PUBLIC REVIEW DRAFT



Initial Study / Mitigated Negative Declaration

Point Molate Beach Park Shoreline Restoration Project

City of Richmond, CA

October 2020

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Point Molate Beach Park Shoreline Restoration Project

City of Richmond, CA

Initial Study / Mitigated Negative Declaration

Prepared for:

City of Richmond

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MITIGATED NEGATIVE DECLARATION

The City of Richmond, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

The Point Molate Beach Shoreline Restoration Project. The Point Molate Beach Park Shoreline Restoration Project proposes to address the bluff erosion and culvert failure by constructing a 300 foot revetment along the beach bluff and replacing a failed 12-inch by 30-foot iron pipe with a 15-inch by 60-foot reinforced concrete culvert. The project would also complete an 80-foot section of the San Francisco Bay Trail along this section of the bluff. Left unchecked, this erosion will continue to encroach upon the Bay Trail route, park facilities, trees, cultural resources, and open space.

The City Council proposes to:

- Adopt the Mitigated Negative Declaration
- Approve the Point Molate Beach Shoreline Restoration Project

The City of Richmond has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

This Mitigated Negative Declaration has been prepared pursuant to Title 14, Section 15070 of the California Code of Regulations; the Local Environmental Regulations adopted by the City of Richmond; and the Richmond Municipal Code.

Copies are also available for review at the City of Richmond, **Planning Division**, City Hall, 450 Civic Center Plaza, Richmond, CA, 94804 by appointment only due to COVID-19, and also online at **www.ci.richmond.ca.us/pmshorelinerestoration**

Community Development Director, City of Richmond, California, a municipal corporation

October 8, 2020
Dated:

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Executive Summary

PROJECT BACKGROUND AND DESCRIPTION

The City of Richmond (City) has prioritized the need to restore actively eroding portions of the shoreline at the Point Molate Beach Park (Beach Park). The Beach Park is in the southernmost portion of the larger Point Molate property, formerly the Point Molate Naval Fuel Depot. The Beach Park is accessed via Stenmark Drive, approximately 1.5 miles north of the Richmond-San Rafael Bridge. Continual coastal wave and tidal action are causing a loss of park area and severe undercutting is present near a broken culvert. Left unchecked, this erosion will continue to encroach upon park facilities, trees, cultural resources, and open space. This coastal erosion has undercut the shoreline and the planned alignment for the San Francisco Bay Trail (Bay Trail) at Point Molate, a Class I bike trail currently being designed for the East Bay Regional Park District and the City.

The City conducted an assessment to characterize erosion at the site and developed erosion-repair alternatives. Preliminary design alternatives included placing a rock revetment or constructing a piled retaining wall with riprap protection. The proposed beach restoration consists of an approximately 300-foot-long rock revetment situated at the north end of Beach Park. This rock structure would consist of layers of rock and geotextile placed on the shoreline bluff to impede the progress of erosion. Sand would be removed to a depth of up to 4 feet in the rock revetment area to allow placement of the various layers. Sand removed from the rock revetment area would be spread out over the sand beach at the toe of the rock revetment and along the bluff extending further into Beach Park.

An existing 12-inch culvert pipe drains the upland watershed above the top of the bank. The pipe is deteriorated and broken at the bluff face. As part of the proposed project, this pipe would be replaced with a new 15-inch reinforced concrete culvert, connecting from an existing drainage inlet just north of the bluff to the face of the new rock revetment.

A portion of the planned Bay Trail alignment was lost due to bank failure. As part of this project, an 80-foot-long foundational section of the Bay Trail would be constructed where it coincides with the Beach Park slope stabilization, aligned at the top of the rock revetment. This foundation would consist of compacted aggregate base; in the future, it is planned that the East Bay Regional Parks District will install 10 feet of asphalt paving with 5-foot, decomposed granite shoulders to match the overall new trail.

