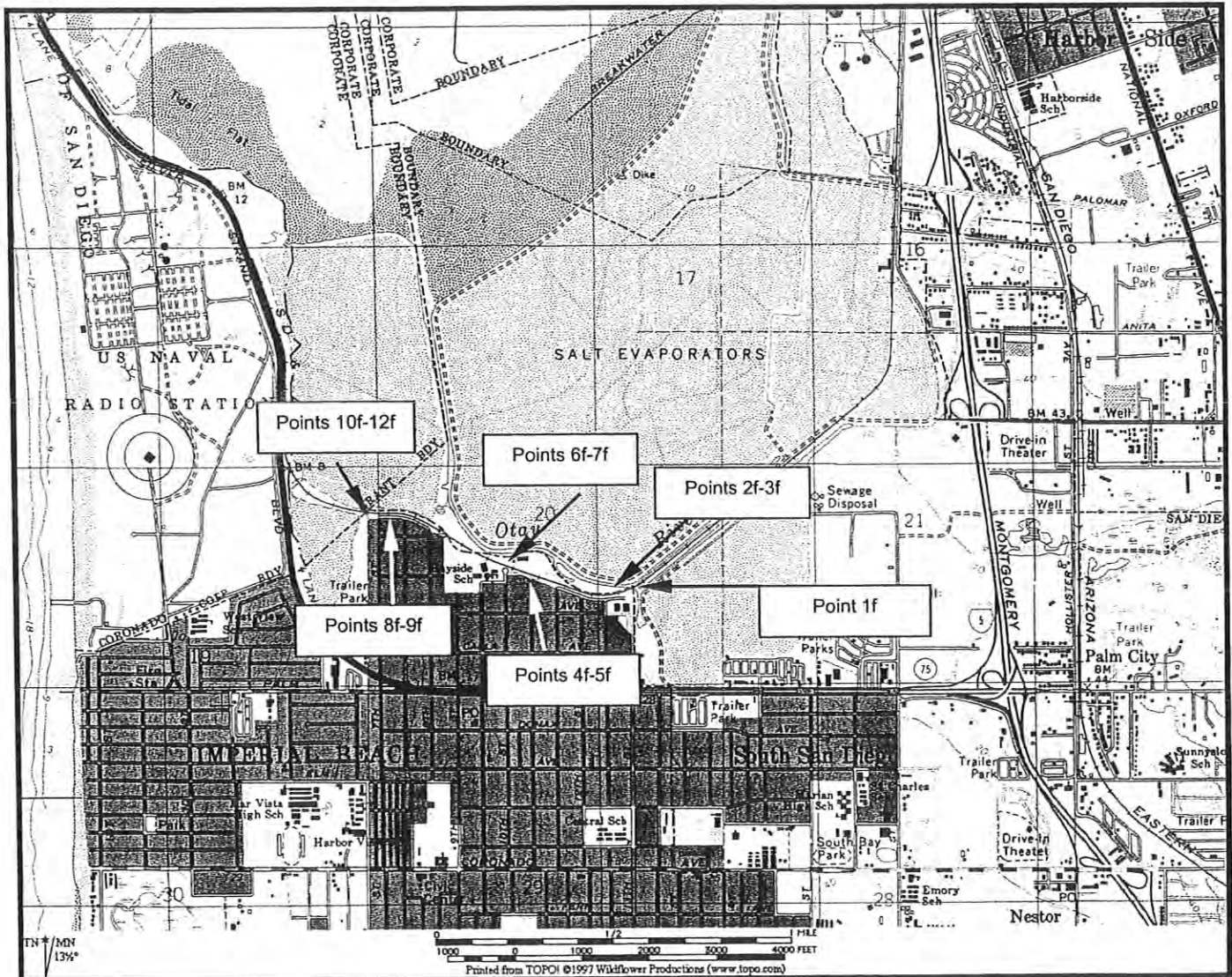
Page 142 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Map Name: Segment F Points

*Scale: 1"=24,000m

*Date of Map: 12 April 2001



Primary #

HRI #/Trinomial

Page 143 of 149 Project Name (Assigned by Recorder): Coronado Belt Line Right-of-Way

Year: 2001

Roll Number: 6

Camera Format: SLR

Photographer(s): Alexander D. Bevil

Lens Size: N/A

Film Type and Speed: 35mm 100ASA

Images: 300 DPI JPG

Negatives Kept at: In Possession of Photographer

[illegible]

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 144 of 149

*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #1f

Point 1f

Start of Section F
Raised Rt-of-Wy on
SW Bank of Otay River,
Imperial Beach
Crossing Wooden
Trestle #4
Site of Former Junction
of Connecting Spur
Line to Otay Springs

View: Looking East

Accession #
NN3P_008.JPG



Photograph #2f

Point 2f

Discontiguous Rt-of-Wy
Section between 13th
and 12th Sts., Imperial
Beach, North of
Cypress Ave.

View: Looking West

Accession #
NN3P_009.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 145 of 149

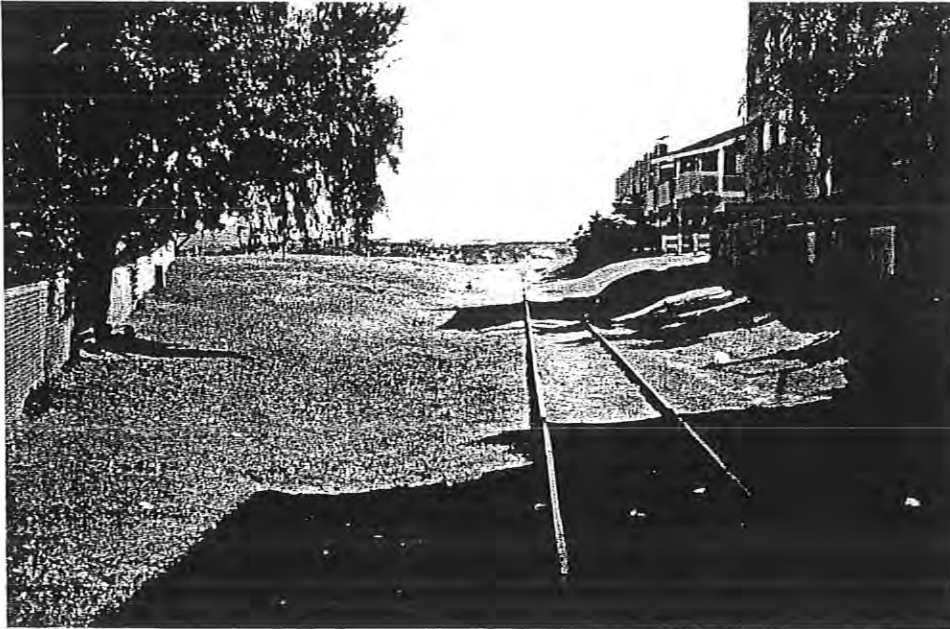
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #3f

Point 3f

Discontiguous Rt-of-Wy Section between 13th and 12th Sts., Imperial Beach

View: Looking East

Accession #
NN3P_010.JPG



Photograph #4f

Point 4f

Discontiguous Rt-of-Wy Section between the Intersection of 11th St., and Cherry Ave. to the Intersection of 10th St. and Boulevard Ave.

View: Looking West

Accession #
NN3P_011.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 146 of 149

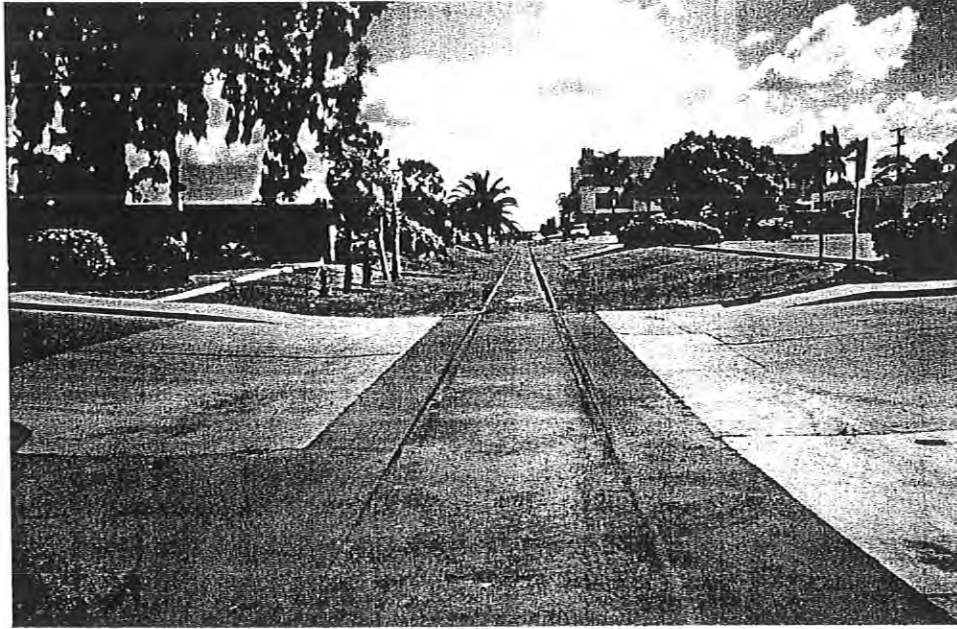
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #5f

Point 5f

Discontiguous Rt-of-Wy Section between the Intersection of 11th St., and Cherry Ave. to the Intersection of 10th St. and Boulevard Ave. Entrance to I.B Public Works Corporation Yard

View: Looking East

Accession #
NN3P_012.JPG



Photograph #6f

Point 6f

Discontiguous Section of Rt-of-Wy between Intersection of Cherry Ave. & 10th St. and Boulevard Ave. Possible Location of Crossover Junction with South SD & Imperial Beach Ry

View: Looking West

Accession #
NN3P_015.JPG

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 147 of 149

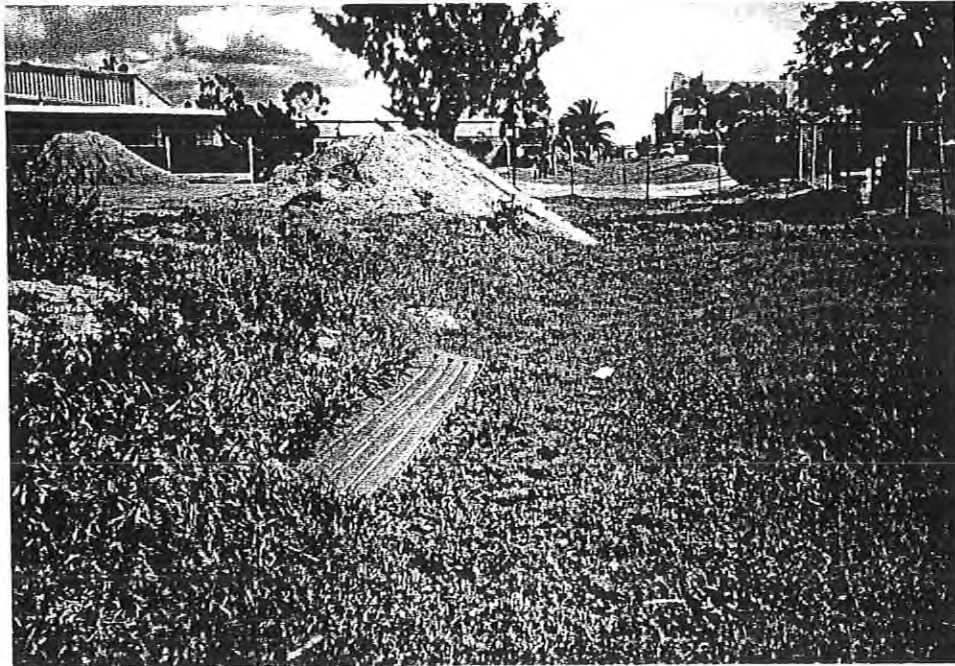
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



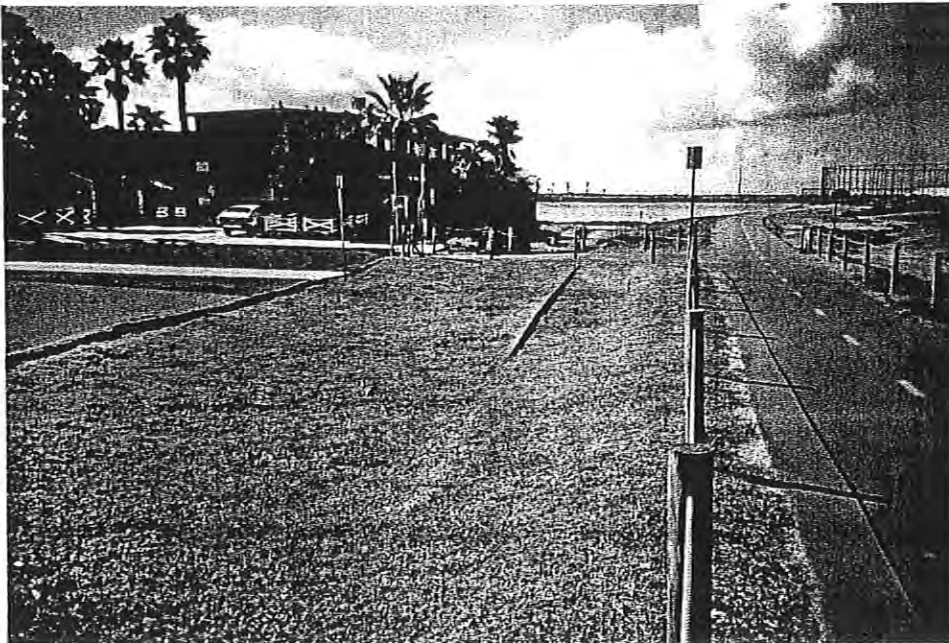
Photograph #7f

Point 7f

Discontiguous Section
of Rt-of-Wy between
Intersection of Cherry
Ave. & 10th St. and
Boulevard Ave.
Possible Location of
Crossover Junction
with South SD &
Imperial Beach Ry.

Accession #
NN3P_016.JPG

View: Looking East



Photograph #8f

Point 8f

Discontiguous Section
of Rt-of-Wy between
Boulevard Ave. &
Bicycle Path between
7th St. & Delaware Sts.

Accession #
NN3P_020.JPG

View: Looking West

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET/PHOTOS

Primary #:
HRI#/Trinomial:

Page 148 of 149

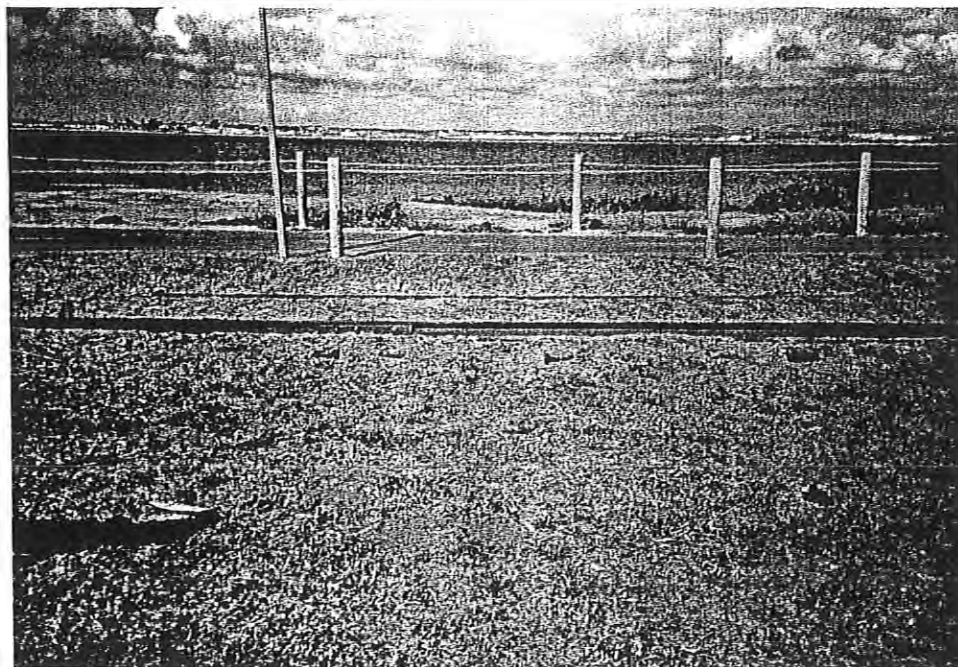
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



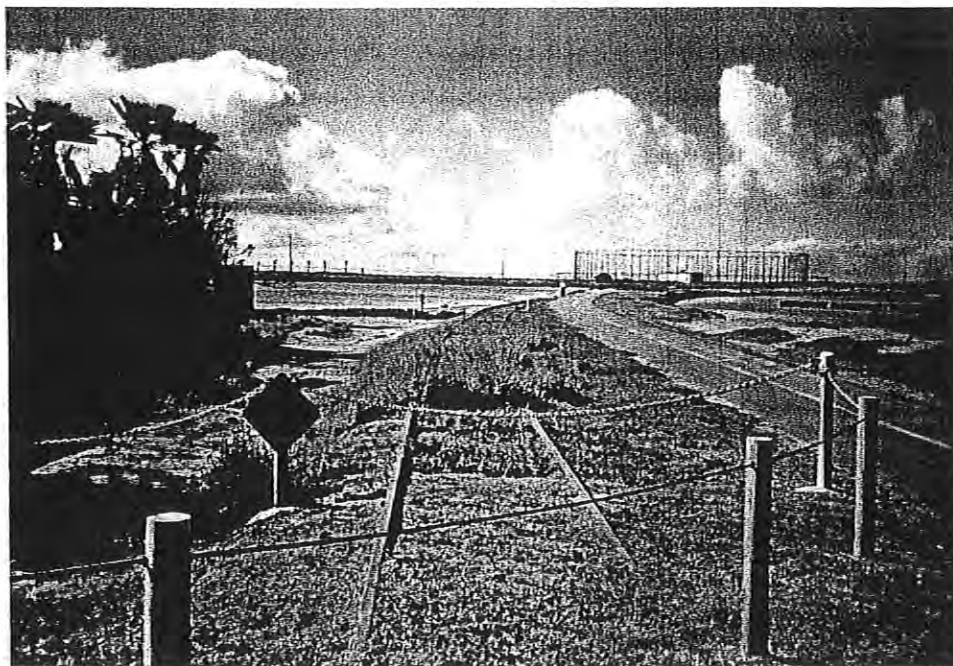
Photograph #9f

Point 9f

Close up of Exposed
Rail Sections South
of Bike Path

View: North

Accession #
NN3P_021.JPG



Photograph #10f

Point 10f

Discontiguous Section
of Rt-of-Way West of
Intersection of 7th St &
Boulevard Ave.

View: Looking West
toward Earthen
Causeway to the
Silver Strand

Accession #
NN3P_022.JPG

CONTINUATION SHEET/PHOTOS

Primary #:

HRI#/Trinomial:

Page 149 of 149

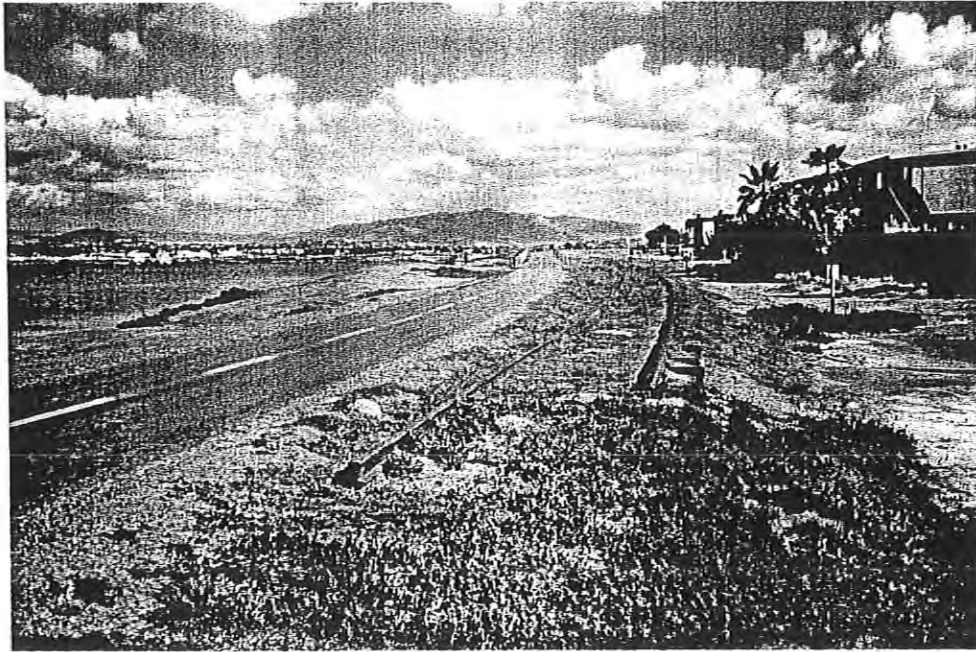
*Resource Name or Number (Assigned by recorder): Coronado Belt Line Right-of-Way

*Recorded by: Alexander D. Bevil

*Date: 12 April 2001

☒ Continuation

☐ Update



Photograph #11f

Point 11f

Continuation of
Discontiguous Rt-of-
Wy West of 7th
St.
Rail Stamped
"Carnegie 1899"

View: Looking East

Accession #
NN3P_023.JPG



Photograph #12f

Point 12f

Continuation of
Discontiguous Rt-of-
Wy West of 7th St.
Approaching Earthen
Causeway to Silver
Strand
Terminus of Section F
and SW Terminus of
Historic Rt-of-Wy

View: Looking West at
US Navy Radio
Receiving Facility

Accession #
NN3P_024.JPG

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #: _____
HRI #: _____
Trinomial: CA-SDI-13.073H (update)
NRHP Status Code: _____

Other Listings: _____
Review Code: _____ Reviewer: _____ Date: _____

Page 1 of 2

Resource Name or #: (Assigned by recorder): CA-SDI-13,073H

UPDATE

P1. Other Identifier: None

- P2. Location: ☒ Not for Publication ☐ Unrestricted a. County: San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
b. USGS 7.5' Quad: Imperial Beach, CA Date: 1967 (Photorevised 1975) T18 S ; R 2 W; south half of section 16,
northwest corner of Section 21 and the eastern half of Section 20; S.B.M.
c. Address: None City: _____ Zip: _____
d. UTM: Zone 17 ; NAD 1927 ; A: 491370 mE/ 3606900 mN; B: 490160mE/ 3605440mN
e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., as appropriate): Site is located along the
southeastern margins of the San Diego Bay.

P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting,
and boundaries): This site consists of a portion of the historic Coronado Railroad within the project APE. The railroad
alignment is not in use and has been fenced off near the Western Salt Plant. Several portions of the track have been
undermined by erosion while others have been partially covered by erosion from the nearby berm. The track south of
the APE has been removed. The two tressels within the APE are both in poor condition. A portion of the southern
tressels has been removed to limit access across the channel. The remainder has seriously deteriorated and has been
tagged by graffiti. The northern tressel is also heavily deteriorated and a portion has been burned. The overall integrity
of CA-SDI-13,073H within the APE is poor.

P3b. Resource Attributes (List attributes and codes): AH7. Railroad grades.

P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photo required for buildings, structures, and
objects)

P5b. Description of Photo (View,
date, accession #):

P6. Age and Sources: ☒ Historic
☐ Prehistoric ☐ Both

P7. Owner and Address:
Western Salt Co.
1470 Bav Blvd.
Chula Vista, CA 91910

P8. Recorded by (Name, affiliation,
and address):
Andrew R. Pignuolo
Tierra Environmental Services
9903-E Businesspark Avenue
San Diego, CA 92131

P9. Date Recorded:
November 3, 1999

P10. Survey Type (Describe):
Intensive Surface Inventory

P11. Report Citation (Cite survey report and other sources, or enter "none"): Pignuolo, Andrew R. and Michael Baksh 2000
Draft Archaeological Survey Report for the Bayshore Bikeway Project, City of San Diego, California.

Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

UPDATE

LOCATION MAP

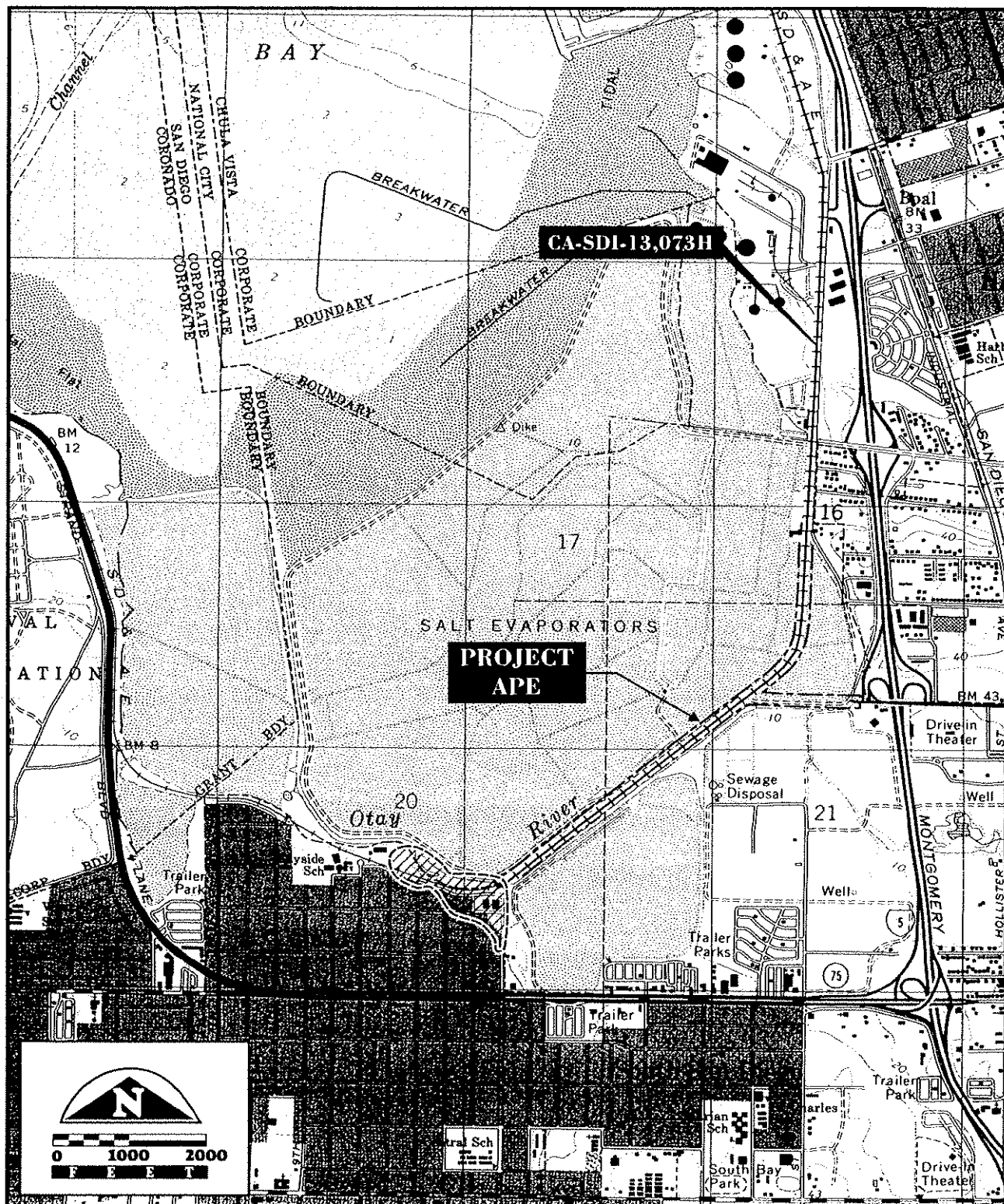
Page 2 of 2

Resource Name or #: (Assigned by recorder):

Map Name: USGS Quad Map (Imperial Beach)

Scale: 1:24,000

Date of Map: 1967 (photorevised 1975)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #: **P-37-013073H**

HRI #:

Trinomial: **CA-SDI-13.073H**

NRHP Status Code:

Other Listings:

Review Code:

Reviewer:

Date:

Page 1 of 2

Resource Name or #: (Assigned by recorder): CA-SDI-13,073H

UPDATE

P1. Other Identifier: None

P2. Location: ☒ Not for Publication ☐ Unrestricted

a. County: San Diego

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad: Imperial Beach, CA Date:1967 (Photorevised 1975) T18 S ; R 2 W; south half of section 16, northwest corner of Section 21 and the eastern half of Section 20; S.B.M.

c. Address: None

City:

Zip:

d. UTM: Zone 17 ; NAD 1927 ; A: 491370 mE/ 3606900 mN

B: 490160mE/ 3605440mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., as appropriate):Site is located along the southeastern margins of the San Diego Bay.

P3a. **Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): This site consists of a portion of the historic Coronado Railroad within the project APE. The railroad alignment The alignment is not in use and has been fenced off near the Western Salt Plant. Several portions of the track have been undermined by erosion while others have been partially covered by erosion from the nearby berm. The track south of the APE has been removed. The two tressels within the APE are both in poor condition. A portion of the southern tressels has been removed to limit access across the channel. The remainder has seriously deteriorated and has been tagged by graffiti. The northern tressel is also heavily deteriorated and a portion has been burned. The overall integrity of CA-SDI-13,073H within the APE is poor.

P3b. **Resource Attributes** (List attributes and codes): AH7. Railroad grades.

P4. **Resources Present:** ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photo required for buildings, structures, and objects)

P5b. Description of Photo
(View, date, accession #):

P6. **Age and Sources:**

☒ Historic ☐ Prehistoric
☐ Both

P7. **Owner and Address:**

Western Salt Co.
1470 Bay Blvd.
Chula Vista, CA 91910

P8. **Recorded by** (Name,
affiliation, and address):

Andrew R. Pignolo
Tierra Environmental Services
9903-E Businesspark Avenue
San Diego, CA 92131

P9. **Date Recorded:**

November 3, 1999

P10. **Survey Type** (Describe):

Intensive Surface Inventory

P11. **Report Citation** (Cite survey report and other sources, or enter "none"):Pignolo, Andrew R. and Michael Baksh 2000 Draft Archaeological Survey Report for the Bayshore Bikeway Project, City of San Diego, California.

Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

LOCATION MAP

UPDATE

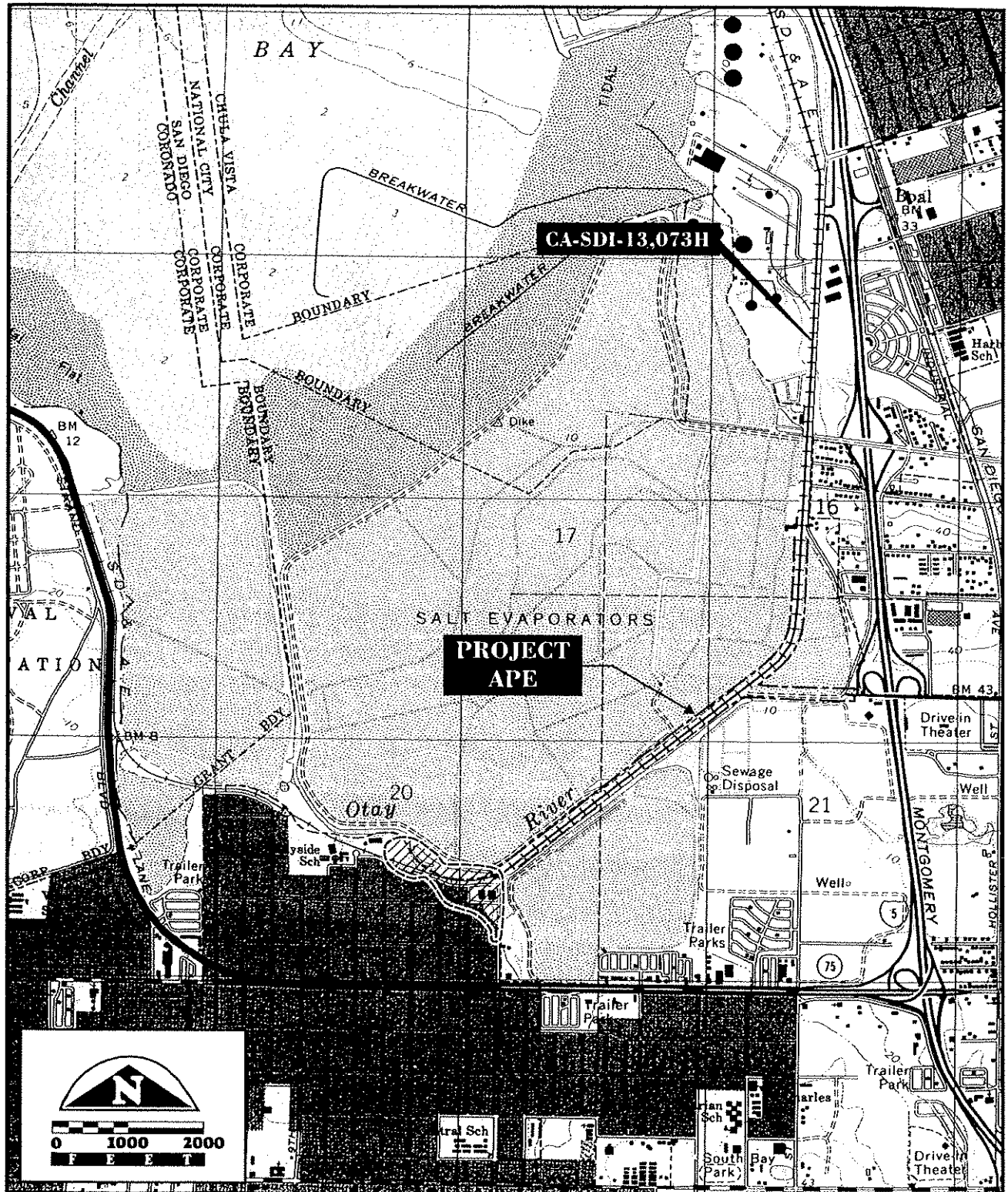
Page 2 of 2

Resource Name or #: (Assigned by recorder):

Map Name: USGS Quad Map (Imperial Beach)

Scale: 1:24,000

Date of Map: 1967 (photorevised 1975)



PRIMARY RECORD

Primary #: **P-37-013073H**

HRI #:

Trinomial: **CA-SDI-13073H**

NRHP Status Code:

Other Listings:

Review Code:

Reviewer:

Date:

Page 1 of 1

Resource Name or #: (Assigned by recorder):

UPDATE

P1. Other Identifier: None

P2. Location: ☒ Not for Publication ☐ Unrestricted

a. County: San Diego

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad: Imperial Beach, National City, Point Loma Date: 1967, photorevised 1975 T 17S, 18S ; R 2W, 3W
Unsectioned; SBM

c. Address: None

d. UTM: Zone 11 ; NAD 1927 ; A:485580mE / 3618150N B:491250mE / 3606400N C: 488500mE / 3605950mN

D: 483800mE / 3616000mN

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., as appropriate): This site is located along the southern margins of San Diego Bay, from San Diego to Coronado.

P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): This site includes the railroad grade, track ties and bridges of which the tracks and ties have been removed. Only the bed of the railroad remains. It has been heavily impacted by construction of the Bayshore Bikeway and parking facilities. The vegetation community includes salt marsh.

P3b. Resource Attributes (List attributes and codes): AH7:Railroad grades

P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photo required for buildings, structures, and objects)

P5b. Description of Photo
(View, date, accession #):

P6. Age and Sources:

☒ Historic ☐ Prehistoric
☐ Both

P7. Owner and Address:

unknown

P8. Recorded by (Name,
affiliation, and address):

Andrew R. Pignolo
Tierra Environmental Services
9903-E Businesspark Avenue
San Diego, CA 92131

P9. Date Recorded:

October 5, 2000

P10. Survey Type (Describe):

Intensive Surface Inventory

P11. Report Citation (Cite survey report and other sources, or enter "none"): Pignolo, Andrew R. Archaeological Survey Report for the Coronado Underground Project, City of Coronado, California.

Attachments: ☐ NONE ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California - The Resources Agency
Department of Parks and Recreation

Permanent Trinomial: CA-SDI-

Supplement:

ARCHAEOLOGICAL SITE RECORD

Other Designations: Coronado Railroad

Page 1 of 8

1. County: San Diego
2. USGS Quads: Imperial Beach, National City, Point Loma (7.5') 1967 (15')
Photorevised: 1975
3. UTM Coordinates: Zone 11, ⁵⁸⁰485650 m Easting 3618150 m Northing
491250 m 3606400 m
488500 m 3605950 m
483800 m 3616050 m
4. Townships 17 & 18 South, Ranges 2 & 3 West, SBM
5. Map Coordinates: N/A
6. Elevation: about 5 to 25 feet above sea level
7. Location: Along the southern margins of San Diego Bay, from San Diego to Coronado
8. Prehistoric Historic X Protohistoric
9. Site Description: Historic railroad grade
10. Area: 18 linear miles (30,000 m) x 3± m = 90,000 m²
Method of Determination: U.S.G.S. mapping
11. Depth: N/A Method of Determination: N/A
12. Features: Railroad grade, tracks, ties, bridges
13. Artifacts: None observed
14. Non-artifactual Constituents and Faunal Remains: N/A
15. Date Recorded: 3/93
16. Recorded by: D. Laylander
17. Affiliation and Address: Caltrans District 11, 2829 Juan Street, San Diego, CA 92186-5406
18. Human Remains: None observed
19. Site Disturbance: Probable periodic repair and replacement of original features
20. Nearest Water (type, distance and direction): Adjacent to San Diego Bay; crosses Sweetwater River, Otay River, etc.

State of California - The Resources Agency
Department of Parks and Recreation

Permanent Trinomial: CA-SDI-

Month/Year: 3/93

ARCHAEOLOGICAL SITE RECORD

Other Designations: Coronado Railroad

Page 2 of 8

21. **Vegetation Community (site vicinity):** Salt marsh and various others
22. **Vegetation (on site):** Same as vicinity
23. **Site Soil:** Urban land, made land, tidal flats, coastal beaches, Marine loamy coarse sand, Huerhuero loam, Salinas clay loam
24. **Surrounding Soil:** Same as site
25. **Geology:** Quaternary alluvium, dune sand, Pleistocene marine and marine terrace deposits
26. **Landform:** Bay margin 27. **Slope:** 0-1% 28. **Exposure:** Open
29. **Landowner(s) (and/or tenants) and Address:** Unknown
30. **Remarks:** The Coronado Railroad was constructed in the late 1880s. The route has been variously labelled on maps and in publications the Coronado Belt Line, Coronado Railroad, San Diego Southern, San Diego & Southeastern, San Diego and Arizona - Southern Pacific Lines, A. T. & S. F. - San Diego and Arizona Eastern.
31. **References:** Richard F. Pourade, 1964, "The History of San Diego: The Glory Years"; Philip R. Pryde (ed.), 1984, "San Diego: An Introduction to the Region", pp. 171-188; Robert M. Hanft, 1984, "San Diego & Arizona: The Impossible Railroad"; Don Laylander, 1993, "An Archaeological Survey for the Bay Route Bikeway, Chula Vista and National City, California"
32. **Name of Project:** Bay Route Bikeway 33. **Type of Investigation:** Survey
34. **Site Accession Number:** N/A Curated At: N/A 35. **Photos:** None

State of California - The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
 ARCHEOLOGICAL SITE
 MAP

Permanent Trinomial: CA-SDI / 13073 H
 Temporary Number: _____
 Agency Designation: _____

Page 3 of 8



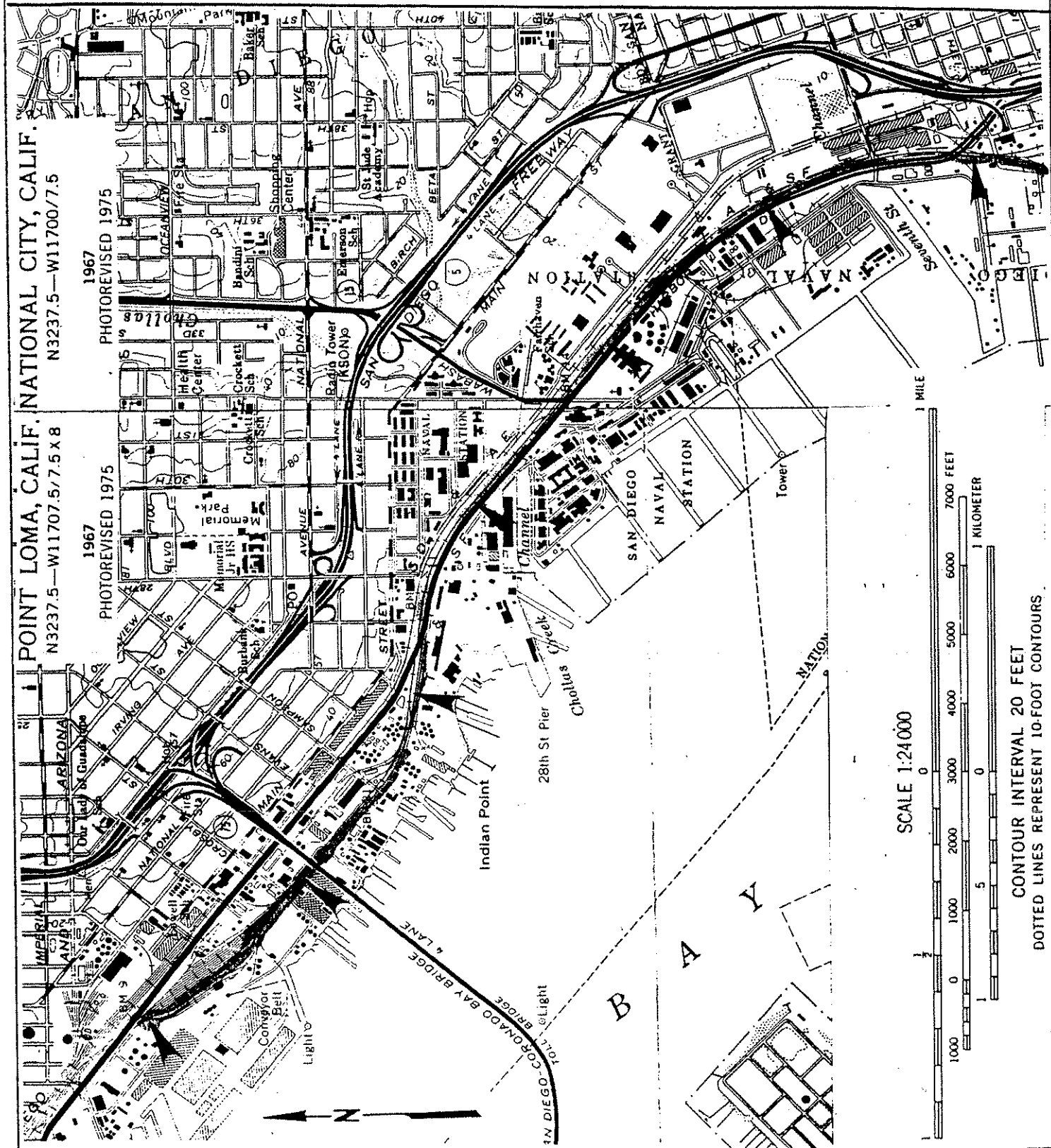
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHEOLOGICAL SITE LOCATION
MAP

Permanent Trinomial: CA-SDI / 13073
no. 3 073 yr.

Temporary Number: _____

Agency Designation: _____

Page 4 of 8



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHEOLOGICAL SITE LOCATION
MAP

Page 5 of 8

Permanent Trinomial:

CA-SDI 113073 H

mo.

yr.

Temporary Number:

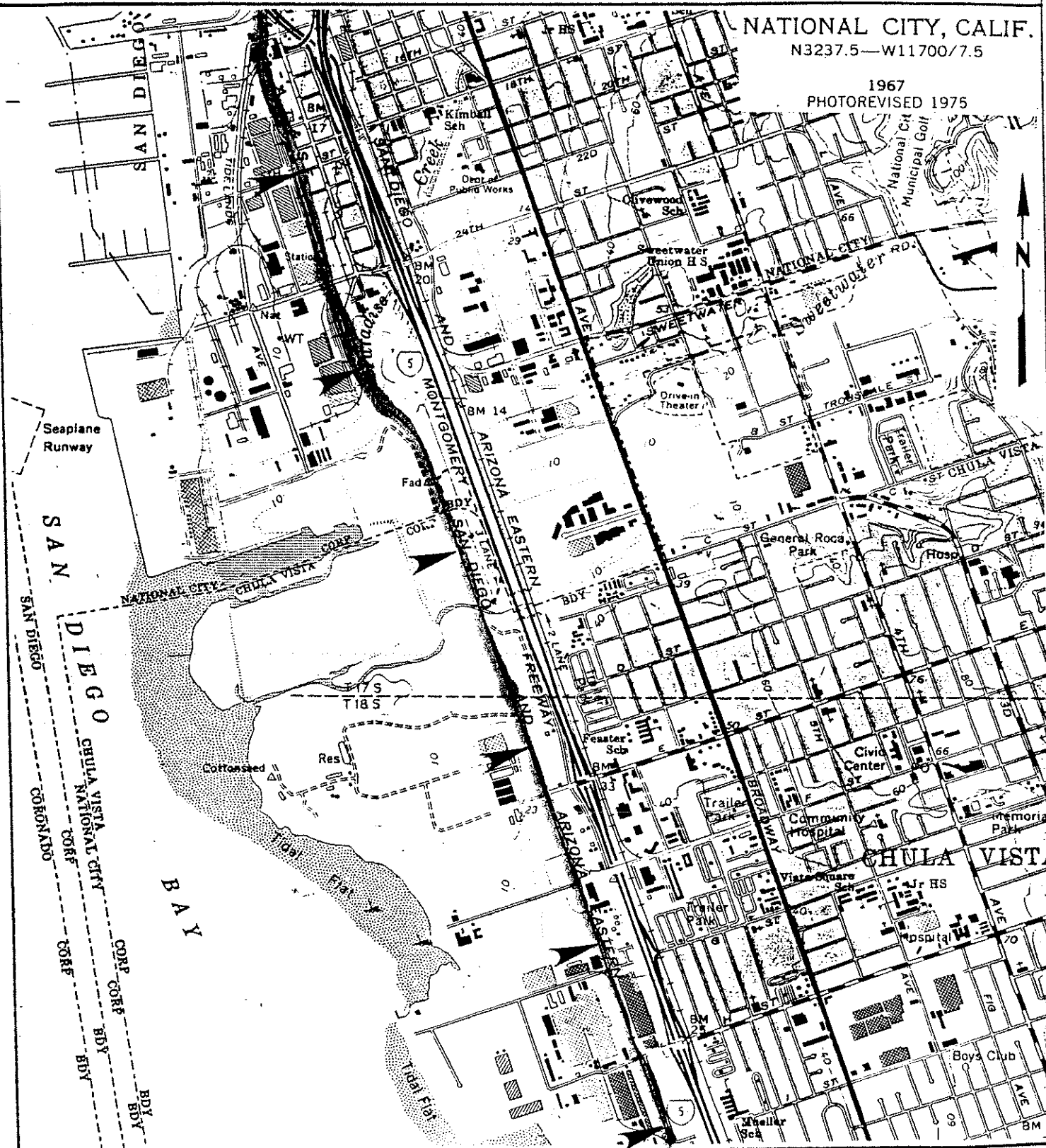
Agency Designation:

NATIONAL CITY, CALIF.

N3237.5—W11700/7.5

1967

PHOTOREVISED 1975



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHEOLOGICAL SITE LOCATION
MAP

Page 6 of 8

Permanent Trinomial: CA-SDI /

13072
mo. 3 yr.

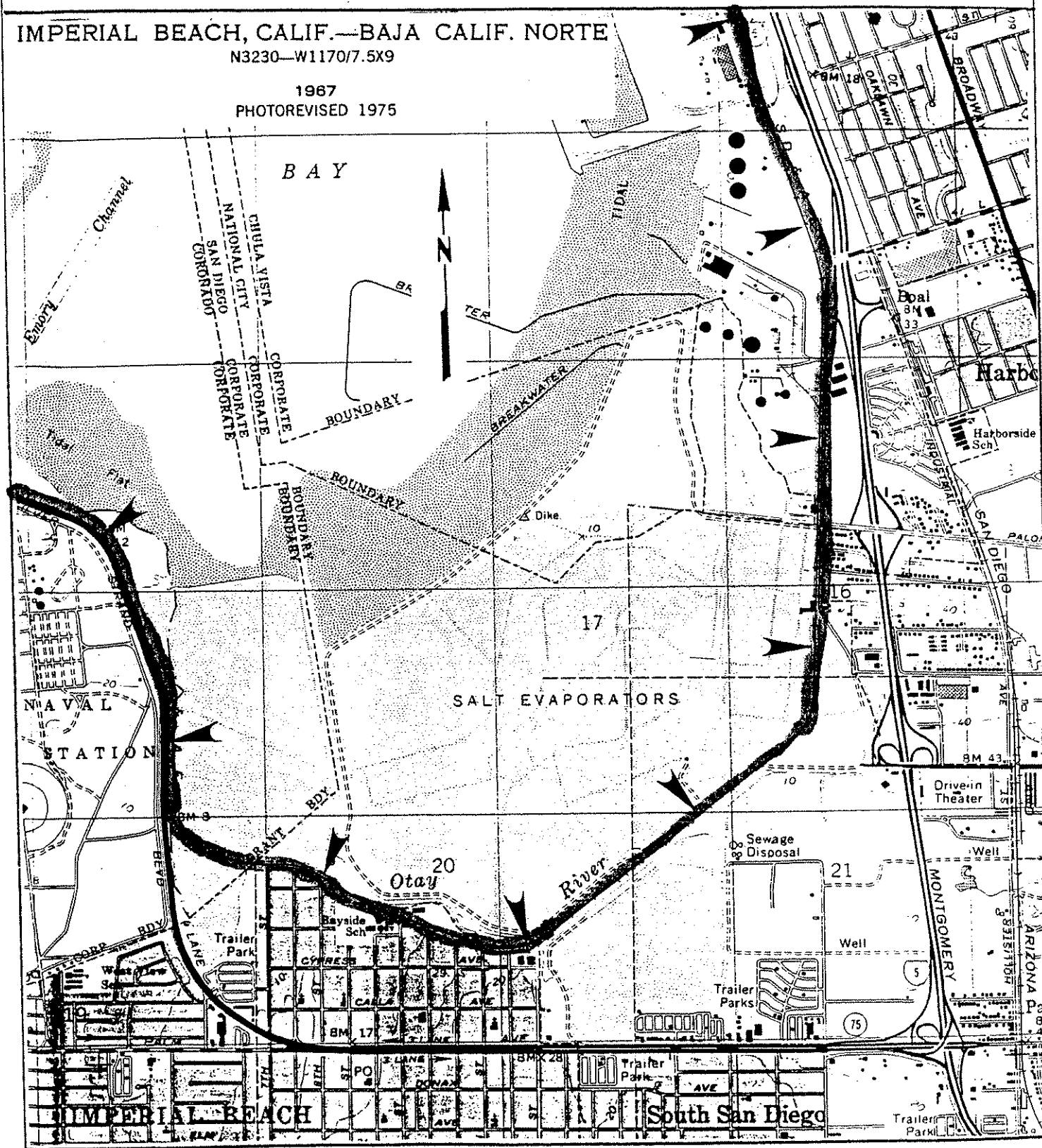
Temporary Number: _____

Agency Designation: _____

IMPERIAL BEACH, CALIF.—BAJA CALIF. NORTE

N3230—W1170/7.5X9

1967
PHOTOREVISED 1975



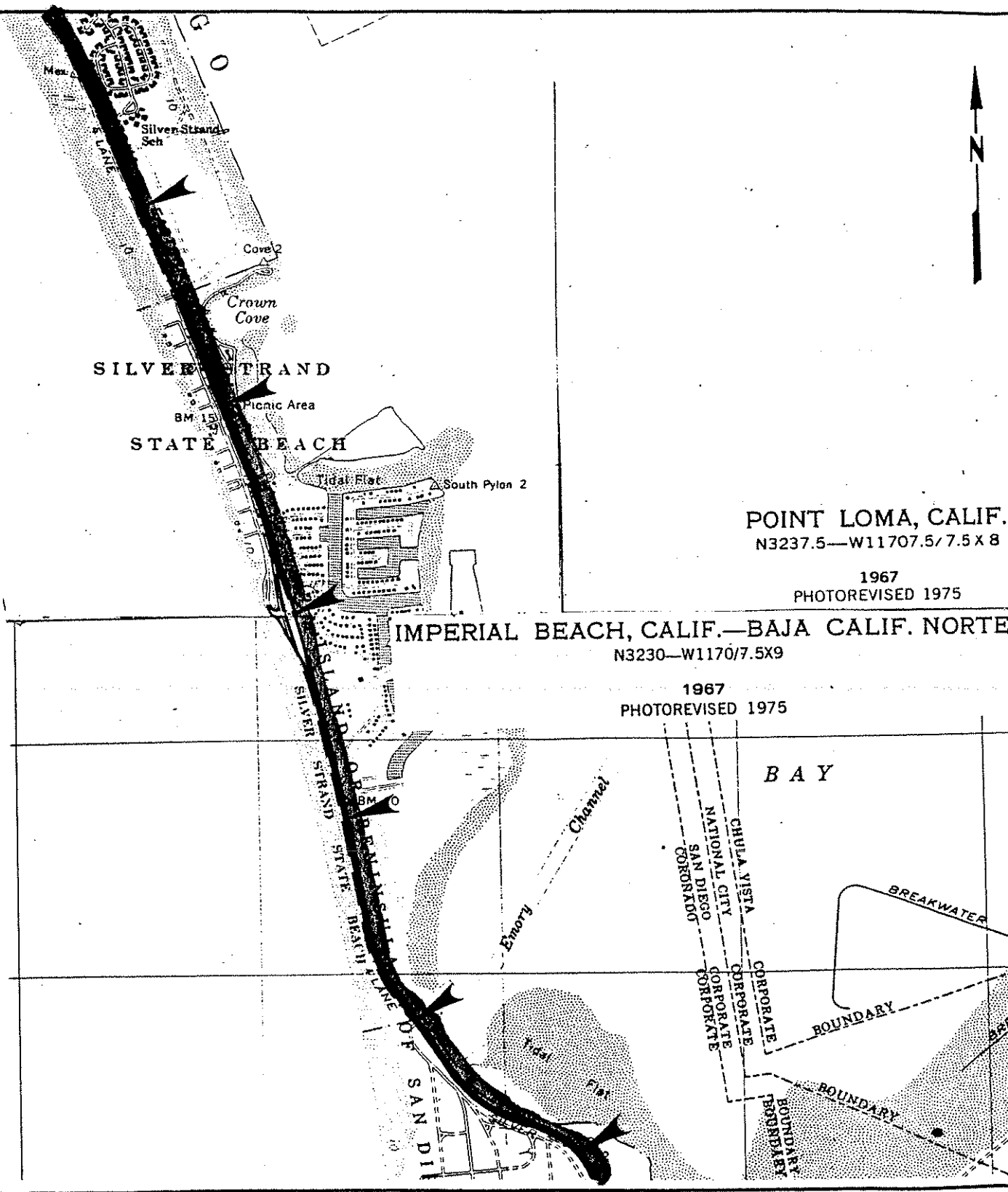
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHEOLOGICAL SITE LOCATION
MAP

Page 7 of 8.

Permanent Tribunal: _____ / _____
mo. yr.

Temporary Number: _____

Agency Designation: _____



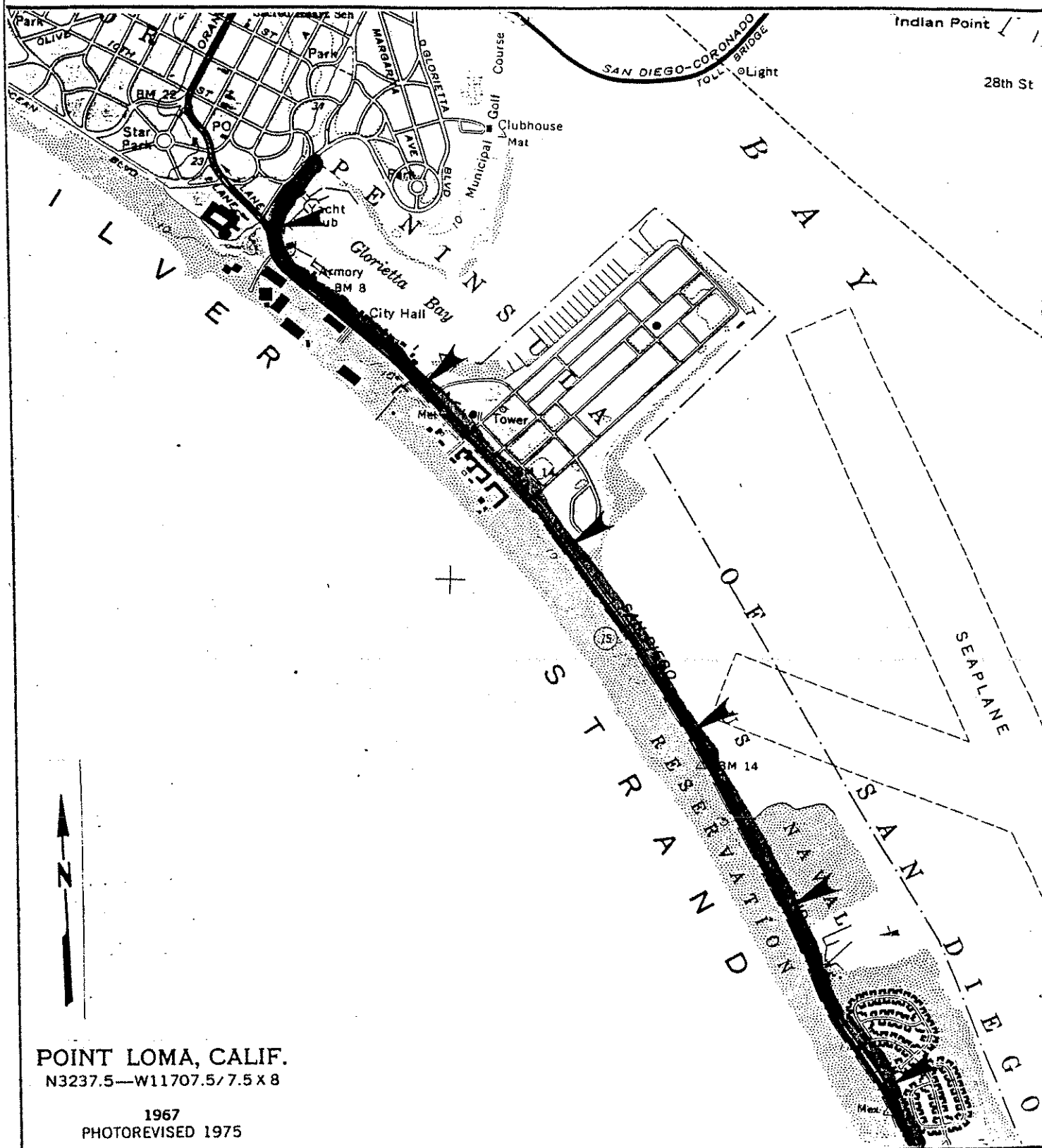
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHEOLOGICAL SITE LOCATION
MAP

Page 8 of 8

Partitions Trigonim.: _____ / $\frac{\text{mo.}}{\text{yr.}}$

Temporary Number: _____

Agency Designation: _____



Page **1** of **5**

*Resource Name or # (Assigned by recorder) Atchison, Topeka, and Santa Fe Railway

*Recorded by T. Yates & N. Cox

*Date July 12, 2019

☐ Continuation ☒ Update

P1. Other Identifier: California Southern Railroad; Burlington Northern Santa Fe Railway

P2e. Other Locational Data: Aligned north-south, the subject railroad line traverses linear portions of the study area for the proposed project occasioning this update at three at-grade crossings situated west of Cleveland Avenue and Harrison Avenue and east of Tidelands Avenue and Haffley Avenue in National City. These crossings are at Civic Center Drive, 19th Street, and Bay Marina Drive. The portion of the resource within the study area also extends approximately 530 feet to the north of the Bay Marina Drive crossing.

*P3a. Description:

Developed beginning in the early 1880s by the California Southern Railroad Company, which was controlled by Atchison, Topeka, and Santa Fe Railway (Santa Fe) interests, the subject resource is a predominantly double track railroad line generally aligned north-south through coastal San Diego County between Oceanside and National City. The portion of the resource recorded here consists of standard gauge railroad line (4 feet, 8½ inches). At Civic Center Drive, a single track segment of rails and wood ties transitions to rails imbedded in steel-reinforced concrete as the resource crosses the street that forms a linear branch of the proposed project's study area for approximately 100 feet. Approximately 1,900 feet to the south of that crossing, the resource crosses another linear branch of the study area at 19th Street. At this location, two sets of rails cross the public right-of-way imbedded in steel-reinforced concrete. The resource enters the study area again from the north approximately 200 feet north of the National City Santa Fe Depot building. From there the resource stretches south at a length of approximately 530 feet to the north side of Bay Marina Drive. This segment consists of two principle sets of rails with ties, as well as the southern end of a spur track that continues north beyond the study area, and a switch between the two principle tracks. On the north side of Bay Marina Drive, the eastern principle track splits into two tracks. Three sets of rails imbedded in steel-reinforced concrete cross Bay Marina Drive.

*P3b. Resource Attributes: HP11. Engineering structure; AH7. Railroad Grades

*P8. Recorded by: Timothy Yates and Nara Cox

*P9. Date Recorded: July 12, 2019

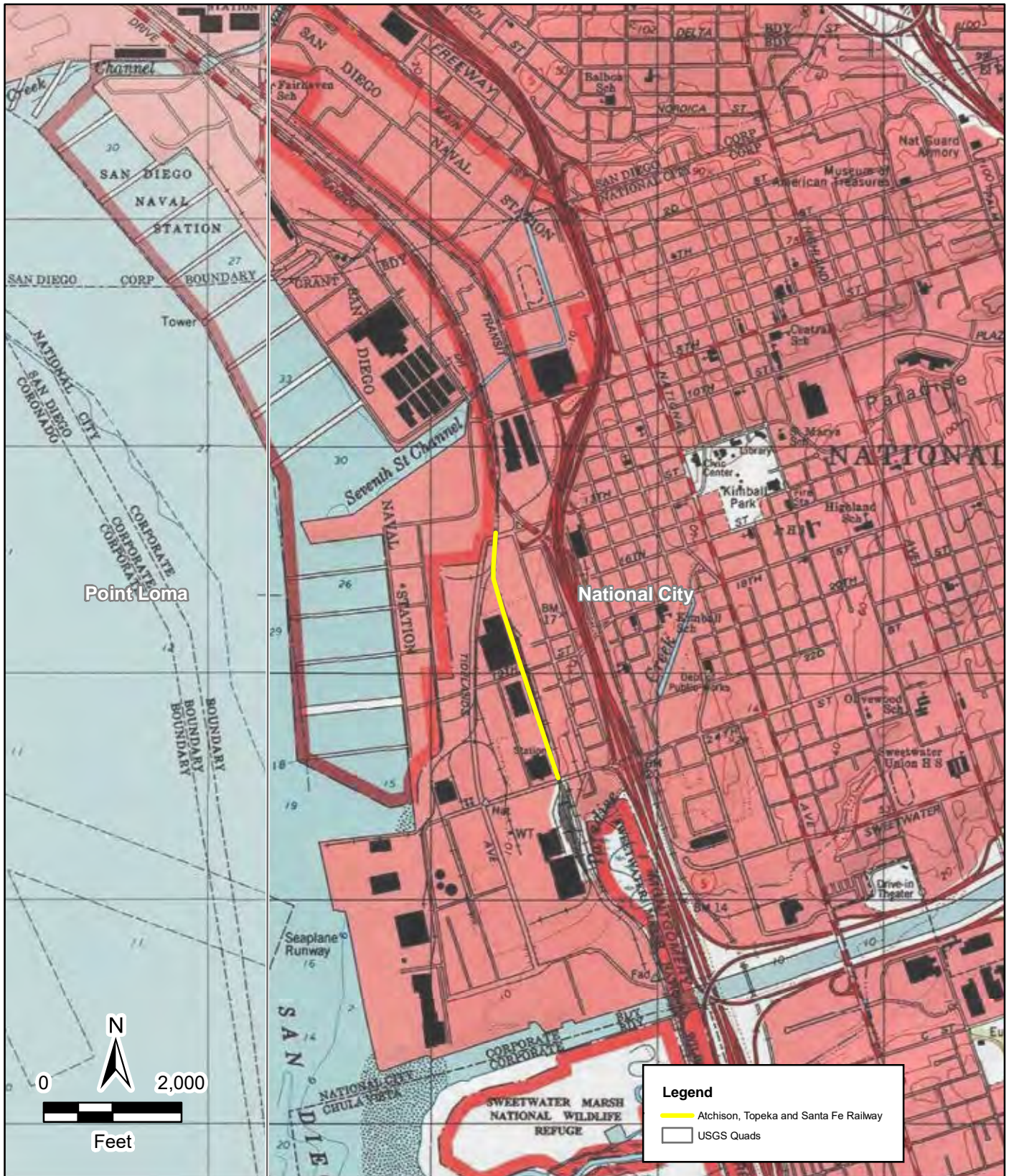
*P11. Report Citation: ICF. 2019. *Cultural Resources Inventory and Evaluation Report for the National City Bayfront Projects and Plan Amendments, National City, California.* Prepared for the San Diego Unified Port District.

*B10. Significance:

In 2002, CRM TECH evaluated the approximately 5.9-mile segment of the Santa Fe Railway line from 24th Street in National City (today's Bay Marina Drive) north to Ash Street, and found the resource ineligible for listing in the National Register of Historic Places (NRHP). The California State Historic Preservation Office (SHPO) concurred with this finding. The 5.9-mile segment—which includes all portions of the resource recorded here—has a Status Code of "6Y" (determined ineligible for NRHP by consensus through Section 106 process).

The Santa Fe line has potential significance under California Register of Historical Resources (CRHR) Criterion 1 as infrastructure that made possible the local real estate boom of the 1880s and served as San Diego County's sole connection to the transcontinental railroad system during the 1890s and the early twentieth century. Two historically important individuals, Frank Kimball and Alonzo Horton, helped bring the California Southern Railroad into existence. However, Kimball and Horton are more directly associated with the founding of National City and "New Town" San Diego (today's downtown) respectively. The Santa Fe line does not have significance under CRHR Criterion 2. The Santa Fe line as it exists today within the study area consists of commonplace railroad infrastructure. The segment recorded here does not include any elements that embody important innovation in railroad engineering or construction technique under CRHR Criterion 3. Under CRHR Criterion 4, the portion of the resource recorded here is not significant as a source, or likely source, of important historical information, nor is it likely to yield important information about historic construction methods, materials, or technologies.

The portions of the Santa Fe line recorded here do not contribute to a larger railroad line with sufficient historical integrity to convey significance under CRHR Criterion 1. The portions recorded here, like other segments of the line through San Diego recorded in DPR forms appended to this update, have been subject to recurrent replacement of rails, ties, trestles, culverts, and bridges, as well as modifications to street crossings, over the course of the resource's nearly 140-year history. The Santa Fe Railway line elements recorded here are part of a much larger linear railroad resource that does not retain integrity of design, workmanship, materials, and, in many places, setting with respect to any potential period of significance reaching back to the late nineteenth or early twentieth century.



Page **3** of **5** *Resource Name or # (Assigned by recorder) Atchison, Topeka, and Santa Fe Railway
*Recorded by T. Yates and N. Cox *Date July 12, 2019 ☐ Continuation ☒ Update

For these reasons, the portions of Santa Fe line recorded here do not contribute to a larger railroad line with both significance under the criteria for listing in the CRHR and sufficient historical integrity. The recorded portions of the Santa Fe line do not, therefore, qualify as a historical resource under CEQA.

*B14. Evaluator: Timothy Yates, ICF
525 B Street, Suite 1700
San Diego, CA 92101

*Date of Evaluation: September 4, 2019

Photographs:



Photograph 1. Santa Fe Railway crossing at Civic Center Drive, looking southwest.

Page **4** of **5** *Resource Name or # (Assigned by recorder) Atchison, Topeka, and Santa Fe Railway
*Recorded by T. Yates and N. Cox *Date July 12, 2019 ☐ Continuation ☒ Update



Photograph 2. Santa Fe Railway crossing at 19th Street, looking north-northwest.



Photograph 3. Santa Fe Railway alignment north of Bay Marina Drive, looking north-northwest toward National City Santa Fe Depot.

Page **5** of **5**

*Resource Name or # (Assigned by recorder) Atchison, Topeka, and Santa Fe Railway

*Recorded by T. Yates and N. Cox

*Date July 12, 2019

☐ Continuation ☒ Update



Photograph 4. Santa Fe Railway crossing at Bay Marina Drive, looking northwest.

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DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

Page 1 of 4

Recorded by: S. Castells
☐ Continuation ☒ Update

*Resource Name or # SDI-16385H MP 257.2 to MP 256.4
Date: 10/8/2015

P2. Location: ☒ Not for Publication ☐ Unrestricted

- a. **County:** San Diego
b. **USGS 7.5' Quad** La Jolla **Date** 1997 **T** 15S; **R** 3W; **unsectioned Pueblo Lands of San Diego; San Bernardino B.M.**
c. **Address** **City** **Zip**
d. **UTM: NAD 83 Zone** 11S, **West End** 478027 **mE/** 3634415 **mN, East End** 478903 **mE/** 3635299 **mN**
e. **Other Locational Data:**

This segment of the railroad extends across Rose Canyon from MP 257.2 to MP 256.4.

P3a. Description:

The BNSF railroad (originally Atchison, Topeka and Santa Fe Railway) has not been previously recorded in the Project area, other segments of this railroad have been recorded in San Diego County under the trinomial SDI-16385H (P-37-024739). This segment of the railroad begins at MP 256.4 on the eastern end and continues 1- mile to the west to MP 257.2. The railroad is a typical double-track railroad that has carried freight and passenger trains continuously since its construction from 1882 to 1885. This segment includes the railroad grade, ballast, rails, ties, two culverts, at MP 256.8 and MP 256.9, Bridge 257.2, and a concrete pad. Both tracks have wooden ties. Bridge 257.2 was recorded by Garcia and Associates for the Mid-Coast Corridor Transit Project in 2011 as Railroad Bridge #7 (Property No. 157). Bridge 257.2 spans north-south over Rose Canyon Creek, 400 ft. south of Gilman and La Jolla Colony Drives. The bridge is a double-track, continuous span, wooden trestle bridge measuring approximately 56 ft. in length and 31 ft. in width. Wooden ties support the steel tracks, and solid wood railings flank both sides of the trestle. Based on historical aerials, the bridge was constructed circa 1950. ASM's survey found Bridge 257.2 in the same condition as previously recorded by Garcia and Associates. No date stamps were identified on the rails in this segment, however they appear modern. Both culverts were constructed at an unknown date from wooden posts. The concrete pad is located south of tracks and measures 15x10 feet. One piece of rebar is present within the pad. (See continuation sheet.)



P5a. Photograph or Drawing:

P5b. 6/12/15: #823. Railroad tracks and culvert 256.9, facing south west.

***P6. Date Constructed/Age and Source:**

☒ Historic ☐ Prehistoric ☐ Both
Originally 1882 (originally Atchison, Topeka and Santa Fe Railway), changes in ca. 1950s

***P7. Owner and Address:**

BNSF Railway Corporate Headquarters
2650 Lou Menk Drive
Fort Worth, TX 76131-2830

P8. Recorded by:

Shelby Castells
ASM Affiliates, Inc.
2034 Corte Del Nogal,
Carlsbad, CA 92011

P9. Date Recorded:

June 12, 2015

P10. Survey Type:

Intensive Pedestrian

P11. Report Citation:

Shelby Castells, and Sinéad Ní Ghabhláin

2015 *Cultural Resource Inventory and Evaluation Report on the Bridge 257.2 Replacement and Gap Closure Project, City of San Diego, San Diego County, California.*

Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, and OBJECT RECORD

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

Page 2 of 4

*NRHP Status Code 6Z

		*Resource Name or # (Assigned by recorder)		SDI-16385H MP 257.2 to MP 256.4	
B1. Historic Name:	Atchison, Topeka and Santa Fe Railway				
B2. Common Name:	Burlington, Northern, Santa Fe Railway				
B3. Original Use:	Railroad				
B4. Present Use:	Railroad				
*B5. Architectural Style:	N/A				
*B6. Construction History: (Construction date, alterations, and date of alterations)		Originally constructed between 1881 and 1885			
Routine maintenance and replacements have taken place as necessary, was double tracked with modern materials.					
*B7. Moved? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown		Date:		Original Location:	
*B8. Related Features:		Continuation of the railroad line and railroad stations			
B9a. Architect:	N/A	b. Builder:		Atchison, Topeka and Santa Fe Railway	
*B10. Significance: Theme		Transportation and Regional Development of San Diego County in the late 19 th and early 20 th centuries and Railroad Engineering		Area: San Diego County	
Period of Significance:		1882-1920		Property Type:	Railroad
				Applicable Criteria:	A and C

SDI-16385H / P-37-024739, a segment of the Santa Fe Railroad from MP 257.2 to MP 256.4, is recommended as not eligible for the NRHP, CRHR. Two historic themes are relevant to the NRHP eligibility of the Santa Fe railroad: potential significance in relation to the development of the city of San Diego and the region (Criterion A); and in significance in the context of railroad engineering (Criterion C).

NRHP Criterion A- Significance in Development of San Diego City and Region

The completion of the California Southern Railroad line to San Diego contributed directly to the southern California population and land boom of the 1880s, and contributed to the economy of the region by connecting San Diego to markets in Los Angeles and throughout the U.S. The establishment of the Southern California Railway in 1889, also created a viable competitor to the Southern Pacific Railroad, which up until then had exercised a monopoly in the state. The railroad infrastructure laid by the Southern California Railway in the region in the 1880s and early 1890s prepared the foundation for continued economic expansion in and around San Diego and Los Angeles during the early decades of the twentieth century. This segment of the railroad satisfies Criterion A for its significance in the economic development of the city and county of San Diego within a period of significance of 1882 to 1920. The arrival of the California Southern Railroad in San Diego provided the impetus for the initial growth of the city, and contributed to its long-term development. While the railroad continued to contribute to the local economy in the following decades, it played its most significant role in the first three decades, 1882-1912, after its construction. However the alignment does not retain sufficient integrity in that no features or elements of the railroad from this timer period remain.

NRHP Criterion B - Association with Significant People

While several influential people in the history of San Diego, including Frank Kimball and Alonzo Horton, played a direct role in bringing the Southern California Railroad to San Diego, they were more directly associated with other developments in San Diego's history: Horton, as the founder of New Town San Diego, and Kimball, as the founder of National City. For this reason, the Santa Fe Surf Line is not recommended eligible under Criterion B.

NRHP Criterion C-Significance in Railroad Engineering

This segment of the AT&SF Surf Line is not significant in terms of railroad engineering or construction technology. It does not contain any railroad structures such as bridges, trestles, tunnels or unusual structures that would distinguish it from other railroads.

NRHP Criterion D

This segment of the Santa Fe Surf Line is not recommended eligible under Criterion D as historical records, including railroad design drawings, and as-builts provide greater insight into the history of the early railroad than the remaining structures.

ASM carefully considered whether or not this section of the Santa Fe Railroad, would be eligible for its association with the themes of transportation and regional development of San Diego County in the late nineteenth and early twentieth centuries. The alignment is the same as it was historically, but none of the segment retains the original rails and integrity of materials, craftsmanship, and design.

While several influential people in the history of San Diego County, including Frank Kimball and Alonzo Horton, played a direct role in bringing the California Southern Railroad to San Diego, they were more directly associated with other developments in regional history: Horton, as the founder of New Town San Diego, and Kimball, as the founder of National City. Accordingly, this segment of the Santa Fe Railroad is recommended as not eligible under NRHP Criterion B. The Santa Fe Railroad is also recommended as not eligible under NRHP Criterion C. The segment does not contain any railroad structures such as bridges, trestles, tunnels or unusual structures that would distinguish it from other railroads. This segment of the Santa Fe Railroad is recommended as not eligible under NRHP Criterion D, as historical records, including railroad design drawings, and as-builts provide greater insight into the history of the early railroad than the remaining structures. This segment of the Santa Fe Railroad is recommended as not eligible as a contributor to a historic district following all applicable NRHP criteria. The segment of the Santa Fe Surf Line does not retain sufficient integrity to convey its historical significance. It is therefore recommended as ineligible for inclusion in the NRHP

*B12. References:	See report
*B14. Evaluator:	Sinéad Ní Ghabhláin, ASM PI
*Date of Evaluation:	October 2015

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

Page 3 of 4

Recorded by: S. Castells

■ Continuation ■ Update

*Resource Name or # SDI-16385H MP 257.2 to MP 256.4

Date: 10/8/2015



P5a. Photograph or Drawing:

P5b. 6/12/15: #85. Concrete pad, facing east.



P5a. Photograph or Drawing:

P5b. 6/12/15: #87. Bridge 257.2 and the railroad tracks within the APE, facing south west.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

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*Resource Name or #: SDI-16385H MP 257.2 to MP 256.4

*Map Name: USGS La Jolla 7.5' Quad

*Scale: 1:24,000

*Date of Map: 2013



Page 1 of 3

*Resource Name or # (Assigned by recorder): CA-SDI-16385 (Atchison, Topeka, and Santa Fe Railway)

*Recorded by: T. Yates, ICF International

*Date: May 14, 2014

☐ Continuation ☒ Update

A small segment of the Atchison, Topeka, and Santa Fe (Santa Fe) Railway alignment historically passed through the study area of the proposed project that has occasioned this update form: the Tenth Avenue Marine Terminal Redevelopment Plan. Constructed in 1882-83, the Santa Fe line passed through the northeastern portion of the Tenth Avenue Marine Terminal Redevelopment Plan Study area. This portion of the Santa Fe line was part of a larger segment evaluated for listing on the National Register of Historic Places (NRHP) in 2002, and found ineligible for NRHP listing due to insufficient historic integrity. At that time, it was observed that most of the existing track dated to 1975 or later, while nearly all of the railroad's historic-period physical components had been replaced over time. In fact, the 1904 San Diego topographic map (surveyed 1902) shows that at that time, much of the Santa Fe Railway line through the Plan study area was carried over bay waters or marshland on a bridge that is no longer present (USGS 1904). Due to substantial loss of historical integrity, any remaining trace of the original Santa Fe line through the project study area would not be eligible for listing on the CRHR. Site records for CA-SDI-16385 are appended to this update form.



Photograph 1: View of northeastern Tenth Avenue Marine Terminal Redevelopment Plan study area, where the Santa Fe Railway line passed through the study area largely on a railroad bridge over bay waters or marshland circa 1900, looking southwest

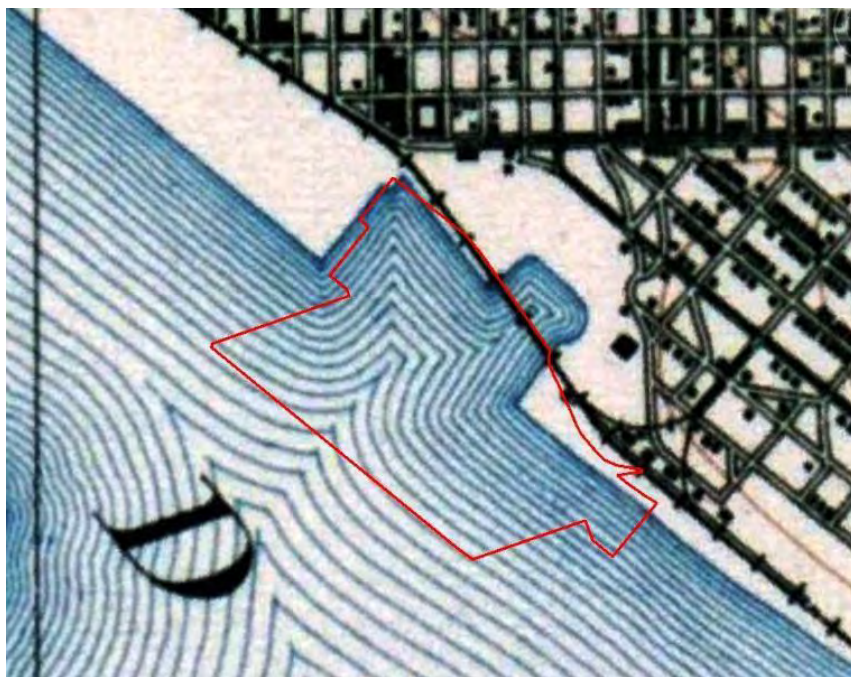
Page 2 of 3

*Resource Name or # (Assigned by recorder): CA-SDI-16385 (Atchison, Topeka, and Santa Fe Railway)

*Recorded by: T. Yates, ICF International

*Date: May 14, 2014

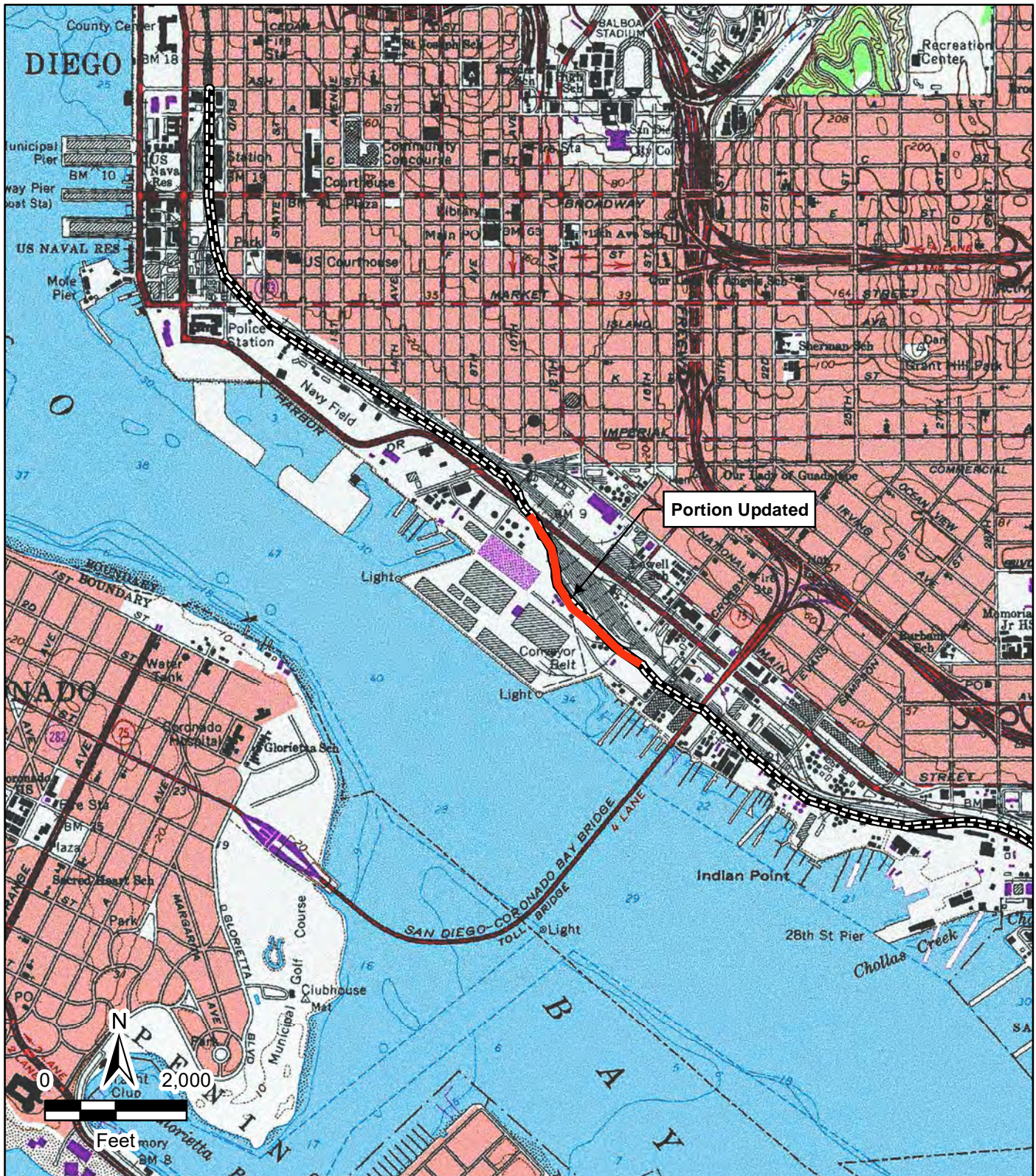
☐ Continuation ☒ Update



1904 *San Diego* topographic map (surveyed 1902) with Plan study area overlay showing railroad bridge and alignment through eastern study area.

References:

United States Geological Survey (USGS). 1904. *San Diego California*. 15' series (1:63,360) Topographic Quadrangle Map. Culture surveyed 1902.



State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

Page 1 of 3

Recorded by: S. Castells and J. Krintz

☐ Continuation ☒ Update

*Resource Name or # SDI-16385H at CP Rose

Date: 08/26/2013

P2. Location: ☒ Not for Publication ☐ Unrestricted

a. County: San Diego

b. USGS 7.5' Quad La Jolla Date 1997 T 15S; R 3W; unsectioned Pueblo Lands of San Diego; San Bernardino B.M.

c. Address City Zip

d. UTM: NAD 83 Zone 11S, East End 479296 mE/ 3635494 mN, West End 478903 mE/ 3635299 mN

e. Other Locational Data:

This segment of the railroad extends from CP Rose west for 0.3-miles.

P3a. Description:

The historic BNSF railroad (originally Atchison, Topeka and Santa Fe Railway) has not been previously recorded in the Project area, other segments of this railroad have been recorded in San Diego County under the trinomial SDI-16385H (P-37-024739). This segment of the railroad begins at CP Rose on the eastern end and continues 0.3- miles to the west. The railroad is a typical double-track railroad that has carried freight and passenger trains continuously since its construction from 1882 to 1885. This segment includes the railroad grade, ballast, rails, ties, two culverts, and a signal. Both tracks have wooden ties. No date stamps were identified on the rails in this segment, however they appear modern. The western culvert is formed concrete and contains a 1943 date stamp. This culvert and the 1943 date stamp is visible on both sides of the railroad. The eastern culvert was constructed at an unknown date from wooden posts.

P5a. Photograph or Drawing:



P5b. 02/25/2013: #03. Railroad tracks and 1943 railroad culvert, facing south.

*P6. Date Constructed/Age and Source:

☒ Historic ☐ Prehistoric ☐ Both
1882 (originally Atchison, Topeka and Santa Fe Railway)

*P7. Owner and Address:

BNSF Railway Corporate Headquarters
2650 Lou Menk Drive
Fort Worth, TX 76131-2830

P8. Recorded by:

Shelby Castells and Jennifer Krintz
ASM Affiliates, Inc.
2034 Corte Del Nogal,
Carlsbad, CA 92011

P9. Date Recorded:

February 25, 2013

P10. Survey Type:

Intensive Pedestrian

P11. Report Citation:

Shelby Castells, Jennifer Krintz, and Sinéad Ni Ghabhláin

2013 *Elvira to Morena Double Track Project, Cultural and Historical Resources Technical Report, San Diego, California.*

Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, and OBJECT RECORD

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

Page 2 of 3

*NRHP Status Code 6Z

		*Resource Name or # (Assigned by recorder)		SDI-16385H at CP Rose	
B1. Historic Name:	Atchison, Topeka and Santa Fe Railway				
B2. Common Name:	Burlington, Northern, Santa Fe Railway				
B3. Original Use:	Railroad				
B4. Present Use:	Railroad				
*B5. Architectural Style:	N/A				
*B6. Construction History: (Construction date, alterations, and date of alterations)		Originally constructed between 1881 and 1885			
Routine maintenance and replacements have taken place as necessary.					
*B7. Moved? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown		Date:		Original Location:	
*B8. Related Features:		Continuation of the railroad line and railroad stations			
B9a. Architect:	N/A	b. Builder:		Atchison, Topeka and Santa Fe Railway	
*B10. Significance: Theme		Transportation and Regional Development of San Diego County in the late 19 th and early 20 th centuries and Railroad Engineering		Area: San Diego County	
Period of Significance:		1882-1920		Property Type:	Railroad
				Applicable Criteria:	A and C

SDI-16385H / P-37-024739, a segment of the Santa Fe Railroad, is recommended as not eligible for the NRHP, CRHR. Two historic themes are relevant to the NRHP eligibility of the Santa Fe railroad: potential significance in relation to the development of the city of San Diego and the region (Criterion A); and in significance in the context of railroad engineering (Criterion C).

NRHP Criterion A- Significance in Development of San Diego City and Region

The completion of the California Southern Railroad line to San Diego contributed directly to the southern California population and land boom of the 1880s, and contributed to the economy of the region by connecting San Diego to markets in Los Angeles and throughout the U.S. The establishment of the Southern California Railway in 1889, also created a viable competitor to the Southern Pacific Railroad, which up until then had exercised a monopoly in the state. The railroad infrastructure laid by the Southern California Railway in the region in the 1880s and early 1890s prepared the foundation for continued economic expansion in and around San Diego and Los Angeles during the early decades of the twentieth century. This segment of the railroad satisfies Criterion A for its significance in the economic development of the city and county of San Diego within a period of significance of 1882 to 1920. The arrival of the California Southern Railroad in San Diego provided the impetus for the initial growth of the city, and contributed to its long-term development. While the railroad continued to contribute to the local economy in the following decades, it played its most significant role in the first three decades, 1882-1912, after its construction. However the alignment does not retain sufficient integrity in that no features or elements of the railroad from this timer period remain.

NRHP Criterion B - Association with Significant People

While several influential people in the history of San Diego, including Frank Kimball and Alonzo Horton, played a direct role in bringing the Southern California Railroad to San Diego, they were more directly associated with other developments in San Diego's history: Horton, as the founder of New Town San Diego, and Kimball, as the founder of National City. For this reason, the Santa Fe Surf Line is not recommended eligible under Criterion B.

NRHP Criterion C-Significance in Railroad Engineering

This segment of the AT&SF Surf Line is not significant in terms of railroad engineering or construction technology. It does not contain any railroad structures such as bridges, trestles, tunnels or unusual structures that would distinguish it from other railroads.

NRHP Criterion D

This segment of the Santa Fe Surf Line is not recommended eligible under Criterion D as historical records, including railroad design drawings, and as-builts provide greater insight into the history of the early railroad than the remaining structures.

ASM carefully considered whether or not this section of the Santa Fe Railroad, would be eligible for its association with the themes of transportation and regional development of San Diego County in the late nineteenth and early twentieth centuries. The alignment is the same as it was historically, but none of the segment retains the original rails and integrity of materials, craftsmanship, and design.

While several influential people in the history of San Diego County, including Frank Kimball and Alonzo Horton, played a direct role in bringing the California Southern Railroad to San Diego, they were more directly associated with other developments in regional history: Horton, as the founder of New Town San Diego, and Kimball, as the founder of National City. Accordingly, this segment of the Santa Fe Railroad is recommended as not eligible under NRHP Criterion B. The Santa Fe Railroad is also recommended as not eligible under NRHP Criterion C. The segment does not contain any railroad structures such as bridges, trestles, tunnels or unusual structures that would distinguish it from other railroads. This segment of the Santa Fe Railroad is recommended as not eligible under NRHP Criterion D, as historical records, including railroad design drawings, and as-builts provide greater insight into the history of the early railroad than the remaining structures. This segment of the Santa Fe Railroad is recommended as not eligible as a contributor to a historic district following all applicable NRHP criteria. The segment of the Santa Fe Surf Line does not retain sufficient integrity to convey its historical significance. It is therefore recommended as ineligible for inclusion in the NRHP

*B12. References:	See report
*B14. Evaluator:	Jennifer Krintz, ASM Architectural Historian
*Date of Evaluation:	August 2013

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-37-024739 UPDATE
HRI #
Trinomial CA-SDI-16385H UPDATE

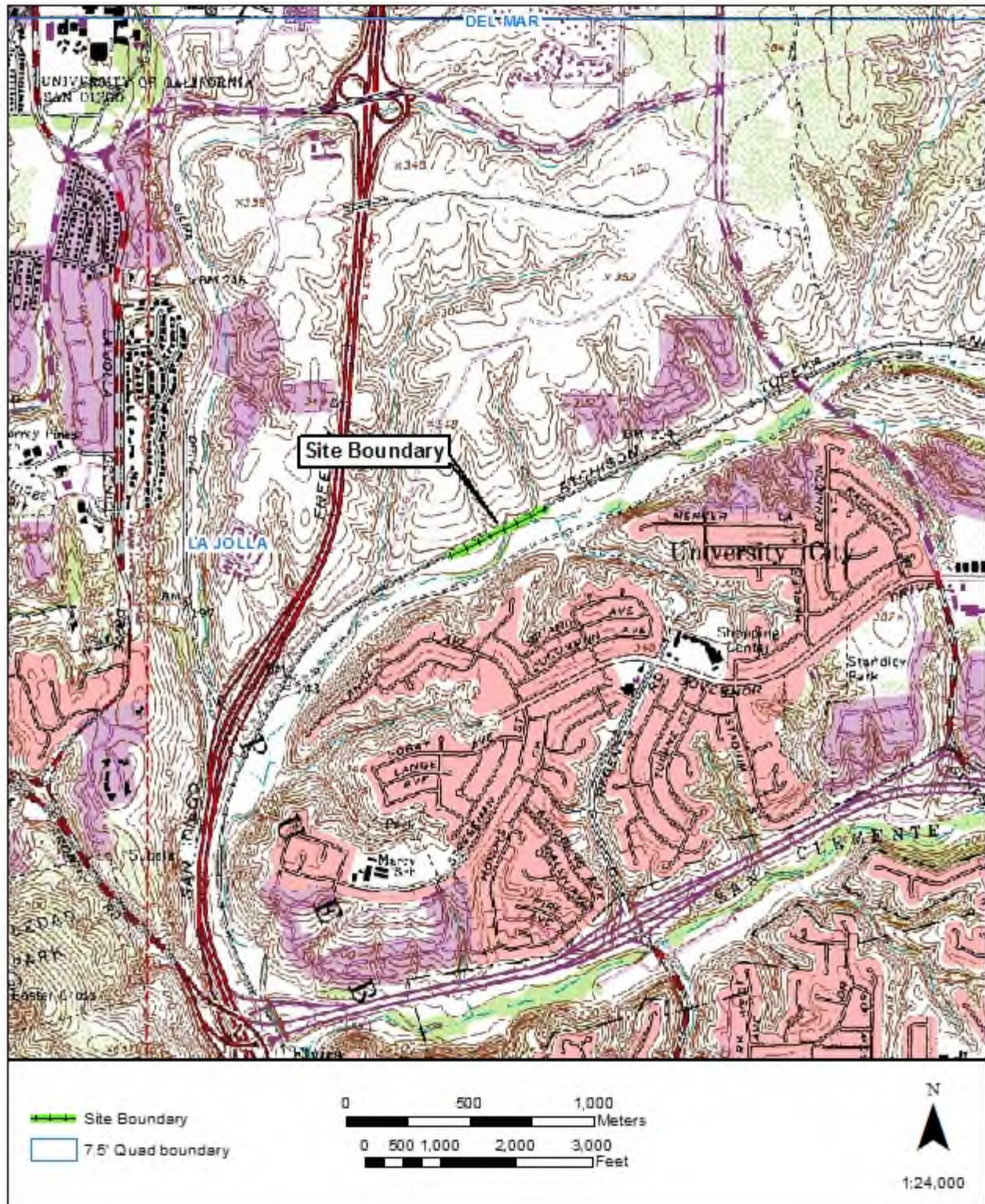
Page 3 of 3

*Map Name: USGS La Jolla 7.5' Quad

*Scale: 1:24,000

*Resource Name or #: SDI-16385 at CP Rose

*Date of Map: 2013



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-37-024739 (Update)
HRI # _____
Trinomial CA-SDI-16385H (Update)
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 13

*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

P1. Other Identifier:

*P2. Location: ☐ Not for Publication ☒ Unrestricted

*a. County: San Diego

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Point Loma Date: 1994 T 16 South; R 3 West; unsectioned; S.B.B.M.