POTENTIAL IMPACTS

Based on the environmental evaluation performed for this Initial Study, the proposed project would have:

- ***No Impact*** on Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, Population and Housing, and Public Services.
- ***Less Than Significant Impact*** on Aesthetics, Air Quality, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Recreation, Transportation, Utilities and Service Systems, and Wildfire.
- ***Less Than Significant Impact with Mitigation Incorporated*** on Biological Resources and Tribal Cultural Resources.

MITIGATION MEASURES

The following mitigation measures shall be implemented to reduce project impacts to a "Less than Significant" level:

- **Mitigation Measure BIO-1:** If any construction activities (e.g., grubbing or grading) are scheduled during the bird nesting season (typically defined by CDFW as February 15 to September 15), the City or approved construction contractor shall retain a qualified biologist to conduct a pre-construction survey of the project area and a 100-foot buffer, as access is available, to locate active bird nests, identify measures to protect the nests, and locate any other special status species.

  The pre-construction survey shall be conducted no more than 14 days prior to the implementation of construction activities (including staging and equipment storage). Any active nest should not be disturbed until young have fledged or under the direction provided by a qualified biologist. Any special status species shall not be disturbed without the direction of a qualified biologist. If an active nest is found during construction, disturbance shall not occur without direction from a qualified biologist.

- **Mitigation Measure TCR-1:** The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers, before any project-related construction activities begin. The WEAP shall be developed in coordination with culturally affiliated Native American tribes and a qualified archaeologist, as defined by the Secretary of the Interior's Professional Qualifications Standards for Archeology. The City may invite Native American representatives from interested culturally affiliated Native American tribes to participate.

  The WEAP shall include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations,

protocols for avoidance, and consequences of violating state laws and regulations. The WEAP shall also describe appropriate avoidance and impact minimization measures for resources that could be located at the project area or mitigation site and provide procedures and contact information should workers encounter any potential cultural resources or tribal cultural resources. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

- **Mitigation Measure TCR-2:** The City shall retain a qualified archaeologist that meets or exceeds the Secretary of the Interior's (SOI) standards to prepare an Archaeological Monitoring Plan prior to ground-disturbing activities implementing the project. The monitoring plan shall describe the procedures for the appropriate identification and treatment of archaeological resources inadvertently discovered during grading or construction activities. The plan shall include provisions to halt work in the immediate area in the event of a discovery, as specified in TCR-3.
- **Mitigation Measure TCR-3:** The City shall retain an SOI-qualified archaeological monitor and Native American monitors prior to the commencement of ground-disturbing activities to implement the activities prescribed by the Archaeological Monitoring Plan. The monitors shall be granted stop-work authority in the event an inadvertent discovery is made. The monitors shall immediately evaluate the discovery to determine whether additional treatment is warranted. Construction activities shall not resume in the immediate area of the discovery until authorized by the monitors.

List of Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADI	Area of Direct Impact
APE	Area of Potential Effect
APN	Assessor's Parcel Number
BA	Biological Assessment
BAAQMD	Bay Area Air Quality Management District
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
Bay Trail	San Francisco Bay Trail
BCDC	San Francisco Bay Conservation & Development Commission
BMP	Best Management Practice
BRA	Biological Resources Assessment
BRAC	Base Realignment and Closure Act
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	construction general permit
City	City of Richmond
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CWA	Clean Water Act
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
General Plan	Richmond General Plan 2030
GWP	Global Warming Potential
HSC	California Health and Safety Code
IS	Initial Study
lbs	pounds
MBTA	Migratory Bird Treaty Act
MLRA	Major Land Resource Area

MMRP	Mitigation Monitoring and Reporting Plan
MND	Mitigated Negative Declaration
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCE	Nichols Consulting Engineers
NFD	Point Molate Naval Depot
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
msl	mean sea level
O_3	ozone
OPR	Governor's Office of Planning and Research
PCB	polychlorinated biphenyl
$PM_{2.5}$	fine particulate matter
PM_{10}	respirable particulate matter
ppm	parts per million
PRC	Public Resource Code
project	Pont Molate Beach Park Shoreline Restoration Project
RoadMod	District's Road Construction Emissions Model
ROG	reactive organic gases
RSR	Richmond-San Rafael
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SO_2	sulfur dioxide
SO_x	sulfur oxides
SOI	Secretary of the Interior
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
USTs	underground storage tank
VHFHSZ	Very High Fire Hazard Severity Zones
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program
WOUS	Waters of the United States