USGS 7.5' Quad: La Jolla Date: 1975 T 16 South; R 3 West; unsectioned; S.B.B.M.

c. Address: City: San Diego Zip: _____

d. UTM: Zone: 11 NAD 83; see below mE/ mN (G.P.S.)

Segment Number	UTM NAD 83 Zone 11		Segment Number	UTM NAD 83 Zone 11	
	Easting	Northing		Easting	Northing
1-North End	483655.386	3621697.82	3-South End	482378.483	3622859.409
1-South End	483722.414	3621570.178	4-North End	481337.937	3623977.051
2-North End	482790.881	3622605.824	4-South End	482379.92	3622859.639
2-South End	483009.56	3622457.072	5-North End	478161.32	3634728.798
3-North End	481979.395	3623109.958	5-South End	481153.175	3624618.958

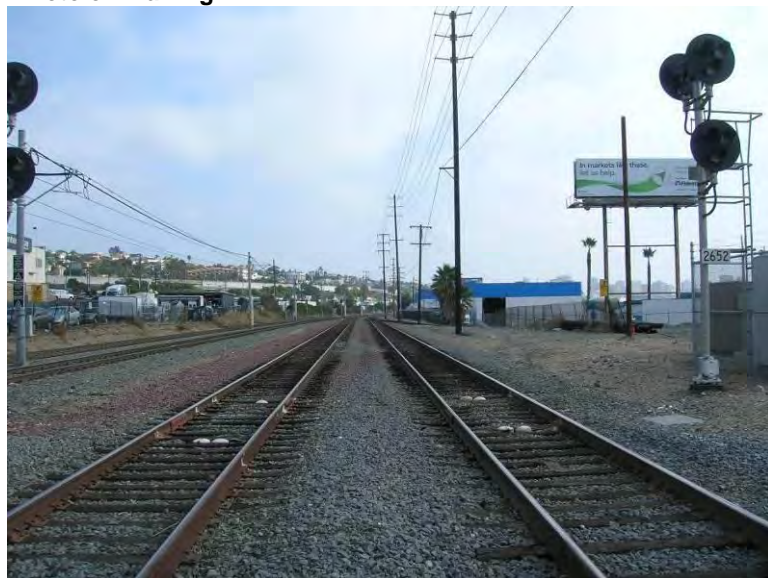
e. Other Locational Data: The five newly-recorded segments are located between Santa Fe Depot and approximately 400 feet south of Gilman and La Jolla Colony drives, generally between Mile Posts (MP) 258 and 265.

*P3a. Description: See continuation sheet. Note: Location maps are presented from the south to the north to follow the Mid-Coast Corridor Transit Project description.

*P3b. Resource Attributes: HP37. Railroad

*P4. Resources Present: ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Photo: View south toward the Burlington Northern Santa Fe (BNSF) railroad tracks from the W. Washington Street crossing. Taken on October 24, 2011 (Photo Accession #DSCN 7225).

*P6. Date Constructed/Age and Sources: ☒ Historic ☐ Prehistoric ☐ Both
1882 (original Atchison, Topeka, and Santa Fe railway construction); Ballester and Woodward 2002 and Galvin Preservation Associates 2011

*P7. Owner and Address:
BNSF Railway Corporate Headquarters
2650 Lou Menk Drive
Fort Worth, TX 76131-2830

*P8. Recorded by:
E. Schultz and K. Harper
Garcia & Associates (GANDA)
104 S. C Street, Suite G
Lompoc, CA 93436

*P9. Date Recorded: November 11, 2011

*P10. Survey Type: Intensive

*P11. Report Citation: San Diego Association of Governments (SANDAG). Historic Property Survey and Eligibility Determination Report for Mid-Coast Corridor Transit Project, San Diego, California. April 2013.

*Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

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*NRHP Status Code 6Z

*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

B1. Historic Name: Atchison, Topeka and Santa Fe Railway

B2. Common Name: Burlington, Northern, Santa Fe Railway

B3. Original Use: Railroad

B4. Present Use: Railroad

*B5. Architectural Style: N/A

*B6. Construction History: Originally constructed in 1882. Routine maintenance and replacement of select features since its construction.

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date:

Original Location:

*B8. Related Features: See continuation sheet.

B9a. Architect: N/A

b. Builder: Atchison, Topeka and Santa Fe Railway

*B10. Significance: Theme: Railroad Transportation

Area: San Diego, California

Period of Significance: N/A

Property Type: Railroad

Applicable Criteria: N/A

In 2002, CRM TECH evaluated a 5.9-mile segment of the BNSF Railway in 2002 from Ash Street in San Diego to 24th Street in National City (BNSF MP 267.3 to 273.2) (Tang et al. 2002). The railroad segment was recorded on Department of Parks and Recreation (DPR) 523 forms and found to be not eligible for the National Register of Historic Places (NRHP). The California State Historic Preservation Office (SHPO) concurred with this finding and determined that the railway was ineligible for the NRHP. The railway was assigned NRHP/CRHP Status Code "6Y" (determined ineligible for NRHP by consensus through Section 106 process).

GANDA concurs with this evaluation, and updated the 2002 DPR 523 forms to include five newly-recorded segments and associated features, which are also ineligible for listing in the NRHP and the CRHP.

B11. Additional Resource Attributes: None

*B12. References: See continuation sheet.

B13. Remarks: None

*B14. Evaluator: E. Schultz and K. Harper, GANDA; C. Anderson, ICF International (peer review)

*Date of Evaluation: November 18, 2011; March 12, 2013

Sketch Map: See continuation sheets.

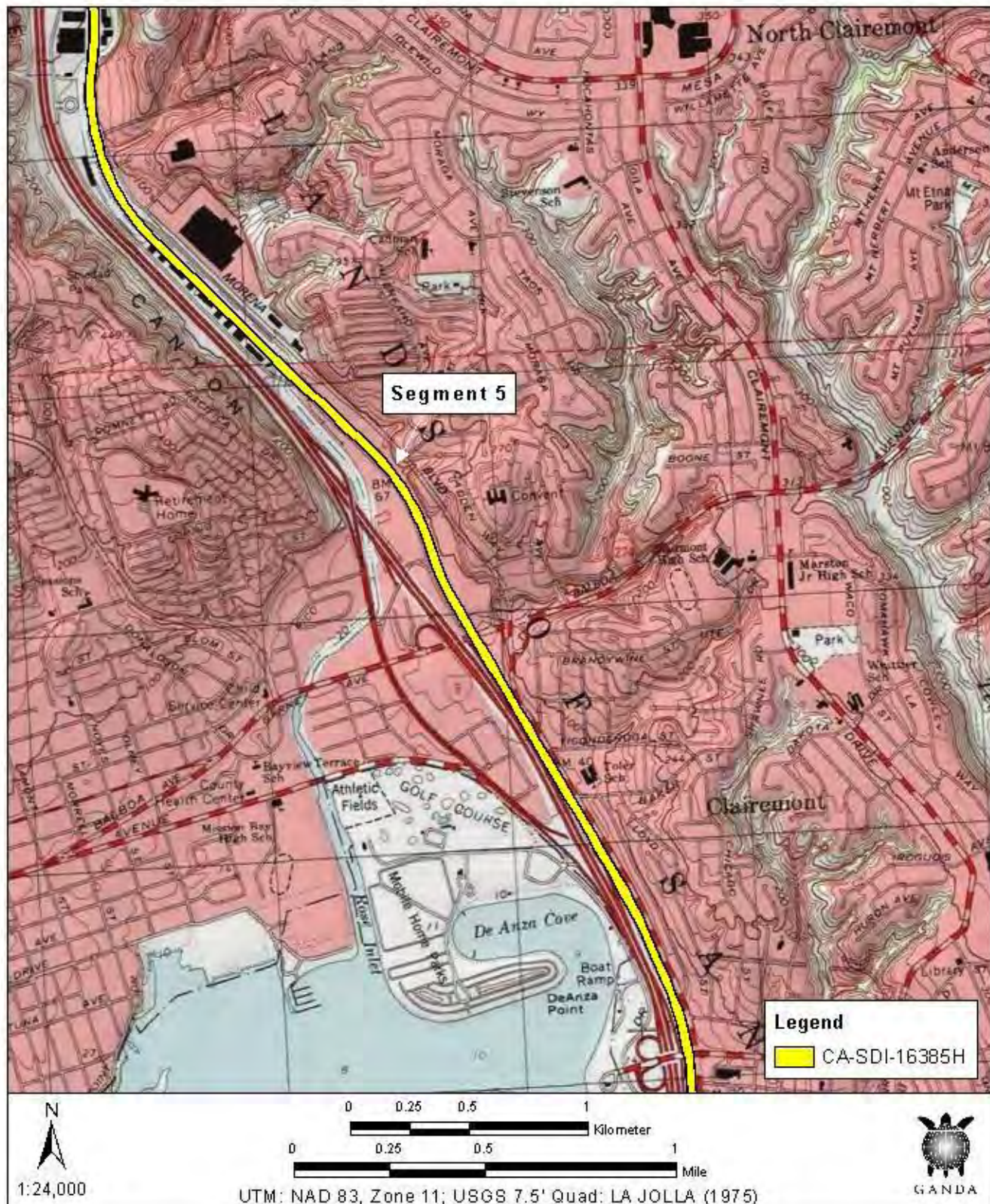
(This space reserved for official comments.)

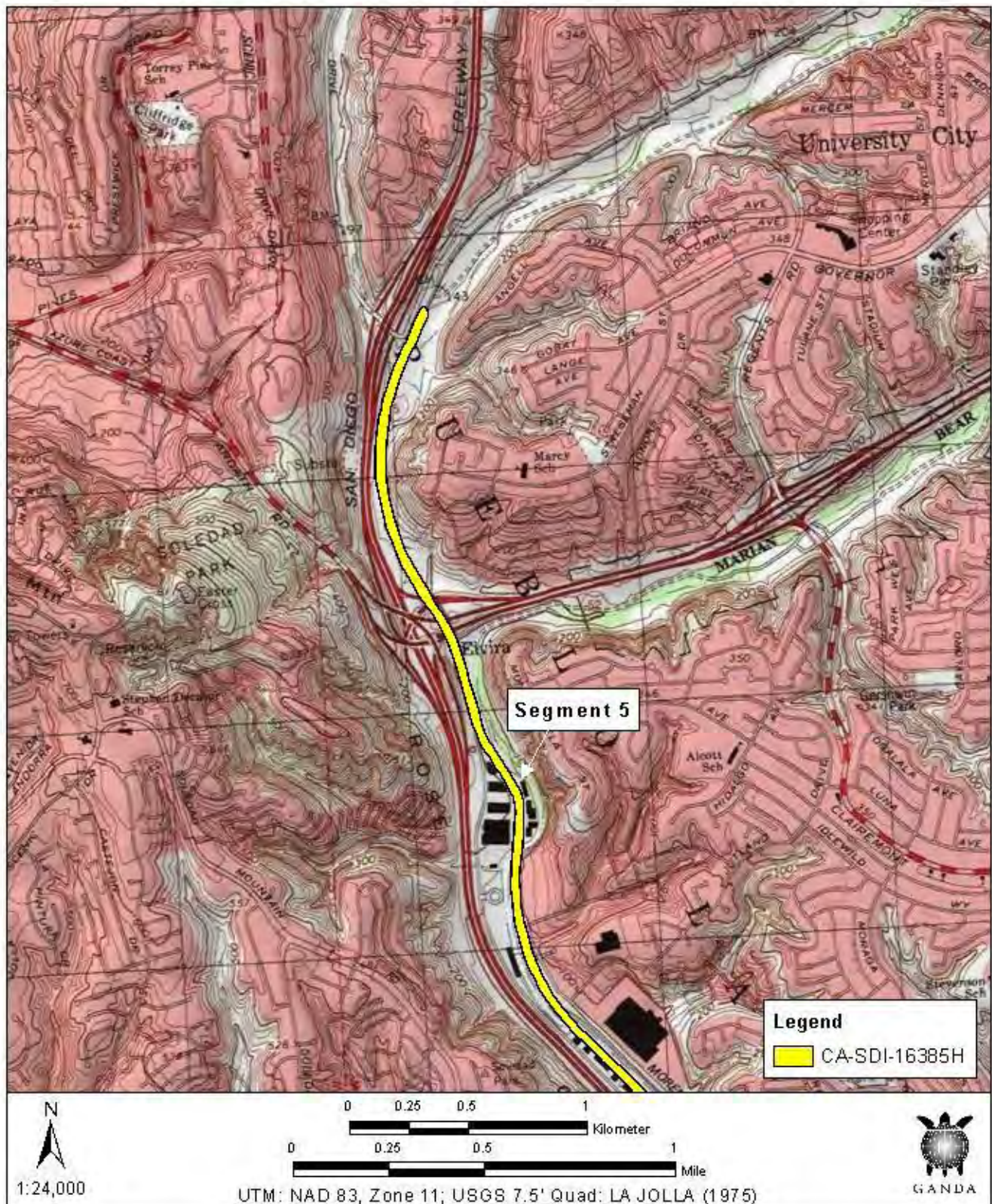
*Map Name: La Jolla, California, USGS 7.5-minute topographic quadrangle *Scale: 1:24,000 *Date of Map: 1975

*Map Name: Point Loma, California, USGS 7.5-minute topographic quadrangle *Scale: 1:24,000 *Date of Map: 1994









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DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-37-024739 (Update)

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*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

*Recorded by E. Schultz and K. Harper, GANDA

*Date November 11, 2011

☒ Continuation ☒ Update

Continuation of P3a. Description:

The resource consists of five segments (referred to as Segments 1-5 in this discussion) of the Burlington Northern Santa Fe (BNSF) Railway in San Diego. South of the San Diego River, the BNSF tracks are the two westernmost tracks, while the eastern two tracks are part of the modern Metropolitan Transit System (MTS) Trolley light rail line completed in 1994. North of the San Diego River, the BNSF tracks continue northward through Rose Canyon and then head east just after the intersection of Gilman and La Jolla Colony drives. The railroad is a typical single- and double- track railroad that has carried freight and passenger trains continuously for more than 100 years. It is comprised of various features, including rail, ties, and ballast; switches; spurs; bridges; culverts; and other small-scale components. Today, the rail corridor is used by Burlington Northern and Santa Fe Railway (BNSF) freight service (Federal Railroad Administration 2009). Additionally, Amtrak provides commuter service for Metrolink (Southern California) and operates the Pacific Surfliner route extending from San Luis Obispo to San Diego (Amtrak 2011).

The following table lists the features associated with the five newly-recorded BNSF railway segments (Table 1). Features that are clustered together were numbered with letters (e.g. A, B, C).

Table 1. BNSF Railroad Features Associated with Newly-Recorded Segments 1-5

Feature No.	BNSF No.	Resource Type/Description	UTMs		Built Date
			Easting	Northing	
1A		Switch for Washington Street East Leg Spur	482916.5436	3622519.434	ca. 1928
1B		Electrical box for Washington Street East Leg Spur	482913.1786	3622518.36	ca. 1928
1C		Switch box for Washington Street East Leg Spur	482821.4732	3622550.88	ca. 1928
1D		Switch box for Washington Street East Leg Spur	482820.0156	3622550.878	ca. 1928
1E		Switch box for Washington Street East Leg Spur	482816.9019	3622549.875	ca. 1928
1F		Signal for Washington Street East Leg Spur	482809.4529	3622549.256	appears modern
2A		Washington Street signal house	482794.0249	3622591.137	unknown
2B	2652	Washington Street signal (west side of tracks)	482797.1875	3622593.293	unknown
2C	2654	Washington Street signal (east side of tracks)	482803.6863	3622603.868	unknown
3		Electrical box with bumper rails created from 1903 rails	482139.0072	3623005.396	unknown
4		1942 culvert	481992.6862	3623099.903	1942
5		Abandoned General Dynamics Spur at south end of U.S. Navy Space and Naval Warfare Systems Command (SPAWAR) complex	481760.23	3623316.62	ca. 1924
6		Abandoned General Dynamics Spur at north end of SPAWAR complex	481694.98	3623407.02	ca. 1924
7		Guardrail at curve underneath I-5 at north end of Segment 4	481400.5789	3623822.433	appears modern
8		South end of Newspaper Spur (building used to contain a newspaper printer)	481025.8816	3625029.769	unknown
9		Culvert running parallel to east side of tracks	480923.0539	3625379.519	appears modern
10		Corrugated metal culvert	480906.6525	3625417.411	appears modern
11A		Derail switch for private car	480895.3577	3625462.364	ca. 1990s

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DEPARTMENT OF PARKS AND RECREATION
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*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

*Recorded by E. Schultz and K. Harper, GANDA

*Date November 11, 2011 ☐ Continuation ☒ Update

Table 1. BNSF Railroad Features Associated with Newly-Recorded Segments 1-5

Feature No.	BNSF No.	Resource Type/Description	UTMs		Built Date
			Easting	Northing	
11B		Spur line switch for private car	480863.219	3625542.719	ca. 1990s
11C		Split point spur derail for private car	480856.4716	3625563.473	ca. 1990s
11D		Spur line for private car	480899.53	3625462.01	ca. 1990s
11E		Spur switch from main track (spur leads to private car and old newspaper spur)	480828.2837	3625636.489	ca. 1990s
12		Abandoned spur line for WD-40 factory			unknown
13		Abandoned spur line on east side of tracks	480856.282	3625593.001	unknown
14A		Signal for Control Point (CP) Tecolote	480789.3742	3625737.185	2002
14B		CP Tecolote switch	480787.1585	3625752.438	2002
14C		CP Tecolote switch box	480779.4529	3625754.246	2002
14D		CP Tecolote cantilever signal	480732.6963	3625895.227	2002
15		Modern culvert	480674.2431 (east) 480659.6764 (west)	3626134.56 (east) 3626129.798 (west)	appears modern
16		Modern concrete culvert	480625.5292	3626293.926	appears modern
17		Possible brick culvert	480554.8692	3626543.864	unknown
18		Concrete and metal culvert	480541.8703	3626915.648	appears modern
19		Private crossing for NCTD staff	480544.8216	3626938.734	appears modern
20		Concrete culvert	480580.7512	3627139.006	appears modern
21		Metal and concrete culvert	480656.4117	3627652.213	appears modern
22A	2611	Signal	480688.4586	3627906.314	unknown
22B	2613	Signal	480674.9441	3627907.951	unknown
22C		Signal house	480670.3635	3627906.282	unknown
23		Concrete culvert	480692.668	3627970.367	appears modern
24		Metal and concrete culvert	480639.5661	3628327.849	1943
25		Concrete culvert	480517.8939	3628645.704	appears modern
26		Concrete culvert (west end feeds to a storm drain)	480489.5492	3628720.597	1919
27		Metal and concrete culvert	480409.0933	3628884.647	1919
28		Concrete culvert	480281.2837	3629136.222	1919
29		Concrete culvert	480180.3199	3629326.484	unknown
30		Metal culvert	480062.6558	3629562.039	unknown
31A		Signal (west side of tracks) for CP Morena	479966.6364	3629714.346	unknown
31B		Signal (east side of tracks) for CP Morena	479978.155	3629721.406	unknown
31C		CP Morena Switch box	479902.48	3629853.854	appears modern
31D		CP Morena Signal box	479899.7977	3629851.709	appears modern
31E		CP Morena Signal	479893.3926	3629867.006	appears modern
32		Concrete culvert	479973.2625	3629730.155	appears modern
33		Possible abandoned spur	479708.40 (north) 479761.2610 (south)	3630264.63 (north) 3630112.79 (south)	unknown
34		Double concrete culvert	479694.3684	3630381.636	appears modern
35		Concrete culvert	479599.4111	3630573.19	appears modern
36		Concrete culvert	479512.0736	3630687.152	appears modern
37		Concrete culvert	479404.2031	3630806.73	appears modern
38		Concrete culvert	479301.4713	3630917.522	1918
39		Concrete culvert (runs parallel to tracks)	479183.9314	3631022.315	appears modern

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*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

*Recorded by E. Schultz and K. Harper, GANDA

*Date November 11, 2011 ☐ Continuation ☒ Update

Table 1. BNSF Railroad Features Associated with Newly-Recorded Segments 1-5

Feature No.	BNSF No.	Resource Type/Description	UTMs		Built Date
			Easting	Northing	
40		Concrete culvert (runs parallel to tracks)	479112.3802	3631095.776	appears modern
41A	2591	Signal	478818.8021	3631442.363	unknown
41B		Signal box for 2951	478807.614	3631433.089	unknown
42		Automatic train stop	478678.0736	3631590.456	appears modern
43A		Battery box for old Budweiser switch box	478417.7721	3632432.253	unknown
43B		Old Budweiser spur line (also former NCTD storage area)	478419.1821	3632474.848	1911--closer to the distribution building 1968--closer to the main tracks
44		Metal culvert (runs under Budweiser spur)	478424.6128	3632485.583	unknown
45		Metal and concrete culvert	478336.9443	3632823.142	appears modern
46		Metal and concrete culvert	478222.9877	3633176.406	1920
47A		CP Elvira signal box	478152.1089	3633373.677	appears modern
47B		CP Elvira signal	478165.1783	3633376.931	appears modern
47C		CP Elvira switch	478154.2399	3633386.358	appears modern
47D		CP Elvira cantilever signal	478077.2952	3633510.932	appears modern
48		Concrete culvert	478042.3793	3633578.078	appears modern
49		Double concrete culvert	477970.4483	3633753.881	appears modern
50		Automatic train stop	478038.2432	3634450.646	appears modern

Additionally, seven BNSF railroad bridges are associated with the newly-recorded segments of the BNSF (Table 2). Since they are large-scale engineering structures that may be eligible for listing in the NRHP, CRHR, or City of San Diego Historical Register as individual properties, the railroad bridges over 45 years old (Railroad Bridges #1-3 and #5-7) are also recorded and evaluated on separate DPR 523 Forms.

Table 2. BNSF Railroad Bridges Associated with Newly-Recorded Segments 1-5

Bridge No.	Resource Type/Description	UTM		Construction Date (Source)
		Easting	Northing	
1	Single track, steel pony girder (or floor-beam system) railroad bridge over San Diego River and Friars Road, 0.5 mile east of Sea World Drive; also Caltrans Bridge #57C0289	481027.83 (north) 481109.95 (south)	3624998.53 (north) 3624738.64 (south)	1914, repaired in 1916, widened in 1927, and lengthened in 1957 (Caltrans and archival research)
2	Double track, concrete deck beam girder railroad bridge over Tecolote Creek	480728.01	3625942.83	ca. 1963 (historic aerial photographs)
3	Single track, steel stringer/multi-beam (or open-deck plate girder) railroad bridge over Balboa/Garnet Avenue	479879.23	3629904.83	1956 (metal plaque on the bridge)
4	Single track, concrete deck beam girder railroad bridge over Rose Canyon Creek 0.8 mile north of Balboa/Garnet Avenue	4791977.53	3631039.02	ca. 2000, visual estimate
5	Single track, concrete deck beam girder railroad bridge over Rose Canyon Creek, 1.3 miles north of Balboa/Garnet Avenue	478610.55	3631161.14	ca. 1950s (historic aerial photographs)

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*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

*Recorded by E. Schultz and K. Harper, GANDA

*Date November 11, 2011

☐ Continuation

☒ Update

Bridge No.	Resource Type/Description	UTM		Construction Date (Source)
		Easting	Northing	
6	Single track, concrete deck beam girder railroad bridge over Rose Canyon Creek, 1.75 miles north of Balboa/Garnet Avenue	478414.05	3632387.36	ca. 1950s (historic aerial photographs)
7	Double track, wood deck truss railroad bridge over Rose Canyon Creek, just south of Gilman La Jolla Colony Drives	478032.45	3634427.23	ca. 1950s (historic aerial photographs)

Sketch maps of the five newly-recorded BNSF segments (from south to north):



Segment 1 consists of the western two tracks starting at the intersection of W. Palm Street and Pacific Highway and ending at the southern property line of 1411-1415 W. Palm Street (APN 451-65-103-00)



Segment 2 consists of the western two tracks and spur starting at the southwest corner of Washington Street and Pacific Highway and ending at the southern property line of 3225 Bean Street (APN 451-69-032-00).



Segment 3 consists of the western two tracks starting at the southwest corner of Witherby Street and ending at the southern property line of 3500 Estudillo Street (APN 450-60-214-00).

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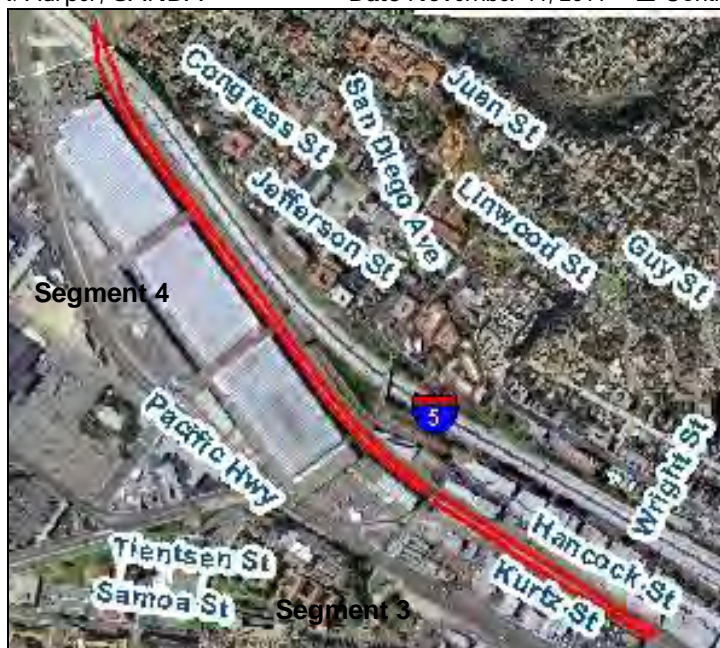
*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

*Recorded by E. Schultz and K. Harper, GANDA

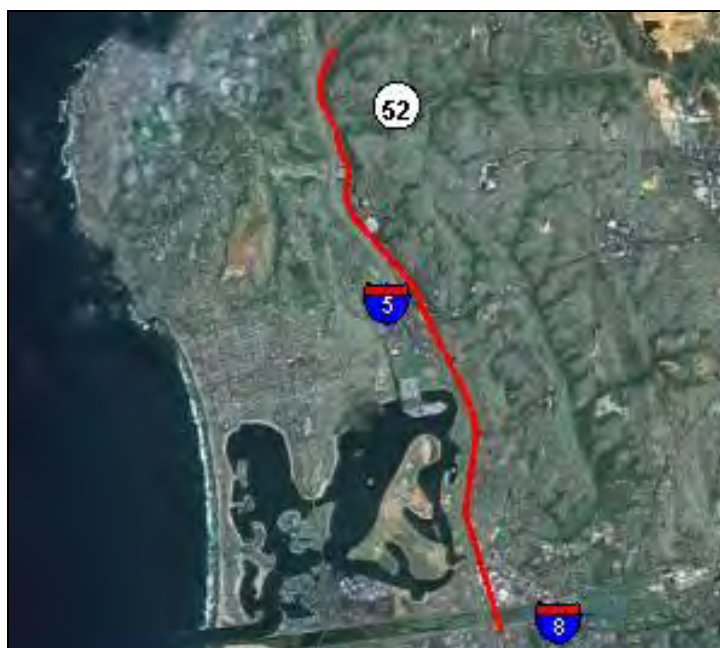
*Date November 11, 2011

☐ Continuation

☒ Update



Segment 4 consists of the western two tracks starting at the location where Interstate 5 (I-5) crosses Pacific Highway at Old Town Transit Center and ending at the southern property line of the former Air Force Plant 19 (APN 450-55-008-00) at Witherby Street. (This map also shows Segment 3 located to the south.)



Segment 5 consists of the tracks starting around 400 feet south of the intersection of Gilman La Jolla Colony drives and ending around 6.75 miles south at I-8.

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HRI # _____

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*Resource Name or # Property No. 1 (Burlington Northern Santa Fe Railway)

*Recorded by E. Schultz and K. Harper, GANDA

*Date November 11, 2011 ☐ Continuation ☒ Update

Continuation of B12. References:

Amtrak

2011 "National Facts."

<http://www.amtrak.com/servlet/ContentServer?c=Page&pagename=am%2FLayout&cid=1246041980246> (accessed November 14, 2011).

Ballester, Daniel, and Teresa Woodard

2002 Primary Record Update for P-37-024739 (CA-SDI-16385H). On file, South Coastal Information Center, San Diego State University.

California Department of Transportation (Caltrans)

2011 *Structure Maintenance & Investigation: Local Agency Bridge List.*

<http://www.dot.ca.gov/hq/structur/strmaint/local/localbrlist.pdf> (accessed on November 13, 2011).

Federal Railroad Administration, U.S. Department of Transportation

2009 "Record of Decision for the LOSSAN Proposed Rail Corridor Improvements."

http://www.fra.dot.gov/downloads/RRDev/LOSSAN_ROD_FINAL_2009.pdf (accessed November 14, 2011).

Galvin Preservation Associates

2011 *Draft City of San Diego Midway Community Plan Area Historic Resources Reconnaissance Survey: Historic Context and Survey Report.* Prepared for City of San Diego City Planning & Community Investment Department.

Heritage Architecture and Planning

2005 *Warehouse Thematic Historic District, Draft City of San Diego Local District Nomination.* Prepared for Centre City Development Corporation, San Diego, California.

San Diego History Center

2011 "Timeline of San Diego History." <http://www.sandiegohistory.org/timeline/timeline3.htm> (accessed on November 14, 2011).

Tang, Bai, Michael Hogan, Mariam Dahdul, Teresa Woodard, and Daniel Ballester

2002 California Department of Parks and Recreation 523 forms, CA-SDI-16385H/P-37-024739, Burlington Northern Santa Fe Railway. Prepared by CRM TECH. In "Historical Resources Compliance Report: Track Improvements between San Diego and National City, and New Locomotive/Car Service and Inspection Facility in National City, San Diego County, California." On file, South Coastal Information Center, San Diego State University, San Diego.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____

Reviewer _____ Date _____

Page 1 of 4

*Resource Name or #: SVDT-Railroad

P1. Other Identifier: former Atchison, Topeka and Santa Fe Railway (AT&SF); Santa Fe Surf Line

***P2. Location:** ☐ Not for Publication ☒ Unrestricted

*a. County: San Diego

*b. USGS 7.5' Quad Del Mar Date 1975; T 15S; R 3W; unsectioned Pueblo of San Diego Lands; S.B. **B.M.**

c. Address: N/A City: San Diego and Del Mar Zip: N/A

d. UTM: Zone 11, 477696 **mE** / 3642144 **mN** to 479370 **mE** 3640033 **mN**

e. **Other Location Data:** This segment of the NCTD Los Angeles to San Diego (LOSSAN) Rail Corridor, formerly the AT&SF railroad is located within the Soledad / Sorrento Valley and extends from approximately 180 feet (ft.) west of Sorrento Valley Road and the western terminus of Carmel Mountain Road in the northwest to approximately 400 ft. east of Arbutus Street. The segment is approximately one and one-half miles long.

***P3a. Description:** This resource consists of a 1.5-mile segment of the LOSSAN railroad corridor, formerly the Atchison, Topeka and Santa Fe railway that was first constructed in 1882-1883. The railroad is currently in use by NCTD's commuter trains (Coaster), Amtrak and BNSF. The existing tracks, and associated structures are modern. Three timber trestle bridges in this segment were constructed in the early 1940s.

***P3b. Resource Attributes:** HP 19 Railroad bridge; AH7 Railroad Grade

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo:



1/23/2007, View south from Bridge 248.5

***P6. Date Constructed/Age and Sources:**

☒ Historic ☐ Prehistoric ☐ Both
1882-1883

***P7. Owner and Address:**

San Diego Metropolitan Transit System (MTS)
1255 Imperial Avenue
San Diego, CA 92101-7990

***P8. Recorded by:**

Barry Stiefel/ Shelby Gunderman
ASM Affiliates, Inc.
2034 Corte del Nogal
Carlsbad, CA 92011

***P9. Date Recorded:** 1/23/2007; July 2009

***P10. Survey Type: (Describe):** Intensive
Pedestrian

***P11. Report Citation:** Ní Ghabhláin, Sinéad and

Sarah Stringer-Bowsher (2010), *Cultural and Historical Resources Existing Conditions Report for the North County Transit District Sorrento Valley Double Track and Bridge Replacement Project*. ASM Affiliates, Inc. Submitted to BRG Consulting.

***Attachments:** ☐ NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☒ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

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DEPARTMENT OF PARKS AND RECREATION
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Primary # _____
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*NRHP Status Code 6Y

*Resource Name or # SVDT-Railroad

B1. Historic Name: Atchison, Topeka and Santa Fe Railroad, Surf Line

B2. Common Name: NCTD Coaster

B3. Original Use: Railroad

B4. Present Use: Railroad

*B5. Architectural Style: N/A

*B6. **Construction History:** This segment of the AT&SF railroad was first constructed in 1882-1883 as part of the California Southern Railroad, the first Santa Fe subsidiary in California. Almost all of the physical components of the railroad have been replaced over the years. The three timber pile trestle bridges on this segment were constructed between 1940 and 1942.

*B7. **Moved?** ☒ No ☐ Yes ☐ Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:** Three timber pile trestle bridges are located on this segment of the railway at mile posts 247.7, 248.5 and 248.7.

B9a. Architect: unknown

b. Builder: California Southern Railroad Company

*B10. **Significance:** _____ **Theme:** Railroad Transportation

Area: San Diego, California

Period of Significance: 1880-1920

Property Type: Railroad

Applicable Criteria: N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Santa Fe Surf Line is eligible for inclusion in the NRHP under Criterion A for the significant role it played in the early settlement and development of the city and county of San Diego. The period of significance is from its completion in 1882 to 1920 when road travel provided an alternative means of transportation for passenger and freight. While the railroad continued to contribute to the local economy in the following decades, it played its most significant role in the first three decades after its construction.

This segment of the Santa Fe rail line, however, has poor integrity of materials and workmanship as tracks, ties, ballast, signals, bridges, culverts and other railroad features have been replaced and upgraded as needed. The three bridges within this segment of the railroad were constructed in the early 1940s when the Santa Fe railroad completed a major upgrading and modernization of its rail facilities. It is likely that the section of track within the current project area was also upgraded at that time. The Soledad depot and platform are no longer in existence. The current tracks were replaced in the 1990s. Other than the railroad berm through the Soledad Valley wetlands, nothing remains of the original Santa Fe railroad during its period of significance. This segment of the Santa Fe Surf Line does not retain sufficient integrity to convey its historical significance. It is therefore recommended ineligible for inclusion in the NRHP.

B11. Additional Resource Attributes: (List attributes and codes) HP 19 - Bridges

*B12. **References:**

Pacific Southwest Railway Museum

2003 Railway History. Pacific Southwest Railway Museum, 12

October 2003 <<http://www.sdrm.org/history/>> (6 February 2007)

San Diego Northern Railway Bridge Ratings, NCTD, 2006 URS

2002 Environmental Impact Report – Draft, Sorrento-Miramar
Curve Realignment and Second Main Track Project

*B14. **Evaluator:** Sinéad Ní Ghabhláin, Ph.D., RPA; Sarah Stringer-
Bowsher, M.A. ASM Affiliates, Inc.

***Date of Evaluation:** June 4, 2012

(Sketch Map with north arrow required.)
(see Location Map)

(This space reserved for official comments.)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI # _____
Trinomial _____

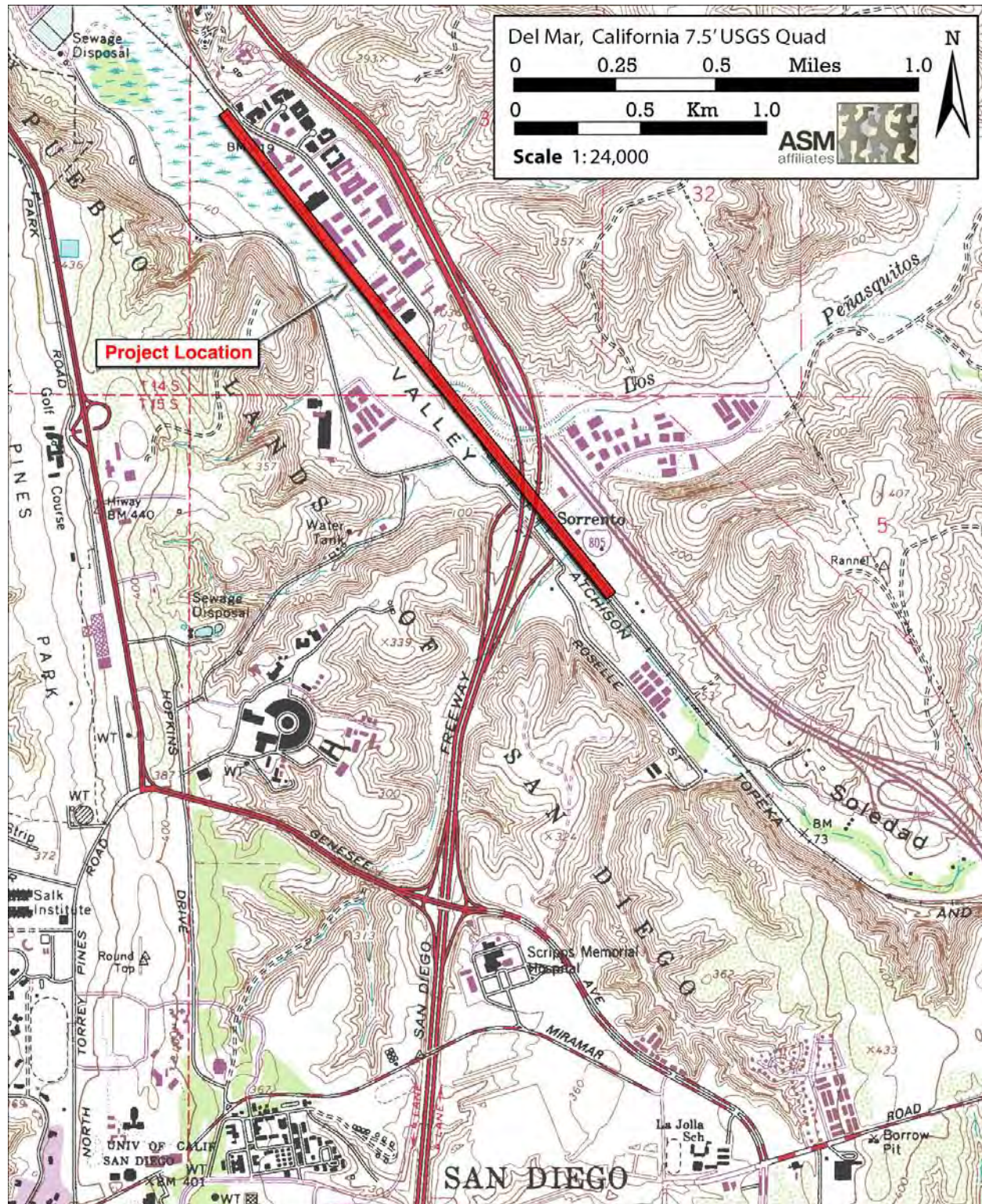
Page 3 of 4

* Map Name: Del Mar, California

*Scale: 1:24,000

*Resource Name or # SVDT-Railroad

* Date of map: _____



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary #
HRI #
Trinomial

CA-SDI-16385

Page 4 of 4

Resource Name or #: SVDT-Railroad

L1. Historic and/or Common Name: Atchison, Topeka and Santa Fe Railroad, Surf Line

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:**

b. Location of point or segment:

This segment of the NCTD Los Angeles to San Diego (LOSSAN) Rail Corridor, formerly the AT&SF railroad is located within the Soledad / Sorrento Valley and extends from approximately 180 feet (ft.) west of Sorrento Valley Road and the western terminus of Carmel Mountain Road in the northwest to approximately 400 ft. east of Arbutus Street. The segment is approximately one and one-half miles long.

Zone 11, 477696 **mE** / 3642144 **mN** to 479370 **mE** 3640033 **mN**. Surveyed section shown on attached Location Map.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

This segment of the AT&SF Surf Line extends north-west to south-east across the southern portion of Peñasquitos Lagoon into Sorrento Valley. At the southern end of the segment the tracks are at grade. The northern portion of the segment through the lagoon is constructed on a berm. The railroad is currently in use and has been upgraded and modernized.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width: 4 feet

b. Bottom Width: 8 feet

c. Height or Depth: 1 foot (at grade); ~10 feet on berm

d. Length of Segment: 1.5 miles

L5. Associated Resources: Three timber pile trestle bridges constructed between 1940 and 1942 are located at mile markers 247.7, 248.5 and 248.7

L6. Setting: The southern half of the segment is located in the urban setting of Sorrento Valley. The northern half of the segment extends through Soledad Valley/ Los Peñasquitos Lagoon

L4e. Sketch of Cross-Section (include scale) **Facing:** (N/A)

L7. Integrity Considerations:

This segment of the Santa Fe rail line has poor integrity of materials and workmanship as tracks, ties, ballast, signals, bridges and other railroad features have been replaced and upgraded as needed. The three bridges within this segment of the railroad were constructed in the early 1940s. Other than the railroad berm through the Soledad Valley wetlands, nothing remains of the original Santa Fe railroad. The Soledad depot and platform are no longer in existence.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing (View, scale, etc.)

1/23/2007, View toward southwest of Bridge 248.5

L9. Remarks: None

L10. Form Prepared by:

Sinéad Ní Ghabhláin, Ph.D.
ASM Affiliates, Inc.
2034 Corte del Nogal,
Carlsbad, CA 92011

L11. Date: June 4, 2012

DPR 523E (1/95)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 1 of 1
Recorded by:
☒ Continuation ☐ Update

*Resource Name or # SVDT- Railroad
Date: June 4, 2012

Bridge 247.7 is a 154-ft.-long ballast deck, timber pile trestle railroad bridge. The bridge is comprised of two primary components, the wooden trestle and deck. The trestles consist of seven vertical and/or slightly inclined timber piles, approximately 14 inches in diameter with bi-directional cross bracing, and steel stringers and caps that support a 15-ft.-wide ballast deck. Date nails were identified in several locations on the timber piles. The deck consists of wooden timbers, above which in stratigraphic order are: sealing membrane layer, crushed rock ballast and railroad track (comprising of the tie plate, cross tie, spike, and rail) at the top. Metal piping runs the length of the bridge. Bridge 247.7 is a typical timber trestle railroad bridge, which can be found across the United State.

Bridge 248.5 is an 84-ft.-long ballast deck, timber pile trestle railroad bridge . Bridge 248.5 has a very low clearance, approximately 3 ft. above ground level. The trestles consist of five vertical timber pilings approximately 14 inches in diameter with bi-directional cross bracing, and steel stringers and caps that support a 15-ft.-wide ballast deck. In all other respects this bridge is similar to Bridge 247.7. The deck has a wooden railing that is supported by knee braces and the ballast header. The ballast header keeps the crushed ballast from rolling off the deck. Metal piping runs the length of the bridge.

Bridge 248.7 is a 210-ft.-long open deck, timber pile trestle railroad bridge, similar in construction to bridges 247.7 and 248.5. Rip-rap has been placed along the bridge abutments. Metal piping runs the length of the bridge.



Bridge 247.7

UPDATE

UPDATE

P-37-024739

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORDPrimary # P-37-024739 CA-SDI-16385
HRI # _____
Trinomial CA-SDI-16385H
NRHP Status Code 6Y
Other Listings _____Review Code _____ Reviewer _____ Date _____
*Resource Name or # (Assigned by recorder) CRM TECH 878-2HPage 1 of 5

- P1. Other Identifier: Burlington Northern Santa Fe (BNSF, formerly Atchison, Topeka and Santa Fe) Railway
- *P2. Location: ☒ Not for Publication ☐ Unrestricted *a. County San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quads Point Loma, Calif. Date 1967, photorevised 1975
National City, Calif. Date 1967, photorevised 1975
T17S R2/3W, S.B. B.M. (Within the boundaries of the Pueblo Lands of San Diego and the Rancho de la Nación land grant)
Elevation: Ca. 15-20 feet above mean sea level
c. Address N/A City San Diego and National City Zip N/A
d. UTM: Zone 11; North end: 484160 mE/ 3620040 mN; South end: 489660 mE/ 3613280 mN
UTM Derivation: ☒ USGS Quad ☐ GPS
e. Other Locational Data: (e.g., parcel #, directions to resource, etc., as appropriate) The recorded segment of the railroad extends from Ash Street in San Diego to 24th Street in National City (BNSF Mile Post 267.3 to Mile Post 273.2)
- *P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The site consists of an approximately 5.9-mile segment of the Burlington Northern Santa Fe (formerly Atchison, Topeka and Santa Fe) Railway that was first constructed in 1882-1883. The existing tracks and other associated railroad features, however, are mostly modern in origin, and show no particular historical characteristics. A short segment of older tracks, now abandoned, is observed in front of the historic Santa Fe depot in National City (see p. 5).
- *P3b. Resource Attributes: (List attributes and codes) HP37--Railroad
- *P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District
Other (isolates, etc.)
- P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)
(See p. 5)
- P5b. Description of Photo: (view, date, accession #)
Photos taken on September 3, 2002
*P6. Date Constructed/Age of Sources:
☒ Historic ☐ Prehistoric ☐ Both 1882-1883 (see Items B6 and B12 for detail)
*P7. Owner and Address:
Burlington Northern Santa Fe Railway Company, 2650 Lou Menk Drive, Fort Worth, TX 76131
*P8. Recorded by: (Name, affiliation, and address)
Daniel Ballester/Teresa Woodard, CRM TECH, 4472 Orange Street, Riverside, CA 92501
*P9. Date Recorded: September 2002
*P10. Survey Type: Section 106-compliance survey
- *P11. Report Citation: (Cite survey report and other sources, or enter "none.") Bai Tang, Michael Hogan, Mariam Dahdul, Teresa Woodard, and Daniel Ballester (2002): Historical Resources Compliance Report: Track Improvements between San Diego and National City, and New Locomotive/Car Service and Inspection Facility in National City, San Diego County, California. On file, South Coastal Information Center, San Diego State University.
- *Attachments: ☐ None ☒ Location Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Resource Record ☐ Milling Station Record
☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

*Required information

HRI #

163851

*NRHP Status Code 6Y

*Resource Name or # (Assigned by recorder) CRM TECH 878-2H

- B1. Historic Name: Atchison, Topeka and Santa Fe Railway
B2. Common Name: Burlington Northern Santa Fe Railway
B3. Original Use: Railroad B4. Present Use: Railroad
*B5. Architectural Style: N/A
*B6. Construction History: (Construction date, alterations, and date of alterations) This segment of railroad was originally constructed in 1882-1883 as a part of the California Southern Railroad, the first Santa Fe subsidiary in California and the Pacific coast terminus of the second transcontinental railway to reach the state. Almost all of the physical components of the railroad, however, have been replaced over the years. The existing tracks typically date to the post-1975 period.
*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
*B8. Related Features: Two minor railroad bridges across the Chollas Creek Channel in San Diego and the Seventh Street Channel in National City, recorded separately for Caltrans references (see P-37-024741 and P-37-024742)
B9a. Architect: N/A b. Builder: California Southern Railroad Company
*B10. Significance: Theme Railroad transportation Area California
Period of Significance 1880s Property Type Railroad Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.) The completion of the California Southern Railroad marked the beginning of the end of the Southern Pacific Railway Company's transportation monopoly in the state, an important event in 19th century California history, and contributed directly to the southern California land boom of the 1880s. However, the existing railroad line and its associated features that constitute Site CA-SDI-16385H, as working components of the modern transportation infrastructure, do not retain sufficient historic integrity to relate to the site's period of significance. Therefore, the site does not appear eligible for listing in the National Register of Historic Places.
B11. Additional Resource Attributes: (List attributes and codes) HP19--Bridges
*B12. References: Lee Gustafson and Philip Serpico (1992): Santa Fe Coast Lines Depots, Los Angeles Division. Omni Publications, Palmdale, California.
(Sketch Map with north arrow required.)
B13. Remarks: _____
*B14. Evaluator: Bai "Tom" Tang
*Date of Evaluation: September 2002
(See pp. 3-4)

(This space reserved for official comments.)