µg/m^3	micrograms per cubic meter
µm	micrometers

Section 1 Project Information

1. Project title:	Point Molate Beach Park Shoreline Restoration Project
2. Lead agency name and address:	City of Richmond Engineering Services Department 450 Civic Center Plaza Richmond, CA 94804
3. Contact person and phone number:	Lina Velasco Community Development Director Community Development Department City of Richmond (510) 620-6841
4. Project location:	Point Molate Beach Park at Stenmark Drive, Richmond, CA (APN: 561-100-008)
5. Project sponsor's name and address:	City of Richmond Engineering Services Department 450 Civic Center Plaza Richmond, CA 94804
6. General Plan designations:	Parks and Recreation
7. Zoning:	Parks and Recreation
8. Description of project:	The project would restore approximately 300 feet of shoreline at Point Molate Beach Park with rock revetment, construct the compacted aggregate base of an 80-foot portion of the Bay Trail, and repair the existing culvert.
9. Surrounding land uses and setting:	PR-Parks and Recreation and S- Shoreline Overlay
10. Other public agencies whose approval is required:	• US Army Corps of Engineers

- Bay Conservation and Development Commission
- San Francisco Bay Regional Water Quality Control Board
- US Fish and Wildlife Service
- California Department of Fish and Wildlife
- National Marine Fisheries Service

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The tribes were initially contacted during an earlier consultation on March 4, 2016. The tribes were then contacted again specifically for this project on May 27, 2020. There have been three responses recommending mitigation measures during construction to protect tribal cultural resources identified during construction. The Sacred Lands Search reported known resources within the area.

Section 2 Introduction

2.1 FOCUS OF THE ENVIRONMENTAL REVIEW

The City of Richmond (City) has prepared this Draft Initial Study (IS) and Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (CEQA) for the proposed Point Molate Beach Park Shoreline Restoration Project (project). This IS/MND is an informational document, provided to help the public and decision-makers understand the potential effects the project may have on the environment, and how potential adverse effects may be mitigated. The Notice of Intent to Adopt a Mitigated Negative Declaration provides notice to interested agencies and the public that it is the City's intent to adopt an MND and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment. This Public Review Draft IS/MND is subject to modification based on comments received by interested agencies and the public.

2.2 SUMMARY OF FINDINGS

The environmental factors checked below would be potentially affected by this project, involving at least one impact that would be a "Potentially Significant Impact" without the implementation of mitigation measures.

	Aesthetics		Agricultural and Forestry Resources		Air Quality
✓	Biological Resources		Cultural Resources		Energy
	Geology/Soils		Greenhouse Gas Emissions		Hazards and Hazardous Materials
	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
	Noise		Population/Housing		Public Services
	Recreation		Transportation	✓	Tribal Cultural Resources
	Utilities/Service Systems		Wildfire	✓	Mandatory Findings of Significance

Based on the environmental evaluation performed for this IS (Section 4), the proposed project would have:

- ***No Impact*** on Agricultural and Forestry Resources, Land Use and Planning, Mineral Resources, Population and Housing, and Public Services.
- ***Less Than Significant Impact*** on Aesthetics, Air Quality, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Recreation, Transportation, Utilities and Service Systems, and Wildfire.
- ***Less Than Significant Impact with Mitigation Incorporated*** on Biological Resources and Tribal Cultural Resources. The following mitigation measures have been incorporated into the project and would reduce potential adverse effects toto a "Less than Significant" level:
    - **Mitigation Measure BIO-1**: If any construction activities (e.g., grubbing or grading) are scheduled during the bird nesting season (typically defined by the California Department of Fish and Wildlife [CDFW] as February 15 to September 15), the City or approved construction contractor shall retain a qualified biologist to conduct a pre-construction survey of the project area and a 100-foot buffer, as access is available, to locate active bird nests, identify measures to protect the nests, and locate any other special status species.