(See pp. 3-4)

***Required information**

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # P-37-024739

CA-SDI-16385

HRI #

Trinomial CA-SDI-16385H

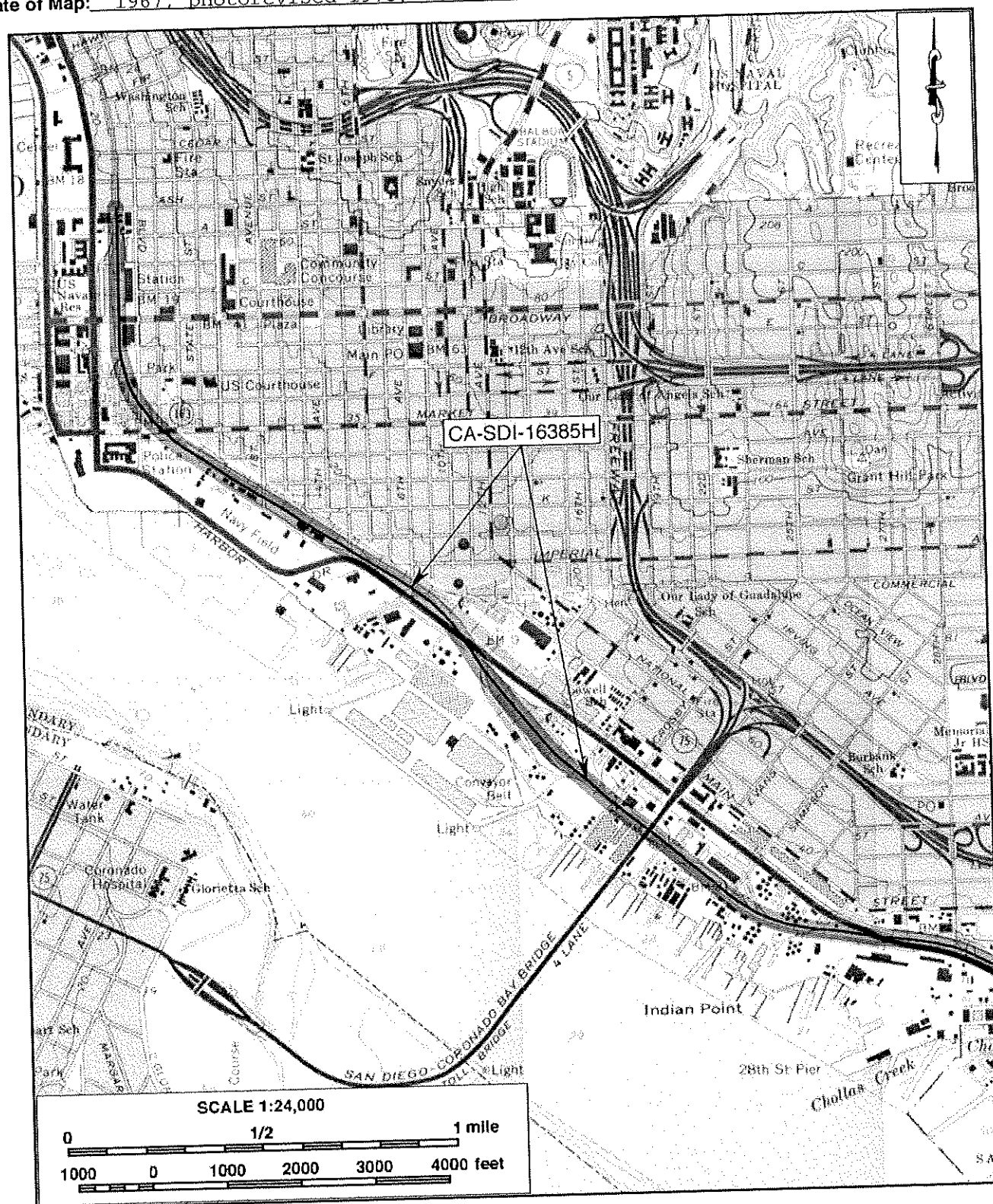
Page 3 of 5

*Resource Name or # (Assigned by recorder) CRM TECH 878-2H

*Map Name: Point Loma, Calif.

*Scale: 1:24,000

*Date of Map: 1967, photorevised 1975, minor revisions 1994



Northern portion

*Required information

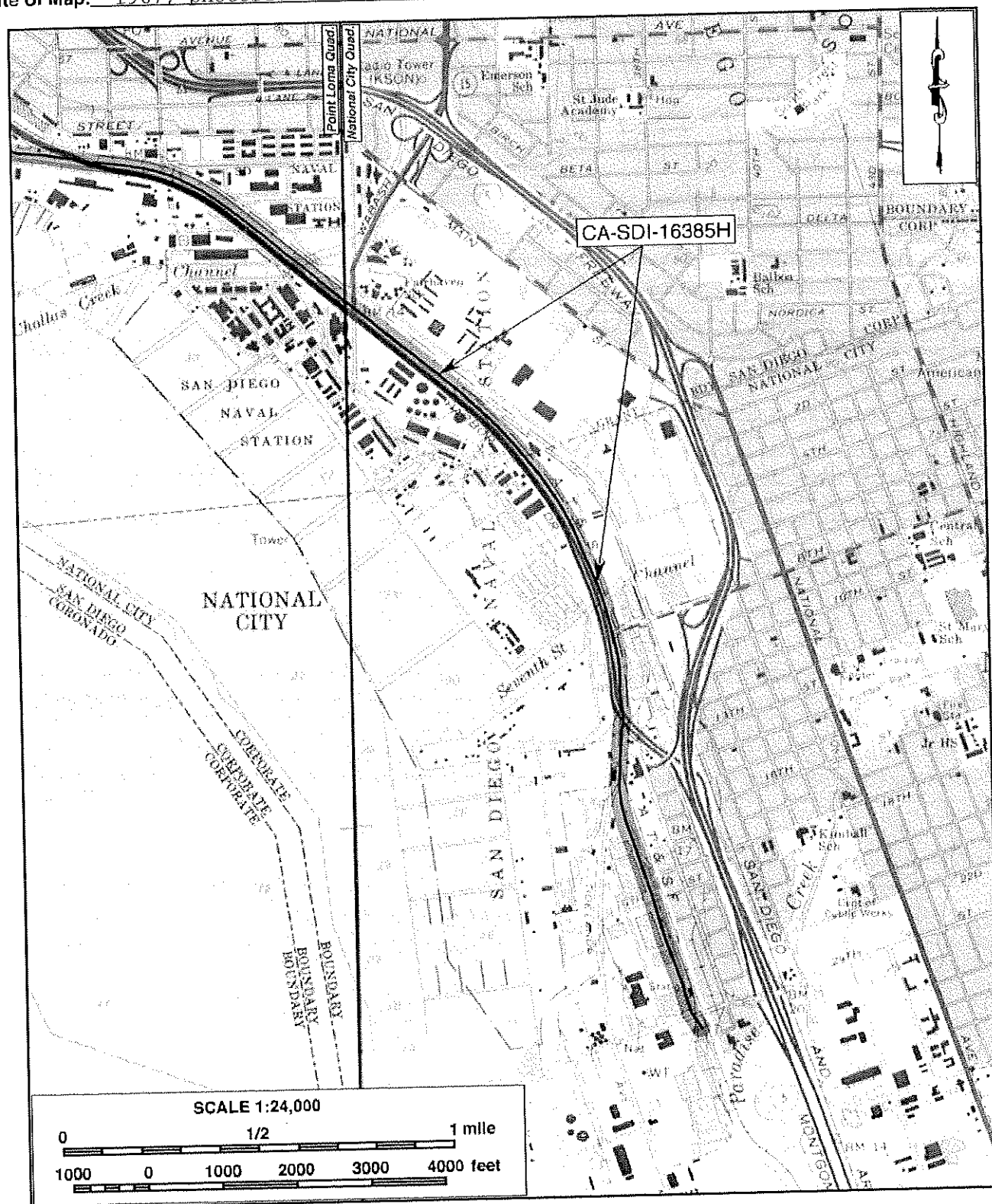
State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Page 4 of 5

*Resource Name or # (Assigned by recorder) CRM TECH 878-2H

*Map Name: Point Loma and National City, Calif. *Scale: 1:24,000

*Date of Map: 1967, photorevised 1975, minor revisions 1994; 1967, photorevised 1975



Southern portion

*Required information

UPDATE

P-37-024739

CA-SDI-16385

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # P-37-024739

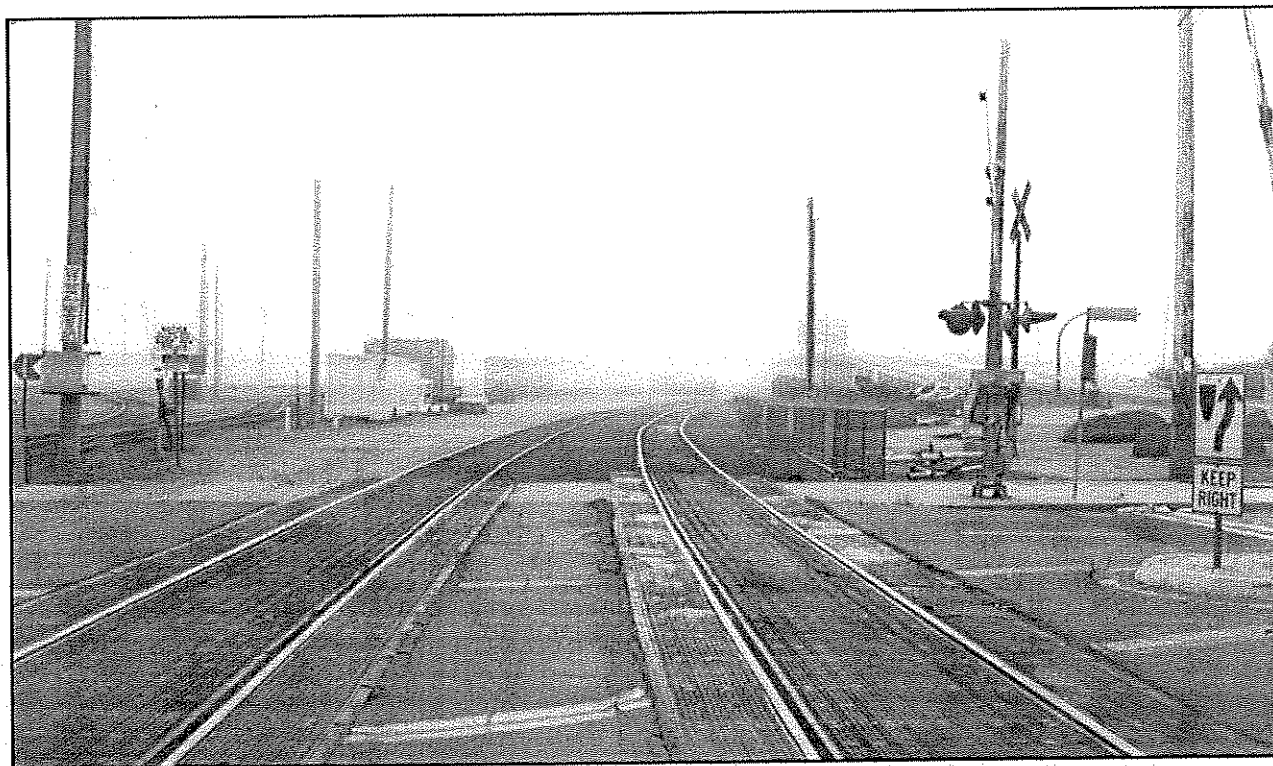
HRI # _____

Trinomial CA-SDI-16385H

Page 5 of 5

Resource name or # (Assigned by recorder) CRM TECH 878-2H

Recorded by Danniel Ballester *Date September 3, 2002 ☒ Continuation ☐ Update



Typical view of the existing railroad line. (View to the southeast)



Abandoned segment of old railroad near the National City depot. (View to the north)

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 87024730
HRI # _____
Trinomial SDi-16385-N
NRHP Status Code 6Y
Other Listings _____

Review Code _____

Reviewer _____

Date _____

*Resource Name or # (Assigned by recorder) CRM TECH 878-2H

Page 1 of 5

P1. Other Identifier: Burlington Northern Santa Fe (BNSF, formerly Atchison, Topeka and Santa Fe) Railway

*P2. Location: ☒ Not for Publication ☐ Unrestricted *a. County San Diego
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quads Point Loma, Calif. Date 1967, photorevised 1975
National City, Calif. Date 1967, photorevised 1975

T17S R2/3W, S.B. B.M. (Within the boundaries of the Pueblo Lands of San Diego and the Rancho de la Nación land grant)

Elevation: Ca. 15-20 feet above mean sea level

c. Address N/A City San Diego and National City Zip N/A

d. UTM: Zone 11; North end: 484160 mE/ 3620040 mN; South end: 489660 mE/ 3613280 mN
UTM Derivation: ☒ USGS Quad ☐ GPS

e. Other Locational Data: (e.g., parcel #, directions to resource, etc., as appropriate) The recorded segment of the railroad extends from Ash Street in San Diego to 24th Street in National City (BNSF Mile Post 267.3 to Mile Post 273.2)

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The site consists of an approximately 5.9-mile segment of the Burlington Northern Santa Fe (formerly Atchison, Topeka and Santa Fe) Railway that was first constructed in 1882-1883. The existing tracks and other associated railroad features, however, are mostly modern in origin, and show no particular historical characteristics. A short segment of older tracks, now abandoned, is observed in front of the historic Santa Fe depot in National City (see p. 5).

*P3b. Resource Attributes: (List attributes and codes) HP37--Railroad

*P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of District
Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

(See p. 5)

P5b. Description of Photo: (view, date, accession #)
Photos taken on September 3, 2002

*P6. Date Constructed/Age of Sources:
☒ Historic ☐ Prehistoric ☐ Both 1882-1883 (see Items B6 and B12 for detail)

*P7. Owner and Address:
Burlington Northern Santa Fe Railway Company, 2650 Lou Menk Drive, Fort Worth, TX 76131

*P8. Recorded by: (Name, affiliation, and address)
Daniel Ballester/Teresa Woodard, CRM TECH, 4472 Orange Street, Riverside, CA 92501

*P9. Date Recorded: September 2002

*P10. Survey Type: Section 106-compliance survey

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Bai Tang, Michael Hogan, Mariam Dahdul, Teresa Woodard, and Daniel Ballester (2002): Historical Resources Compliance Report: Track Improvements between San Diego and National City, and New Locomotive/Car Service and Inspection Facility in National City, San Diego County, California. On file, South Coastal Information Center, San Diego State University.

*Attachments: ☐ None ☒ Location Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Resource Record ☐ Milling Station Record
☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List): _____

*Required information

DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 5

*NRHP Status Code 6Y

*NRHP Status Code 6Y
*Resource Name or # (Assigned by recorder) CRM TECH 878-2H

- B1. Historic Name: Atchison, Topeka and Santa Fe Railway
- B2. Common Name: Burlington Northern Santa Fe Railway
- B3. Original Use: Railroad
- B4. Present Use: Railroad
- *B5. Architectural Style: N/A
- *B6. Construction History: (Construction date, alterations, and date of alterations) This segment of railroad was originally constructed in 1882-1883 as a part of the California Southern Railroad, the first Santa Fe subsidiary in California and the Pacific coast terminus of the second transcontinental railway to reach the state. Almost all of the physical components of the railroad, however, have been replaced over the years. The existing tracks typically date to the post-1975 period.
- *B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
- *B8. Related Features: Two minor railroad bridges across the Chollas Creek Channel in San Diego and the Seventh Street Channel in National City, recorded separately for Caltrans references (see CRM TECH 878-4H and -5H)
- B9a. Architect: N/A b. Builder: California Southern Railroad Company
- *B10. Significance: Theme Railroad transportation Area California
Period of Significance 1880s Property Type Railroad Applicable Criteria N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.) The completion of the California Southern Railroad marked the beginning of the end of the Southern Pacific Railway Company's transportation monopoly in the state, an important event in 19th century California history, and contributed directly to the southern California land boom of the 1880s. However, the existing railroad line and its associated features that constitute Site CRM TECH 787-2H, as working components of the modern transportation infrastructure, do not retain sufficient historic integrity to relate to the site's period of significance. Therefore, the site does not appear eligible for listing in the National Register of Historic Places.
- B11. Additional Resource Attributes: (List attributes and codes) HP19—Bridges
- *B12. References: Lee Gustafson and Philip Serpico (1992): Santa Fe Coast Lines Depots, Los Angeles Division. Omni Publications, Palmdale, California.
(Sketch Map with north arrow required.)
- B13. Remarks: _____
- *B14. Evaluator: Bai "Tom" Tang
- *Date of Evaluation: September 2002

(This space reserved for official comments.)

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # 37024739
HRI # _____
Trinomial SDi-1638S-H

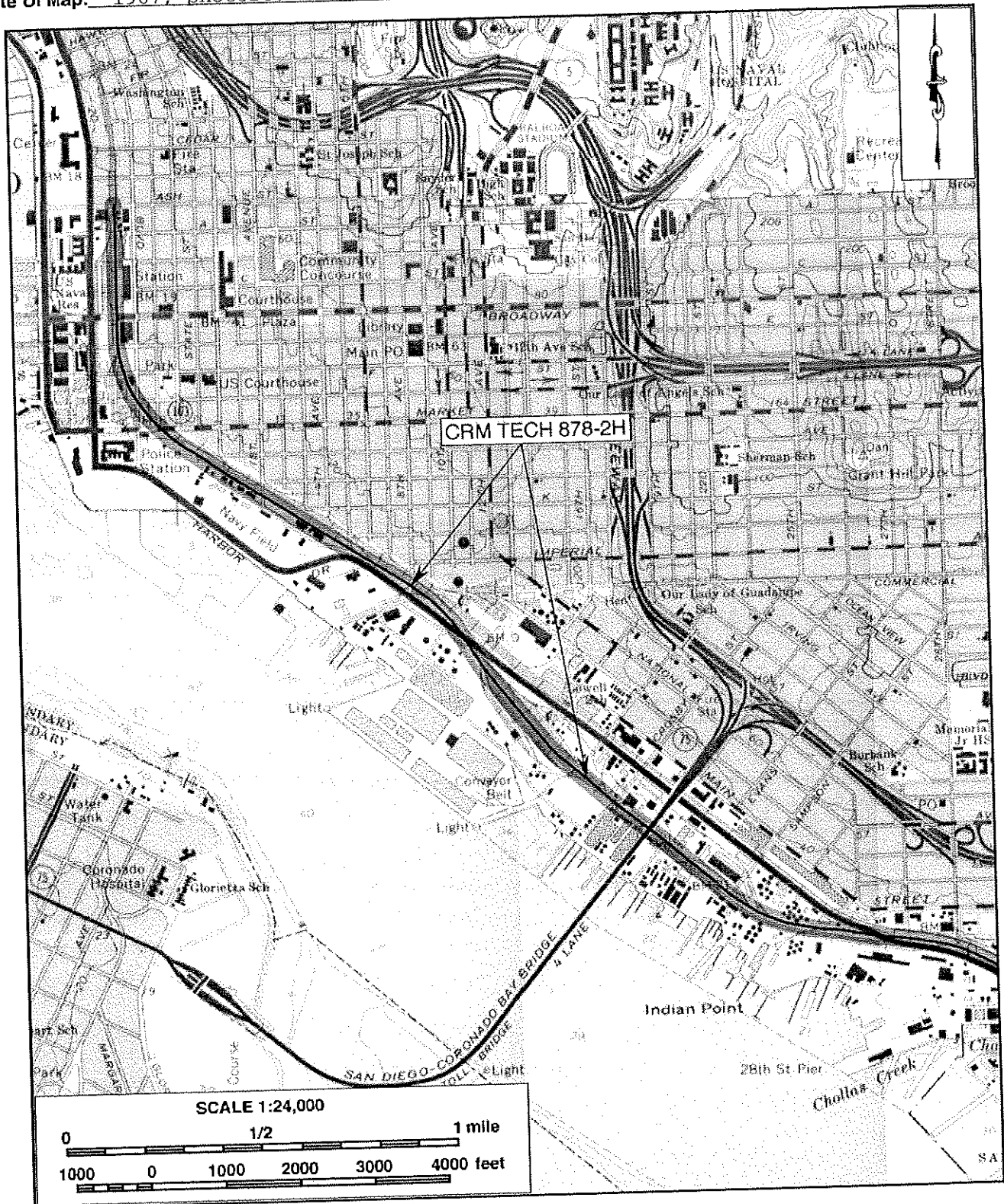
Page 3 of 5

*Resource Name or # (Assigned by recorder) CRM TECH 878-2H

*Map Name: Point Loma, Calif.

*Scale: 1:24,000

*Date of Map: 1967, photorevised 1975, minor revisions 1994



Northern portion

*Required information

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #

3702473-0

HRI #

Trinomial

SDI-16385-1

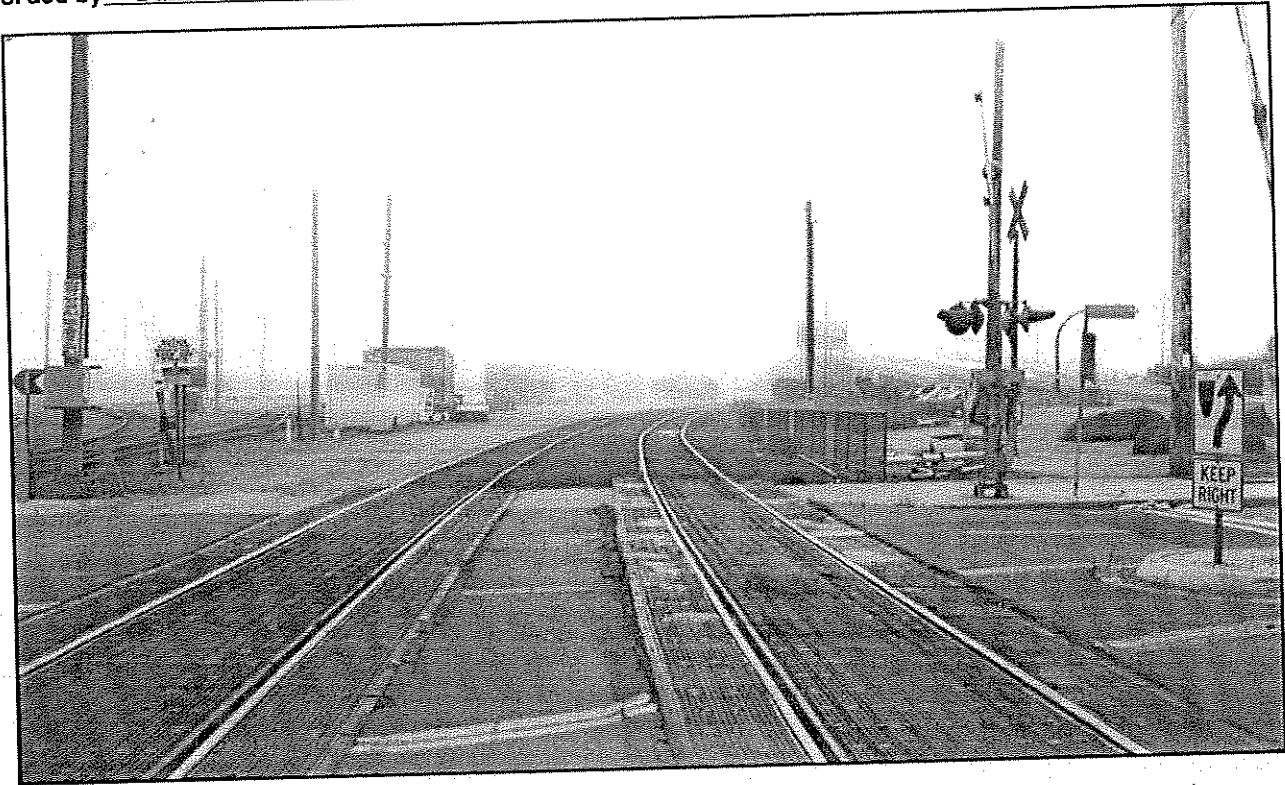
Page 5 of 5

Resource name or # (Assigned by recorder) CRM TECH 878-2H

Recorded by Danniel Ballester

*Date September 3, 2002

☒ Continuation ☐ Update



Typical view of the existing railroad line. (View to the southeast)



Abandoned segment of old railroad near the National City depot. (View to the north)

*Required information

Appendix C

Granger Hall

Character-Defining Features Inventory

CHARACTER-DEFINING FEATURE INVENTORY OF GRANGER HALL, NATIONAL CITY, CALIFORNIA

PREPARED FOR:

San Diego Unified Port District
3165 Pacific Highway
San Diego, CA 92101
Contact: Anna Buzaitis
619.686.7263

PREPARED BY:

ICF
525 B Street, Suite 1700
San Diego, CA 92101
Project Contact: Timothy Yates
858.444.3950

December 2018



ICF. 2018. *Character-Defining Feature Inventory of Granger Hall, National City, CA*. December. (ICF 00152.17) Prepared for the San Diego Unified Port District and the City of National City, San Diego and National City, CA.

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Purpose of This Study	2
Granger Hall Exterior	2
Granger Hall Interiors	5
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5	Interior Ceiling, Camera Facing East. ICF, 2018	7

Granger Hall Character-Defining Features Inventory

Introduction

The San Diego Unified Port District (District), the City of National City (City), GB Capital Holdings, LLC (GB Capital), and Pasha Automotive Services (Pasha), as co-applicants and project proponents, are each proposing components that constitute the National City Bayfront Projects (project or proposed project). The project would include changes to land and water use designations in the District's Port Master Plan (PMP), as well as amendments to the City's Local Coastal Program, General Plan, Harbor District Specific Area Plan, and Land Use (Zoning) Code and Bicycle Master Plan that would include changes to jurisdictional boundaries; changes to subarea boundaries; and changes to land use, specific plan, and zone designations (City Program – Planning Amendments). The PMP Amendment (PMPA) and corresponding LCP Amendment (LCPA) to clarify jurisdictional land use authority and the balancing of commercial and maritime uses is herein referred to as the "Balanced Plan." The project would entail construction and operation hotels, a recreational vehicle (RV) park, modular cabins, dry boat storage, an expanded marina, retail and potentially other buildings, and a rail connector track and storage track. In addition to closing several street segments in areas that would re-designated Marine-Related Industrial in the District's PMP, the project would construct and operate Segment 5 of the Bayshore Bikeway (Bayshore Bikeway Component). The proposed project may also relocate the Granger Hall from its current location at 615 East 4th Street, National City (APN 554-050-11-00) to Pepper Park, located at the south portion of the project area adjacent to the Pier 32 Marina. Granger Hall is the focus of this study

The subject property, a former private music hall, was commissioned by Ralph Granger in 1898. Originally a smaller music venue, Granger expanded the building to its current plan shortly after its construction. The building was relocated to its current location in 1969, and listed in the National Register of Historic Places (NRHP) in 1975. The NRHP nomination accounted for the building's relocation and its new siting facing south instead of its original west orientation. The nomination form did not specify the NRHP significance criteria that applied to the listing. The Hall does not appear to be associated with a specific event or pattern of events significant to our history (Criterion A). Additionally, while Ralph Granger played a major role in the construction and patronage of the building, the building does not appear to be significant for its associations with Granger (Criterion B). However, the resource has architectural significance under Criterion C, and retains exterior design features and interior art elements that convey its significance. Designed by master architect Irving Gill, the Hall features his "innovative simplicity," which resulted in the building's "uncluttered natural beauty" (NRHP Nomination 1974: 3). Because Granger Hall is listed on the NRHP, the property is also listed on the California Register of Historical Resources (CRHR), and is considered a historical resource for the purposes of the California Environmental Quality Act (CEQA). The National City Landmarks list identifies Granger Hall as a historic site listed in the NRHP, but the Hall does not appear to be a locally designated resource. A 1994 Survey includes the Hall under its "1- indicates National Register Potential" category, but the 2010 survey update excluded the property.

Purpose of This Study

The purpose of this study is to provide a resource for proposed efforts to relocate Granger Hall from its current location to Pepper Park at the National City Bayfront. Secretary of the Interior-qualified ICF architectural historians this study to document and inventory the character-defining features that convey Granger Hall's significance. The resource's character-defining features are critical to its historical integrity. In order for the proposed relocation to avoid a significant impact to a historical resource under CEQA, Granger Hall's character-defining features must be preserved or restored as part of the process of relocating the building so that it retains historical integrity. In addition to inventorying Granger Hall's character defining features, this brief study provides baseline documentation of existing conditions prior to relocation. It is based on an intensive survey of Granger Hall conducted by ICF architectural historians on October 3, 2018. ICF architectural historians determined that, although the building has undergone some deterioration, particularly in the form of roof and ceiling damage, it retains sufficient historical integrity to convey its architectural significance and firmly justify its continued status as a NRHP-listed property and a historical resource under CEQA.

The remainder of this document consists of detailed architectural descriptions of the resource's exterior and interior, followed by matrices that document each of the building's character-defining features, including images of each feature type. The matrices rank each feature as "essential" (a feature or space that is essential to the significance of the building and should be retained/repared to the extent possible or replaced in-kind), or "contributing" (a feature or space that contributes to the significance of the building and should be retained or replaced with similar material, to the extent possible), or "none" (a feature or space that is neither essential nor contributes to the significance of the building).

Granger Hall Exterior

Sited adjacent to the 805-Freeway, the subject property faces south toward East 4th Street in National City. Originally sited to face west at a different location, the building is currently situated within a setting that does not contribute to its significance. Located on a narrow rectangular parcel, the building's setting has been embellished with brick and concrete ground cover, metal and brick benches, a circular fountain, two small ancillary buildings to the east, unmaintained lawn, and several trees and bushes. A National City storage lot, a California National Guard facility, the freeway, and several two-story multiple family residences surround the Hall's current parcel.

Clad with wood shake shingles, the approximately 133-foot by 38-foot T-shaped Hall rises one story and is capped by a low-pitched roof with moderate eaves. Two hipped-roof sections and one low-pitched shed roof form the building's roof system. The western hipped-roof portion

contains four dormers and the eastern hipped-roof section contains one dormer. Atop the western hipped-roof, one dormer faces each cardinal direction. Located under a single hipped-roof, two long U-shaped dormers on a west-east axis contain 12-fixed sash diamond-light windows. Jutting out from this larger hipped-roof and dormer configuration, two additional dormers are located on a north-south axis. Capped by additional hipped-roofs, two dormers located on a north-south axis protrude, each with one fixed sash diamond-light window. Additionally, a protruding rectangular mass capped by a hipped roof forms the dormer facing east on the eastern roof. The dormers' eaves are moderately deep. Decorative, curved rafters support both the roof and dormers' eaves. A tarp covers the roof to prevent damage. The building rests on a concrete block foundation, which is a circa 1969 alteration dating to its relocation.



Figure 1. South (Front) and Partial East Elevations, Camera Facing North-Northwest. ICF, 2018.

While asymmetrical, the primary elevation displays a balance of features. Two entrances at either edge of the elevation frame two, roughly centered oval-shaped windows on the primarily unembellished shake shingle-clad elevation. The western portion of the elevation juts forward to form the top of the building's T-shaped plan. This western portion contains the building's primary, public entrance. Green painted plywood currently secures a wood door. Visible from the interior, eight-panels embellish the wide door. The door's exterior surround remains unknown. While a tarp covers the porch's roof, a bracket and curved knee-brace support an open front-facing gable. Decorative, curved rafters, matching those along the roof-line, bolster the porch. Two non-original vertical posts stabilize the porch configuration. Ten non-original concrete steps with a circa 1969 metal balustrade access the entrance.

The secondary public entrance is located near the east end of the primary elevation. Painted green plywood installed at this entrance creates an enclosed porch. However, the porch

features of the primary elevation's eastern entrance mirror those to the west. An unembellished wide surround highlights the wide, eight-panel wood door. While a tarp covers the porch's roof, a bracket and curved knee-brace support an open front-facing gable. Decorative, curved rafters, matching those along the roof-line, bolster the porch. Two non-original vertical posts stabilize the porch configuration. A non-original concrete ramp with a metal balustrade descends west along the building's primary elevation and provides access to this door, which punctuates the wall at a lower height than its western counterpart. Green painted plywood obscures the two oval-shaped windows. Interior inspection, however, verified that one oval-shaped fixed light forms each window. A simple frame supports each window. At the roofline, four rows of fish-scale shake shingles surmount the square butt shake shingles found elsewhere on the elevation. A smooth cornice leads into the roof's brackets.



Figure 2. West and Partial South (Front) Elevations, Including West Public Entrance, Camera Facing Northeast. ICF, 2018.

The west elevation lacks fenestration. However, a chimney composed of running bond brickwork divides the elevation. At the roofline, the southern half-width of the chimney tapers off while the remaining half-width extends above the roofline. The existing chimney replaces the original. The northern portion of the elevation features a lower roofline that corresponds to the low-pitched shed roof portion of the building. Visual inspection identifies an infilled pedestrian door located to the far north along the elevation. Furthermore, a security light has been affixed to the elevation north of the chimney. As described above, a dormer system caps the roof and is visible along the west elevation.

The east elevation remains the least elaborate of the building's elevations. Green painted plywood masks the elevation's single feature: a regular-sized pedestrian door located at the northern portion of the elevation. Five circa 1969 concrete steps with a metal balustrade

provide access. A red painted plywood box, approximately five feet tall, butts the east elevation, to the south. The purpose of this box is unclear; it may hide utilities. Two non-original lights have been affixed to the elevation. Square butt shake shingles adorn the elevation with four rows of fish scale shake shingles located directly below the roof's smooth, wide cornice.

Like the south elevation, the rear (north) elevation contains two portions: the western and the eastern portions. The western portion of the elevation juts forward to form the top of the building's T-shaped plan. The rear elevation lacks doorways, but contains five windows. Three regularly placed four-over-four single-hung wood sash windows punctuate the western portion. The westernmost of these three windows is boarded with plywood. Two regularly placed oval-shaped windows complete the fenestration along the eastern portion. Green painted plywood obscures the two oval-shaped windows. Interior inspection, however, confirms that one oval-shaped fixed light forms each window. A simple frame supports each window. An approximately 10-foot by 15-foot, 10-foot tall concrete block addition with a low pitched shed roof has been appended to the rear elevation. This addition likely dates to circa 1969 because the concrete blocks match those used for the foundation. A single solid slab pedestrian door located at ground level accesses this addition from the west.

Granger Hall Interiors

The Hall's T-shaped interior features a split-level plan with a raised western portion and a lower eastern portion. Two small rooms are sectioned off at the western portion's north elevation, which corresponds to the exterior elevation's northern low-pitched shed roof massing. Walls are clad with wood wainscot, narrow vertical wood strips, and plaster. Likewise, narrow strips of wood and plaster clad the ceiling, along with skylight panels. Finally, non-original carpet covers the floor.

The primary entrance leads into the western portion, which served as the Hall's entry parlor. A wood wainscot formed by a baseboard, two rows of square panels, and a chair rail adorns the western portion's walls. Narrow strips of vertically aligned wood surmount the wainscot. A curve leads to the ceiling, which is formed by a skylight system and additional narrow strips of wood. Outlining a rectangle, single-light rectangular panels with nine-light corner pieces form the skylight. Low-pile red carpet covers the floor.

The interior western wall contains a fireplace. Ornate, two squat balusters surmounted by a small platform flank the fireplace opening. A centered relief element formed by a medallion with columns, and filigree-type designs embellish the fireplace just below the mantel. Two non-historic doors located on the interior north wall of the western portion lead to a small office space (left, a dutch door) and a kitchenette (right, an eight-panel door). Three non-historic metal and glass sconces with floral patterns decorate the west and north walls. A non-historic five-light chandelier dangles from the center of the room. The interior east elevation of the western portion is primarily open to the eastern portion. However, columns and fretwork grilles separate the building into its west and east portions. Four centered steps lead down to the eastern portion. A



Figure 3. Western Portion of Interior, Primary Entry at Left Out of View, Camera Facing West. ICF, 2018.



Figure 4. Stage and Carved Wood Screen, Eastern Portion of Interior, Camera Facing East. ICF, 2018.



Figure 5. Interior Ceiling, Camera Facing East. ICF, 2018.



pair of round, fluted columns support the turned balustrade at the staircase while engaged square columns replicate the pattern along the north and south walls at the transition between the west and east portions. The western engaged columns, like their rounded counterparts, support the balustrade.

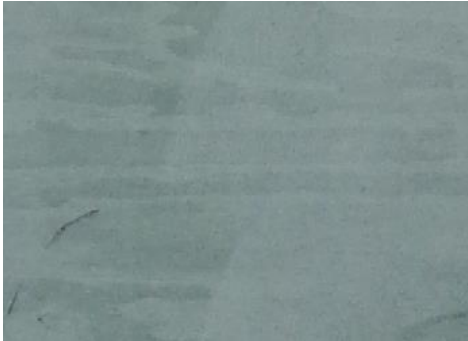

The larger, eastern portion of the interior forms the music hall. It features a wood wainscot formed by a baseboard, vertical panels and square panels separated by horizontal strips, and a chair rail on the north- and south-elevation walls. Smooth painted plaster over a wood lath forms both the walls above the wainscot and the ceiling. A non-original floral and acanthus leaf patterned carpet covers the floor.

As noted above, columns and a fretwork grilles separate the building into its west and east portions. Five one-light, fixed-sash windows form a ribbon window skylight above the staircase at the eastern portions' curved ceiling. As noted in the exterior description, two oval-shaped one-light, fixed-sash windows pierce the north and south elevations. A wide, wood surround

frames each window. A wood stage conceals most of the interior eastern wall. Non-historic wood doors flank each side of the stage (left, a five-panel door; right, a six-panel wood door). The curved stage rises approximately three-feet. An elaborately carved wood screen provides the stage's backdrop and obscures the performers "green room" space and former organ elements from public view. Rising nearly to the roofline, the screen contains a five-bay base featuring narrow long carved panels, a five-bay screened colonnade complete with an architrave and cornice, and a seven-bay clerestory level. The clerestory level displays an arched, screened arcade and a cornice. The "green room" space behind the stage contains smooth painted plaster and wood walls and elements. Undecorated, the "green room" space remains utilitarian.



The ceiling of the eastern portion curves from the walls. A circular garland pattern encompasses the curved part of the ceiling. A large mural, which features a figural music scene on a blue sky background, adorns the ceiling. The mural also contains cherubs and flowers. Plywood covers circular grilles to the west and east of the mural. Rope and garland patterns frame the mural. Finally, palm-reed like plants are depicted in the four corners of the ceiling. Plaster separation from its lath has damaged sections of the mural.

Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	T-shaped Plan		Building site	T-shaped plan consisting of western portion set perpendicular to eastern portion	Essential	X	X
	Red color of building		All exterior elevations	Dark red color, faded	None		


Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Green color on building		All exterior elevations; located on trim elements and porches	Green paint, faded	None		
	Square butt shake shingles		All exterior elevations	Square butt shakes form primary cladding on Hall. Shake width varies between approximately two to eight inches, although most are in the mid- range	Essential	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Fish scale shake shingles		All exterior elevations, just below the roofline	Four rows of fish scale shakes located just below the roofline cornice. Scales are regular in size	Essential	X	
	Concrete cinder block		All exterior elevations	Concrete block foundation, constructed circa 1969, is a non-original feature	None		



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Hipped roof		Caps building, one at western portion and one at eastern portion	Hipped roof; low-pitched over eastern portion of Hall (shown), extends along a west-east axis; medium pitched over western portion, extends along a north-south axis	Essential	X	X
	Small hipped roof dormer		Three dormers; two at west end with one facing north and the other facing south. One at east end facing east.	Low-pitched hipped roof caps squat rectangular massing consisting of a diamond-light fixed sash window. Dormer walls are clad with square butt shakes. Curved brackets support medium eaves	Essential	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Elongated hipped roof dormer		Two dormers; west end of Hall. One facing west and one facing east.	Two low-pitched U- shaped hipped roof caps two U-shaped massings, each consisting of 12 fixed sash diamond-light windows. Four windows on each side are narrow, while the remaining eight on each side are roughly square. Dormer walls are clad with square butt shakes. Curved brackets support medium set eaves	Essential	X	
	Low-pitched shed roof		Rear elevation at west corner	A low-pitched shed roof adjoined to west portion of Hall. Forms part of T-shaped plan	Contributing	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Brick chimney		West elevation, centered	Brick Chimney features decorative elements at roofline and cap. Visual inspection suggests chimney was repointed or reconstructed. If reconstructed, its design follows the original	Contributing	X	
	Wide door		Two total, located on primary elevation, one near the west corner and one near the east corner	Wide, eight-paneled wood door, painted, with dead-lock (non- original) and handle (non-original)	Essential (dead lock and handle— None)	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Door		East elevation, at north corner	Standard sized pedestrian door; 5- cross panel door, painted (currently boarded)	Contributing	X	
	Oval-shaped window		Primary (south) and rear (north) elevations, centered	Four total; two on each elevation; oval- shaped window with one fixed light and simple wood surround	Essential	X	

Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Rectangular window		Rear (north) elevation, western portion	Three regularly placed four-over-four single- hung windows	Essential	X	
	Cornice, roof		All elevations, located below the building's two hipped-roofs	Wide smooth wood cornice line with multi-curved roof brackets placed at regular intervals that support the wood soffit and eaves	Essential	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Cornice, dormers		Located below the dormer's hipped-roofs; western portion of Hall contains two small hipped-roof dormers and two U-shaped dormers; eastern portion of Hall contains one hipped-roof dormer facing east	Wide smooth wood cornice line with multi-curved roof brackets placed at regular intervals that support the soffit and eaves; miniature versions of the roof's cornice design	Essential	X	
	Open gabled porch hood		Two on primary elevation with one to the west and one to the east along the elevation	Gabled porch hood, open and supported by extended rafters	Essential	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Porch soffit and rafters		Underside of porch hood: Two groupings on primary elevation, one at the west porch and one at the east porch along the elevation	Narrow strips of wood combine to form the soffit; rafters are placed vertically to separate brackets from soffit/porch hood	Essential	X	
	Rafter ends and fascia		Underside of porch hood: Two groupings on primary elevation, one at the west porch and one at the east porch along the elevation	Flat fascia board with matching backwards "S" curve at terminus; Backwards "S" curved rafter ends located at regular intervals	Essential	X	


Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Bracket and curved knee brace		Primary elevation, western and eastern entrances, flanking each entrance	Square bracket with pyramid terminus directly support rafters, with a curved knee brace type bracket springing from the engaged column; curved brace type bracket features one large concave curve followed by multiple sharp curves just below the square bracket	Essential	X	
	Engaged column		Primary elevation, western and eastern entrances, flanking each entrance	Square engaged wood column divided by a springer platform approximately three feet above its base	Essential	X	



Exterior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Porch post		Primary elevation, western and eastern entrances, framing each entrance	Four posts total: Two square wood posts added to provide support. Non-original feature	None		
	Concrete staircase		Two total: One on primary elevation, west entrance and one on east elevation entrance	Ten concrete steps leading to western entrance on primary elevation, supported by concrete blocks; five concrete steps leading to east elevation entrance	None		

Exterior Features



Feature/ Space	Photo	Location	Description	Priority Level	Area	
					Architectural Style	Music Hall Building Function
Ramp		Primary elevation, located along elevation toward eastern entrance	Concrete ramp supported by concrete blocks, accessed west of east entrance, runs parallel to elevation, includes additional concrete porch supported by concrete block at entrance	None		
Balustrade		Three sets total; one on primary elevation staircase at western entrance, one at ramp at eastern entrance on primary elevation; and one on east elevation staircase	A circa 1969 metal balustrade, with triangular pattern on every third rail, finials at top at porch level	None		



Interior Features	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
	Interior T-shaped plan		Building plan, interior	T-shaped plan consisting of western portion set perpendicular to eastern portion; western portion raised several feet above the eastern portion to create split-level	Essential	X	X
	Wainscot, east portion		North and south walls of Interior eastern portion, approximately five feet high along lower wall	Wood wainscot with baseboard, vertical panels and square panels separated by a horizontal strip; surmounted by a chair rail	Essential	X	X



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Plaster, east portion		South, east, and north walls of eastern portion; above wainscott, including ceiling	Smooth finish plaster over wood lath, painted	Contributing	X	X
	Wainscot, west portion		All walls of western parlor portion, approximately four feet tall along lower wall	Wood wainscot with baseboard, two rows of square panels, and a chair rail	Essential	X	X



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Vertical wood siding, west portion		All walls of western parlor portion, above wainscot and below the ceiling	Narrow strips of vertically aligned wood, unpainted	Essential	X	X
	Carpet, east portion		Covering entire floor of eastern portion	Floral pattern with acanthus leaves; dark red, tan and cream, pink, blue, and green	None		



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Carpet, west portion		Covering entire floor of western portion, including steps at split-level	Low-pile dark red carpet	None		
	Curve from walls to ceiling, west portion		All walls of western parlor portion, between walls and ceiling	Narrow strips of wood, horizontally aligned; approximately one-foot flush with wall below, then approximately one-foot curves to ceiling	Essential	X	X



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Ceiling, east portion		Ceiling over eastern portion	Smooth plaster over wood lath, painted with mural; large center scene contains blue background with figures, circular scene at west contains instruments and foliage, other elements include garlands and rope patterns, some of which are relief; garland pattern decorates curved portion of ceiling	Essential	X	X
	Ceiling, east portion, skylight		West side of ceiling over eastern portion	Five single-light fixed- sash windows form ribbon skylight window configuration	Essential	X	



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Ceiling, west portion		Ceiling over western portion	Glazed rectangular skylight separated by muntins, corner panels divided into nine-light skylights; arranged to frame rectangular ceiling panel formed by narrow strips of wood, unpainted	Essential	X	X
	Wide, eight panel wood door		Two along south elevation, with one at each end of elevation	Wide, eight-panel wood door, unpainted, with three vertical panels at bottom, two horizontal panels in the center, and three square panels at the top. Emergency exit handle attached (non- original)	Essential (emergency exit handle-- None)	X	



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Six panel wood door		One at east interior elevation, to the south, leading to former organ and performers space	Non-historic six panel wood door, unpainted, with two vertical panels at bottom, center, and top	None		
	Five panel wood door		One at east elevation, to the north, leading to the exterior	Non-historic five panel wood door, painted white, with five regularly placed horizontal panels	None		



	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Eight square panel wood door		Two: one at east interior elevation attached to the organ and performers space; one at north interior elevation, eastern of two doors at western portion	Non-historic eight panel wood door, with four pairs of rectangular panels	None		
	Dutch Door		North interior elevation, western of two doors at western portion	Non-historic wood Dutch door, unpainted	None		


	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Oval window		North and south elevations	Four oval windows, two on each elevation; single-light fixed-sash windows with unpainted wood surround	Essential	X	
	Stairs/Split-level		Separating east portion from west portion at approximately one-third distance from west elevation; steps centered	Four steps separating east portion from west portion; steps rise to the west toward the top of the building's T shape and create split-level	Essential	X	

	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Balustrade		Aligning staircase and split-level	Open string turned balustrade with rail, attached to columns (see below)	Essential	X	
	Engaged column		North and south interior elevations, engaged at wall; separating split-level	Four engaged rectangular fluted wood columns with rectangular bases and rectangular capitals. The western two columns are shorter because they rest on the higher split-level, while the eastern two are full-height	Essential	X	

	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Column		Aligning staircase; separating split- level	Four fluted wood columns with doric bases and capitals. The western two columns are shorter because they rest on the higher split-level, while the eastern two are full-height	Essential	X	
	Fretwork Grille		Below ceiling, between western engaged and western non- engaged columns; flanking split- level staircase	Two panels; beaded spindles radiating from medallion centered on starburst lattice design	Essential	X	

	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Fireplace		Centered along interior of western wall	Approximately four and one-half feet tall, fireplace surround and mantel; two balusters surmounted by a platform flank each side of the fireplace opening; secondary relief feature is centered above the fireplace opening, formed by a medallion flanked by columns; fireplace also embellished with filigree-type designs	Contributing	X	
	Double light fixture		West and north interior elevations of west portion, located at approximately door height	Non-historic three metal double light fixture with glass, floral pattern	None		

	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Chandelier		West portion, centered within space, hanging from center of ceiling	Non-historic six-light chandelier, metal fixture with glass floral pattern	None		
	Door Surround		Two entrances at primary elevation, at each side of the elevation; two interior doorways at northern interior elevation of western portion	Four thick surrounds with three narrow wood strips.	Contributing	X	

	Feature/ Space	Photo	Location	Description	Priority Level	Area	
						Architectural Style	Music Hall Building Function
Interior Features	Stage and screen		Eastern end of eastern portion	Curved stage with tall screen; curved stage features square panels along rise; screen contains three levels: five-bay base featuring narrow long carved panels, a five-bay screened colonnade complete with an architrave and cornice, and a seven-bay clerestory level; clerestory contains arched, screened colonnade.	Essential	X	X

References Cited

Hoffman, Cheri Lynn

1974 National Register Nomination for Granger Hall. List of Historical Resources. Prepared by the National City Planning Department.