      The pre-construction survey shall be conducted no more than 14 days prior to the implementation of construction activities (including staging and equipment storage). Any active nest should not be disturbed until young have fledged or under the direction provided by a qualified biologist. Any special status species shall not be disturbed without the direction of a qualified biologist. If an active nest is found during construction, disturbance shall not occur without direction from a qualified biologist.
    - **Mitigation Measure TCR-1**: The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers, before any project-related construction activities begin. The WEAP shall be developed in coordination with culturally affiliated Native American tribes and a qualified archaeologist, as defined by the Secretary of the Interior's Professional Qualifications Standards for Archeology. The City may invite Native American representatives from interested culturally affiliated Native American tribes to participate.

The WEAP shall include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations. The WEAP shall also describe appropriate avoidance and impact minimization measures for resources that could be located at the project area or mitigation site and provide procedures and contact information should workers encounter any potential cultural resources or tribal cultural resources. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

- **Mitigation Measure TCR-2:** The City shall retain a qualified archaeologist that meets or exceeds the Secretary of the Interior's (SOI) standards to prepare an Archaeological Monitoring Plan prior to ground-disturbing activities implementing the project. The monitoring plan shall describe the procedures for the appropriate identification and treatment of archaeological resources inadvertently discovered during grading or construction activities. The plan shall include provisions to halt work in the immediate area in the event of a discovery, as specified in TCR.
- **Mitigation Measure TCR-3:** The City shall retain an SOI-qualified archaeological monitor and Native American monitors prior to the commencement of ground-disturbing activities to implement the activities prescribed by the Archaeological Monitoring Plan. The monitors shall be granted stop-work authority in the event an inadvertent discovery is made. The monitors shall immediately evaluate the discovery to determine whether additional treatment is warranted. Construction activities shall not resume in the immediate area of the discovery until authorized by the monitors.

2.3 REQUIRED PERMITS AND ADDITIONAL APPROVALS

Permits

The project would obtain or comply with the following permits:

- City Right of Way Encroachment Permit
- Clean Water Act Section 404 Permit
- Clean Water Act Section 401 Water Quality Certification

- California Department of Fish and Wildlife - Fish and Game Code Section 1602 (Streambed Alteration Notification)
- Construction General Permit Order 2009-0009-DWQ.
- San Francisco Bay Conservation & Development Commission Permit

Trustee Agencies

- California Department of Fish and Wildlife

Oversight

The following federal agencies also provide oversight:

- U.S. Army Corps of Engineers (USACE), as issuer of 404 permit and lead agency for National Environmental Policy Act (NEPA) review

2.4 LEAD AGENCY DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An EIR is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature — Date: October 8, 2020

Name: Lina Velasco — Title: Community Development Director

Section 3 Project Description

3.1 PROJECT LOCATION

The proposed project is located within the 11-acre Point Molate Beach Park (Beach Park) in the City of Richmond, Contra Costa County, California, on the shoreline of San Francisco Bay **(Figure 1**). Beach Park is in the southernmost area of the larger Point Molate property, formerly the Point Molate Naval Fuel Depot. Beach Park is accessed via Stenmark Drive, approximately 1.5 miles north of the Richmond-San Rafael Bridge.

3.2 PROJECT AREA

The project limits encompass approximately 1 acre along the shoreline at Beach Park, starting at the existing shoreline rock revetment near Stenmark Drive and continuing approximately 300 feet southward (**Figure 2**). The proposed project is located within the following assessor's parcel: APN 561-100-008.

3.3 PROJECT PURPOSE, NEED, AND OBJECTIVES

The City has identified the need to restore actively eroding portions of the shoreline at Beach Park. Continual coastal wave and tidal action is causing a loss of park area; the coastal erosion is more prominent and severe at the north end of Beach Park, where the bluff is higher. Severe undercutting is present near the broken culvert located near the northern end of the project area. The erosion is also threatening the alignment of the San Francisco Bay Trail (Bay Trail), which is currently planned for construction in summer 2021.