Noise and Vibration Data and Calculations

FIELD NOISE MEASUREMENT DATA

PROJECT: National City Bay Front plan. PROJ. # 00152.17

SITE IDENTIFICATION: LTI OBSERVER(S): JLR
 ADDRESS: 2143 Cleveland Ave
 START DATE / TIME: 8/6/19 / 9:30 AM END DATE / TIME: 8/9/19 / 9:07 AM

METEOROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
 WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
 SKY: SUNNY CLEAR OVRCAST PRTLY CLOUDY FOG RAIN OTHER: _____

ACOUSTIC MEASUREMENTS:

INSTRUMENT: NOA NL-2 1 TYPE: 02 SERIAL #: 6887
 CALIBRATOR: LD CAL 200 SERIAL #: 6645
 CALIBRATION CHECK, BEFORE: 114 AFTER: 114.0 WINDSCREEN X
 SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

FILE / MEAS #	START TIME	END TIME	L _{eq}	max	1.67	8.33	25	L	50	90	99	min

COMMENTS: cleared 9:45
stopped: 9:07

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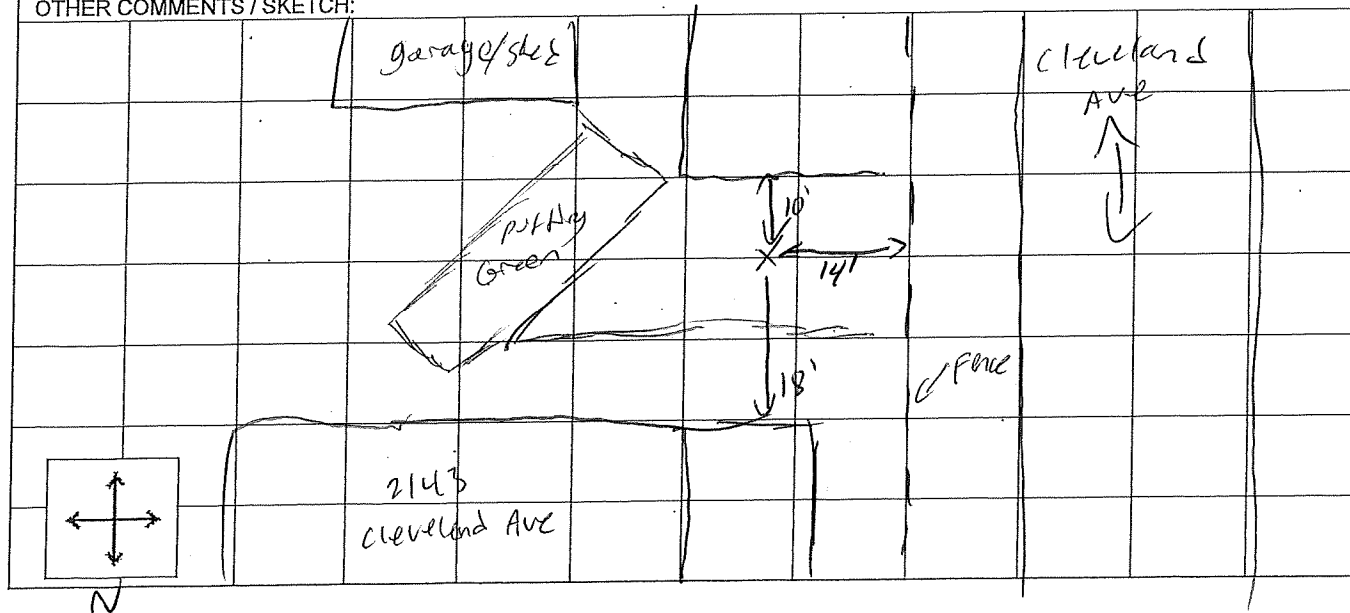
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: _____
 ROADWAY TYPE: _____
 OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
 DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: _____

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH: _____



FIELD NOISE MEASUREMENT DATA

PROJECT: National City Bayfront plan PROJ. # 00152.17

SITE IDENTIFICATION: LT 2 OBSERVER(S): JCR
 ADDRESS: 800 Bay Marine Dr - Best Western.
 START DATE / TIME: 8/6/19 / 9:00 AM END DATE / TIME: 8/9/19 / 8:48 AM

METEROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
 WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
 SKY: SUNNY CLEAR OVRCAST PRTLY CLOUDY FOG RAIN OTHER: _____

ACOUSTIC MEASUREMENTS:

INSTRUMENT: pic #3 TYPE: 1(2) SERIAL #: 3018
 CALIBRATOR: LP cal 200 SERIAL #: 6645
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COMMENTS: Started 9:00 AM, started 11:52, cleared 11:55
picked up: 8:45 AM, stopped: 8:48 AM

NOISE SOURCE INFO:

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ROADWAY TYPE: _____

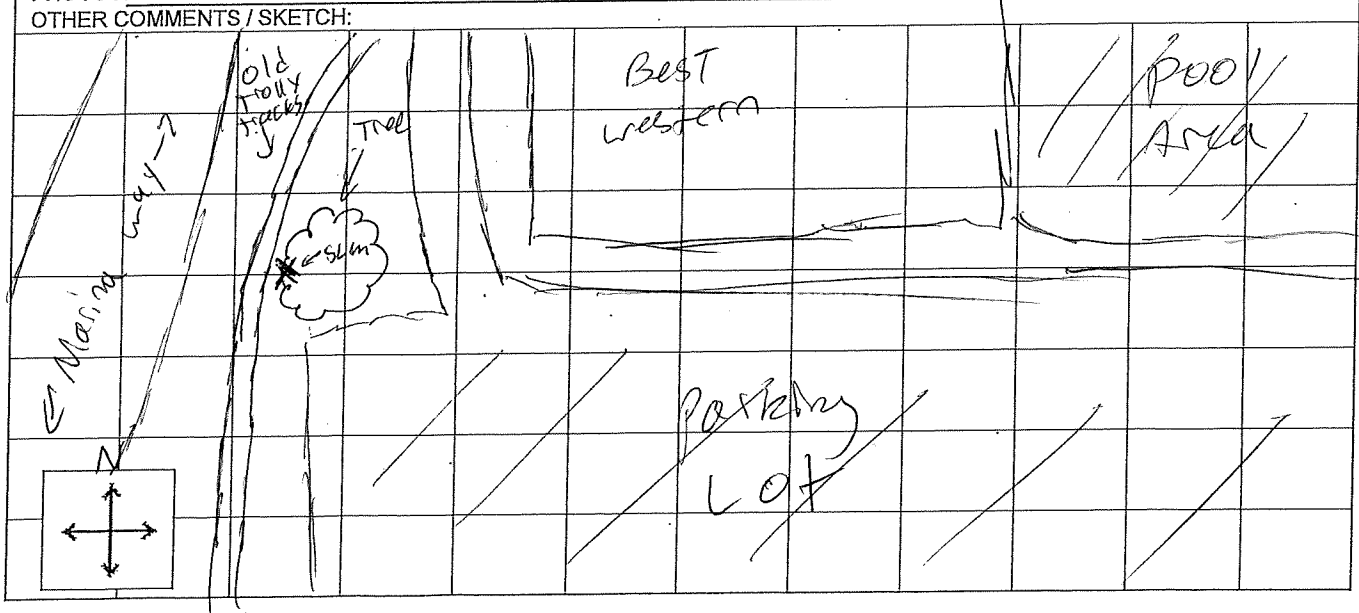
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 DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: _____

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH: _____



FIELD NOISE MEASUREMENT DATA

PROJECT: National City Bayfront Plan PROJ. # 00152.17

SITE IDENTIFICATION: LT3 OBSERVER(S): SCR
 ADDRESS: Ripper Park
 START DATE / TIME: 8/6/19 / ~ 9:05 Am END DATE / TIME: 8/9/19 / 10:20 am

METEOROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
 WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
 SKY: SUNNY CLEAR OVRCAST PARTLY CLOUDY FOG RAIN OTHER: _____

ACOUSTIC MEASUREMENTS:

INSTRUMENT: pic II TYPE: 1 2 SERIAL #: 1209
 CALIBRATOR: LD CAL 200 SERIAL #: 6645
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 SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

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COMMENTS: started ~ 9:05, moved 11:18, cleared 11:20
Arrived 10:20, stopped 10:36

NOISE SOURCE INFO:

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ROADWAY TYPE: _____

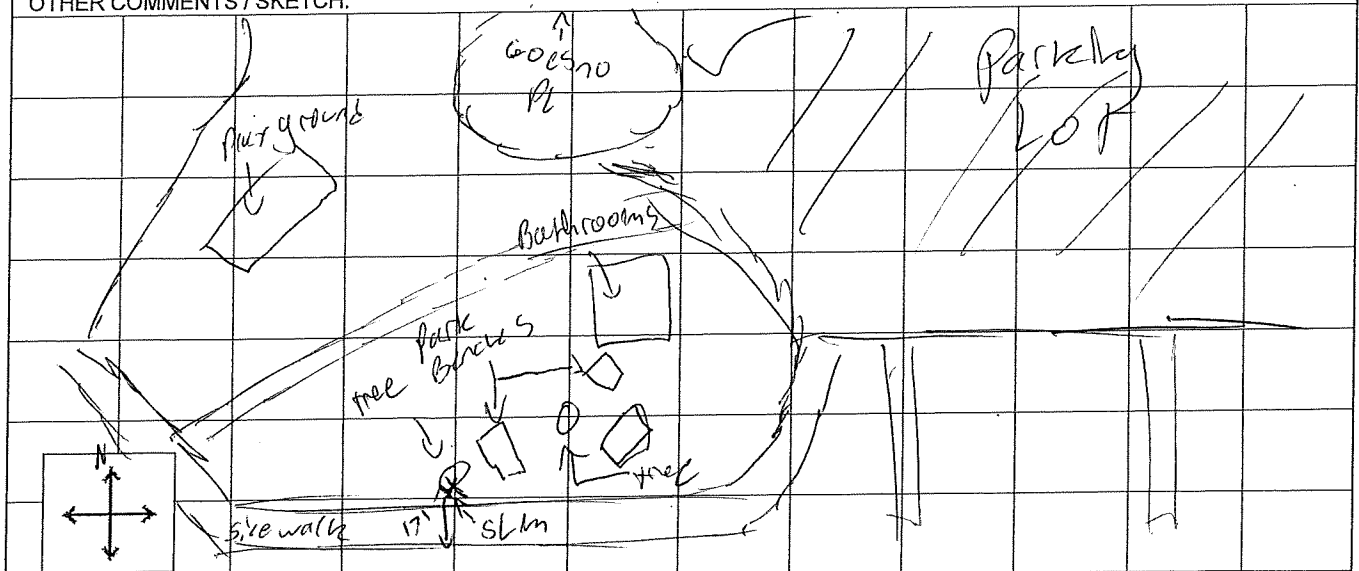
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 DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: _____

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH:



← Sweet water channel →

FIELD NOISE MEASUREMENT DATA

PROJECT: National city Bayfront plan PROJ. # 00152.17

SITE IDENTIFICATION: LT4 OBSERVER(S): JCR
 ADDRESS: South of Sweetwater channel
 START DATE / TIME: 8/6/19 / 9:01 AM END DATE / TIME: 8/9/19 / 11:15

METEOROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
 WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
 SKY: SUNNY CLEAR OVCST PRTLY CLOUDY FOG RAIN OTHER: _____

ACOUSTIC MEASUREMENTS:

INSTRUMENT: pic #4 TYPE: 1 (2) SERIAL # 0014
 CALIBRATOR: cal 200 SERIAL #: 6645
 CALIBRATION CHECK, BEFORE: 94 AFTER 93.8 WINDSCREEN X
 SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

FILE / MEAS #	START TIME	END TIME	L _{eq}	max	1.67	8.33	25	L	50	90	99	min
	<u>9:01</u>											

COMMENTS: mounted 10:42, closed 10:45
arrived 11:01, stopped 11:15 AM

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: _____

ROADWAY TYPE: _____

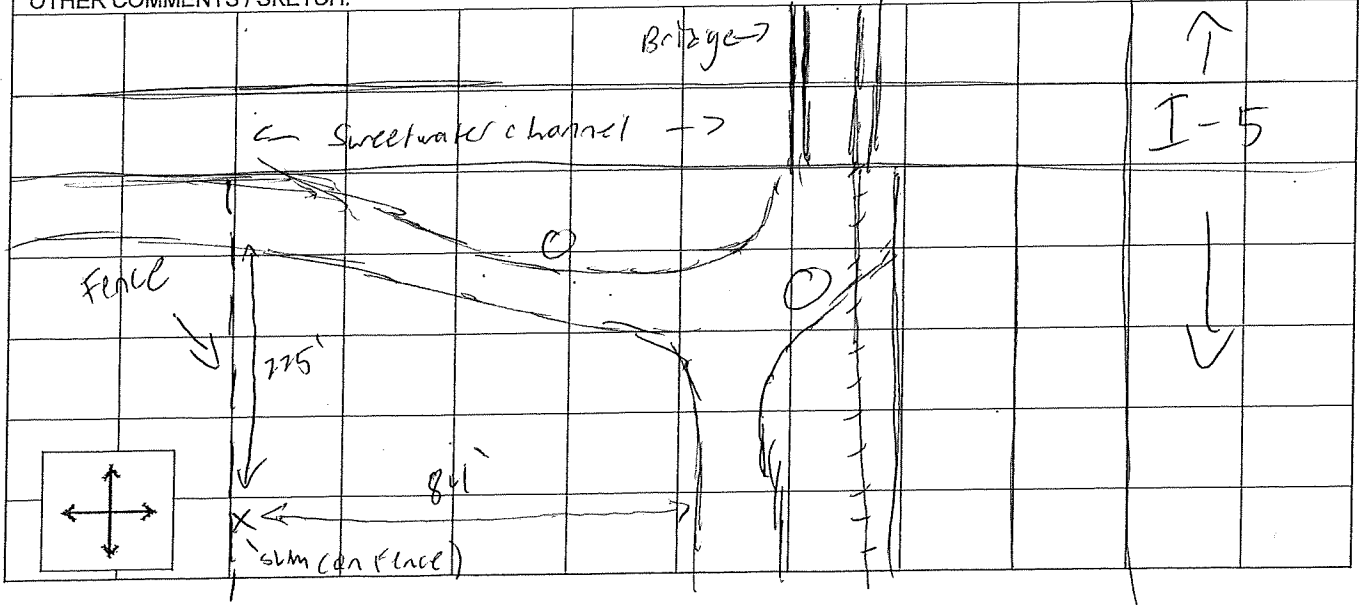
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
 DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: _____

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH: _____



FIELD NOISE MEASUREMENT DATA

PROJECT: National city Bayport Plan PROJ. # 00152.17

SITE IDENTIFICATION: <u>ST1</u>	OBSERVER(S): <u>JCR</u>
ADDRESS: <u>1323 Wilson Ave</u>	
START DATE / TIME: <u>8/6/19 / 103 pm</u>	END DATE / TIME: <u>1:23 pm</u>

METEROLOGICAL CONDITIONS:	
TEMP: <u>75</u> °F	HUMIDITY: <u>74</u> %R.H.
WINDSPEED: <u>6-8</u> MPH	DIR: <u>N NE E SE S SW W NW</u>
SKY: <u>SUNNY CLEAR</u>	OVRCAST: <u>PRTLY CLOUDY</u> FOG: <u>RAIN</u> OTHER: <u>STEADY GUSTY</u>

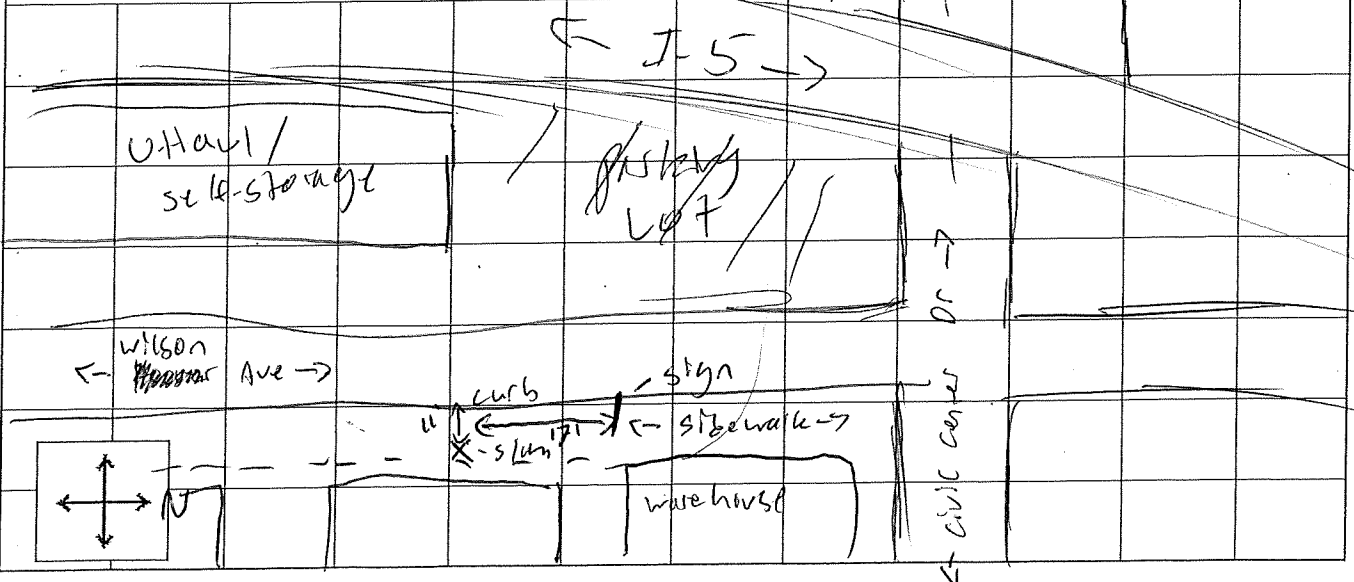
ACOUSTIC MEASUREMENTS:	
INSTRUMENT: <u>11831</u>	TYPE: <u>(1) 2</u>
CALIBRATOR: <u>CAL 200</u>	SERIAL #: <u>3784</u>
CALIBRATION CHECK, BEFORE: <u>114.0</u> AFTER: <u>113.96</u>	WINDSCREEN: <u>X</u>
SETTINGS: <u>A-WEIGHTED</u> <u>SLOW</u> <u>FAST</u> <u>FRONTAL</u> <u>RANDOM</u> <u>ANSI</u>	OTHER: <u> </u>

FILE / MEAS #	START TIME	END TIME	L _{eq}	max	1.67	8.33	25	L	50	90	99	min
1994	1:03	1:23	64.4	73.5	70.3	68.2	66.4	66.0	64.3	63.5	62.3	

COMMENTS: paused out from alarm @ intersection

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: <u>TRAFFIC</u> AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: <u> </u>
ROADWAY TYPE: <u> </u>
OTHER SOURCES: <u>DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL</u>
<u>DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: <u> </u></u>

DESCRIPTION / SKETCH:
TERRAIN: <u>HARD SOFT MIXED FLAT</u> OTHER: <u> </u>
PHOTOS: <u> </u>
OTHER COMMENTS / SKETCH: <u> </u>



FIELD NOISE MEASUREMENT DATA

PROJECT: National City Bayfront Plaza PROJ. # 00152.17

SITE IDENTIFICATION: ST2 OBSERVER(S): JCR
 ADDRESS: NL Adult School
 START DATE / TIME: 8/6/19 / 12:24pm END DATE / TIME: 12:44pm

METEOROLOGICAL CONDITIONS:
 TEMP: 78 °F HUMIDITY: 71 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
 WINDSPEED: 5-8 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
 SKY: SUNNY CLEAR OVRCAST PRTLY CLOUDY FOG RAIN OTHER:

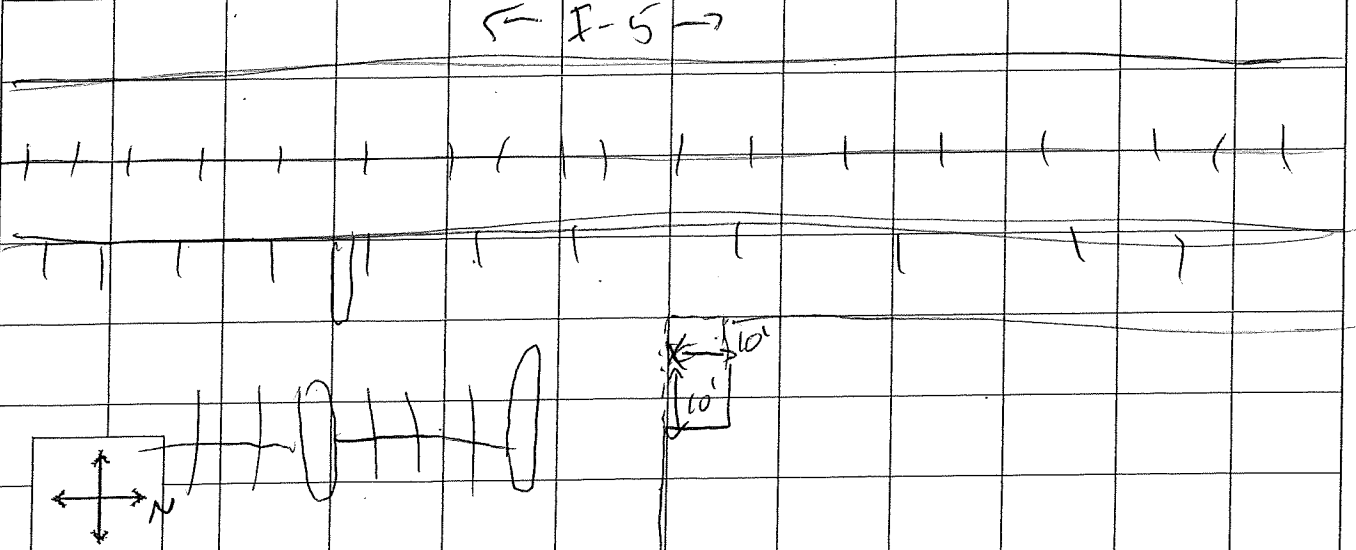
ACOUSTIC MEASUREMENTS:
 INSTRUMENT: LD 931 TYPE: 2 SERIAL #: 3786
 CALIBRATOR: LAL 200 SERIAL #: 6645
 CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.13 WINDSCREEN X
 SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L _{eq}	max	1.67	8.33	25	L 50	90	99	min
<u>.993</u>	<u>12:24</u>	<u>12:44</u>	<u>65.2</u>	<u>73.6</u>	<u>68.0</u>	<u>66.6</u>	<u>65.8</u>	<u>65.0</u>	<u>63.6</u>	<u>62.4</u>	<u>61.7</u>

COMMENTS: paused out trolley (horn)

NOISE SOURCE INFO:
 PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
 ROADWAY TYPE:
 OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
- power line hum

DESCRIPTION / SKETCH:
 TERRAIN: HARD SOFT MIXED FLAT OTHER:
 PHOTOS:
 OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: National City Bayfront Plan PROJ. # 00152.17

SITE IDENTIFICATION: <u>Clock Tower - ST3</u>	OBSERVER(S): <u>JCR</u>
ADDRESS: <u>North of Sweetwater channel</u>	
START DATE / TIME: <u>8/9/19 / 9:29 Am</u>	END DATE / TIME: <u>8/9/19 9:59</u>

METEROLOGICAL CONDITIONS:	
TEMP: <u>69</u> °F	HUMIDITY: <u>84</u> %R.H.
WINDSPEED: <u>03</u> MPH	DIR: <u>N NE E SE S SW W NW</u>
SKY: <u>SUNNY CLEAR</u>	OVRCAST: <u>PRITLY CLOUDY</u> FOG: <u>RAIN</u> OTHER: <u></u>

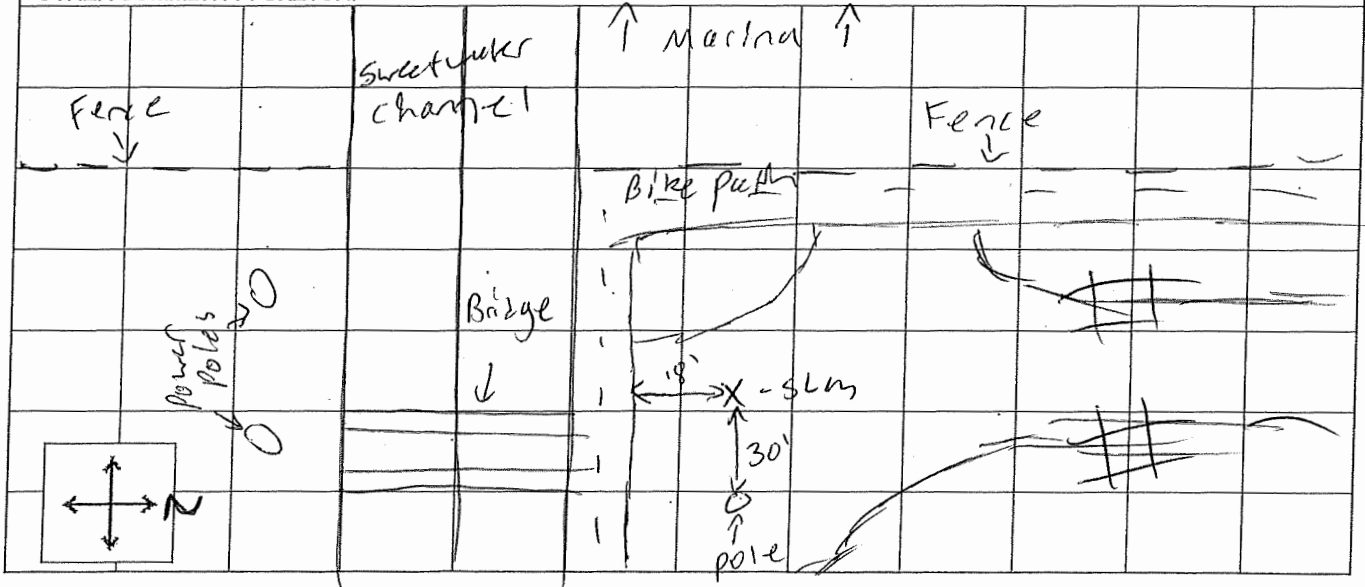
ACOUSTIC MEASUREMENTS:	
INSTRUMENT: <u>LD 831</u>	TYPE: <u>12</u>
CALIBRATOR: <u>LD CAL 200</u>	SERIAL #: <u>3786</u>
CALIBRATION CHECK, BEFORE: <u>114.0</u> AFTER: <u>113.98</u>	WINDSCREEN: <u>X</u>
SETTINGS: <u>A-WEIGHTED</u> <u>SLOW</u> <u>FAST</u> <u>FRONTAL</u> <u>RANDOM</u> <u>ANSI</u>	OTHER: <u></u>

FILE / MEAS #	START TIME	END TIME	L _{eq}	max	1.67	8.33	25	L	50	90	99	min
.495	9:29am	9:59	62.4	68.3	65.6	64.6	63.5	62.3	60.0	58.0	56.2	

COMMENTS: paused out pedestrian noise

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: <u>TRAFFIC</u> AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: <u></u>
ROADWAY TYPE: <u></u>
OTHER SOURCES: <u>DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL</u>
<u>DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:</u>
<u>noise - focus line noise</u>

DESCRIPTION / SKETCH:
TERRAIN: <u>HARD</u> <u>SOFT</u> <u>MIXED</u> <u>FLAT</u> OTHER: <u></u>
PHOTOS: <u></u>
OTHER COMMENTS / SKETCH:



Noise Measurement Photographs



LT1 Looking East



LT1 Looking South



LT1 Looking West



LT1 Looking North

Noise Measurement Photographs



LT2 Looking East



LT2 Looking South



LT2 Looking West



LT2 Looking North

Noise Measurement Photographs



LT3 Looking North



LT3 Looking East



LT3 Looking South



LT3 Looking West

Noise Measurement Photographs



LT4 Looking West



LT4 Looking North



LT4 Looking East



LT4 Looking South

Noise Measurement Photographs



ST1 Looking West



ST1 Looking North



ST1 Looking East



ST1 Looking South

Noise Measurement Photographs



ST2 Looking Southwest



ST2 Looking Northwest



ST2 Looking Northeast



ST2 Looking Southeast

Noise Measurement Photographs



ST3 Looking West



ST3 Looking North



ST3 Looking East



ST3 Looking South

Table 1. Construction Noise Analysis, Balanced Plan Component - Roadway Closures and Realignments

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Demo.								
18	Excavator	80.7	0.4	1	50	hard	0	81
13	Dozer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
70	Skid Steer	77.6	0.4	1	50	hard	0	78
91	Off-Highway Truck	76.5	0.4	1	50	hard	0	77
								82
Grading								
13	Dozer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
51	Scraper	83.6	0.4	2	50	hard	0	84
91	Off-Highway Truck	76.5	0.4	1	50	hard	0	77
								84
Util.								
18	Excavator	80.7	0.4	1	50	hard	0	81
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
								84
Paving								
23	Grader	85	0.4	1	50	hard	0	85
34	Paver	77.2	0.5	1	50	hard	0	77
44	Roller	80	0.2	1	50	hard	0	80
70	Skid Steer	77.6	0.4	1	50	hard	0	78
								85
Finishing								
17	Drill Rig, Truck	79.1	0.2	1	50	hard	0	79
12	Crane	80.6	0.16	1	50	hard	0	81
91	Off-Highway Truck	76.5	0.4	1	50	hard	0	77
60	Tractor	84	0.4	1	50	hard	0	84
								84
	Worst Case Phase							85

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 2. Construction Noise Analysis, Balanced Plan Component - Pepper Park Improvements

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Demo.								
48	Saw, Concrete	89.6	0.2	1	50	hard	0	90
13	Dozer	81.7	0.4	1	50	hard	0	82
92	Tractor/Loader/Backhoe	84	0.4	3	50	hard	0	84
								90
Site Prep.								
23	Grader	85	0.4	1	50	hard	0	85
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
51	Scraper	83.6	0.4	1	50	hard	0	84
								85
Grading								
13	Dozer	81.7	0.4	1	50	hard	0	82
92	Tractor/Loader/Backhoe	84	0.4	2	50	hard	0	84
23	Grader	85	0.4	1	50	hard	0	85
								85
Building								
20	Generator	80.6	0.5	1	50	hard	0	81
12	Crane	80.6	0.16	1	50	hard	0	81
72	Forklift	77.6	0.4	2	50	hard	0	78
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
69	Welder/Torch	74	0.4	3	50	hard	0	74
								84
Paving								
31	Mixer, Concrete (or concrete m	78.8	0.4	1	50	hard	0	79
34	Paver	77.2	0.5	1	50	hard	0	77
44	Roller	80	0.2	2	50	hard	0	80
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
75	Paving Equipment	77.2	0.5	1	50	hard	0	77
								84
Coating								
10	Compressor, Air	77.7	0.4	1	50	hard	0	78
	Worst Case Phase							90

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 3. Construction Noise Analysis, GB Capital Component, Phase 1 - Landside Improvements

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Demo.								
48	Saw, Concrete	89.6	0.2	1	50	hard	0	90
18	Excavator	80.7	0.4	3	50	hard	0	81
13	Dozer	81.7	0.4	2	50	hard	0	82
								90
Site Prep.								
13	Dozer	81.7	0.4	3	50	hard	0	82
92	Tractor/Loader/Backhoe	84	0.4	4	50	hard	0	84
								84
Grading								
18	Excavator	80.7	0.4	2	50	hard	0	81
23	Grader	85	0.4	1	50	hard	0	85
13	Dozer	81.7	0.4	1	50	hard	0	82
92	Tractor/Loader/Backhoe	84	0.4	2	50	hard	0	84
51	Scraper	83.6	0.4	2	50	hard	0	84
								85
Building								
12	Crane	80.6	0.16	1	50	hard	0	81
72	Forklift	77.6	0.4	3	50	hard	0	78
20	Generator	80.6	0.5	1	50	hard	0	81
92	Tractor/Loader/Backhoe	84	0.4	3	50	hard	0	84
69	Welder/Torch	74	0.4	1	50	hard	0	74
								84
Paving								
34	Paver	77.2	0.5	2	50	hard	0	77
75	Paving Equipment	77.2	0.5	2	50	hard	0	77
44	Roller	80	0.2	2	50	hard	0	80
								80
Coatings								
10	Compressor, Air	77.7	0.4	1	50	hard	0	78
	Worst Case Phase							90

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 4. Construction Noise Analysis, GB Capital Component, Phase 1 - Waterside Improvements

[illegible]

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 5. Construction Noise Analysis, GB Capital Component, Phase 2 - Landside Improvements (No Pile Driving)

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Phase 1, Mobil./Demo.								
73	AC Cold Planer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	1	50	hard	0	78
								82
Phase 1, Dewatering/Shoring.								
15	Drill Rig, Auger	84.4	0.2	1	50	hard	0	84
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
								84
Phase 2, Excav. & Foundation								
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
23	Grader	85	0.4	1	50	hard	0	85
18	Excavator	80.7	0.4	2	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
								85
Structural Frame								
79	Tower Crane	80.6	0.16	1	50	hard	0	81
12	Crane	80.6	0.16	1	50	hard	0	81
41	Pump, Concrete (or concrete p	81.4	0.2	1	50	hard	0	81
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	1	80
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
77	Wheeled Hydro Crane	80.6	0.16	1	50	hard	0	81
2	Backhoe	77.6	0.4	1	50	hard	0	78
								81
Ex. Closure & Roofing								
74	Boom Lift	74.7	0.2	5	50	hard	0	75
30	Man Lift	74.7	0.2	4	50	hard	0	75
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
								78
Int. Construction/Finishes								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
								78
MEP Systems								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
								78
Phase 3, Offsite Demo./Grading/Util.								
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
70	Skid Steer	77.6	0.4	2	50	hard	0	78
80	Bobcat	77.6	0.4	2	50	hard	0	78
								79
Site Improv.								
34	Paver	77.2	0.5	1	50	hard	0	77
87	Vibratory Roller	80	0.2	2	50	hard	0	80
2	Backhoe	77.6	0.4	3	50	hard	0	78
18	Excavator	80.7	0.4	1	50	hard	0	81
80	Bobcat	77.6	0.4	2	50	hard	0	78
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	0	81
								81
Worst Case Phase								85

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 6. Construction Noise Analysis, GB Capital Component, Phase 2 - Landside Improvements (With Pile Driving)

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Phase 1, Mobil./Demo.								
73	AC Cold Planer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	1	50	hard	0	78
								82
Phase 1, Dewatering/Shoring.								
15	Drill Rig, Auger	84.4	0.2	1	50	hard	0	84
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
								84
Phase 2, Excav. & Foundation								
35	Pile-driver (Impact)	101.3	0.2	2	50	hard	0	101
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
23	Grader	85	0.4	1	50	hard	0	85
18	Excavator	80.7	0.4	2	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
								101
Structural Frame								
79	Tower Crane	80.6	0.16	1	50	hard	0	81
12	Crane	80.6	0.16	1	50	hard	0	81
41	Pump, Concrete (or concrete p	81.4	0.2	1	50	hard	0	81
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	1	80
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
77	Wheeled Hydro Crane	80.6	0.16	1	50	hard	0	81
2	Backhoe	77.6	0.4	1	50	hard	0	78
								81
Ex. Closure & Roofing								
74	Boom Lift	74.7	0.2	5	50	hard	0	75
30	Man Lift	74.7	0.2	4	50	hard	0	75
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
								78
Int. Construction/Finishes								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
								78
MEP Systems								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
								78
Phase 3, Offsite Demo./Grading/Util.								
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
70	Skid Steer	77.6	0.4	2	50	hard	0	78
80	Bobcat	77.6	0.4	2	50	hard	0	78
								79
Site Improv.								
34	Paver	77.2	0.5	1	50	hard	0	77
87	Vibratory Roller	80	0.2	2	50	hard	0	80
2	Backhoe	77.6	0.4	3	50	hard	0	78
18	Excavator	80.7	0.4	1	50	hard	0	81
80	Bobcat	77.6	0.4	2	50	hard	0	78
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	0	81
								81
Worst Case Phase								101

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 7. Construction Noise Analysis, Pasha Rail Improvement and Road Closures Component

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Demo.								
18	Excavator	80.7	0.4	1	50	hard	0	81
13	Dozer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
70	Skid Steer	77.6	0.4	1	50	hard	0	78
								82
Water truck								
71	Truck, Water	76.5	0.4	1	50	hard	0	77
Grading								
13	Dozer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
51	Scraper	83.6	0.4	2	50	hard	0	84
								84
Util.								
18	Excavator	80.7	0.4	1	50	hard	0	81
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
								84
Paving								
23	Grader	85	0.4	1	50	hard	0	85
34	Paver	77.2	0.5	1	50	hard	0	77
44	Roller	80	0.2	1	50	hard	0	80
70	Skid Steer	77.6	0.4	1	50	hard	0	78
								85
Finishing								
17	Drill Rig, Truck	79.1	0.2	1	50	hard	0	79
12	Crane	80.6	0.16	1	50	hard	1	80
91	Off-Highway Truck	76.5	0.4	1	50	hard	2	75
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	3	81
								81
Track Install								
72	Forklift	77.6	0.4	1	50	hard	0	78
10	Compressor, Air	77.7	0.4	1	50	hard	0	78
								78
	Worst Case Phase							85

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Demo.								
48	Saw, Concrete	89.6	0.2	1	50	hard	0	90
13	Dozer	81.7	0.4	1	50	hard	0	82
92	Tractor/Loader/Backhoe	84	0.4	3	50	hard	0	84
								90
Site Prep.								
23	Grader	85	0.4	1	50	hard	0	85
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
51	Scraper	83.6	0.4	1	50	hard	0	84
								85
Site Grading								
13	Dozer	81.7	0.4	1	50	hard	0	82
92	Tractor/Loader/Backhoe	84	0.4	2	50	hard	0	84
23	Grader	85	0.4	1	50	hard	0	85
								85
Paving								
31	Mixer, Concrete (or concrete m	78.8	0.4	1	50	hard	0	79
34	Paver	77.2	0.5	1	50	hard	0	77
44	Roller	80	0.2	2	50	hard	0	80
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
75	Paving Equipment	77.2	0.5	1	50	hard	0	77
								84
	Worst Case Phase							90

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Phase 1, Mobile Demo.								
73	AC Cold Planer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	1	50	hard	0	78
Phase 1, Dewater/Shoring								
15	Drill Rig, Auger	84.4	0.2	1	50	hard	0	84
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
Phase 2, Excav. + Foundation								
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
23	Grader	85	0.4	1	50	hard	0	85
18	Excavator	80.7	0.4	2	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
Struct. Frame								
79	Tower Crane	80.6	0.16	1	50	hard	0	81
12	Crane	80.6	0.16	1	50	hard	0	81
41	Pump, Concrete (or concrete p	81.4	0.2	1	50	hard	0	81
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	1	80
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
77	Wheeled Hydro Crane	80.6	0.16	1	50	hard	0	81
2	Backhoe	77.6	0.4	1	50	hard	0	78
Exterior Closure/Roofing								
74	Boom Lift	74.7	0.2	5	50	hard	0	75
30	Man Lift	74.7	0.2	4	50	hard	0	75
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
Int. Construction								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
MEP Systems								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
Phase 3, Offsite Demo/Grad/Util.								
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
70	Skid Steer	77.6	0.4	2	50	hard	0	78
80	Bobcat	77.6	0.4	2	50	hard	0	78
Site Improv.								
34	Paver	77.2	0.5	1	50	hard	0	77
87	Vibratory Roller	80	0.2	2	50	hard	0	80
2	Backhoe	77.6	0.4	3	50	hard	0	78
18	Excavator	80.7	0.4	1	50	hard	0	81
80	Bobcat	77.6	0.4	2	50	hard	0	78
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	0	81
Worst Case Phase								

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Phase 1, Mobile, Demo.								
73	AC Cold Planer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	1	50	hard	0	78
								82
Phase 1, Dewater/Shoring								
15	Drill Rig, Auger	84.4	0.2	1	50	hard	0	84
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
								84
Phase 2, Excav. + Foundation								
35	Pile-driver (Impact)	101.3	0.2	2	50	hard	0	101
88	Dewater Pumps	80.9	0.5	6	50	hard	0	81
23	Grader	85	0.4	1	50	hard	0	85
18	Excavator	80.7	0.4	2	50	hard	0	81
29	Loader (Front End Loader)	79.1	0.4	2	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
								101
Struct. Frame								
79	Tower Crane	80.6	0.16	1	50	hard	0	81
12	Crane	80.6	0.16	1	50	hard	0	81
41	Pump, Concrete (or concrete p	81.4	0.2	1	50	hard	0	81
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	1	80
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
77	Wheeled Hydro Crane	80.6	0.16	1	50	hard	0	81
2	Backhoe	77.6	0.4	1	50	hard	0	78
								81
Exterior Closure/Roofing								
74	Boom Lift	74.7	0.2	5	50	hard	0	75
30	Man Lift	74.7	0.2	4	50	hard	0	75
89	All Terrain Forklifts	77.6	0.4	2	50	hard	0	78
								78
Int. Construction								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
								78
MEP Systems								
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
76	Scissor Lift	74.7	0.2	6	50	hard	0	75
								78
Phase 3, Offsite Demo/Grad/Util.								
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
2	Backhoe	77.6	0.4	2	50	hard	0	78
70	Skid Steer	77.6	0.4	2	50	hard	0	78
80	Bobcat	77.6	0.4	2	50	hard	0	78
								79
Site Improv.								
34	Paver	77.2	0.5	1	50	hard	0	77
87	Vibratory Roller	80	0.2	2	50	hard	0	80
2	Backhoe	77.6	0.4	3	50	hard	0	78
18	Excavator	80.7	0.4	1	50	hard	0	81
80	Bobcat	77.6	0.4	2	50	hard	0	78
89	All Terrain Forklifts	77.6	0.4	1	50	hard	0	78
90	Mobile Concrete Pump	81.4	0.2	1	50	hard	0	81

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 11. Construction Noise Analysis, City Program - Development Component - Roadway Improvements

Equipment		Typical Level @ 50', dBA ¹	Usage Factor ^{1,2}	Number of Units	Distance to Receiver, ft.	Hard or Soft Site?	Barrier Attenuation, dB	Lmax, dBA
Item No.	Description							
Demo.								
18	Excavator	80.7	0.4	1	50	hard	0	81
13	Dozer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
70	Skid Steer	77.6	0.4	1	50	hard	0	78
								82
Water Truck								
71	Truck, Water	76.5	0.4	1	50	hard	0	77
Grading								
13	Dozer	81.7	0.4	1	50	hard	0	82
29	Loader (Front End Loader)	79.1	0.4	1	50	hard	0	79
51	Scraper	83.6	0.4	2	50	hard	0	84
								84
Util.								
18	Excavator	80.7	0.4	1	50	hard	0	81
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
								84
Paving								
23	Grader	85	0.4	1	50	hard	0	85
34	Paver	77.2	0.5	1	50	hard	0	77
44	Roller	80	0.2	1	50	hard	0	80
70	Skid Steer	77.6	0.4	1	50	hard	0	78
								85
Finishing								
17	Drill Rig, Truck	79.1	0.2	1	50	hard	0	79
12	Crane	80.6	0.16	1	50	hard	0	81
91	Off-Highway Truck	76.5	0.4	1	50	hard	0	77
92	Tractor/Loader/Backhoe	84	0.4	1	50	hard	0	84
								84
	Worst Case Phase							85

1. Obtained or estimated from:

FHWA Roadway Construction Noise Model (RCNM), Version 1.1, December 8, 2008

2. Usage Factor = percentage of time equipment is operating in noisiest mode while in use

Table 12. Construction Noise Analysis, Reciever Distances and Site Identification

Nearest Source/Reciever Distance	R1: Wilson Ave - SFR		R2: Cleveland Ave - SFR		R4: NC Depot Museum		R5: City Program Component		R6: NC Adult School		R7: BW Hotel		R9: RV Resort (GB Capital Phase 1&2)		R10: Hotel #4 (GB Capital Phase 2)		R11: Hotel #3 (GB Capital Phase 2)		R13: Hotel #1 (GB Capital Phase 2)		R14: Hotel #2 (GB Capital Phase 2)		R15: RV Resort (GB Phase 1)		R16: Modular Cabins (GB Phase 1)		R17: Pepper Park (Existing Footprint)		R17: Pepper Park (Expanded Footprint)	
Construction Element	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet	Hard or Soft Site?	Dist., feet
Balanced Plan Component - Transportation Improvements	soft	5300	soft	2425	soft	1945	soft	1700	soft	2225	soft	1285	hard	< 50	hard	505	hard	505	hard	< 50	hard	< 50	hard	< 50	soft	950	hard	170	N/A	PoC
Balanced Plan Component - Pepper Park	soft	6760	soft	3870	soft	3340	soft	3135	soft	3700	soft	2730	hard	< 50	soft	810	hard	625	hard	70	hard	< 50	hard	< 50	hard	380	N/A	PoC	N/A	PoC
GB Capital Component - Phase 1 Landside Improvements	soft	5400	soft	2520	soft	2045	soft	1800	soft	2340	soft	1385	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	hard	190	hard	< 50
GB Capital Component- Phase 1 Waterside Improvements	soft	6890	soft	4160	soft	3745	soft	3500	soft	3660	soft	3060	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	hard	440	hard	< 50
GB Capital Component- Phase 2	soft	6045	soft	3205	soft	2785	soft	2510	soft	2840	soft	2095	hard	< 50	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	N/A	PoC	hard	225	hard	120	hard	< 50
Pasha Rail Improvement Component	soft	5310	soft	2425	soft	1950	soft	1705	soft	2255	soft	1285	hard	90	hard	570	hard	575	hard	120	hard	290	hard	170	soft	1000	hard	610	hard	495
Pasha Road Closures Component	soft	4360	soft	1820	soft	1185	soft	1315	soft	2440	soft	1350	hard	515	soft	1145	soft	1020	hard	110	soft	375	hard	120	soft	1225	hard	525	hard	445
Bayshore Bikeway Route 1	soft	650	hard	240	hard	75	hard	< 50	soft	380	hard	95	hard	200	hard	240	hard	380	hard	1210	hard	1180	hard	1160	hard	215	soft	1675	soft	1215
Bayshore Bikeway Route 2	soft	1940	hard	< 50	hard	400	hard	< 50	soft	755	hard	< 50	hard	< 50	hard	< 50	hard	190	hard	705	hard	635	hard	625	hard	< 50	soft	1185	soft	730
Bayshore Bikeway Route 3	soft	650	hard	240	hard	290	hard	< 50	soft	380	hard	< 50	hard	< 50	hard	90	hard	190	hard	1045	hard	1025	hard	1000	hard	< 50	soft	1495	soft	1030
City Program - Development Component	soft	3150	soft	390	hard	< 50	N/A	PoC	soft	510	hard	145	soft	1990	soft	2525	soft	2655	soft	2765	soft	2830	soft	2790	soft	2860	soft	3370	soft	3095

Notes:

PoC = Part of Component (Recievers within the analyzed project component were excluded from the analysis)

Table 13. Construction Noise Analysis, Estimated Construction Noise Levels for Offsite Assessment

Construction Element	Equipment Type	Noise level at 50 Feet - L _{max} dBA	Noise Level at Receiver Location, L _{max} dBA					
			R1: Wilson Ave - SFR	R2: Cleveland Ave - SFR	R4: NC Depot Museum	R6: NC Adult School	R7: BW Hotel	R17: Pepper Park (Existing Footprint)
Balanced Plan Component - Transportation Improvements	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	40	48	51	49	55	80
	General mechanized construction equipment	85	34	43	45	44	50	74
Balanced Plan Component - Pepper Park	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	37	43	45	44	47	N/A
	General mechanized construction equipment	85	32	38	39	38	42	N/A
GB Capital Component - Phase 1 Landside Improvements	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	39	48	50	49	54	79
	General mechanized construction equipment	85	34	42	45	43	49	73
GB Capital Component-Phase 1 Waterside Improvements	Pile driving	101	48	53	54	55	57	82
	High impact demolition equipment	90	37	42	43	44	46	71
	General mechanized construction equipment	85	32	37	38	38	40	66
GB Capital Component-Phase 2	Pile driving	101	49	56	58	57	61	94
	High impact demolition equipment	90	38	45	47	46	50	83
	General mechanized construction equipment	85	33	40	41	41	44	77
Pasha Rail Improvement Component	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	40	48	51	49	55	69
	General mechanized construction equipment	85	34	43	45	44	50	63
Pasha Road Closures Component	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	42	51	56	48	55	70
	General mechanized construction equipment	85	36	46	51	43	49	65
Bayshore Bikeway Route 1	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	62	77	87	68	85	52
	General mechanized construction equipment	85	57	71	81	63	79	47
Bayshore Bikeway Route 2	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	51	90	72	61	90	56
	General mechanized construction equipment	85	45	85	67	56	85	51
Bayshore Bikeway Route 3	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	62	77	75	68	90	53
	General mechanized construction equipment	85	57	71	70	63	85	48
City Program - Development Component	Pile driving	101	56	79	101	76	92	56
	High impact demolition equipment	90	45	68	90	65	81	45
	General mechanized construction equipment	85	40	63	85	60	76	39

Table 14. Construction Noise Analysis, Estimated Construction Noise Levels for Onsite Assessment

Construction Element	Equipment Type	Noise level at 50 Feet - L _{max} dBA	Noise Level at Receiver Location, L _{max} dBA								
			R5: City Program Component	R9: RV Resort (GB Capital Phase 1&2)	R10: Hotel #4 (GB Capital Phase 2)	R11: Hotel #3 (GB Capital Phase 2)	R13: Hotel #1 (GB Capital Phase 2)	R14: Hotel #2 (GB Capital Phase 2)	R15: RV Resort (GB Phase 1)	R16: Modular Cabins (GB Phase 1)	R17: Pepper Park (Expanded Footprint)
Balanced Plan Component - Transportation Improvements	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	52	90	70	70	90	90	90	58	N/A
	General mechanized construction equipment	85	47	85	65	65	85	85	85	53	N/A
Balanced Plan Component - Pepper Park	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	45	90	60	68	87	90	90	73	N/A
	General mechanized construction equipment	85	40	85	55	63	82	85	85	67	N/A
GB Capital Component - Phase 1 Landside Improvements	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	90
	General mechanized construction equipment	85	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	85
GB Capital Component- Phase 1 Waterside Improvements	Pile driving	101	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	101
	High impact demolition equipment	90	44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	90
	General mechanized construction equipment	85	39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	85
GB Capital Component- Phase 2	Pile driving	101	59	101	N/A	N/A	N/A	N/A	N/A	88	101
	High impact demolition equipment	90	48	90	N/A	N/A	N/A	N/A	N/A	77	90
	General mechanized construction equipment	85	42	85	N/A	N/A	N/A	N/A	N/A	72	85
Pasha Rail Improvement Component	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	52	85	69	69	83	75	80	58	70
	General mechanized construction equipment	85	47	80	64	64	77	70	74	52	65
Pasha Road Closures Component	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	55	70	56	58	83	68	83	56	71
	General mechanized construction equipment	85	50	65	51	52	78	63	77	50	66
Bayshore Bikeway Route 1	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	90	78	77	73	63	63	63	78	56
	General mechanized construction equipment	85	85	73	71	67	57	58	58	72	50
Bayshore Bikeway Route 2	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	90	90	90	79	67	68	68	90	61
	General mechanized construction equipment	85	85	85	85	73	62	63	63	85	56
Bayshore Bikeway Route 3	Pile driving	No pile driving	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	High impact demolition equipment	90	90	90	85	79	64	64	64	90	57
	General mechanized construction equipment	85	85	85	80	73	59	59	59	85	52
City Program - Development Component	Pile driving	101	N/A	61	59	58	58	57	58	57	57
	High impact demolition equipment	90	N/A	50	48	47	47	46	47	46	46
	General mechanized construction equipment	85	N/A	45	42	42	41	41	41	41	40

This spreadsheet calculates traffic noise levels based on TNM Version 2.5 Lookup Tables.

**** Type in yellow cells only.**

Traffic Data:

☒ Enter ADT Traffic

☒ Enter Loudest-hour Traffic

Units:

☒ Metric

☒ English

Calculate



Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Number #	Traffic Mix Description	Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.					Distance feet, min. 33 max. 1000	dB CNEL
1	Tidelands Avenue - Existing	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
2	Tidelands Avenue - Existing	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
3	Tidelands Avenue - Existing	Bay Marina Drive to West 32nd Street	H				1,683	3	Generic - Highway (From J&S SR95	35	50	60.5
4	McKinley Avenue - Existing	West 14th Street to West 18th Street	H				593	1	Generic - Arterial Roadways (From	25	50	50.0
5	McKinley Avenue - Existing	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
6	McKinley Avenue - Existing	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
7	Cleveland Avenue - Existing	Civic Center Drive to West 14th Street	H				4,822	1	Generic - Arterial Roadways (From	35	50	61.3
8	Cleveland Avenue - Existing	West 14th Street to West 18th Street	H				4,724	1	Generic - Arterial Roadways (From	35	50	61.2
9	Cleveland Avenue - Existing	West 18th Street to West 19th Street	H				5,323	1	Generic - Arterial Roadways (From	35	50	61.7
10	Cleveland Avenue - Existing	West 19th Street to West 23rd Street	H				5,075	1	Generic - Arterial Roadways (From	35	50	61.5
11	Cleveland Avenue - Existing	West 23rd Street to Bay Marina Drive	H				5,708	1	Generic - Arterial Roadways (From	35	50	62.0
12	Bay Marina Drive - Existing	Tidelands Avenue to Marina Way	H				7,573	3	Generic - Highway (From J&S SR95	30	50	65.9
13	Bay Marina Drive - Existing	Marina Way to Cleveland Avenue	H				8,472	3	Generic - Highway (From J&S SR95	30	50	66.4
14	Bay Marina Drive - Existing	Cleveland Avenue to I-5 SB Ramps	H				14,833	3	Generic - Highway (From J&S SR95	30	50	68.8
15	Bay Marina Drive - Existing	I-5 SB Ramps to I-5 NB Ramps	H				21,354	3	Generic - Highway (From J&S SR95	30	50	70.4
16	West 18th Street - Existing	Cleveland Avenue to McKinley Avenue	H				1,148	1	Generic - Arterial Roadways (From	30	50	53.8
17	West 19th Street - Existing	Tidelands Avenue to Cleveland Avenue	H				3,937	1	Generic - Arterial Roadways (From	30	50	58.8
18	West 19th Street - Existing	Cleveland Avenue to McKinley Avenue	H				2,218	1	Generic - Arterial Roadways (From	30	50	56.4
19	Marina Way - Existing	Bay Marina Drive to West 32nd Street	H				1,390	1	Generic - Arterial Roadways (From	25	50	53.1
20	West 32nd Street - Existing	Tidelands Avenue to Marina Way	H				650	1	Generic - Arterial Roadways (From	25	50	50.3
21	Tidelands Avenue - Existing + DP	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
22	Tidelands Avenue - Existing + DP	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
23	Tidelands Avenue - Existing + DP	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
24	McKinley Avenue - Existing + DP	West 14th Street to West 18th Street	H				910	1	Generic - Arterial Roadways (From	25	50	51.5
25	McKinley Avenue - Existing + DP	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
26	McKinley Avenue - Existing + DP	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
27	Cleveland Avenue - Existing + DP	Civic Center Drive to West 14th Street	H				4,822	1	Generic - Arterial Roadways (From	35	50	61.3
28	Cleveland Avenue - Existing + DP	West 14th Street to West 18th Street	H				4,724	1	Generic - Arterial Roadways (From	35	50	61.2
29	Cleveland Avenue - Existing + DP	West 18th Street to West 19th Street	H				5,431	1	Generic - Arterial Roadways (From	35	50	61.8
30	Cleveland Avenue - Existing + DP	West 19th Street to West 23rd Street	H				5,507	1	Generic - Arterial Roadways (From	35	50	61.9
31	Cleveland Avenue - Existing + DP	West 23rd Street to Bay Marina Drive	H				12,508	1	Generic - Arterial Roadways (From	35	50	65.4

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
32	Bay Marina Drive - Existing + DP	Tidelands Avenue to Marina Way	H				7,825	3	Generic - Highway (From J&S SR95	30	50	66.0
33	Bay Marina Drive - Existing + DP	Marina Way to Cleveland Avenue	H				14,023	3	Generic - Highway (From J&S SR95	30	50	68.6
34	Bay Marina Drive - Existing + DP	Cleveland Avenue to I-5 SB Ramps	H				26,320	3	Generic - Highway (From J&S SR95	30	50	71.3
35	Bay Marina Drive - Existing + DP	I-5 SB Ramps to I-5 NB Ramps	H				23,448	3	Generic - Highway (From J&S SR95	30	50	70.8
36	West 18th Street - Existing + DP	Cleveland Avenue to McKinley Avenue	H				1,256	1	Generic - Arterial Roadways (From	30	50	54.2
37	West 19th Street - Existing + DP	Tidelands Avenue to Cleveland Avenue	H				4,153	1	Generic - Arterial Roadways (From	30	50	59.1
38	West 19th Street - Existing + DP	Cleveland Avenue to McKinley Avenue	H				2,326	1	Generic - Arterial Roadways (From	30	50	56.6
39	Marina Way - Existing + DP	Bay Marina Drive to West 32nd Street	H				6,792	1	Generic - Arterial Roadways (From	25	50	59.5
40	West 32nd Street - Existing + DP	Tidelands Avenue to Marina Way	H				717	1	Generic - Arterial Roadways (From	25	50	50.6
41	Tidelands Avenue - EX + DPW	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
42	Tidelands Avenue - EX + DPW	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
43	Tidelands Avenue - EX + DPW	Bay Marina Drive to West 32nd Street	H				1,683	3	Generic - Highway (From J&S SR95	35	50	60.5
44	McKinley Avenue - EX + DPW	West 14th Street to West 18th Street	H				593	1	Generic - Arterial Roadways (From	25	50	50.0
45	McKinley Avenue - EX + DPW	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
46	McKinley Avenue - EX + DPW	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
47	Cleveland Avenue - EX + DPW	Civic Center Drive to West 14th Street	H				4,835	1	Generic - Arterial Roadways (From	35	50	61.3
48	Cleveland Avenue - EX + DPW	West 14th Street to West 18th Street	H				4,737	1	Generic - Arterial Roadways (From	35	50	61.3
49	Cleveland Avenue - EX + DPW	West 18th Street to West 19th Street	H				5,336	1	Generic - Arterial Roadways (From	35	50	61.8
50	Cleveland Avenue - EX + DPW	West 19th Street to West 23rd Street	H				5,088	1	Generic - Arterial Roadways (From	35	50	61.6
51	Cleveland Avenue - EX + DPW	West 23rd Street to Bay Marina Drive	H				5,721	1	Generic - Arterial Roadways (From	35	50	62.1
52	Bay Marina Drive - EX + DPW	Tidelands Avenue to Marina Way	H				7,573	3	Generic - Highway (From J&S SR95	30	50	65.9
53	Bay Marina Drive - EX + DPW	Marina Way to Cleveland Avenue	H				8,599	3	Generic - Highway (From J&S SR95	30	50	66.4
54	Bay Marina Drive - EX + DPW	Cleveland Avenue to I-5 SB Ramps	H				14,947	3	Generic - Highway (From J&S SR95	30	50	68.8
55	Bay Marina Drive - EX + DPW	I-5 SB Ramps to I-5 NB Ramps	H				21,456	3	Generic - Highway (From J&S SR95	30	50	70.4
56	West 18th Street - EX + DPW	Cleveland Avenue to McKinley Avenue	H				1,148	1	Generic - Arterial Roadways (From	30	50	53.8
57	West 19th Street - EX + DPW	Tidelands Avenue to Cleveland Avenue	H				3,937	1	Generic - Arterial Roadways (From	30	50	58.8
58	West 19th Street - EX + DPW	Cleveland Avenue to McKinley Avenue	H				2,218	1	Generic - Arterial Roadways (From	30	50	56.4
59	Marina Way - EX + DPW	Bay Marina Drive to West 32nd Street	H				1,517	1	Generic - Arterial Roadways (From	25	50	53.4
60	West 32nd Street - EX + DPW	Tidelands Avenue to Marina Way	H				777	1	Generic - Arterial Roadways (From	25	50	50.9
61	Tidelands Avenue - Ex + TB	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
62	Tidelands Avenue - Ex + TB	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
63	Tidelands Avenue - Ex + TB	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
64	McKinley Avenue - Ex + TB	West 14th Street to West 18th Street	H				910	1	Generic - Arterial Roadways (From	25	50	51.5
65	McKinley Avenue - Ex + TB	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
66	McKinley Avenue - Ex + TB	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
67	Cleveland Avenue - Ex + TB	Civic Center Drive to West 14th Street	H				4,835	1	Generic - Arterial Roadways (From	35	50	61.3
68	Cleveland Avenue - Ex + TB	West 14th Street to West 18th Street	H				5,350	1	Generic - Arterial Roadways (From	35	50	61.8
69	Cleveland Avenue - Ex + TB	West 18th Street to West 19th Street	H				5,760	1	Generic - Arterial Roadways (From	35	50	62.1
70	Cleveland Avenue - Ex + TB	West 19th Street to West 23rd Street	H				5,755	1	Generic - Arterial Roadways (From	35	50	62.1
71	Cleveland Avenue - Ex + TB	West 23rd Street to Bay Marina Drive	H				12,521	1	Generic - Arterial Roadways (From	35	50	65.4
72	Bay Marina Drive - Ex + TB	Tidelands Avenue to Marina Way	H				7,825	3	Generic - Highway (From J&S SR95	30	50	66.0
73	Bay Marina Drive - Ex + TB	Marina Way to Cleveland Avenue	H				14,150	3	Generic - Highway (From J&S SR95	30	50	68.6
74	Bay Marina Drive - Ex + TB	Cleveland Avenue to I-5 SB Ramps	H				26,434	3	Generic - Highway (From J&S SR95	30	50	71.3

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
75	Bay Marina Drive - Ex + TB	I-5 SB Ramps to I-5 NB Ramps	H				23,549	3	Generic - Highway (From J&S SR95)	30	50	70.8
76	West 18th Street - Ex + TB	Cleveland Avenue to McKinley Avenue	H				1,553	1	Generic - Arterial Roadways (From	30	50	55.0
77	West 19th Street - Ex + TB	Tidelands Avenue to Cleveland Avenue	H				4,153	1	Generic - Arterial Roadways (From	30	50	59.1
78	West 19th Street - Ex + TB	Cleveland Avenue to McKinley Avenue	H				2,245	1	Generic - Arterial Roadways (From	30	50	56.5
79	Marina Way - Ex + TB	Bay Marina Drive to West 32nd Street	H				6,919	1	Generic - Arterial Roadways (From	25	50	59.6
80	West 32nd Street - Ex + TB	Tidelands Avenue to Marina Way	H				844	1	Generic - Arterial Roadways (From	25	50	51.2
81	Tidelands Avenue - Ex + Cl of BM	Harbor Drive to West 19th Street	H				8,590	3	Generic - Highway (From J&S SR95)	35	50	67.5
82	Tidelands Avenue - Ex + Cl of BM	West 19th Street to Bay Marina Drive	H				8,955	3	Generic - Highway (From J&S SR95)	35	50	67.7
83	Tidelands Avenue - Ex + Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95)	35	50	44.8
84	McKinley Avenue - Ex + Cl of BM	West 14th Street to West 18th Street	H				593	1	Generic - Arterial Roadways (From	25	50	50.0
85	McKinley Avenue - Ex + Cl of BM	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
86	McKinley Avenue - Ex + Cl of BM	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
87	Cleveland Avenue - Ex + Cl of BM	Civic Center Drive to West 14th Street	H				4,822	1	Generic - Arterial Roadways (From	35	50	61.3
88	Cleveland Avenue - Ex + Cl of BM	West 14th Street to West 18th Street	H				4,724	1	Generic - Arterial Roadways (From	35	50	61.2
89	Cleveland Avenue - Ex + Cl of BM	West 18th Street to West 19th Street	H				5,323	1	Generic - Arterial Roadways (From	35	50	61.7
90	Cleveland Avenue - Ex + Cl of BM	West 19th Street to West 23rd Street	H				5,075	1	Generic - Arterial Roadways (From	35	50	61.5
91	Cleveland Avenue - Ex + Cl of BM	West 23rd Street to Bay Marina Drive	H				5,708	1	Generic - Arterial Roadways (From	35	50	62.0
92	Bay Marina Drive - Ex + Cl of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95)	30	50	44.1
93	Bay Marina Drive - Ex + Cl of BM	Marina Way to Cleveland Avenue	H				1,732	3	Generic - Highway (From J&S SR95)	30	50	59.6
94	Bay Marina Drive - Ex + Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				8,093	3	Generic - Highway (From J&S SR95)	30	50	66.2
95	Bay Marina Drive - Ex + Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				16,973	3	Generic - Highway (From J&S SR95)	30	50	69.4
96	West 18th Street - Ex + Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,148	1	Generic - Arterial Roadways (From	30	50	53.8
97	West 19th Street - Ex + Cl of BM	Tidelands Avenue to Cleveland Avenue	H				3,937	1	Generic - Arterial Roadways (From	30	50	58.8
98	West 19th Street - Ex + Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,218	1	Generic - Arterial Roadways (From	30	50	56.4
99	Marina Way - Ex + Cl of BM	Bay Marina Drive to West 32nd Street	H				1,390	1	Generic - Arterial Roadways (From	25	50	53.1
100	West 32nd Street - Ex + Cl of BM	Tidelands Avenue to Marina Way	H				650	1	Generic - Arterial Roadways (From	25	50	50.3
101	Tidelands Avenue - Ex + P-Cl of BM	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95)	35	50	60.9
102	Tidelands Avenue - Ex + P-Cl of BM	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95)	35	50	61.7
103	Tidelands Avenue - Ex + P-Cl of BM	Bay Marina Drive to West 32nd Street	H				1,683	3	Generic - Highway (From J&S SR95)	35	50	60.5
104	McKinley Avenue - Ex + P-Cl of BM	West 14th Street to West 18th Street	H				593	1	Generic - Arterial Roadways (From	25	50	50.0
105	McKinley Avenue - Ex + P-Cl of BM	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
106	McKinley Avenue - Ex + P-Cl of BM	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
107	Cleveland Avenue - Ex + P-Cl of BM	Civic Center Drive to West 14th Street	H				4,822	1	Generic - Arterial Roadways (From	35	50	61.3
108	Cleveland Avenue - Ex + P-Cl of BM	West 14th Street to West 18th Street	H				4,724	1	Generic - Arterial Roadways (From	35	50	61.2
109	Cleveland Avenue - Ex + P-Cl of BM	West 18th Street to West 19th Street	H				5,323	1	Generic - Arterial Roadways (From	35	50	61.7
110	Cleveland Avenue - Ex + P-Cl of BM	West 19th Street to West 23rd Street	H				5,075	1	Generic - Arterial Roadways (From	35	50	61.5
111	Cleveland Avenue - Ex + P-Cl of BM	West 23rd Street to Bay Marina Drive	H				5,708	1	Generic - Arterial Roadways (From	35	50	62.0
112	Bay Marina Drive - Ex + P-Cl of BM	Tidelands Avenue to Marina Way	H				7,573	3	Generic - Highway (From J&S SR95)	30	50	65.9
113	Bay Marina Drive - Ex + P-Cl of BM	Marina Way to Cleveland Avenue	H				8,472	3	Generic - Highway (From J&S SR95)	30	50	66.4
114	Bay Marina Drive - Ex + P-Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				14,833	3	Generic - Highway (From J&S SR95)	30	50	68.8
115	Bay Marina Drive - Ex + P-Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				21,354	3	Generic - Highway (From J&S SR95)	30	50	70.4
116	West 18th Street - Ex + P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,148	1	Generic - Arterial Roadways (From	30	50	53.8
117	West 19th Street - Ex + P-Cl of BM	Tidelands Avenue to Cleveland Avenue	H				3,937	1	Generic - Arterial Roadways (From	30	50	58.8

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Number #	Traffic Mix Description	Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.					Distance feet, min. 33 max. 1000	dB CNEL
118	West 19th Street - Ex + P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,218	1	Generic - Arterial Roadways (From	30	50	56.4
119	Marina Way - Ex + P-Cl of BM	Bay Marina Drive to West 32nd Street	H				1,390	1	Generic - Arterial Roadways (From	25	50	53.1
120	West 32nd Street - Ex + P-Cl of BM	Tidelands Avenue to Marina Way	H				650	1	Generic - Arterial Roadways (From	25	50	50.3
121	Tidelands Avenue - Ex + TB w/ Cl of BM	Harbor Drive to West 19th Street	H				8,590	3	Generic - Highway (From J&S SR95	35	50	67.5
122	Tidelands Avenue - Ex + TB w/ Cl of BM	West 19th Street to Bay Marina Drive	H				9,180	3	Generic - Highway (From J&S SR95	35	50	67.8
123	Tidelands Avenue - Ex + TB w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
124	McKinley Avenue - Ex + TB w/ Cl of BM	West 14th Street to West 18th Street	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
125	McKinley Avenue - Ex + TB w/ Cl of BM	West 18th Street to West 19th Street	H				640	1	Generic - Arterial Roadways (From	25	50	50.3
126	McKinley Avenue - Ex + TB w/ Cl of BM	West 19th Street to Cleveland Avenue	H				480	1	Generic - Arterial Roadways (From	25	50	49.3
127	Cleveland Avenue - Ex + TB w/ Cl of BM	Civic Center Drive to West 14th Street	H				4,840	1	Generic - Arterial Roadways (From	35	50	61.3
128	Cleveland Avenue - Ex + TB w/ Cl of BM	West 14th Street to West 18th Street	H				4,740	1	Generic - Arterial Roadways (From	35	50	61.3
129	Cleveland Avenue - Ex + TB w/ Cl of BM	West 18th Street to West 19th Street	H				5,450	1	Generic - Arterial Roadways (From	35	50	61.9
130	Cleveland Avenue - Ex + TB w/ Cl of BM	West 19th Street to West 23rd Street	H				5,740	1	Generic - Arterial Roadways (From	35	50	62.1
131	Cleveland Avenue - Ex + TB w/ Cl of BM	West 23rd Street to Bay Marina Drive	H				12,740	1	Generic - Arterial Roadways (From	35	50	65.5
132	Bay Marina Drive - Ex + TB w/ Cl of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95	30	50	44.1
133	Bay Marina Drive - Ex + TB w/ Cl of BM	Marina Way to Cleveland Avenue	H				7,420	3	Generic - Highway (From J&S SR95	30	50	65.8
134	Bay Marina Drive - Ex + TB w/ Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				19,700	3	Generic - Highway (From J&S SR95	30	50	70.0
135	Bay Marina Drive - Ex + TB w/ Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				19,170	3	Generic - Highway (From J&S SR95	30	50	69.9
136	West 18th Street - Ex + TB w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,260	1	Generic - Arterial Roadways (From	30	50	54.2
137	West 19th Street - Ex + TB w/ Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,370	1	Generic - Arterial Roadways (From	30	50	59.3
138	West 19th Street - Ex + TB w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,330	1	Generic - Arterial Roadways (From	30	50	56.6
139	Marina Way - Ex + TB w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				6,860	1	Generic - Arterial Roadways (From	25	50	59.6
140	West 32nd Street - Ex + TB w/ Cl of BM	Tidelands Avenue to Marina Way	H				780	1	Generic - Arterial Roadways (From	25	50	50.9
141	Tidelands Avenue - Ex + TB w/ P-Cl of BM	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
142	Tidelands Avenue - Ex + TB w/ P-Cl of BM	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
143	Tidelands Avenue - Ex + TB w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
144	McKinley Avenue - Ex + TB w/ P-Cl of BM	West 14th Street to West 18th Street	H				910	1	Generic - Arterial Roadways (From	25	50	51.5
145	McKinley Avenue - Ex + TB w/ P-Cl of BM	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
146	McKinley Avenue - Ex + TB w/ P-Cl of BM	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
147	Cleveland Avenue - Ex + TB w/ P-Cl of BM	Civic Center Drive to West 14th Street	H				4,835	1	Generic - Arterial Roadways (From	35	50	61.3
148	Cleveland Avenue - Ex + TB w/ P-Cl of BM	West 14th Street to West 18th Street	H				5,350	1	Generic - Arterial Roadways (From	35	50	61.8
149	Cleveland Avenue - Ex + TB w/ P-Cl of BM	West 18th Street to West 19th Street	H				5,760	1	Generic - Arterial Roadways (From	35	50	62.1
150	Cleveland Avenue - Ex + TB w/ P-Cl of BM	West 19th Street to West 23rd Street	H				5,755	1	Generic - Arterial Roadways (From	35	50	62.1
151	Cleveland Avenue - Ex + TB w/ P-Cl of BM	West 23rd Street to Bay Marina Drive	H				12,521	1	Generic - Arterial Roadways (From	35	50	65.4
152	Bay Marina Drive - Ex + TB w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				7,825	3	Generic - Highway (From J&S SR95	30	50	66.0
153	Bay Marina Drive - Ex + TB w/ P-Cl of BM	Marina Way to Cleveland Avenue	H				14,150	3	Generic - Highway (From J&S SR95	30	50	68.6
154	Bay Marina Drive - Ex + TB w/ P-Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				26,434	3	Generic - Highway (From J&S SR95	30	50	71.3
155	Bay Marina Drive - Ex + TB w/ P-Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				23,549	3	Generic - Highway (From J&S SR95	30	50	70.8
156	West 18th Street - Ex + TB w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,553	1	Generic - Arterial Roadways (From	30	50	55.0
157	West 19th Street - Ex + TB w/ P-Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,153	1	Generic - Arterial Roadways (From	30	50	59.1
158	West 19th Street - Ex + TB w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,245	1	Generic - Arterial Roadways (From	30	50	56.5
159	Marina Way - Ex + TB w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				6,919	1	Generic - Arterial Roadways (From	25	50	59.6
160	West 32nd Street - Ex + TB w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				844	1	Generic - Arterial Roadways (From	25	50	51.2

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
161	Tidelands Avenue - Near Term	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95)	35	50	63.8
162	Tidelands Avenue - Near Term	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95)	35	50	64.5
163	Tidelands Avenue - Near Term	Bay Marina Drive to West 32nd Street	H				3,300	3	Generic - Highway (From J&S SR95)	35	50	63.4
164	McKinley Avenue - Near Term	West 14th Street to West 18th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
165	McKinley Avenue - Near Term	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
166	McKinley Avenue - Near Term	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
167	Cleveland Avenue - Near Term	Civic Center Drive to West 14th Street	H				5,200	1	Generic - Arterial Roadways (From	35	50	61.7
168	Cleveland Avenue - Near Term	West 14th Street to West 18th Street	H				5,100	1	Generic - Arterial Roadways (From	35	50	61.6
169	Cleveland Avenue - Near Term	West 18th Street to West 19th Street	H				5,700	1	Generic - Arterial Roadways (From	35	50	62.0
170	Cleveland Avenue - Near Term	West 19th Street to West 23rd Street	H				5,500	1	Generic - Arterial Roadways (From	35	50	61.9
171	Cleveland Avenue - Near Term	West 23rd Street to Bay Marina Drive	H				6,100	1	Generic - Arterial Roadways (From	35	50	62.3
172	Bay Marina Drive - Near Term	Tidelands Avenue to Marina Way	H				10,800	3	Generic - Highway (From J&S SR95)	30	50	67.4
173	Bay Marina Drive - Near Term	Marina Way to Cleveland Avenue	H				12,100	3	Generic - Highway (From J&S SR95)	30	50	67.9
174	Bay Marina Drive - Near Term	Cleveland Avenue to I-5 SB Ramps	H				21,100	3	Generic - Highway (From J&S SR95)	30	50	70.3
175	Bay Marina Drive - Near Term	I-5 SB Ramps to I-5 NB Ramps	H				30,400	3	Generic - Highway (From J&S SR95)	30	50	71.9
176	West 18th Street - Near Term	Cleveland Avenue to McKinley Avenue	H				1,300	1	Generic - Arterial Roadways (From	30	50	54.3
177	West 19th Street - Near Term	Tidelands Avenue to Cleveland Avenue	H				4,300	1	Generic - Arterial Roadways (From	30	50	59.2
178	West 19th Street - Near Term	Cleveland Avenue to McKinley Avenue	H				2,400	1	Generic - Arterial Roadways (From	30	50	56.8
179	Marina Way - Near Term	Bay Marina Drive to West 32nd Street	H				1,500	1	Generic - Arterial Roadways (From	25	50	53.4
180	West 32nd Street - Near Term	Tidelands Avenue to Marina Way	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
181	Tidelands Avenue - NT+DP	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95)	35	50	63.8
182	Tidelands Avenue - NT+DP	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95)	35	50	64.5
183	Tidelands Avenue - NT+DP	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95)	35	50	44.8
184	McKinley Avenue - NT+DP	West 14th Street to West 18th Street	H				1,050	1	Generic - Arterial Roadways (From	25	50	52.0
185	McKinley Avenue - NT+DP	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
186	McKinley Avenue - NT+DP	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
187	Cleveland Avenue - NT+DP	Civic Center Drive to West 14th Street	H				5,200	1	Generic - Arterial Roadways (From	35	50	61.7
188	Cleveland Avenue - NT+DP	West 14th Street to West 18th Street	H				5,100	1	Generic - Arterial Roadways (From	35	50	61.6
189	Cleveland Avenue - NT+DP	West 18th Street to West 19th Street	H				5,808	1	Generic - Arterial Roadways (From	35	50	62.1
190	Cleveland Avenue - NT+DP	West 19th Street to West 23rd Street	H				5,932	1	Generic - Arterial Roadways (From	35	50	62.2
191	Cleveland Avenue - NT+DP	West 23rd Street to Bay Marina Drive	H				12,900	1	Generic - Arterial Roadways (From	35	50	65.5
192	Bay Marina Drive - NT+DP	Tidelands Avenue to Marina Way	H				11,086	3	Generic - Highway (From J&S SR95)	30	50	67.5
193	Bay Marina Drive - NT+DP	Marina Way to Cleveland Avenue	H				17,651	3	Generic - Highway (From J&S SR95)	30	50	69.6
194	Bay Marina Drive - NT+DP	Cleveland Avenue to I-5 SB Ramps	H				32,587	3	Generic - Highway (From J&S SR95)	30	50	72.2
195	Bay Marina Drive - NT+DP	I-5 SB Ramps to I-5 NB Ramps	H				32,494	3	Generic - Highway (From J&S SR95)	30	50	72.2
196	West 18th Street - NT+DP	Cleveland Avenue to McKinley Avenue	H				1,408	1	Generic - Arterial Roadways (From	30	50	54.6
197	West 19th Street - NT+DP	Tidelands Avenue to Cleveland Avenue	H				4,516	1	Generic - Arterial Roadways (From	30	50	59.4
198	West 19th Street - NT+DP	Cleveland Avenue to McKinley Avenue	H				2,508	1	Generic - Arterial Roadways (From	30	50	57.0
199	Marina Way - NT+DP	Bay Marina Drive to West 32nd Street	H				6,967	1	Generic - Arterial Roadways (From	25	50	59.6
200	West 32nd Street - NT+DP	Tidelands Avenue to Marina Way	H				782	1	Generic - Arterial Roadways (From	25	50	50.9
201	Tidelands Avenue - NT + DPW	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95)	35	50	63.8
202	Tidelands Avenue - NT + DPW	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95)	35	50	64.5
203	Tidelands Avenue - NT + DPW	Bay Marina Drive to West 32nd Street	H				3,300	3	Generic - Highway (From J&S SR95)	35	50	63.4

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
204	McKinley Avenue - NT + DPW	West 14th Street to West 18th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
205	McKinley Avenue - NT + DPW	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
206	McKinley Avenue - NT + DPW	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
207	Cleveland Avenue - NT + DPW	Civic Center Drive to West 14th Street	H				5,213	1	Generic - Arterial Roadways (From	35	50	61.7
208	Cleveland Avenue - NT + DPW	West 14th Street to West 18th Street	H				5,113	1	Generic - Arterial Roadways (From	35	50	61.6
209	Cleveland Avenue - NT + DPW	West 18th Street to West 19th Street	H				5,713	1	Generic - Arterial Roadways (From	35	50	62.1
210	Cleveland Avenue - NT + DPW	West 19th Street to West 23rd Street	H				5,513	1	Generic - Arterial Roadways (From	35	50	61.9
211	Cleveland Avenue - NT + DPW	West 23rd Street to Bay Marina Drive	H				6,113	1	Generic - Arterial Roadways (From	35	50	62.3
212	Bay Marina Drive - NT + DPW	Tidelands Avenue to Marina Way	H				10,800	3	Generic - Highway (From J&S SR95	30	50	67.4
213	Bay Marina Drive - NT + DPW	Marina Way to Cleveland Avenue	H				12,227	3	Generic - Highway (From J&S SR95	30	50	68.0
214	Bay Marina Drive - NT + DPW	Cleveland Avenue to I-5 SB Ramps	H				21,214	3	Generic - Highway (From J&S SR95	30	50	70.4
215	Bay Marina Drive - NT + DPW	I-5 SB Ramps to I-5 NB Ramps	H				30,502	3	Generic - Highway (From J&S SR95	30	50	71.9
216	West 18th Street - NT + DPW	Cleveland Avenue to McKinley Avenue	H				1,300	1	Generic - Arterial Roadways (From	30	50	54.3
217	West 19th Street - NT + DPW	Tidelands Avenue to Cleveland Avenue	H				4,300	1	Generic - Arterial Roadways (From	30	50	59.2
218	West 19th Street - NT + DPW	Cleveland Avenue to McKinley Avenue	H				2,400	1	Generic - Arterial Roadways (From	30	50	56.8
219	Marina Way - NT + DPW	Bay Marina Drive to West 32nd Street	H				1,627	1	Generic - Arterial Roadways (From	25	50	53.7
220	West 32nd Street - NT + DPW	Tidelands Avenue to Marina Way	H				827	1	Generic - Arterial Roadways (From	25	50	51.1
221	Tidelands Avenue - NT + TB	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95	35	50	63.8
222	Tidelands Avenue - NT + TB	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95	35	50	64.5
223	Tidelands Avenue - NT + TB	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
224	McKinley Avenue - NT + TB	West 14th Street to West 18th Street	H				1,050	1	Generic - Arterial Roadways (From	25	50	52.0
225	McKinley Avenue - NT + TB	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
226	McKinley Avenue - NT + TB	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
227	Cleveland Avenue - NT + TB	Civic Center Drive to West 14th Street	H				5,213	1	Generic - Arterial Roadways (From	35	50	61.7
228	Cleveland Avenue - NT + TB	West 14th Street to West 18th Street	H				5,813	1	Generic - Arterial Roadways (From	35	50	62.1
229	Cleveland Avenue - NT + TB	West 18th Street to West 19th Street	H				6,171	1	Generic - Arterial Roadways (From	35	50	62.4
230	Cleveland Avenue - NT + TB	West 19th Street to West 23rd Street	H				6,245	1	Generic - Arterial Roadways (From	35	50	62.4
231	Cleveland Avenue - NT + TB	West 23rd Street to Bay Marina Drive	H				12,913	1	Generic - Arterial Roadways (From	35	50	65.5
232	Bay Marina Drive - NT + TB	Tidelands Avenue to Marina Way	H				11,086	3	Generic - Highway (From J&S SR95	30	50	67.5
233	Bay Marina Drive - NT + TB	Marina Way to Cleveland Avenue	H				17,778	3	Generic - Highway (From J&S SR95	30	50	69.6
234	Bay Marina Drive - NT + TB	Cleveland Avenue to I-5 SB Ramps	H				32,701	3	Generic - Highway (From J&S SR95	30	50	72.2
235	Bay Marina Drive - NT + TB	I-5 SB Ramps to I-5 NB Ramps	H				32,595	3	Generic - Highway (From J&S SR95	30	50	72.2
236	West 18th Street - NT + TB	Cleveland Avenue to McKinley Avenue	H				1,758	1	Generic - Arterial Roadways (From	30	50	55.5
237	West 19th Street - NT + TB	Tidelands Avenue to Cleveland Avenue	H				4,516	1	Generic - Arterial Roadways (From	30	50	59.4
238	West 19th Street - NT + TB	Cleveland Avenue to McKinley Avenue	H				2,458	1	Generic - Arterial Roadways (From	30	50	56.9
239	Marina Way - NT + TB	Bay Marina Drive to West 32nd Street	H				7,094	1	Generic - Arterial Roadways (From	25	50	59.7
240	West 32nd Street - NT + TB	Tidelands Avenue to Marina Way	H				909	1	Generic - Arterial Roadways (From	25	50	51.5
241	Tidelands Avenue - NT + TB w/ Cl of BM	Harbor Drive to West 19th Street	H				13,220	3	Generic - Highway (From J&S SR95	35	50	69.4
242	Tidelands Avenue - NT + TB w/ Cl of BM	West 19th Street to Bay Marina Drive	H				14,130	3	Generic - Highway (From J&S SR95	35	50	69.7
243	Tidelands Avenue - NT + TB w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
244	McKinley Avenue - NT + TB w/ Cl of BM	West 14th Street to West 18th Street	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
245	McKinley Avenue - NT + TB w/ Cl of BM	West 18th Street to West 19th Street	H				640	1	Generic - Arterial Roadways (From	25	50	50.3
246	McKinley Avenue - NT + TB w/ Cl of BM	West 19th Street to Cleveland Avenue	H				480	1	Generic - Arterial Roadways (From	25	50	49.3

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
247	Cleveland Avenue - NT + TB w/ Cl of BM	Civic Center Drive to West 14th Street	H				4,840	1	Generic - Arterial Roadways (From	35	50	61.3
248	Cleveland Avenue - NT + TB w/ Cl of BM	West 14th Street to West 18th Street	H				4,740	1	Generic - Arterial Roadways (From	35	50	61.3
249	Cleveland Avenue - NT + TB w/ Cl of BM	West 18th Street to West 19th Street	H				5,450	1	Generic - Arterial Roadways (From	35	50	61.9
250	Cleveland Avenue - NT + TB w/ Cl of BM	West 19th Street to West 23rd Street	H				5,740	1	Generic - Arterial Roadways (From	35	50	62.1
251	Cleveland Avenue - NT + TB w/ Cl of BM	West 23rd Street to Bay Marina Drive	H				12,740	1	Generic - Arterial Roadways (From	35	50	65.5
252	Bay Marina Drive - NT + TB w/ Cl of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95	30	50	44.1
253	Bay Marina Drive - NT + TB w/ Cl of BM	Marina Way to Cleveland Avenue	H				8,170	3	Generic - Highway (From J&S SR95	30	50	66.2
254	Bay Marina Drive - NT + TB w/ Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				23,090	3	Generic - Highway (From J&S SR95	30	50	70.7
255	Bay Marina Drive - NT + TB w/ Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				26,350	3	Generic - Highway (From J&S SR95	30	50	71.3
256	West 18th Street - NT + TB w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,260	1	Generic - Arterial Roadways (From	30	50	54.2
257	West 19th Street - NT + TB w/ Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,370	1	Generic - Arterial Roadways (From	30	50	59.3
258	West 19th Street - NT + TB w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,330	1	Generic - Arterial Roadways (From	30	50	56.6
259	Marina Way - NT + TB w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				6,860	1	Generic - Arterial Roadways (From	25	50	59.6
260	West 32nd Street - NT + TB w/ Cl of BM	Tidelands Avenue to Marina Way	H				780	1	Generic - Arterial Roadways (From	25	50	50.9
261	Tidelands Avenue - NT + TB w/ P-Cl of BM	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95	35	50	63.8
262	Tidelands Avenue - NT + TB w/ P-Cl of BM	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95	35	50	64.5
263	Tidelands Avenue - NT + TB w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
264	McKinley Avenue - NT + TB w/ P-Cl of BM	West 14th Street to West 18th Street	H				1,050	1	Generic - Arterial Roadways (From	25	50	52.0
265	McKinley Avenue - NT + TB w/ P-Cl of BM	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
266	McKinley Avenue - NT + TB w/ P-Cl of BM	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
267	Cleveland Avenue - NT + TB w/ P-Cl of BM	Civic Center Drive to West 14th Street	H				5,213	1	Generic - Arterial Roadways (From	35	50	61.7
268	Cleveland Avenue - NT + TB w/ P-Cl of BM	West 14th Street to West 18th Street	H				5,813	1	Generic - Arterial Roadways (From	35	50	62.1
269	Cleveland Avenue - NT + TB w/ P-Cl of BM	West 18th Street to West 19th Street	H				6,171	1	Generic - Arterial Roadways (From	35	50	62.4
270	Cleveland Avenue - NT + TB w/ P-Cl of BM	West 19th Street to West 23rd Street	H				6,245	1	Generic - Arterial Roadways (From	35	50	62.4
271	Cleveland Avenue - NT + TB w/ P-Cl of BM	West 23rd Street to Bay Marina Drive	H				12,913	1	Generic - Arterial Roadways (From	35	50	65.5
272	Bay Marina Drive - NT + TB w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				11,086	3	Generic - Highway (From J&S SR95	30	50	67.5
273	Bay Marina Drive - NT + TB w/ P-Cl of BM	Marina Way to Cleveland Avenue	H				17,778	3	Generic - Highway (From J&S SR95	30	50	69.6
274	Bay Marina Drive - NT + TB w/ P-Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				32,701	3	Generic - Highway (From J&S SR95	30	50	72.2
275	Bay Marina Drive - NT + TB w/ P-Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				32,595	3	Generic - Highway (From J&S SR95	30	50	72.2
276	West 18th Street - NT + TB w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,758	1	Generic - Arterial Roadways (From	30	50	55.5
277	West 19th Street - NT + TB w/ P-Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,516	1	Generic - Arterial Roadways (From	30	50	59.4
278	West 19th Street - NT + TB w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,458	1	Generic - Arterial Roadways (From	30	50	56.9
279	Marina Way - NT + TB w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				7,094	1	Generic - Arterial Roadways (From	25	50	59.7
280	West 32nd Street - NT + TB w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				909	1	Generic - Arterial Roadways (From	25	50	51.5
281	Tidelands Avenue - Horizon Year	Harbor Drive to West 19th Street	H				3,900	3	Generic - Highway (From J&S SR95	35	50	64.1
282	Tidelands Avenue - Horizon Year	West 19th Street to Bay Marina Drive	H				4,600	3	Generic - Highway (From J&S SR95	35	50	64.8
283	Tidelands Avenue - Horizon Year	Bay Marina Drive to West 32nd Street	H				3,500	3	Generic - Highway (From J&S SR95	35	50	63.6
284	McKinley Avenue - Horizon Year	West 14th Street to West 18th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
285	McKinley Avenue - Horizon Year	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
286	McKinley Avenue - Horizon Year	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
287	Cleveland Avenue - Horizon Year	Civic Center Drive to West 14th Street	H				5,700	1	Generic - Arterial Roadways (From	35	50	62.0
288	Cleveland Avenue - Horizon Year	West 14th Street to West 18th Street	H				5,600	1	Generic - Arterial Roadways (From	35	50	62.0
289	Cleveland Avenue - Horizon Year	West 18th Street to West 19th Street	H				6,300	1	Generic - Arterial Roadways (From	35	50	62.5