To protect existing recreational facilities and transportation infrastructure located along the shoreline, revetments are required to support coastal-dependent uses (public beaches, the bike/pedestrian trail, and shoreline public park). The proposed project meets requirements under California Coastal Act Section 30235, which states that shoreline-protective structures shall be permitted if: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline altering construction is required to protect the existing threatened structure; and (4) the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply.

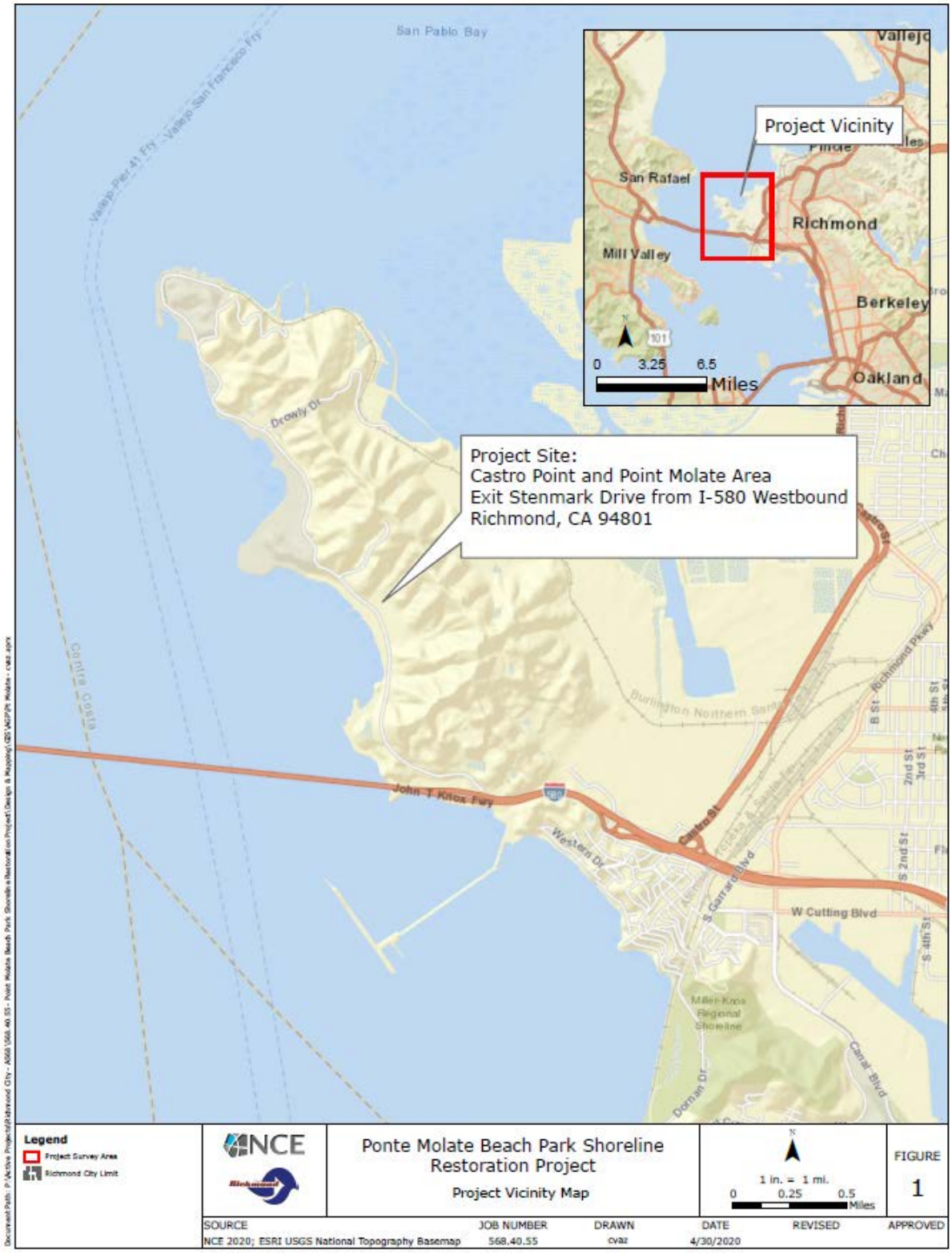


Figure 1 Project Vicinity Map



Figure 2 Project Location Map

The objectives of the proposed project are to:

1. Repair and protect the bluff at the proposed location of the Bay Trail to the north of Beach Park to ensure that the trail will not be damaged in the future.
2. Prevent recession at the restoration site and prevent further recession along the beach to the south.
3. Repair and restore the existing culvert.