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
290	Cleveland Avenue - Horizon Year	West 19th Street to West 23rd Street	H				6,000	1	Generic - Arterial Roadways (From	35	50	62.3
291	Cleveland Avenue - Horizon Year	West 23rd Street to Bay Marina Drive	H				6,700	1	Generic - Arterial Roadways (From	35	50	62.7
292	Bay Marina Drive - Horizon Year	Tidelands Avenue to Marina Way	H				11,100	3	Generic - Highway (From J&S SR95	30	50	67.6
293	Bay Marina Drive - Horizon Year	Marina Way to Cleveland Avenue	H				12,400	3	Generic - Highway (From J&S SR95	30	50	68.0
294	Bay Marina Drive - Horizon Year	Cleveland Avenue to I-5 SB Ramps	H				21,700	3	Generic - Highway (From J&S SR95	30	50	70.5
295	Bay Marina Drive - Horizon Year	I-5 SB Ramps to I-5 NB Ramps	H				31,300	3	Generic - Highway (From J&S SR95	30	50	72.0
296	West 18th Street - Horizon Year	Cleveland Avenue to McKinley Avenue	H				1,400	1	Generic - Arterial Roadways (From	30	50	54.6
297	West 19th Street - Horizon Year	Tidelands Avenue to Cleveland Avenue	H				4,700	1	Generic - Arterial Roadways (From	30	50	59.6
298	West 19th Street - Horizon Year	Cleveland Avenue to McKinley Avenue	H				2,600	1	Generic - Arterial Roadways (From	30	50	57.1
299	Marina Way - Horizon Year	Bay Marina Drive to West 32nd Street	H				1,700	1	Generic - Arterial Roadways (From	25	50	53.8
300	West 32nd Street - Horizon Year	Tidelands Avenue to Marina Way	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
301	Tidelands Avenue - HZ + DP	Harbor Drive to West 19th Street	H				3,900	3	Generic - Highway (From J&S SR95	35	50	64.1
302	Tidelands Avenue - HZ + DP	West 19th Street to Bay Marina Drive	H				4,600	3	Generic - Highway (From J&S SR95	35	50	64.8
303	Tidelands Avenue - HZ + DP	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
304	McKinley Avenue - HZ + DP	West 14th Street to West 18th Street	H				1,100	1	Generic - Arterial Roadways (From	25	50	52.2
305	McKinley Avenue - HZ + DP	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
306	McKinley Avenue - HZ + DP	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
307	Cleveland Avenue - HZ + DP	Civic Center Drive to West 14th Street	H				5,700	1	Generic - Arterial Roadways (From	35	50	62.0
308	Cleveland Avenue - HZ + DP	West 14th Street to West 18th Street	H				5,600	1	Generic - Arterial Roadways (From	35	50	62.0
309	Cleveland Avenue - HZ + DP	West 18th Street to West 19th Street	H				6,408	1	Generic - Arterial Roadways (From	35	50	62.5
310	Cleveland Avenue - HZ + DP	West 19th Street to West 23rd Street	H				6,432	1	Generic - Arterial Roadways (From	35	50	62.6
311	Cleveland Avenue - HZ + DP	West 23rd Street to Bay Marina Drive	H				13,500	1	Generic - Arterial Roadways (From	35	50	65.7
312	Bay Marina Drive - HZ + DP	Tidelands Avenue to Marina Way	H				11,390	3	Generic - Highway (From J&S SR95	30	50	67.7
313	Bay Marina Drive - HZ + DP	Marina Way to Cleveland Avenue	H				17,951	3	Generic - Highway (From J&S SR95	30	50	69.6
314	Bay Marina Drive - HZ + DP	Cleveland Avenue to I-5 SB Ramps	H				33,187	3	Generic - Highway (From J&S SR95	30	50	72.3
315	Bay Marina Drive - HZ + DP	I-5 SB Ramps to I-5 NB Ramps	H				33,394	3	Generic - Highway (From J&S SR95	30	50	72.3
316	West 18th Street - HZ + DP	Cleveland Avenue to McKinley Avenue	H				1,508	1	Generic - Arterial Roadways (From	30	50	54.9
317	West 19th Street - HZ + DP	Tidelands Avenue to Cleveland Avenue	H				4,916	1	Generic - Arterial Roadways (From	30	50	59.8
318	West 19th Street - HZ + DP	Cleveland Avenue to McKinley Avenue	H				2,708	1	Generic - Arterial Roadways (From	30	50	57.3
319	Marina Way - HZ + DP	Bay Marina Drive to West 32nd Street	H				7,175	1	Generic - Arterial Roadways (From	25	50	59.8
320	West 32nd Street - HZ + DP	Tidelands Avenue to Marina Way	H				790	1	Generic - Arterial Roadways (From	25	50	51.0
321	Tidelands Avenue - HZ + DPW	Harbor Drive to West 19th Street	H				3,900	3	Generic - Highway (From J&S SR95	35	50	64.1
322	Tidelands Avenue - HZ + DPW	West 19th Street to Bay Marina Drive	H				4,600	3	Generic - Highway (From J&S SR95	35	50	64.8
323	Tidelands Avenue - HZ + DPW	Bay Marina Drive to West 32nd Street	H				3,500	3	Generic - Highway (From J&S SR95	35	50	63.6
324	McKinley Avenue - HZ + DPW	West 14th Street to West 18th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
325	McKinley Avenue - HZ + DPW	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
326	McKinley Avenue - HZ + DPW	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
327	Cleveland Avenue - HZ + DPW	Civic Center Drive to West 14th Street	H				5,713	1	Generic - Arterial Roadways (From	35	50	62.1
328	Cleveland Avenue - HZ + DPW	West 14th Street to West 18th Street	H				5,613	1	Generic - Arterial Roadways (From	35	50	62.0
329	Cleveland Avenue - HZ + DPW	West 18th Street to West 19th Street	H				6,313	1	Generic - Arterial Roadways (From	35	50	62.5
330	Cleveland Avenue - HZ + DPW	West 19th Street to West 23rd Street	H				6,013	1	Generic - Arterial Roadways (From	35	50	62.3
331	Cleveland Avenue - HZ + DPW	West 23rd Street to Bay Marina Drive	H				6,713	1	Generic - Arterial Roadways (From	35	50	62.7
332	Bay Marina Drive - HZ + DPW	Tidelands Avenue to Marina Way	H				11,100	3	Generic - Highway (From J&S SR95	30	50	67.6

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
333	Bay Marina Drive - HZ + DPW	Marina Way to Cleveland Avenue	H				12,527	3	Generic - Highway (From J&S SR95)	30	50	68.1
334	Bay Marina Drive - HZ + DPW	Cleveland Avenue to I-5 SB Ramps	H				21,814	3	Generic - Highway (From J&S SR95)	30	50	70.5
335	Bay Marina Drive - HZ + DPW	I-5 SB Ramps to I-5 NB Ramps	H				31,402	3	Generic - Highway (From J&S SR95)	30	50	72.1
336	West 18th Street - HZ + DPW	Cleveland Avenue to McKinley Avenue	H				1,400	1	Generic - Arterial Roadways (From	30	50	54.6
337	West 19th Street - HZ + DPW	Tidelands Avenue to Cleveland Avenue	H				4,700	1	Generic - Arterial Roadways (From	30	50	59.6
338	West 19th Street - HZ + DPW	Cleveland Avenue to McKinley Avenue	H				2,600	1	Generic - Arterial Roadways (From	30	50	57.1
339	Marina Way - HZ + DPW	Bay Marina Drive to West 32nd Street	H				1,827	1	Generic - Arterial Roadways (From	25	50	54.1
340	West 32nd Street - HZ + DPW	Tidelands Avenue to Marina Way	H				927	1	Generic - Arterial Roadways (From	25	50	51.5
341	Tidelands Avenue - HZ + TB	Harbor Drive to West 19th Street	H				3,900	3	Generic - Highway (From J&S SR95)	35	50	64.1
342	Tidelands Avenue - HZ + TB	West 19th Street to Bay Marina Drive	H				4,600	3	Generic - Highway (From J&S SR95)	35	50	64.8
343	Tidelands Avenue - HZ + TB	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95)	35	50	44.8
344	McKinley Avenue - HZ + TB	West 14th Street to West 18th Street	H				1,100	1	Generic - Arterial Roadways (From	25	50	52.2
345	McKinley Avenue - HZ + TB	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
346	McKinley Avenue - HZ + TB	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
347	Cleveland Avenue - HZ + TB	Civic Center Drive to West 14th Street	H				5,713	1	Generic - Arterial Roadways (From	35	50	62.1
348	Cleveland Avenue - HZ + TB	West 14th Street to West 18th Street	H				6,363	1	Generic - Arterial Roadways (From	35	50	62.5
349	Cleveland Avenue - HZ + TB	West 18th Street to West 19th Street	H				6,821	1	Generic - Arterial Roadways (From	35	50	62.8
350	Cleveland Avenue - HZ + TB	West 19th Street to West 23rd Street	H				6,745	1	Generic - Arterial Roadways (From	35	50	62.8
351	Cleveland Avenue - HZ + TB	West 23rd Street to Bay Marina Drive	H				13,513	1	Generic - Arterial Roadways (From	35	50	65.7
352	Bay Marina Drive - HZ + TB	Tidelands Avenue to Marina Way	H				11,390	3	Generic - Highway (From J&S SR95)	30	50	67.7
353	Bay Marina Drive - HZ + TB	Marina Way to Cleveland Avenue	H				18,078	3	Generic - Highway (From J&S SR95)	30	50	69.7
354	Bay Marina Drive - HZ + TB	Cleveland Avenue to I-5 SB Ramps	H				33,301	3	Generic - Highway (From J&S SR95)	30	50	72.3
355	Bay Marina Drive - HZ + TB	I-5 SB Ramps to I-5 NB Ramps	H				33,495	3	Generic - Highway (From J&S SR95)	30	50	72.3
356	West 18th Street - HZ + TB	Cleveland Avenue to McKinley Avenue	H				1,858	1	Generic - Arterial Roadways (From	30	50	55.7
357	West 19th Street - HZ + TB	Tidelands Avenue to Cleveland Avenue	H				4,916	1	Generic - Arterial Roadways (From	30	50	59.8
358	West 19th Street - HZ + TB	Cleveland Avenue to McKinley Avenue	H				2,608	1	Generic - Arterial Roadways (From	30	50	57.1
359	Marina Way - HZ + TB	Bay Marina Drive to West 32nd Street	H				7,302	1	Generic - Arterial Roadways (From	25	50	59.8
360	West 32nd Street - HZ + TB	Tidelands Avenue to Marina Way	H				917	1	Generic - Arterial Roadways (From	25	50	51.5
361	Tidelands Avenue - HZ + TB w/ Cl of BM	Harbor Drive to West 19th Street	H				13,780	3	Generic - Highway (From J&S SR95)	35	50	69.6
362	Tidelands Avenue - HZ + TB w/ Cl of BM	West 19th Street to Bay Marina Drive	H				14,700	3	Generic - Highway (From J&S SR95)	35	50	69.8
363	Tidelands Avenue - HZ + TB w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95)	35	50	44.8
364	McKinley Avenue - HZ + TB w/ Cl of BM	West 14th Street to West 18th Street	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
365	McKinley Avenue - HZ + TB w/ Cl of BM	West 18th Street to West 19th Street	H				640	1	Generic - Arterial Roadways (From	25	50	50.3
366	McKinley Avenue - HZ + TB w/ Cl of BM	West 19th Street to Cleveland Avenue	H				480	1	Generic - Arterial Roadways (From	25	50	49.3
367	Cleveland Avenue - HZ + TB w/ Cl of BM	Civic Center Drive to West 14th Street	H				4,840	1	Generic - Arterial Roadways (From	35	50	61.3
368	Cleveland Avenue - HZ + TB w/ Cl of BM	West 14th Street to West 18th Street	H				4,740	1	Generic - Arterial Roadways (From	35	50	61.3
369	Cleveland Avenue - HZ + TB w/ Cl of BM	West 18th Street to West 19th Street	H				5,450	1	Generic - Arterial Roadways (From	35	50	61.9
370	Cleveland Avenue - HZ + TB w/ Cl of BM	West 19th Street to West 23rd Street	H				5,740	1	Generic - Arterial Roadways (From	35	50	62.1
371	Cleveland Avenue - HZ + TB w/ Cl of BM	West 23rd Street to Bay Marina Drive	H				12,740	1	Generic - Arterial Roadways (From	35	50	65.5
372	Bay Marina Drive - HZ + TB w/ Cl of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95)	30	50	44.1
373	Bay Marina Drive - HZ + TB w/ Cl of BM	Marina Way to Cleveland Avenue	H				8,200	3	Generic - Highway (From J&S SR95)	30	50	66.2
374	Bay Marina Drive - HZ + TB w/ Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				23,430	3	Generic - Highway (From J&S SR95)	30	50	70.8
375	Bay Marina Drive - HZ + TB w/ Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				27,080	3	Generic - Highway (From J&S SR95)	30	50	71.4

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
376	West 18th Street - HZ + TB w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,260	1	Generic - Arterial Roadways (From	30	50	54.2
377	West 19th Street - HZ + TB w/ Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,370	1	Generic - Arterial Roadways (From	30	50	59.3
378	West 19th Street - HZ + TB w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,330	1	Generic - Arterial Roadways (From	30	50	56.6
379	Marina Way - HZ + TB w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				6,860	1	Generic - Arterial Roadways (From	25	50	59.6
380	West 32nd Street - HZ + TB w/ Cl of BM	Tidelands Avenue to Marina Way	H				780	1	Generic - Arterial Roadways (From	25	50	50.9
381	Tidelands Avenue - HZ + TB w/ P-Cl of BM	Harbor Drive to West 19th Street	H				3,900	3	Generic - Highway (From J&S SR95	35	50	64.1
382	Tidelands Avenue - HZ + TB w/ P-Cl of BM	West 19th Street to Bay Marina Drive	H				4,600	3	Generic - Highway (From J&S SR95	35	50	64.8
383	Tidelands Avenue - HZ + TB w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
384	McKinley Avenue - HZ + TB w/ P-Cl of BM	West 14th Street to West 18th Street	H				1,100	1	Generic - Arterial Roadways (From	25	50	52.2
385	McKinley Avenue - HZ + TB w/ P-Cl of BM	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
386	McKinley Avenue - HZ + TB w/ P-Cl of BM	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
387	Cleveland Avenue - HZ + TB w/ P-Cl of BM	Civic Center Drive to West 14th Street	H				5,713	1	Generic - Arterial Roadways (From	35	50	62.1
388	Cleveland Avenue - HZ + TB w/ P-Cl of BM	West 14th Street to West 18th Street	H				6,363	1	Generic - Arterial Roadways (From	35	50	62.5
389	Cleveland Avenue - HZ + TB w/ P-Cl of BM	West 18th Street to West 19th Street	H				6,821	1	Generic - Arterial Roadways (From	35	50	62.8
390	Cleveland Avenue - HZ + TB w/ P-Cl of BM	West 19th Street to West 23rd Street	H				6,745	1	Generic - Arterial Roadways (From	35	50	62.8
391	Cleveland Avenue - HZ + TB w/ P-Cl of BM	West 23rd Street to Bay Marina Drive	H				13,513	1	Generic - Arterial Roadways (From	35	50	65.7
392	Bay Marina Drive - HZ + TB w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				11,390	3	Generic - Highway (From J&S SR95	30	50	67.7
393	Bay Marina Drive - HZ + TB w/ P-Cl of BM	Marina Way to Cleveland Avenue	H				18,078	3	Generic - Highway (From J&S SR95	30	50	69.7
394	Bay Marina Drive - HZ + TB w/ P-Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				33,301	3	Generic - Highway (From J&S SR95	30	50	72.3
395	Bay Marina Drive - HZ + TB w/ P-Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				33,495	3	Generic - Highway (From J&S SR95	30	50	72.3
396	West 18th Street - HZ + TB w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,858	1	Generic - Arterial Roadways (From	30	50	55.7
397	West 19th Street - HZ + TB w/ P-Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,916	1	Generic - Arterial Roadways (From	30	50	59.8
398	West 19th Street - HZ + TB w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,608	1	Generic - Arterial Roadways (From	30	50	57.1
399	Marina Way - HZ + TB w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				7,302	1	Generic - Arterial Roadways (From	25	50	59.8
400	West 32nd Street - HZ + TB w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				917	1	Generic - Arterial Roadways (From	25	50	51.5
401	I-5 Existing	I-15 & Division St	H				212,000	6	Generic Highway	65	100	84.0
402	I-5 Existing	Division St & 8th St	H				196,000	6	Generic Highway	65	100	83.7
403	I-5 Existing	8th Street & Civic Center Dr	H				189,000	6	Generic Highway	65	100	83.5
404	I-5 Existing	Civic Center Dr & Bay Marina Dr	H				190,000	6	Generic Highway	65	100	83.6
405	I-5 Existing	Bay Marina Dr & SR-54	H				190,000	6	Generic Highway	65	100	83.6
406	I-5 Existing	SR-54 & E St	H				132,000	6	Generic Highway	65	100	82.0
407	I-5 Existing + DP	I-15 and Division Street	H				219,200	6	Generic Highway	65	100	84.2
408	I-5 Existing + DP	Division Street and 8th Street	H				203,200	6	Generic Highway	65	100	83.8
409	I-5 Existing + DP	8th Street and Civic Center Drive	H				196,200	6	Generic Highway	65	100	83.7
410	I-5 Existing + DP	Civic Center Drive and Bay Marina Drive	H				196,860	6	Generic Highway	65	100	83.7
411	I-5 Existing + DP	Bay Marina Drive and SR-54 Junction	H				191,630	6	Generic Highway	65	100	83.6
412	I-5 Existing + DP	SR-54 Junction and E Street	H				132,840	6	Generic Highway	65	100	82.0
413	I-5 Existing + DPW	I-15 and Division Street	H				212,110	6	Generic Highway	65	100	84.0
414	I-5 Existing + DPW	Division Street and 8th Street	H				196,110	6	Generic Highway	65	100	83.7
415	I-5 Existing + DPW	8th Street and Civic Center Drive	H				189,110	6	Generic Highway	65	100	83.5
416	I-5 Existing + DPW	Civic Center Drive and Bay Marina Drive	H				190,110	6	Generic Highway	65	100	83.6
417	I-5 Existing + DPW	Bay Marina Drive and SR-54 Junction	H				190,010	6	Generic Highway	65	100	83.6
418	I-5 Existing + DPW	SR-54 Junction and E Street	H				132,000	6	Generic Highway	65	100	82.0

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
419	I-5 Existing + TB	I-15 and Division Street	H				219,200	6	Generic Highway	65	100	84.2
420	I-5 Existing + TB	Division Street and 8th Street	H				203,310	6	Generic Highway	65	100	83.9
421	I-5 Existing + TB	8th Street and Civic Center Drive	H				196,310	6	Generic Highway	65	100	83.7
422	I-5 Existing + TB	Civic Center Drive and Bay Marina Drive	H				196,970	6	Generic Highway	65	100	83.7
423	I-5 Existing + TB	Bay Marina Drive and SR-54 Junction	H				191,640	6	Generic Highway	65	100	83.6
424	I-5 Existing + TB	SR-54 Junction and E Street	H				132,840	6	Generic Highway	65	100	82.0
425	I-5 Existing + CI of BM	I-15 and Division Street	H				212,000	6	Generic Highway	65	100	84.0
426	I-5 Existing + CI of BM	Division Street and 8th Street	H				196,000	6	Generic Highway	65	100	83.7
427	I-5 Existing + CI of BM	8th Street and Civic Center Drive	H				189,000	6	Generic Highway	65	100	83.5
428	I-5 Existing + CI of BM	Civic Center Drive and Bay Marina Drive	H				190,700	6	Generic Highway	65	100	83.6
429	I-5 Existing + CI of BM	Bay Marina Drive and SR-54 Junction	H				190,000	6	Generic Highway	65	100	83.6
430	I-5 Existing + CI of BM	SR-54 Junction and E Street	H				132,000	6	Generic Highway	65	100	82.0
431	I-5 Existing + P-CI of BM	I-15 & Division St	H				212,000	6	Generic Highway	65	100	84.0
432	I-5 Existing + P-CI of BM	Division St & 8th St	H				196,000	6	Generic Highway	65	100	83.7
433	I-5 Existing + P-CI of BM	8th Street & Civic Center Dr	H				189,000	6	Generic Highway	65	100	83.5
434	I-5 Existing + P-CI of BM	Civic Center Dr & Bay Marina Dr	H				190,000	6	Generic Highway	65	100	83.6
435	I-5 Existing + P-CI of BM	Bay Marina Dr & SR-54	H				190,000	6	Generic Highway	65	100	83.6
436	I-5 Existing + P-CI of BM	SR-54 & E St	H				132,000	6	Generic Highway	65	100	82.0
437	I-5 Existing + TB w/ CI of BM	I-15 and Division Street	H				219,200	6	Generic Highway	65	100	84.2
438	I-5 Existing + TB w/ CI of BM	Division Street and 8th Street	H				203,310	6	Generic Highway	65	100	83.9
439	I-5 Existing + TB w/ CI of BM	8th Street and Civic Center Drive	H				196,310	6	Generic Highway	65	100	83.7
440	I-5 Existing + TB w/ CI of BM	Civic Center Drive and Bay Marina Drive	H				197,670	6	Generic Highway	65	100	83.7
441	I-5 Existing + TB w/ CI of BM	Bay Marina Drive and SR-54 Junction	H				191,640	6	Generic Highway	65	100	83.6
442	I-5 Existing + TB w/ CI of BM	SR-54 Junction and E Street	H				132,840	6	Generic Highway	65	100	82.0
443	I-5 Existing + TB w/ P-CI of BM	I-15 and Division Street	H				219,200	6	Generic Highway	65	100	84.2
444	I-5 Existing + TB w/ P-CI of BM	Division Street and 8th Street	H				203,310	6	Generic Highway	65	100	83.9
445	I-5 Existing + TB w/ P-CI of BM	8th Street and Civic Center Drive	H				196,310	6	Generic Highway	65	100	83.7
446	I-5 Existing + TB w/ P-CI of BM	Civic Center Drive and Bay Marina Drive	H				196,970	6	Generic Highway	65	100	83.7
447	I-5 Existing + TB w/ P-CI of BM	Bay Marina Drive and SR-54 Junction	H				191,640	6	Generic Highway	65	100	83.6
448	I-5 Existing + TB w/ P-CI of BM	SR-54 Junction and E Street	H				132,840	6	Generic Highway	65	100	82.0
449	I-5 Near Term Conditions	I-15 & Division St	H				232,800	6	Generic Highway	65	100	84.4
450	I-5 Near Term Conditions	Division St & 8th St	H				218,300	6	Generic Highway	65	100	84.2
451	I-5 Near Term Conditions	8th Street & Civic Center Dr	H				212,300	6	Generic Highway	65	100	84.0
452	I-5 Near Term Conditions	Civic Center Dr & Bay Marina Dr	H				211,500	6	Generic Highway	65	100	84.0
453	I-5 Near Term Conditions	Bay Marina Dr & SR-54	H				212,800	6	Generic Highway	65	100	84.0
454	I-5 Near Term Conditions	SR-54 & E St	H				144,600	6	Generic Highway	65	100	82.4
455	I-5 Near Term + TB	I-15 and Division Street	H				240,110	6	Generic Highway	65	100	84.6
456	I-5 Near Term + TB	Division Street and 8th Street	H				225,610	6	Generic Highway	65	100	84.3
457	I-5 Near Term + TB	8th Street and Civic Center Drive	H				219,610	6	Generic Highway	65	100	84.2
458	I-5 Near Term + TB	Civic Center Drive and Bay Marina Drive	H				218,470	6	Generic Highway	65	100	84.2
459	I-5 Near Term + TB	Bay Marina Drive and SR-54 Junction	H				214,440	6	Generic Highway	65	100	84.1
460	I-5 Near Term + TB	SR-54 Junction and E Street	H				145,440	6	Generic Highway	65	100	82.4
461	I-5 Near Term + TB w/ CL of BM	I-15 and Division Street	H				240,110	6	Generic Highway	65	100	84.6

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Number #	Traffic Mix Description	Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.					Distance feet, min. 33 max. 1000	dB CNEL
462	I-5 Near Term + TB w/ CL of BM	Division Street and 8th Street	H				225,610	6	Generic Highway	65	100	84.3
463	I-5 Near Term + TB w/ CL of BM	8th Street and Civic Center Drive	H				219,610	6	Generic Highway	65	100	84.2
464	I-5 Near Term + TB w/ CL of BM	Civic Center Drive and Bay Marina Drive	H				219,170	6	Generic Highway	65	100	84.2
465	I-5 Near Term + TB w/ CL of BM	Bay Marina Drive and SR-54 Junction	H				214,440	6	Generic Highway	65	100	84.1
466	I-5 Near Term + TB w/ CL of BM	SR-54 Junction and E Street	H				145,440	6	Generic Highway	65	100	82.4
467	I-5 Near Term + TB w/ P - CL of BM	I-15 and Division Street	H				240,110	6	Generic Highway	65	100	84.6
468	I-5 Near Term + TB w/ P - CL of BM	Division Street and 8th Street	H				225,610	6	Generic Highway	65	100	84.3
469	I-5 Near Term + TB w/ P - CL of BM	8th Street and Civic Center Drive	H				219,610	6	Generic Highway	65	100	84.2
470	I-5 Near Term + TB w/ P - CL of BM	Civic Center Drive and Bay Marina Drive	H				218,470	6	Generic Highway	65	100	84.2
471	I-5 Near Term + TB w/ P - CL of BM	Bay Marina Drive and SR-54 Junction	H				214,440	6	Generic Highway	65	100	84.1
472	I-5 Near Term + TB w/ P - CL of BM	SR-54 Junction and E Street	H				145,440	6	Generic Highway	65	100	82.4
473	I-5 Future Year Conditions	I-15 and Division Street	H				247,800	6	Generic Highway	65	100	84.7
474	I-5 Future Year Conditions	Division Street and 8th Street	H				231,900	6	Generic Highway	65	100	84.4
475	I-5 Future Year Conditions	8th Street and Civic Center Drive	H				218,100	6	Generic Highway	65	100	84.2
476	I-5 Future Year Conditions	Civic Center Drive and Bay Marina Drive	H				221,200	6	Generic Highway	65	100	84.2
477	I-5 Future Year Conditions	Bay Marina Drive and SR-54 Junction	H				224,100	6	Generic Highway	65	100	84.3
478	I-5 Future Year Conditions	SR-54 Junction and E Street	H				154,400	6	Generic Highway	65	100	82.7
479	I-5 Future Year + TB	I-15 and Division Street	H				255,110	6	Generic Highway	65	100	84.8
480	I-5 Future Year + TB	Division Street and 8th Street	H				239,210	6	Generic Highway	65	100	84.6
481	I-5 Future Year + TB	8th Street and Civic Center Drive	H				225,410	6	Generic Highway	65	100	84.3
482	I-5 Future Year + TB	Civic Center Drive and Bay Marina Drive	H				228,170	6	Generic Highway	65	100	84.4
483	I-5 Future Year + TB	Bay Marina Drive and SR-54 Junction	H				225,740	6	Generic Highway	65	100	84.3
484	I-5 Future Year + TB	SR-54 Junction and E Street	H				155,240	6	Generic Highway	65	100	82.7
485	I-5 Future Year + TB w/ CL of BM	I-15 and Division Street	H				255,110	6	Generic Highway	65	100	84.8
486	I-5 Future Year + TB w/ CL of BM	Division Street and 8th Street	H				239,210	6	Generic Highway	65	100	84.6
487	I-5 Future Year + TB w/ CL of BM	8th Street and Civic Center Drive	H				225,410	6	Generic Highway	65	100	84.3
488	I-5 Future Year + TB w/ CL of BM	Civic Center Drive and Bay Marina Drive	H				228,870	6	Generic Highway	65	100	84.4
489	I-5 Future Year + TB w/ CL of BM	Bay Marina Drive and SR-54 Junction	H				225,740	6	Generic Highway	65	100	84.3
490	I-5 Future Year + TB w/ CL of BM	SR-54 Junction and E Street	H				155,240	6	Generic Highway	65	100	82.7
491	I-5 Future Year+ TB w/ P - CL of BM	I-15 and Division Street	H				255,110	6	Generic Highway	65	100	84.8
492	I-5 Future Year+ TB w/ P - CL of BM	Division Street and 8th Street	H				239,210	6	Generic Highway	65	100	84.6
493	I-5 Future Year+ TB w/ P - CL of BM	8th Street and Civic Center Drive	H				225,410	6	Generic Highway	65	100	84.3
494	I-5 Future Year+ TB w/ P - CL of BM	Civic Center Drive and Bay Marina Drive	H				228,170	6	Generic Highway	65	100	84.4
495	I-5 Future Year+ TB w/ P - CL of BM	Bay Marina Drive and SR-54 Junction	H				225,740	6	Generic Highway	65	100	84.3
496	I-5 Future Year+ TB w/ P - CL of BM	SR-54 Junction and E Street	H				155,240	6	Generic Highway	65	100	82.7

This spreadsheet calculates traffic noise levels based on TNM Version 2.5 Lookup Tables.

**** Type in yellow cells only.**

Traffic Data:

☒ Enter ADT Traffic

☒ Enter Loudest-hour Traffic

Units:

☒ Metric

☒ English

Calculate



Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Number #	Traffic Mix Description	Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.					Distance feet, min. 33 max. 1000	dB CNEL
1	Tidelands Avenue - Ex+DPW-GH	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
2	Tidelands Avenue - Ex+DPW-GH	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
3	Tidelands Avenue - Ex+DPW-GH	Bay Marina Drive to West 32nd Street	H				1,683	3	Generic - Highway (From J&S SR95	35	50	60.5
4	McKinley Avenue - Ex+DPW-GH	West 14th Street to West 18th Street	H				593	1	Generic - Arterial Roadways (From	25	50	50.0
5	McKinley Avenue - Ex+DPW-GH	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
6	McKinley Avenue - Ex+DPW-GH	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
7	Cleveland Avenue - Ex+DPW-GH	Civic Center Drive to West 14th Street	H				5,171	1	Generic - Arterial Roadways (From	35	50	61.6
8	Cleveland Avenue - Ex+DPW-GH	West 14th Street to West 18th Street	H				5,073	1	Generic - Arterial Roadways (From	35	50	61.5
9	Cleveland Avenue - Ex+DPW-GH	West 18th Street to West 19th Street	H				5,694	1	Generic - Arterial Roadways (From	35	50	62.0
10	Cleveland Avenue - Ex+DPW-GH	West 19th Street to West 23rd Street	H				5,466	1	Generic - Arterial Roadways (From	35	50	61.9
11	Cleveland Avenue - Ex+DPW-GH	West 23rd Street to Bay Marina Drive	H				6,099	1	Generic - Arterial Roadways (From	35	50	62.3
12	Bay Marina Drive - Ex+DPW-GH	Tidelands Avenue to Marina Way	H				7,573	3	Generic - Highway (From J&S SR95	30	50	65.9
13	Bay Marina Drive - Ex+DPW-GH	Marina Way to Cleveland Avenue	H				10,719	3	Generic - Highway (From J&S SR95	30	50	67.4
14	Bay Marina Drive - Ex+DPW-GH	Cleveland Avenue to I-5 SB Ramps	H				16,689	3	Generic - Highway (From J&S SR95	30	50	69.3
15	Bay Marina Drive - Ex+DPW-GH	I-5 SB Ramps to I-5 NB Ramps	H				22,594	3	Generic - Highway (From J&S SR95	30	50	70.6
16	West 18th Street - Ex+DPW-GH	Cleveland Avenue to McKinley Avenue	H				1,170	1	Generic - Arterial Roadways (From	30	50	53.9
17	West 19th Street - Ex+DPW-GH	Tidelands Avenue to Cleveland Avenue	H				3,937	1	Generic - Arterial Roadways (From	30	50	58.8
18	West 19th Street - Ex+DPW-GH	Cleveland Avenue to McKinley Avenue	H				2,238	1	Generic - Arterial Roadways (From	30	50	56.5
19	Marina Way - Ex+DPW-GH	Bay Marina Drive to West 32nd Street	H				3,637	1	Generic - Arterial Roadways (From	25	50	56.9
20	West 32nd Street - Ex+DPW-GH	Tidelands Avenue to Marina Way	H				2,897	1	Generic - Arterial Roadways (From	25	50	56.0
21	Tidelands Avenue - Ex+TB-GH	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
22	Tidelands Avenue - Ex+TB-GH	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
23	Tidelands Avenue - Ex+TB-GH	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
24	McKinley Avenue - Ex+TB-GH	West 14th Street to West 18th Street	H				910	1	Generic - Arterial Roadways (From	25	50	51.5
25	McKinley Avenue - Ex+TB-GH	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
26	McKinley Avenue - Ex+TB-GH	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
27	Cleveland Avenue - Ex+TB-GH	Civic Center Drive to West 14th Street	H				5,171	1	Generic - Arterial Roadways (From	35	50	61.6
28	Cleveland Avenue - Ex+TB-GH	West 14th Street to West 18th Street	H				5,686	1	Generic - Arterial Roadways (From	35	50	62.0
29	Cleveland Avenue - Ex+TB-GH	West 18th Street to West 19th Street	H				6,118	1	Generic - Arterial Roadways (From	35	50	62.3
30	Cleveland Avenue - Ex+TB-GH	West 19th Street to West 23rd Street	H				6,133	1	Generic - Arterial Roadways (From	35	50	62.4
31	Cleveland Avenue - Ex+TB-GH	West 23rd Street to Bay Marina Drive	H				12,899	1	Generic - Arterial Roadways (From	35	50	65.5

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
32	Bay Marina Drive - Ex+TB-GH	Tidelands Avenue to Marina Way	H				7,825	3	Generic - Highway (From J&S SR95	30	50	66.0
33	Bay Marina Drive - Ex+TB-GH	Marina Way to Cleveland Avenue	H				16,270	3	Generic - Highway (From J&S SR95	30	50	69.2
34	Bay Marina Drive - Ex+TB-GH	Cleveland Avenue to I-5 SB Ramps	H				28,176	3	Generic - Highway (From J&S SR95	30	50	71.6
35	Bay Marina Drive - Ex+TB-GH	I-5 SB Ramps to I-5 NB Ramps	H				24,687	3	Generic - Highway (From J&S SR95	30	50	71.0
36	West 18th Street - Ex+TB-GH	Cleveland Avenue to McKinley Avenue	H				1,575	1	Generic - Arterial Roadways (From	30	50	55.1
37	West 19th Street - Ex+TB-GH	Tidelands Avenue to Cleveland Avenue	H				4,153	1	Generic - Arterial Roadways (From	30	50	59.1
38	West 19th Street - Ex+TB-GH	Cleveland Avenue to McKinley Avenue	H				2,265	1	Generic - Arterial Roadways (From	30	50	56.5
39	Marina Way - Ex+TB-GH	Bay Marina Drive to West 32nd Street	H				9,039	1	Generic - Arterial Roadways (From	25	50	60.7
40	West 32nd Street - Ex+TB-GH	Tidelands Avenue to Marina Way	H				2,964	1	Generic - Arterial Roadways (From	25	50	56.1
41	Tidelands Avenue - Ex+TB-GH w/ Cl of BM	Harbor Drive to West 19th Street	H				8,590	3	Generic - Highway (From J&S SR95	35	50	67.5
42	Tidelands Avenue - Ex+TB-GH w/ Cl of BM	West 19th Street to Bay Marina Drive	H				9,180	3	Generic - Highway (From J&S SR95	35	50	67.8
43	Tidelands Avenue - Ex+TB-GH w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
44	McKinley Avenue - Ex+TB-GH w/ Cl of BM	West 14th Street to West 18th Street	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
45	McKinley Avenue - Ex+TB-GH w/ Cl of BM	West 18th Street to West 19th Street	H				640	1	Generic - Arterial Roadways (From	25	50	50.3
46	McKinley Avenue - Ex+TB-GH w/ Cl of BM	West 19th Street to Cleveland Avenue	H				480	1	Generic - Arterial Roadways (From	25	50	49.3
47	Cleveland Avenue - Ex+TB-GH w/ Cl of BM	Civic Center Drive to West 14th Street	H				5,180	1	Generic - Arterial Roadways (From	35	50	61.6
48	Cleveland Avenue - Ex+TB-GH w/ Cl of BM	West 14th Street to West 18th Street	H				5,080	1	Generic - Arterial Roadways (From	35	50	61.6
49	Cleveland Avenue - Ex+TB-GH w/ Cl of BM	West 18th Street to West 19th Street	H				5,810	1	Generic - Arterial Roadways (From	35	50	62.1
50	Cleveland Avenue - Ex+TB-GH w/ Cl of BM	West 19th Street to West 23rd Street	H				5,900	1	Generic - Arterial Roadways (From	35	50	62.2
51	Cleveland Avenue - Ex+TB-GH w/ Cl of BM	West 23rd Street to Bay Marina Drive	H				13,120	1	Generic - Arterial Roadways (From	35	50	65.6
52	Bay Marina Drive - Ex+TB-GH w/ Cl of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95	30	50	44.1
53	Bay Marina Drive - Ex+TB-GH w/ Cl of BM	Marina Way to Cleveland Avenue	H				9,540	3	Generic - Highway (From J&S SR95	30	50	66.9
54	Bay Marina Drive - Ex+TB-GH w/ Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				21,440	3	Generic - Highway (From J&S SR95	30	50	70.4
55	Bay Marina Drive - Ex+TB-GH w/ Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				20,310	3	Generic - Highway (From J&S SR95	30	50	70.2
56	West 18th Street - Ex+TB-GH w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,280	1	Generic - Arterial Roadways (From	30	50	54.2
57	West 19th Street - Ex+TB-GH w/ Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,370	1	Generic - Arterial Roadways (From	30	50	59.3
58	West 19th Street - Ex+TB-GH w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,350	1	Generic - Arterial Roadways (From	30	50	56.7
59	Marina Way - Ex+TB-GH w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				8,980	1	Generic - Arterial Roadways (From	25	50	60.7
60	West 32nd Street - Ex+TB-GH w/ Cl of BM	Tidelands Avenue to Marina Way	H				2,900	1	Generic - Arterial Roadways (From	25	50	56.0
61	Tidelands Avenue - Ex+TB-GH w/ P-Cl of BM	Harbor Drive to West 19th Street	H				1,850	3	Generic - Highway (From J&S SR95	35	50	60.9
62	Tidelands Avenue - Ex+TB-GH w/ P-Cl of BM	West 19th Street to Bay Marina Drive	H				2,215	3	Generic - Highway (From J&S SR95	35	50	61.7
63	Tidelands Avenue - Ex+TB-GH w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
64	McKinley Avenue - Ex+TB-GH w/ P-Cl of BM	West 14th Street to West 18th Street	H				910	1	Generic - Arterial Roadways (From	25	50	51.5
65	McKinley Avenue - Ex+TB-GH w/ P-Cl of BM	West 18th Street to West 19th Street	H				633	1	Generic - Arterial Roadways (From	25	50	50.2
66	McKinley Avenue - Ex+TB-GH w/ P-Cl of BM	West 19th Street to Cleveland Avenue	H				471	1	Generic - Arterial Roadways (From	25	50	49.3
67	Cleveland Avenue - Ex+TB-GH w/ P-Cl of BM	Civic Center Drive to West 14th Street	H				5,171	1	Generic - Arterial Roadways (From	35	50	61.6
68	Cleveland Avenue - Ex+TB-GH w/ P-Cl of BM	West 14th Street to West 18th Street	H				5,686	1	Generic - Arterial Roadways (From	35	50	62.0
69	Cleveland Avenue - Ex+TB-GH w/ P-Cl of BM	West 18th Street to West 19th Street	H				6,118	1	Generic - Arterial Roadways (From	35	50	62.3
70	Cleveland Avenue - Ex+TB-GH w/ P-Cl of BM	West 19th Street to West 23rd Street	H				6,133	1	Generic - Arterial Roadways (From	35	50	62.4
71	Cleveland Avenue - Ex+TB-GH w/ P-Cl of BM	West 23rd Street to Bay Marina Drive	H				12,899	1	Generic - Arterial Roadways (From	35	50	65.5
72	Bay Marina Drive - Ex+TB-GH w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				7,825	3	Generic - Highway (From J&S SR95	30	50	66.0
73	Bay Marina Drive - Ex+TB-GH w/ P-Cl of BM	Marina Way to Cleveland Avenue	H				16,270	3	Generic - Highway (From J&S SR95	30	50	69.2
74	Bay Marina Drive - Ex+TB-GH w/ P-Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				28,176	3	Generic - Highway (From J&S SR95	30	50	71.6

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
75	Bay Marina Drive - Ex+TB-GH w/ P-Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				24,687	3	Generic - Highway (From J&S SR95	30	50	71.0
76	West 18th Street - Ex+TB-GH w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,575	1	Generic - Arterial Roadways (From	30	50	55.1
77	West 19th Street - Ex+TB-GH w/ P-Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,153	1	Generic - Arterial Roadways (From	30	50	59.1
78	West 19th Street - Ex+TB-GH w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,265	1	Generic - Arterial Roadways (From	30	50	56.5
79	Marina Way - Ex+TB-GH w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				9,039	1	Generic - Arterial Roadways (From	25	50	60.7
80	West 32nd Street - Ex+TB-GH w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				2,964	1	Generic - Arterial Roadways (From	25	50	56.1
81	Tidelands Avenue - NT+TB-GH	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95	35	50	63.8
82	Tidelands Avenue - NT+TB-GH	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95	35	50	64.5
83	Tidelands Avenue - NT+TB-GH	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
84	McKinley Avenue - NT+TB-GH	West 14th Street to West 18th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
85	McKinley Avenue - NT+TB-GH	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
86	McKinley Avenue - NT+TB-GH	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
87	Cleveland Avenue - NT+TB-GH	Civic Center Drive to West 14th Street	H				5,549	1	Generic - Arterial Roadways (From	35	50	61.9
88	Cleveland Avenue - NT+TB-GH	West 14th Street to West 18th Street	H				5,449	1	Generic - Arterial Roadways (From	35	50	61.8
89	Cleveland Avenue - NT+TB-GH	West 18th Street to West 19th Street	H				6,071	1	Generic - Arterial Roadways (From	35	50	62.3
90	Cleveland Avenue - NT+TB-GH	West 19th Street to West 23rd Street	H				5,891	1	Generic - Arterial Roadways (From	35	50	62.2
91	Cleveland Avenue - NT+TB-GH	West 23rd Street to Bay Marina Drive	H				6,491	1	Generic - Arterial Roadways (From	35	50	62.6
92	Bay Marina Drive - NT+TB-GH	Tidelands Avenue to Marina Way	H				10,800	3	Generic - Highway (From J&S SR95	30	50	67.4
93	Bay Marina Drive - NT+TB-GH	Marina Way to Cleveland Avenue	H				14,347	3	Generic - Highway (From J&S SR95	30	50	68.7
94	Bay Marina Drive - NT+TB-GH	Cleveland Avenue to I-5 SB Ramps	H				22,956	3	Generic - Highway (From J&S SR95	30	50	70.7
95	Bay Marina Drive - NT+TB-GH	I-5 SB Ramps to I-5 NB Ramps	H				31,640	3	Generic - Highway (From J&S SR95	30	50	72.1
96	West 18th Street - NT+TB-GH	Cleveland Avenue to McKinley Avenue	H				1,322	1	Generic - Arterial Roadways (From	30	50	54.4
97	West 19th Street - NT+TB-GH	Tidelands Avenue to Cleveland Avenue	H				4,300	1	Generic - Arterial Roadways (From	30	50	59.2
98	West 19th Street - NT+TB-GH	Cleveland Avenue to McKinley Avenue	H				2,420	1	Generic - Arterial Roadways (From	30	50	56.8
99	Marina Way - NT+TB-GH	Bay Marina Drive to West 32nd Street	H				3,747	1	Generic - Arterial Roadways (From	25	50	57.0
100	West 32nd Street - NT+TB-GH	Tidelands Avenue to Marina Way	H				2,947	1	Generic - Arterial Roadways (From	25	50	56.0
101	Tidelands Avenue - NT+TB-GH w/ Cl of BM	Harbor Drive to West 19th Street	H				13,220	3	Generic - Highway (From J&S SR95	35	50	69.4
102	Tidelands Avenue - NT+TB-GH w/ Cl of BM	West 19th Street to Bay Marina Drive	H				14,130	3	Generic - Highway (From J&S SR95	35	50	69.7
103	Tidelands Avenue - NT+TB-GH w/ Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
104	McKinley Avenue - NT+TB-GH w/ Cl of BM	West 14th Street to West 18th Street	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
105	McKinley Avenue - NT+TB-GH w/ Cl of BM	West 18th Street to West 19th Street	H				640	1	Generic - Arterial Roadways (From	25	50	50.3
106	McKinley Avenue - NT+TB-GH w/ Cl of BM	West 19th Street to Cleveland Avenue	H				480	1	Generic - Arterial Roadways (From	25	50	49.3
107	Cleveland Avenue - NT+TB-GH w/ Cl of BM	Civic Center Drive to West 14th Street	H				5,180	1	Generic - Arterial Roadways (From	35	50	61.6
108	Cleveland Avenue - NT+TB-GH w/ Cl of BM	West 14th Street to West 18th Street	H				5,080	1	Generic - Arterial Roadways (From	35	50	61.6
109	Cleveland Avenue - NT+TB-GH w/ Cl of BM	West 18th Street to West 19th Street	H				5,810	1	Generic - Arterial Roadways (From	35	50	62.1
110	Cleveland Avenue - NT+TB-GH w/ Cl of BM	West 19th Street to West 23rd Street	H				6,120	1	Generic - Arterial Roadways (From	35	50	62.3
111	Cleveland Avenue - NT+TB-GH w/ Cl of BM	West 23rd Street to Bay Marina Drive	H				18,450	1	Generic - Arterial Roadways (From	35	50	67.1
112	Bay Marina Drive - NT+TB-GH w/ Cl of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95	30	50	44.1
113	Bay Marina Drive - NT+TB-GH w/ Cl of BM	Marina Way to Cleveland Avenue	H				10,290	3	Generic - Highway (From J&S SR95	30	50	67.2
114	Bay Marina Drive - NT+TB-GH w/ Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				24,840	3	Generic - Highway (From J&S SR95	30	50	71.0
115	Bay Marina Drive - NT+TB-GH w/ Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				27,490	3	Generic - Highway (From J&S SR95	30	50	71.5
116	West 18th Street - NT+TB-GH w/ Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,280	1	Generic - Arterial Roadways (From	30	50	54.2
117	West 19th Street - NT+TB-GH w/ Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,370	1	Generic - Arterial Roadways (From	30	50	59.3