3.4 PROJECT BACKGROUND

The City has prioritized the need to restore actively eroding portions of the shoreline at Beach Park. The bluff along the north end of the park from the south end of the existing revetment near Stenmark Drive to approximately 300 feet south has receded due to a combination of a broken culvert and natural shoreline processes resulting from the action of tides, waves, wind, seepage, and rain. Left unchecked, this erosion will continue to encroach upon park facilities, trees, cultural resources, and open space. In particular, the coastal erosion has undercut the shoreline and the planned alignment for the Bay Trail at Point Molate, which will be a Class I bike trail currently being designed by NCE for the East Bay Regional Park District (EBRPD) and the City.

The City conducted an assessment to characterize erosion at the site and developed two preliminary erosion-repair alternatives (AN West 2018). The assessment evaluated erosion from wave and tidal action including bluff recession rate, sea level rise, any erosion that was suspected to be occurring from stormwater, and susceptibility of soil types readily observed along the bluff. Basic geotechnical parameters were developed for each alternative, and regulatory considerations including biological, cultural, and water resources were analyzed. Preliminary design alternatives included placing a rock revetment or constructing a piled retaining wall with riprap protection. The construction of a rock revetment near Stenmark Drive to approximately 300 feet south was identified as the preferred alternative.

3.5 EXISTING CONDITIONS

Beach Park is owned by the City. The Beach Park has a General Plan land use designation of Parks and Recreation (City of Richmond 2020). The project location has been identified in numerous stakeholder agencies' master plans, polices, and goals as a beneficial location for a portion of the Bay Trail. Identified stakeholder agency plans include the City of Richmond 2030 General Plan and Point Molate Vision, EBRPD Master Plan, Association of Bay Area Governments' (ABAG) Plan Bay Area, and the San Francisco Bay Conservation and Development Commission's (BCDC) San Francisco Bay Plan.

The site is only accessible via a narrow road, Stenmark Drive, from the Richmond-San Rafael Bridge toll plaza "Western Drive" exit.

The area surrounding the project site consists of a flat, asphalt and concrete-covered terrace referenced by Navy documents as Drum Lot 2. Beach Park lies below the Drum Lot area along the shoreline and features picnic tables, parking, and beach access. Stenmark Drive, the main road into Point San Pablo, passes between the two zones. The site was graded by the Navy as part of the fuel depot use. Behind the Drum Lot, coastal scrub covers the steep hillside. A natural drainage zone with unique and sensitive plant species passes the Drum Lot and Beach Park to the south as it connects to San Francisco Bay, marking the entry to the Point Molate property.

A Biological Resource Assessment (NCE 2020a) prepared for the site determined that the area contains sensitive biological resources, although the project site is highly disturbed. Habitats adjacent to the project site include ruderal/developed land, northern coastal bluff scrub, native grassland, rocky and sandy intertidal zones, and landscape plantings. Habitats within the project site include ruderal/developed land, rocky and sandy intertidal zones, and landscape plantings. Based on a delineation of waters of the United States report for this project (NCE, 2020), one culvert with an outfall to San Francisco Bay was identified within the project site as potential waters of the United States.

The proposed project area is also located within a sensitive “cultural resource zone,” as identified in the Point Molate Vision (City of Richmond 2018). The project area and vicinity contain resources considered eligible for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR), and the project site is situated within the boundary of a historic shrimp camp. Native American burials are known within the vicinity.

The coastline within the project area consists of headlands with a small bay. The main headlands are at Castro Point and Point Molate. At the beaches, the foreshore (the beach between low tide and high tide) rises from mud at a slope of approximately 10 feet horizontally to 1 foot vertically and is typically covered with rock fragments and sometimes sand. The foreshore is on average approximately fifty (50) feet wide and is backed by either bluff, low-level banks, or degraded shore protection.