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
118	West 19th Street - NT+TB-GH w/ CI of BM	Cleveland Avenue to McKinley Avenue	H				2,350	1	Generic - Arterial Roadways (From	30	50	56.7
119	Marina Way - NT+TB-GH w/ CI of BM	Bay Marina Drive to West 32nd Street	H				8,980	1	Generic - Arterial Roadways (From	25	50	60.7
120	West 32nd Street - NT+TB-GH w/ CI of BM	Tidelands Avenue to Marina Way	H				2,900	1	Generic - Arterial Roadways (From	25	50	56.0
121	Tidelands Avenue - NT+TB-GH w/ P-Cl of BM	Harbor Drive to West 19th Street	H				3,600	3	Generic - Highway (From J&S SR95	35	50	63.8
122	Tidelands Avenue - NT+TB-GH w/ P-Cl of BM	West 19th Street to Bay Marina Drive	H				4,300	3	Generic - Highway (From J&S SR95	35	50	64.5
123	Tidelands Avenue - NT+TB-GH w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
124	McKinley Avenue - NT+TB-GH w/ P-Cl of BM	West 14th Street to West 18th Street	H				1,050	1	Generic - Arterial Roadways (From	25	50	52.0
125	McKinley Avenue - NT+TB-GH w/ P-Cl of BM	West 18th Street to West 19th Street	H				700	1	Generic - Arterial Roadways (From	25	50	50.6
126	McKinley Avenue - NT+TB-GH w/ P-Cl of BM	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
127	Cleveland Avenue - NT+TB-GH w/ P-Cl of BM	Civic Center Drive to West 14th Street	H				5,549	1	Generic - Arterial Roadways (From	35	50	61.9
128	Cleveland Avenue - NT+TB-GH w/ P-Cl of BM	West 14th Street to West 18th Street	H				6,149	1	Generic - Arterial Roadways (From	35	50	62.4
129	Cleveland Avenue - NT+TB-GH w/ P-Cl of BM	West 18th Street to West 19th Street	H				6,529	1	Generic - Arterial Roadways (From	35	50	62.6
130	Cleveland Avenue - NT+TB-GH w/ P-Cl of BM	West 19th Street to West 23rd Street	H				6,623	1	Generic - Arterial Roadways (From	35	50	62.7
131	Cleveland Avenue - NT+TB-GH w/ P-Cl of BM	West 23rd Street to Bay Marina Drive	H				13,291	1	Generic - Arterial Roadways (From	35	50	65.7
132	Bay Marina Drive - NT+TB-GH w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				11,086	3	Generic - Highway (From J&S SR95	30	50	67.5
133	Bay Marina Drive - NT+TB-GH w/ P-Cl of BM	Marina Way to Cleveland Avenue	H				19,898	3	Generic - Highway (From J&S SR95	30	50	70.1
134	Bay Marina Drive - NT+TB-GH w/ P-Cl of BM	Cleveland Avenue to I-5 SB Ramps	H				34,443	3	Generic - Highway (From J&S SR95	30	50	72.5
135	Bay Marina Drive - NT+TB-GH w/ P-Cl of BM	I-5 SB Ramps to I-5 NB Ramps	H				33,733	3	Generic - Highway (From J&S SR95	30	50	72.4
136	West 18th Street - NT+TB-GH w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				1,780	1	Generic - Arterial Roadways (From	30	50	55.6
137	West 19th Street - NT+TB-GH w/ P-Cl of BM	Tidelands Avenue to Cleveland Avenue	H				4,516	1	Generic - Arterial Roadways (From	30	50	59.4
138	West 19th Street - NT+TB-GH w/ P-Cl of BM	Cleveland Avenue to McKinley Avenue	H				2,478	1	Generic - Arterial Roadways (From	30	50	56.9
139	Marina Way - NT+TB-GH w/ P-Cl of BM	Bay Marina Drive to West 32nd Street	H				9,214	1	Generic - Arterial Roadways (From	25	50	60.8
140	West 32nd Street - NT+TB-GH w/ P-Cl of BM	Tidelands Avenue to Marina Way	H				3,029	1	Generic - Arterial Roadways (From	25	50	56.2
141	Tidelands Avenue - HZ+TB-GH	Harbor Drive to West 19th Street	H				4,500	3	Generic - Highway (From J&S SR95	35	50	64.7
142	Tidelands Avenue - HZ+TB-GH	West 19th Street to Bay Marina Drive	H				5,400	3	Generic - Highway (From J&S SR95	35	50	65.5
143	Tidelands Avenue - HZ+TB-GH	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
144	McKinley Avenue - HZ+TB-GH	West 14th Street to West 18th Street	H				1,200	1	Generic - Arterial Roadways (From	25	50	52.5
145	McKinley Avenue - HZ+TB-GH	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
146	McKinley Avenue - HZ+TB-GH	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
147	Cleveland Avenue - HZ+TB-GH	Civic Center Drive to West 14th Street	H				6,249	1	Generic - Arterial Roadways (From	35	50	62.4
148	Cleveland Avenue - HZ+TB-GH	West 14th Street to West 18th Street	H				6,949	1	Generic - Arterial Roadways (From	35	50	62.9
149	Cleveland Avenue - HZ+TB-GH	West 18th Street to West 19th Street	H				7,379	1	Generic - Arterial Roadways (From	35	50	63.1
150	Cleveland Avenue - HZ+TB-GH	West 19th Street to West 23rd Street	H				7,323	1	Generic - Arterial Roadways (From	35	50	63.1
151	Cleveland Avenue - HZ+TB-GH	West 23rd Street to Bay Marina Drive	H				14,191	1	Generic - Arterial Roadways (From	35	50	66.0
152	Bay Marina Drive - HZ+TB-GH	Tidelands Avenue to Marina Way	H				12,303	3	Generic - Highway (From J&S SR95	30	50	68.0
153	Bay Marina Drive - HZ+TB-GH	Marina Way to Cleveland Avenue	H				21,198	3	Generic - Highway (From J&S SR95	30	50	70.4
154	Bay Marina Drive - HZ+TB-GH	Cleveland Avenue to I-5 SB Ramps	H				36,843	3	Generic - Highway (From J&S SR95	30	50	72.7
155	Bay Marina Drive - HZ+TB-GH	I-5 SB Ramps to I-5 NB Ramps	H				37,033	3	Generic - Highway (From J&S SR95	30	50	72.8
156	West 18th Street - HZ+TB-GH	Cleveland Avenue to McKinley Avenue	H				1,930	1	Generic - Arterial Roadways (From	30	50	55.9
157	West 19th Street - HZ+TB-GH	Tidelands Avenue to Cleveland Avenue	H				5,016	1	Generic - Arterial Roadways (From	30	50	59.8
158	West 19th Street - HZ+TB-GH	Cleveland Avenue to McKinley Avenue	H				2,728	1	Generic - Arterial Roadways (From	30	50	57.3
159	Marina Way - HZ+TB-GH	Bay Marina Drive to West 32nd Street	H				9,446	1	Generic - Arterial Roadways (From	25	50	60.9
160	West 32nd Street - HZ+TB-GH	Tidelands Avenue to Marina Way	H				3,061	1	Generic - Arterial Roadways (From	25	50	56.2

Link	Roadway	Segment Location	Hard or Soft Ground (H or S)	BARRIER			Total Daily Traffic Volumes (ADT)	Traffic Mix		Vehicle Speed mph max. 80	Sound Levels at Receiver Locations	
				Present 1=yes	Height min. 7 ft. max. 32 ft.	Distance 35 ft. or 100 ft.		Number #	Description		Distance feet, min. 33 max. 1000	dB CNEL
161	Tidelands Avenue - HZ+TB-GH w/ CI of BM	Harbor Drive to West 19th Street	H				15,180	3	Generic - Highway (From J&S SR95	35	50	70.0
162	Tidelands Avenue - HZ+TB-GH w/ CI of BM	West 19th Street to Bay Marina Drive	H				16,300	3	Generic - Highway (From J&S SR95	35	50	70.3
163	Tidelands Avenue - HZ+TB-GH w/ CI of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
164	McKinley Avenue - HZ+TB-GH w/ CI of BM	West 14th Street to West 18th Street	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
165	McKinley Avenue - HZ+TB-GH w/ CI of BM	West 18th Street to West 19th Street	H				640	1	Generic - Arterial Roadways (From	25	50	50.3
166	McKinley Avenue - HZ+TB-GH w/ CI of BM	West 19th Street to Cleveland Avenue	H				480	1	Generic - Arterial Roadways (From	25	50	49.3
167	Cleveland Avenue - HZ+TB-GH w/ CI of BM	Civic Center Drive to West 14th Street	H				5,180	1	Generic - Arterial Roadways (From	35	50	61.6
168	Cleveland Avenue - HZ+TB-GH w/ CI of BM	West 14th Street to West 18th Street	H				5,080	1	Generic - Arterial Roadways (From	35	50	61.6
169	Cleveland Avenue - HZ+TB-GH w/ CI of BM	West 18th Street to West 19th Street	H				5,810	1	Generic - Arterial Roadways (From	35	50	62.1
170	Cleveland Avenue - HZ+TB-GH w/ CI of BM	West 19th Street to West 23rd Street	H				6,120	1	Generic - Arterial Roadways (From	35	50	62.3
171	Cleveland Avenue - HZ+TB-GH w/ CI of BM	West 23rd Street to Bay Marina Drive	H				13,120	1	Generic - Arterial Roadways (From	35	50	65.6
172	Bay Marina Drive - HZ+TB-GH w/ CI of BM	Tidelands Avenue to Marina Way	H				0	3	Generic - Highway (From J&S SR95	30	50	44.1
173	Bay Marina Drive - HZ+TB-GH w/ CI of BM	Marina Way to Cleveland Avenue	H				10,520	3	Generic - Highway (From J&S SR95	30	50	67.3
174	Bay Marina Drive - HZ+TB-GH w/ CI of BM	Cleveland Avenue to I-5 SB Ramps	H				26,170	3	Generic - Highway (From J&S SR95	30	50	71.3
175	Bay Marina Drive - HZ+TB-GH w/ CI of BM	I-5 SB Ramps to I-5 NB Ramps	H				30,100	3	Generic - Highway (From J&S SR95	30	50	71.9
176	West 18th Street - HZ+TB-GH w/ CI of BM	Cleveland Avenue to McKinley Avenue	H				1,280	1	Generic - Arterial Roadways (From	30	50	54.2
177	West 19th Street - HZ+TB-GH w/ CI of BM	Tidelands Avenue to Cleveland Avenue	H				4,370	1	Generic - Arterial Roadways (From	30	50	59.3
178	West 19th Street - HZ+TB-GH w/ CI of BM	Cleveland Avenue to McKinley Avenue	H				2,350	1	Generic - Arterial Roadways (From	30	50	56.7
179	Marina Way - HZ+TB-GH w/ CI of BM	Bay Marina Drive to West 32nd Street	H				8,980	1	Generic - Arterial Roadways (From	25	50	60.7
180	West 32nd Street - HZ+TB-GH w/ CI of BM	Tidelands Avenue to Marina Way	H				2,900	1	Generic - Arterial Roadways (From	25	50	56.0
181	Tidelands Avenue - HZ+TB-GH w/ P-CI of BM	Harbor Drive to West 19th Street	H				4,500	3	Generic - Highway (From J&S SR95	35	50	64.7
182	Tidelands Avenue - HZ+TB-GH w/ P-CI of BM	West 19th Street to Bay Marina Drive	H				5,400	3	Generic - Highway (From J&S SR95	35	50	65.5
183	Tidelands Avenue - HZ+TB-GH w/ P-CI of BM	Bay Marina Drive to West 32nd Street	H				0	3	Generic - Highway (From J&S SR95	35	50	44.8
184	McKinley Avenue - HZ+TB-GH w/ P-CI of BM	West 14th Street to West 18th Street	H				1,200	1	Generic - Arterial Roadways (From	25	50	52.5
185	McKinley Avenue - HZ+TB-GH w/ P-CI of BM	West 18th Street to West 19th Street	H				800	1	Generic - Arterial Roadways (From	25	50	51.0
186	McKinley Avenue - HZ+TB-GH w/ P-CI of BM	West 19th Street to Cleveland Avenue	H				600	1	Generic - Arterial Roadways (From	25	50	50.0
187	Cleveland Avenue - HZ+TB-GH w/ P-CI of BM	Civic Center Drive to West 14th Street	H				6,249	1	Generic - Arterial Roadways (From	35	50	62.4
188	Cleveland Avenue - HZ+TB-GH w/ P-CI of BM	West 14th Street to West 18th Street	H				6,949	1	Generic - Arterial Roadways (From	35	50	62.9
189	Cleveland Avenue - HZ+TB-GH w/ P-CI of BM	West 18th Street to West 19th Street	H				7,379	1	Generic - Arterial Roadways (From	35	50	63.1
190	Cleveland Avenue - HZ+TB-GH w/ P-CI of BM	West 19th Street to West 23rd Street	H				7,323	1	Generic - Arterial Roadways (From	35	50	63.1
191	Cleveland Avenue - HZ+TB-GH w/ P-CI of BM	West 23rd Street to Bay Marina Drive	H				14,191	1	Generic - Arterial Roadways (From	35	50	66.0
192	Bay Marina Drive - HZ+TB-GH w/ P-CI of BM	Tidelands Avenue to Marina Way	H				12,303	3	Generic - Highway (From J&S SR95	30	50	68.0
193	Bay Marina Drive - HZ+TB-GH w/ P-CI of BM	Marina Way to Cleveland Avenue	H				21,198	3	Generic - Highway (From J&S SR95	30	50	70.4
194	Bay Marina Drive - HZ+TB-GH w/ P-CI of BM	Cleveland Avenue to I-5 SB Ramps	H				36,843	3	Generic - Highway (From J&S SR95	30	50	72.7
195	Bay Marina Drive - HZ+TB-GH w/ P-CI of BM	I-5 SB Ramps to I-5 NB Ramps	H				37,033	3	Generic - Highway (From J&S SR95	30	50	72.8
196	West 18th Street - HZ+TB-GH w/ P-CI of BM	Cleveland Avenue to McKinley Avenue	H				1,930	1	Generic - Arterial Roadways (From	30	50	55.9
197	West 19th Street - HZ+TB-GH w/ P-CI of BM	Tidelands Avenue to Cleveland Avenue	H				5,016	1	Generic - Arterial Roadways (From	30	50	59.8
198	West 19th Street - HZ+TB-GH w/ P-CI of BM	Cleveland Avenue to McKinley Avenue	H				2,728	1	Generic - Arterial Roadways (From	30	50	57.3
199	Marina Way - HZ+TB-GH w/ P-CI of BM	Bay Marina Drive to West 32nd Street	H				9,446	1	Generic - Arterial Roadways (From	25	50	60.9
200	West 32nd Street - HZ+TB-GH w/ P-CI of BM	Tidelands Avenue to Marina Way	H				3,061	1	Generic - Arterial Roadways (From	25	50	56.2

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	National City Bayfront
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Receiver Parameters	
Receiver:	GB Capital Visitor Accommodations
Land Use Category:	2. Residential
Existing Noise (Measured or Generic Value):	68 dBA

Noise Source Parameters	
Number of Noise Sources:	4

Noise Source Parameters		Source 1
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Electric Locomotive
Daytime hrs	Avg. Number of Locos/train	0
	Speed (mph)	0
	Avg. Number of Events/hr	0
Nighttime hrs	Avg. Number of Locos/train	4
	Speed (mph)	10
	Avg. Number of Events/hr	0.222222222
Distance	Distance from Source to Receiver (ft)	150
	Number of Intervening Rows of Buildings	0
Adjustments		

Noise Source Parameters		Source 2
	Source Type:	Fixed Guideway
	Specific Source:	Rail Car
Daytime hrs	Avg. Number of Rail Cars/train	0
	Speed (mph)	0
	Avg. Number of Events/hr	0
Nighttime hrs	Avg. Number of Rail Cars/train	74
	Speed (mph)	10
	Avg. Number of Events/hr	0.222222222
Distance	Distance from Source to Receiver (ft)	150
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No
	Joint Track/Crossover?	No
	Embedded Track?	No
	Aerial Structure?	No

Noise Source Parameters		Source 3
	Source Type:	Stationary Source
	Specific Source:	Rail Yard & Shops
Daytime hrs	Avg. Number of Trains/hr	0
Nighttime hrs	Avg. Number of Trains/hr	0.111111111
Distance	Distance from Source to Receiver (ft)	150
	Number of Intervening Rows of Buildings	0
Adjustments	Noise Barrier?	No

Noise Source Parameters		Source 4
	Source Type:	Fixed Guideway
	Specific Source:	Locomotive Warning Horn
Daytime hrs	Speed (mph)	
	Avg. Number of Events/hr	
Nighttime hrs	Speed (mph)	10
	Avg. Number of Events/hr	0.222222222
Distance	Distance from Source to Receiver (ft)	150
	Number of Intervening Rows of Buildings	0
Adjustments		

Project: National City Bayfront
Receiver: GB Capital Visitor Accommodations

Source	Distance	Project Ldn	Existing Ldn
1 Diesel Electric Locomotive	150 ft	61.5 dBA	68 dBA
2 Rail Car	150 ft	43.2 dBA	68 dBA
3 Rail Yard & Shops	150 ft	53.7 dBA	68 dBA
4 Locomotive Warning Horn	150 ft	66.5 dBA	68 dBA
5 --	ft		68 dBA
6 --	ft		68 dBA
Combined Sources		68 dBA	68 dBA

Calculation of Operational Noise Levels from Stationary Source(s)

Source Noise Level Data

Source #	Description	Single Distance (S), or Acoustical Average (A)?	Single Distance, ft	Hard or Soft Site?	Measured/ Stated Noise Level, dBA	Reference Noise Level @ 50 feet, dBA	Distance Attenuation Coefficient	Data Source
1	CP Prog. Mech. Equip. (HVAC)	S	50	Hard	76.0	76.0	20	FAL
2	GBC Hotel #1 Mech. Equip. (HVAC)	S	50	Hard	76.0	76.0	20	FAL
3	GBC Hotel #2 Mech. Equip. (HVAC)	S	50	Hard	76.0	76.0	20	FAL
4	GBC Hotel #3 Mech. Equip. (HVAC)	S	50	Hard	76.0	76.0	20	FAL
5	GBC Hotel #4 Mech. Equip. (HVAC)	S	50	Hard	76.0	76.0	20	FAL
6	Pool Area (Human Voice)	S	50	Hard	73.2	73.2	20	Harris 1998
7	Pepper Park (Human Voice)	S	50	Hard	73.2	73.2	20	Harris 1998
8	CP Parking Lot	S	50	Hard	67.3	67.3	20	SoundPLAN
9	GB P1 Parking Lot	S	50	Hard	64.4	64.4	20	SoundPLAN
10	GB P2 Parking Lot	S	50	Hard	68.8	68.8	20	SoundPLAN
11	P.P Parking Lot	S	50	Hard	61.0	61.0	20	SoundPLAN
12	Amphitheater (Live Music)	S	50	Hard	91.1	91.1	20	Measured
13	Boat Storage Equip.	S	50	Hard	75.1	75.1	20	RCNM
14	RV Phase 1 HVAC	S	50	Hard	53.7	53.7	20	Based on supplied Data
15	RV Phase 2 HVAC	S	50	Hard	50.8	50.8	20	Based on supplied Data

Receptors

Receptor	Description
1	SFRs - Cleveland Ave
2	Adult School
3	BW Hotel North
4	BW Hotel South
5	GBC Hotel #1
6	GBC Hotel #2
7	GBC Hotel #3
8	GBC Hotel #4
9	RV Park Phase 1
10	RV Park Phase 2
11	Pepper Park
12	Museum
13	Modular Cabins (GB Phase 1)
14	City Program Component (Hotel)

Table 1. Resultant Noise Levels and Increases in Ambient Noise, R2: Single Family Residential on Cleveland Ave

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
SFRs - Cleveland Ave	CP Prog. Mech. Equip. (HVAC)	76.0	542	50.1	50.1	50.1	50.1	50.1
SFRs - Cleveland Ave	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	3530	29.8	29.8	29.8	29.8	29.8
SFRs - Cleveland Ave	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	3590	29.6	29.6	29.6	29.6	29.6
SFRs - Cleveland Ave	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	3140	31.1	31.1	31.1	31.1	31.1
SFRs - Cleveland Ave	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	3290	30.5	30.5	30.5	30.5	30.5
SFRs - Cleveland Ave	Pool Area (Human Voice)	73.2	3310	27.7	27.7	N/A	27.7	N/A
SFRs - Cleveland Ave	Pool Area (Human Voice)	73.2	3690	26.5	26.5	N/A	26.5	N/A
SFRs - Cleveland Ave	Pepper Park (Human Voice)	73.2	4250	24.9	24.9	24.9	24.9	24.9
SFRs - Cleveland Ave	CP Parking Lot	67.3	542	41.4	41.4	41.4	41.4	41.4
SFRs - Cleveland Ave	GB P1 Parking Lot	64.4	3284	19.0	19.0	19.0	19.0	19.0
SFRs - Cleveland Ave	GB P2 Parking Lot	68.8	3048	24.2	24.2	24.2	24.2	24.2
SFRs - Cleveland Ave	P.P Parking Lot	61.0	4116	13.1	13.1	13.1	13.1	13.1
SFRs - Cleveland Ave	Amphitheater (Live Music)	91.1	4300	42.8	N/A	N/A	42.8	42.8
SFRs - Cleveland Ave	Boat Storage Equip.	75.1	3079	30.4	30.4	30.4	30.4	30.4
SFRs - Cleveland Ave	RV Phase 1 HVAC	53.7	3284	8.2	8.2	8.2	8.2	8.2
SFRs - Cleveland Ave	RV Phase 2 HVAC	50.8	3048	6.2	6.2	6.2	6.2	6.2
Highlighted noise source(s) are responsible for the reported noise impacts		Combined Operational Noise Level:			51	51	52	51
		Threshold:			55	45	55	45
		Measured Ambient:			57	56	57	56
		Project + Ambient:			58	57	59	57
		Ambient Increase:			1	1	1	1
		Exceeds Threshold?			No	Exceeds	No	Exceeds

Table 2. Resultant Noise Levels and Increases in Ambient Noise, R4: National City Depot Museum

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
Museum	CP Prog. Mech. Equip. (HVAC)	76.0	311	60.1	60.1	N/A	60.1	N/A
Museum	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	2980	31.6	31.6	N/A	31.6	N/A
Museum	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	3055	31.3	31.3	N/A	31.3	N/A
Museum	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	2870	32.0	32.0	N/A	32.0	N/A
Museum	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	2735	32.6	32.6	N/A	32.6	N/A
Museum	Pool Area (Human Voice)	73.2	2785	29.5	29.5	N/A	29.5	N/A
Museum	Pool Area (Human Voice)	73.2	2150	32.3	32.3	N/A	32.3	N/A
Museum	Pepper Park (Human Voice)	73.2	3575	26.8	26.8	N/A	26.8	N/A
Museum	CP Parking Lot	67.3	311	51.4	51.4	N/A	51.4	N/A
Museum	GB P1 Parking Lot	64.4	2215	23.2	23.2	N/A	23.2	N/A
Museum	GB P2 Parking Lot	68.8	2215	27.6	27.6	N/A	27.6	N/A
Museum	P.P Parking Lot	61.0	2425	18.8	18.8	N/A	18.8	N/A
Museum	Amphitheater (Live Music)	91.1	3770	44.2	N/A	N/A	44.2	N/A
Museum	Boat Storage Equip.	75.1	2170	34.2	34.2	N/A	34.2	N/A
Museum	RV Phase 1 HVAC	53.7	2210	12.5	12.5	N/A	12.5	N/A
Museum	RV Phase 2 HVAC	50.8	2210	9.7	9.7	N/A	9.7	N/A
		Combined Operational Noise Level:			61	-	61	-
		Threshold:			65	-	65	-
		Measured Ambient:			61	-	61	-
		Project + Ambient:			64	-	64	-
		Ambient Increase:			3	-	3	-
		Exceeds Threshold?			No	-	No	-

Table 3. Resultant Noise Levels and Increases in Ambient Noise, R5: City Program Component (Hotel)

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
City Program Component (Hotel)	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	3015	31.5	31.5	31.5	31.5	31.5
City Program Component (Hotel)	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	3007	31.5	31.5	31.5	31.5	31.5
City Program Component (Hotel)	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	2707	32.7	32.7	32.7	32.7	32.7
City Program Component (Hotel)	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	2565	33.2	33.2	33.2	33.2	33.2
City Program Component (Hotel)	Pool Area (Human Voice)	73.2	2657	30.0	30.0	30.0	30.0	30.0
City Program Component (Hotel)	Pool Area (Human Voice)	73.2	3057	28.5	28.5	28.5	28.5	28.5
City Program Component (Hotel)	Pepper Park (Human Voice)	73.2	3569	26.8	26.8	26.8	26.8	26.8
City Program Component (Hotel)	GB P1 Parking Lot	64.4	2635	21.4	21.4	21.4	21.4	21.4
City Program Component (Hotel)	GB P2 Parking Lot	68.8	2765	25.2	25.2	25.2	25.2	25.2
City Program Component (Hotel)	P.P Parking Lot	61.0	3433	15.0	15.0	15.0	15.0	15.0
City Program Component (Hotel)	Amphitheater (Live Music)	91.1	3575	44.8	N/A	N/A	44.8	44.8
City Program Component (Hotel)	Boat Storage Equip.	75.1	1985	35.2	35.2	35.2	35.2	35.2
City Program Component (Hotel)	RV Phase 1 HVAC	53.7	2584	10.8	10.8	10.8	10.8	10.8
City Program Component (Hotel)	RV Phase 2 HVAC	50.8	2285	9.3	9.3	9.3	9.3	9.3
Combined Operational Noise Level:					41	41	46	46
Threshold:					65	60	65	60
Measured Ambient:					-	-	-	-
Project + Ambient:					-	-	-	-
Ambient Increase:								
Exceeds Threshold?					No	No	No	No

Table 4. Resultant Noise Levels and Increases in Ambient Noise, R6: National City Adult Day School

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
Adult School	CP Prog. Mech. Equip. (HVAC)	76.0	756	36.5	36.5	N/A	36.5	N/A
Adult School	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	3450	20.0	20.0	N/A	20.0	N/A
Adult School	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	3470	20.0	20.0	N/A	20.0	N/A
Adult School	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	2970	21.7	21.7	N/A	21.7	N/A
Adult School	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	2800	22.3	22.3	N/A	22.3	N/A
Adult School	Pool Area (Human Voice)	73.2	3186	18.1	18.1	N/A	18.1	N/A
Adult School	Pool Area (Human Voice)	73.2	3590	16.8	16.8	N/A	16.8	N/A
Adult School	Pepper Park (Human Voice)	73.2	4060	15.4	15.4	N/A	15.4	N/A
Adult School	CP Parking Lot	67.3	756	27.8	27.8	N/A	27.8	N/A
Adult School	GB P1 Parking Lot	64.4	3122	9.5	9.5	N/A	9.5	N/A
Adult School	GB P2 Parking Lot	68.8	2868	14.8	14.8	N/A	14.8	N/A
Adult School	P.P Parking Lot	61.0	4001	3.4	3.4	N/A	3.4	N/A
Adult School	Amphitheater (Live Music)	91.1	4200	33.0	N/A	N/A	33.0	N/A
Adult School	Boat Storage Equip.	75.1	2940	20.9	20.9	N/A	20.9	N/A
Adult School	RV Phase 1 HVAC	53.7	3122	-1.2	-1.2	N/A	-1.2	N/A
Adult School	RV Phase 2 HVAC	50.8	2868	-3.2	-3.2	N/A	-3.2	N/A
Combined Operational Noise Level:					38	-	39	-
Threshold:					60	-	60	-
Measured Ambient:					65	-	65	-
Project + Ambient:					65	-	65	-
Ambient Increase:					0	-	0	-
Exceeds Threshold?					No	-	No	-

Table 5. Resultant Noise Levels and Increases in Ambient Noise, R7: Best Western Hotel (North)

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
BW Hotel North	CP Prog. Mech. Equip. (HVAC)	76.0	302	60.4	60.4	60.4	60.4	60.4
BW Hotel North	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	2720	32.6	32.6	32.6	32.6	32.6
BW Hotel North	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	2770	32.4	32.4	32.4	32.4	32.4
BW Hotel North	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	2320	34.3	34.3	34.3	34.3	34.3
BW Hotel North	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	2470	33.7	33.7	33.7	33.7	33.7
BW Hotel North	Pool Area (Human Voice)	73.2	2500	30.7	30.7	N/A	30.7	N/A
BW Hotel North	Pool Area (Human Voice)	73.2	2880	29.2	29.2	N/A	29.2	N/A
BW Hotel North	Pepper Park (Human Voice)	73.2	3300	27.7	27.7	27.7	27.7	27.7
BW Hotel North	CP Parking Lot	67.3	302	51.6	51.6	51.6	51.6	51.6
BW Hotel North	GB P1 Parking Lot	64.4	2439	22.2	22.2	22.2	22.2	22.2
BW Hotel North	GB P2 Parking Lot	68.8	2213	27.7	27.7	27.7	27.7	27.7
BW Hotel North	P.P Parking Lot	61.0	3311	15.4	15.4	15.4	15.4	15.4
BW Hotel North	Amphitheater (Live Music)	91.1	3530	39.9	N/A	N/A	39.9	39.9
BW Hotel North	Boat Storage Equip.	75.1	2229	33.9	33.9	33.9	33.9	33.9
BW Hotel North	RV Phase 1 HVAC	53.7	2439	11.4	11.4	11.4	11.4	11.4
BW Hotel North	RV Phase 2 HVAC	50.8	2213	9.6	9.6	9.6	9.6	9.6
Highlighted noise source(s) are responsible for the reported noise impacts		Combined Operational Noise Level:			61	61	61	61
		Threshold:			65	60	65	60
		Measured Ambient:			61	57	61	57
		Project + Ambient:			64	62	64	62
		Ambient Increase:			3	5	3	5
		Exceeds Threshold?			No	Exceeds	No	Exceeds

Table 6. Resultant Noise Levels and Increases in Ambient Noise, R7: Best Western Hotel (South)

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
BW Hotel South	CP Prog. Mech. Equip. (HVAC)	76.0	633	48.4	48.4	48.4	48.4	48.4
BW Hotel South	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	2410	33.9	33.9	33.9	33.9	33.9
BW Hotel South	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	2460	33.7	33.7	33.7	33.7	33.7
BW Hotel South	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	2010	35.9	35.9	35.9	35.9	35.9
BW Hotel South	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	2160	35.1	35.1	35.1	35.1	35.1
BW Hotel South	Pool Area (Human Voice)	73.2	2190	32.1	32.1	N/A	32.1	N/A
BW Hotel South	Pool Area (Human Voice)	73.2	2570	30.4	30.4	N/A	30.4	N/A
BW Hotel South	Pepper Park (Human Voice)	73.2	3025	28.6	28.6	28.6	28.6	28.6
BW Hotel South	CP Parking Lot	67.3	633	39.7	39.7	39.7	39.7	39.7
BW Hotel South	GB P1 Parking Lot	64.4	2748	20.9	20.9	20.9	20.9	20.9
BW Hotel South	GB P2 Parking Lot	68.8	2517	26.3	26.3	26.3	26.3	26.3
BW Hotel South	P.P Parking Lot	61.0	3611	14.5	14.5	14.5	14.5	14.5
BW Hotel South	Amphitheater (Live Music)	91.1	3195	46.0	N/A	N/A	46.0	46.0
BW Hotel South	Boat Storage Equip.	75.1	2535	32.5	32.5	32.5	32.5	32.5
BW Hotel South	RV Phase 1 HVAC	53.7	2748	10.2	10.2	10.2	10.2	10.2
BW Hotel South	RV Phase 2 HVAC	50.8	2517	8.3	8.3	8.3	8.3	8.3
		Combined Operational Noise Level:			50	50	51	51
		Threshold:			65	60	65	60
		Measured Ambient:			61	57	61	57
		Project + Ambient:			61	58	61	58
		Ambient Increase:			0	1	0	1
		Exceeds Threshold?			No	No	No	No

Table 7. Resultant Noise Levels and Increases in Ambient Noise, R9: RV Park Phase 1&2

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
RV Park Phase 2	CP Prog. Mech. Equip. (HVAC)	76.0	1985	36.0	36.0	36.0	36.0	36.0
RV Park Phase 2	Pepper Park (Human Voice)	73.2	1095	39.7	39.7	39.7	39.7	39.7
RV Park Phase 2	CP Parking Lot	67.3	1985	27.3	27.3	27.3	27.3	27.3
RV Park Phase 2	P.P. Parking Lot	61.0	870	29.9	29.9	29.9	29.9	29.9
RV Park Phase 2	Amphitheater (Live Music)	91.1	1100	57.6	N/A	N/A	57.6	57.6
RV Park Phase 2	Boat Storage Equip.	75.1	150	65.6	65.6	65.6	65.6	65.6
Highlighted noise source(s) are responsible for the reported noise impacts		Combined Operational Noise Level:			66	66	66	66
		Threshold:			65	60	65	60
		Measured Ambient:			-	-	-	-
		Project + Ambient:			-	-	-	-
		Exceeds Threshold?			Exceeds	Exceeds	Exceeds	Exceeds

Table 8. Resultant Noise Levels and Increases in Ambient Noise, R11: GB Capital Hotel #4

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
GBC Hotel #4	CP Prog. Mech. Equip. (HVAC)	76.0	2570	33.2	33.2	33.2	33.2	33.2
GBC Hotel #4	Pepper Park (Human Voice)	73.2	1425	36.8	36.8	36.8	36.8	36.8
GBC Hotel #4	CP Parking Lot	67.3	2570	24.5	24.5	24.5	24.5	24.5
GBC Hotel #4	P.P. Parking Lot	61.0	1129	27.1	27.1	27.1	27.1	27.1
GBC Hotel #4	Amphitheater (Live Music)	91.1	1435	54.7	N/A	N/A	54.7	54.7
GBC Hotel #4	Boat Storage Equip.	75.1	737	45.9	45.9	45.9	45.9	45.9
		Combined Operational Noise Level:			47	47	55	55
		Threshold:			65	60	65	60
		Measured Ambient:			-	-	-	-
		Project + Ambient:			-	-	-	-
		Exceeds Threshold?			No	No	No	No

Table 9. Resultant Noise Levels and Increases in Ambient Noise, R10: GB Capital Hotel #3

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
GBC Hotel #3	CP Prog. Mech. Equip. (HVAC)	76.0	2645	32.9	32.9	32.9	32.9	32.9
GBC Hotel #3	Pepper Park (Human Voice)	73.2	1246	38.3	38.3	38.3	38.3	38.3
GBC Hotel #3	CP Parking Lot	67.3	2645	24.2	24.2	24.2	24.2	24.2
GBC Hotel #3	P.P. Parking Lot	61.0	942	29.1	29.1	29.1	29.1	29.1
GBC Hotel #3	Amphitheater (Live Music)	91.1	1235	56.3	N/A	N/A	56.3	56.3
GBC Hotel #3	Boat Storage Equip.	75.1	688	46.6	46.6	46.6	46.6	46.6
		Combined Operational Noise Level:			47	47	57	57
		Threshold:			65	60	65	60
		Measured Ambient:			-	-	-	-
		Project + Ambient:			-	-	-	-
		Exceeds Threshold?			No	No	No	No

Table 10. Resultant Noise Levels and Increases in Ambient Noise, R13: GB Capital Hotel #1

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
GBC Hotel #1	Pepper Park (Human Voice)	73.2	395	55.2	55.2	55.2	55.2	55.2
GBC Hotel #1	P.P Parking Lot	61.0	159	48.4	48.4	48.4	48.4	48.4
GBC Hotel #1	Amphitheater (Live Music)	91.1	425	67.9	N/A	N/A	67.9	67.9
GBC Hotel #1	Boat Storage Equip.	75.1	245	57.9	57.9	57.9	57.9	57.9
Combined Operational Noise Level:					60	60	69	69
Threshold:					65	60	65	60
Measured Ambient:					-	-	-	-
Project + Ambient:					-	-	-	-
Ambient Increase:								
Exceeds Threshold?					No	No	Exceeds	Exceeds

Highlighted noise source(s) are responsible for the reported noise impacts

Table 11. Resultant Noise Levels and Increases in Ambient Noise, R14: GB Capital Hotel #2

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
GBC Hotel #2	CP Prog. Mech. Equip. (HVAC)	76.0	2870	32.0	32.0	32.0	32.0	32.0
GBC Hotel #2	Pepper Park (Human Voice)	73.2	527	47.6	47.6	47.6	47.6	47.6
GBC Hotel #2	CP Parking Lot	67.3	2870	23.3	23.3	23.3	23.3	23.3
GBC Hotel #2	P.P Parking Lot	61.0	136	50.1	50.1	50.1	50.1	50.1
GBC Hotel #2	Amphitheater (Live Music)	91.1	555	65.0	N/A	N/A	65.0	65.0
GBC Hotel #2	Boat Storage Equip.	75.1	488	50.4	50.4	50.4	50.4	50.4
Combined Operational Noise Level:					54	54	65	65
Threshold:					65	60	65	60
Measured Ambient:					-	-	-	-
Project + Ambient:					-	-	-	-
Ambient Increase:								
Exceeds Threshold?					No	No	No	Exceeds

Highlighted noise source(s) are responsible for the reported noise impacts

Table 12. Resultant Noise Levels and Increases in Ambient Noise, R15: RV Park Phase 1

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
RV Park Phase 1	CP Prog. Mech. Equip. (HVAC)	76.0	1985	36.0	36.0	36.0	36.0	36.0
RV Park Phase 1	Pepper Park (Human Voice)	73.2	242	56.0	56.0	56.0	56.0	56.0
RV Park Phase 1	CP Parking Lot	67.3	1985	27.3	27.3	27.3	27.3	27.3
RV Park Phase 1	P.P Parking Lot	61.0	117	51.7	51.7	51.7	51.7	51.7
RV Park Phase 1	Amphitheater (Live Music)	91.1	300	71.7			71.7	71.7
RV Park Phase 1	Boat Storage Equip.	75.1	150	65.6	65.6	65.6	65.6	65.6
Combined Operational Noise Level:					66	66	73	73
Threshold:					65	60	65	60
Measured Ambient:					-	-	-	-
Project + Ambient:					-	-	-	-
Ambient Increase:								
Exceeds Threshold?					Exceeds	Exceeds	Exceeds	Exceeds

Highlighted noise source(s) are responsible for the reported noise impacts

Table 13. Resultant Noise Levels and Increases in Ambient Noise, R16: Modular Cabins (GB Phase 1)

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
Modular Cabins (GB Phase 1)	CP Prog. Mech. Equip. (HVAC)	76.0	2860	32.1	32.1	32.1	32.1	32.1
Modular Cabins (GB Phase 1)	Pepper Park (Human Voice)	73.2	800	49.1	49.1	49.1	49.1	49.1
Modular Cabins (GB Phase 1)	CP Parking Lot	67.3	2860	23.3	23.3	23.3	23.3	23.3
Modular Cabins (GB Phase 1)	P.P. Parking Lot	61.0	664	38.5	38.5	38.5	38.5	38.5
Modular Cabins (GB Phase 1)	Amphitheater (Live Music)	91.1	955	65.5	N/A	N/A	65.5	65.5
Modular Cabins (GB Phase 1)	Boat Storage Equip.	75.1	970	42.9	42.9	42.9	42.9	42.9
Highlighted noise source(s) are responsible for the reported noise impacts		Combined Operational Noise Level:			50	50	66	66
		Threshold:			65	60	65	60
		Measured Ambient:			-	-	-	-
		Project + Ambient:			-	-	-	-
		Ambient Increase:			-	-	-	-
		Exceeds Threshold?			No	No	Exceeds	Exceeds

Table 14. Resultant Noise Levels and Increases in Ambient Noise, R17: Pepper Park

Receptor	Source	Reference Noise Level @ 50 feet	Distance, ft	Resulting Noise Level, dBA	Typical Daytime	Typical Nighttime	Daytime w/ Amphitheater	Nighttime w/ Amphitheater
Pepper Park	CP Prog. Mech. Equip. (HVAC)	76.0	3430	30.1	30.1	30.1	30.1	30.1
Pepper Park	GBC Hotel #1 Mech. Equip. (HVAC)	76.0	387	53.8	53.8	53.8	53.8	53.8
Pepper Park	GBC Hotel #2 Mech. Equip. (HVAC)	76.0	473	51.6	51.6	51.6	51.6	51.6
Pepper Park	GBC Hotel #3 Mech. Equip. (HVAC)	76.0	1225	41.3	41.3	41.3	41.3	41.3
Pepper Park	GBC Hotel #4 Mech. Equip. (HVAC)	76.0	1351	40.2	40.2	40.2	40.2	40.2
Pepper Park	Pool Area (Human Voice)	73.2	760	43.6	43.6	N/A	43.6	N/A
Pepper Park	Pool Area (Human Voice)	73.2	340	52.4	52.4	N/A	52.4	N/A
Pepper Park	CP Parking Lot	67.3	3430	21.3	21.3	21.3	21.3	21.3
Pepper Park	GB P1 Parking Lot	64.4	150	52.5	52.5	52.5	52.5	52.5
Pepper Park	GB P2 Parking Lot	68.8	370	47.1	47.1	47.1	47.1	47.1
Pepper Park	Boat Storage Equip.	75.1	1009	42.5	42.5	42.5	42.5	42.5
Pepper Park	RV Phase 1 HVAC	53.7	150	41.7	41.7	41.7	41.7	41.7
Pepper Park	RV Phase 2 HVAC	50.8	1192	16.4	16.4	16.4	16.4	16.4
		Combined Operational Noise Level:			59	58	59	58
		Threshold:			65	60	65	60
		Measured Ambient:			62	57	62	57
		Project + Ambient:			64	61	64	61
		Ambient Increase:			2	3	2	3
		Exceeds Threshold?			No	No	No	No

Table 1. Construction Vibration Analysis - Potential Building Damage, Distance to Criteria

Vibration attenuation constant (n): 1.1			Extremely fragile historic buildings, ruins, ancient monuments	Fragile buildings	Historic and some old buildings	Older residential structures	New residential structures	Modern industrial/commercial buildings
Equipment Item	Reference PPV at 25 feet, in/s ^a	Building Category: Vibration Damage Impact Criteria, PPV, in/s:	0.08	0.1	0.25	0.3	0.5	0.5
Impact Pile Driver	0.65	Distance to Impact Criteria, feet:	168	138	60	51	32	32
Hydraulic Breaker	0.24		68	56	25	21	13	13
Vibratory roller	0.21		61	50	22	19	12	12
Large bulldozer ^b	0.089		28	23	10	9	6	6
Jackhammer	0.035		12	10	5	4	3	3
Small bulldozer ^c	0.003		2	2	1	1	1	1

^a Obtained from "Transportation and Construction Vibration Guidance Manual", Caltrans 2020

^b Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

^c Considered representative of smaller equipment such as mini excavators.

Table 2. Construction Vibration Analysis - Human Response, Distance to Criteria

Vibration attenuation constant (n):		1.1				
Equipment Item	Reference PPV at 25 feet, in/s ^a	Perceptibility:	Barely perceptible	Distinctly perceptible	Strongly perceptible	Severe
		Vibration Damage Impact Criteria, PPV, in/s:	0.01	0.04	0.1	0.4
Impact Pile Driver	0.65	Distance to Impact Criteria, feet:	1112	316	138	39
Hydraulic Breaker	0.24		450	128	56	16
Vibratory roller	0.21		399	113	50	14
Large bulldozer ^b	0.089		183	52	23	7
Jackhammer	0.035		79	23	10	3
Small bulldozer ^c	0.003		9	3	2	1

^a Obtained from "Transportation and Construction Vibration Guidance Manual", Caltrans 2020

^b Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

^c Considered representative of smaller equipment such as mini excavators.

Table 3. Construction Vibration Analysis - Predicted PPV and Human Response at Sensitive Receptors

Receiver - Source Component	Distance (ft) - measured from rec. to closest const. area boundary	Vibration from pile driving		Vibration from Hydraulic Breaker		Vibration from Vibratory Roller		Vibration from Large Earthmoving Equipment ¹		Vibration from Jackhammer		Vibration from Small Earthmoving Equipment ²	
		Predicted PPV, in/sec	Human Response	Predicted PPV, in/sec	Human Response	Predicted PPV, in/sec	Human Response	Predicted PPV, in/sec	Human Response	Predicted PPV, in/sec	Human Response	Predicted PPV, in/sec	Human Response
Reference Location	25	0.650	N/A (for reference only)	0.240	N/A (for reference only)	0.210	N/A (for reference only)	0.089	N/A (for reference only)	0.035	N/A (for reference only)	0.003	N/A (for reference only)
Receiver 1: Wilson Ave SFR - CP hotel (Piles)	3195	0.003	Below barely perceptible	0.001	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 1: Wilson Ave SFR - BS Bikeway	645	N/A	N/A	0.007	Below barely perceptible	0.006	Below barely perceptible	0.002	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible
Receiver 1: Wilson Ave SFR - GB Capital	5000	N/A	N/A	0.001	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 2: Cleveland Ave SFR - CP Hotel (Piles)	390	0.032	Barely perceptible	0.012	Barely perceptible	0.010	Barely perceptible	0.004	Below barely perceptible	0.002	Below barely perceptible	0.000	Below barely perceptible
Receiver 2: Cleveland Ave SFR - BS Bikeway	40	N/A	N/A	0.143	Strongly perceptible	0.125	Strongly perceptible	0.053	Distinctly perceptible	0.021	Barely perceptible	0.002	Below barely perceptible
Receiver 2: Cleveland Ave SFR - GB Capital	2400	N/A	N/A	0.002	Below barely perceptible	0.001	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 3: NC Adult School - CP hotel (Piles)	510	0.024	Barely perceptible	0.009	Below barely perceptible	0.008	Below barely perceptible	0.003	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible
Receiver 3: NC Adult School - BS Bikeway	385	N/A	N/A	0.012	Barely perceptible	0.010	Barely perceptible	0.004	Below barely perceptible	0.002	Below barely perceptible	0.000	Below barely perceptible
Receiver 3: NC Adult School - GB Capital	2190	N/A	N/A	0.002	Below barely perceptible	0.002	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 4: BW Hotel - CP hotel (piles)	170	0.079	Distinctly perceptible	0.029	Barely perceptible	0.025	Barely perceptible	0.011	Barely perceptible	0.004	Below barely perceptible	0.000	Below barely perceptible
Receiver 4: BW Hotel - Bikeway	50	N/A	N/A	0.112	Strongly perceptible	0.098	Distinctly perceptible	0.042	Distinctly perceptible	0.016	Barely perceptible	0.001	Below barely perceptible
Receiver 4: BW Hotel - GB Capital	1250	N/A	N/A	0.003	Below barely perceptible	0.003	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 5: Historic Santa Fe Rail Depot - CP hotel (Piles)	130	0.106	Strongly perceptible	0.039	Barely perceptible	0.034	Barely perceptible	0.015	Barely perceptible	0.006	Below barely perceptible	0.000	Below barely perceptible
Receiver 5: Historic Santa Fe Rail Depot - BS Bikeway	90	N/A	N/A	0.059	Distinctly perceptible	0.051	Distinctly perceptible	0.022	Barely perceptible	0.009	Below barely perceptible	0.001	Below barely perceptible
Receiver 5: Historic Santa Fe Rail Depot - GB Capital	1950	N/A	N/A	0.002	Below barely perceptible	0.002	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 6: Office - 2240 Cleveland Ave - CP (piles)	105	0.134	Strongly perceptible	0.050	Distinctly perceptible	0.043	Distinctly perceptible	0.018	Barely perceptible	0.007	Below barely perceptible	0.001	Below barely perceptible
Receiver 6: Office - 2240 Cleveland Ave - BS Bikeway	70	N/A	N/A	0.077	Distinctly perceptible	0.068	Distinctly perceptible	0.029	Barely perceptible	0.011	Barely perceptible	0.001	Below barely perceptible
Receiver 6: Office - 2240 Cleveland Ave - GB Capital	2060	N/A	N/A	0.002	Below barely perceptible	0.002	Below barely perceptible	0.001	Below barely perceptible	0.000	Below barely perceptible	0.000	Below barely perceptible
Receiver 7: Goodies Restaurant - CP Pile Driving	180	0.07	Distinctly perceptible	0.03	Barely perceptible	0.02	Barely perceptible	0.01	Barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible
Receiver 7 :Goodies Bar and Grill - BS Bikeway	55	N/A	N/A	0.10	Strongly perceptible	0.09	Distinctly perceptible	0.04	Barely perceptible	0.01	Barely perceptible	0.00	Below barely perceptible
Receiver 7 :Goodies Bar and Grill - GB Capital	1540	N/A	N/A	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible
Receiver 8 : Pier 32 Marina/Waterfront Grill - CP Pile Driving	2690	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible	0.00	Below barely perceptible
Receiver 8 : Pier 32 Marina/Waterfront Grill - BS Bikeway	133	N/A	N/A	0.04	Barely perceptible	0.03	Barely perceptible	0.01	Barely perceptible	0.01	Below barely perceptible	0.00	Below barely perceptible
Receiver 8: Pier 32 Marina/Waterfront Grill - GB Capital	25	0.65	Severe	0.24	Strongly perceptible	0.21	Strongly perceptible	0.09	Distinctly perceptible	0.04	Barely perceptible	0.00	Below barely perceptible

¹ Considered representative of any full size/large excavator, dozer, backhoe, etc.² Considered representative of any small excavator, dozer, backhoe, etc.