The existing shore protection along the proposed Bay Trail alignment is varied within the project area. Riprap, rock, stone, concrete debris, concrete armor blocks, and timber walls have been used in the past and this protection has been supplemented over time with riprap. Various rock and concrete materials have been dumped in place without mechanical consolidation, design, or engineering, resulting in unconsolidated materials that are in a loose condition and unsafe to walk across. The bluffs along the shoreline are generally steep. The materials associated with

the bluffs are friable and can be eroded by combinations of heating and cooling of the surface, wind and rain, drainage, and wave and tidal action. Except in the project area, the toe of the bluffs is generally supported by rock riprap.

3.6 PROJECT FEATURES

The Alternatives Study Report (AN West 2017) considered two alternatives, either rock revetment or a concrete wall supported on piles. Revetment was determined to be the most environmentally appropriate alternative because it would have a negligible impact on existing bank material that may contain cultural resources, provides better wave energy reduction, uses limited types of materials, and can be constructed in less time and thus at a lower cost.

Major components of the proposed project are summarized below.

Rock Revetment

The proposed rock revetment would comprise an approximately 300-foot-long rock structure consisting of various layers of rock and geotextile placed on the shoreline. **Figure 3** outlines the approximate proposed area of the rock revetment in red. The compacted aggregate base of the Bay Trail would be constructed on the left side of the construction area, with the alignment of the trail placed to allow the safe passage of pedestrians and bicyclists on the future trail.

Sand would be removed up to 4 feet in depth in the rock revetment area to allow placement of the various layers. Sand removed from the base of the rock revetment would be placed and spread out over the sand beach at the toe of the rock revetment and along the bluff extending further into Beach Park.

To provide long-lasting, sustainable construction, the revetment would consist of rockfill placed against geotextile-lined bluff and protected with armor stone keyed into the underlying rock. The rockfill, which would consist of material ranging from 2 to 12 inches in size, would buttress the existing bluff and serve as backing for the armor stone layer. The geotextile would prevent the passage of soil material, relieve hydrostatic pressure, and allow drainage of the bluff into the rockfill. The armor would consist of unweathered sandstone, igneous rock, metamorphic rock, or dolomitic sandstone. Detailed specifications are provided in **Appendix A.**



Figure 3 Rock Revetment Construction Area-Outlined in Red

Rock Revetment Estimated Quantities

The revetment project is estimated to include 324 cubic yards of bluff removal, clear 12,420 cubic yards of debris, remove 1,207 cubic yards of sand from below the revetment for beach replenishment, and remove 218 cubic yards of bedrock. The project would lay down approximately 470 square yards of geotextile fabric. Approximately 830 cubic yards of rockfill would be placed at the project site and 1,380 cubic yards of rock armor would be brought in to create the outer protection of the revetment.

See Figure 4, Rock Revetment Layout Plan, and Figure 5, Typical Cross Section below.

Culvert Replacement

An existing 12-inch culvert drains the upland watershed above the top of the bank. The pipe is very deteriorated and broken at the bluff face. The culvert has not been maintained for many years, and this deferred maintenance needs to be addressed in a form compatible with the shoreline restoration. As part of the proposed project, this pipe would be replaced with a new 15-inch reinforced concrete culvert, connecting from an existing drainage inlet just north of the bluff to the face of the new rock revetment.

San Francisco Bay Trail

A portion of the proposed Bay Trail alignment was lost due to bank failure. As part of this project, an 80-foot-long foundation section of the Bay Trail would be constructed where it coincides with the Beach Park slope stabilization, aligned at the top of the rock revetment. This foundation would consist of compacted aggregate base; in the future, it is planned that the Bay Trail project will install 10 feet of asphalt paving with 5-foot, decomposed granite shoulders to match the overall proposed new trail.

Revegetation and Planting Plan of Disturbed Areas

After construction, all disturbed areas would be regraded and seeded per the project specifications as applicable.

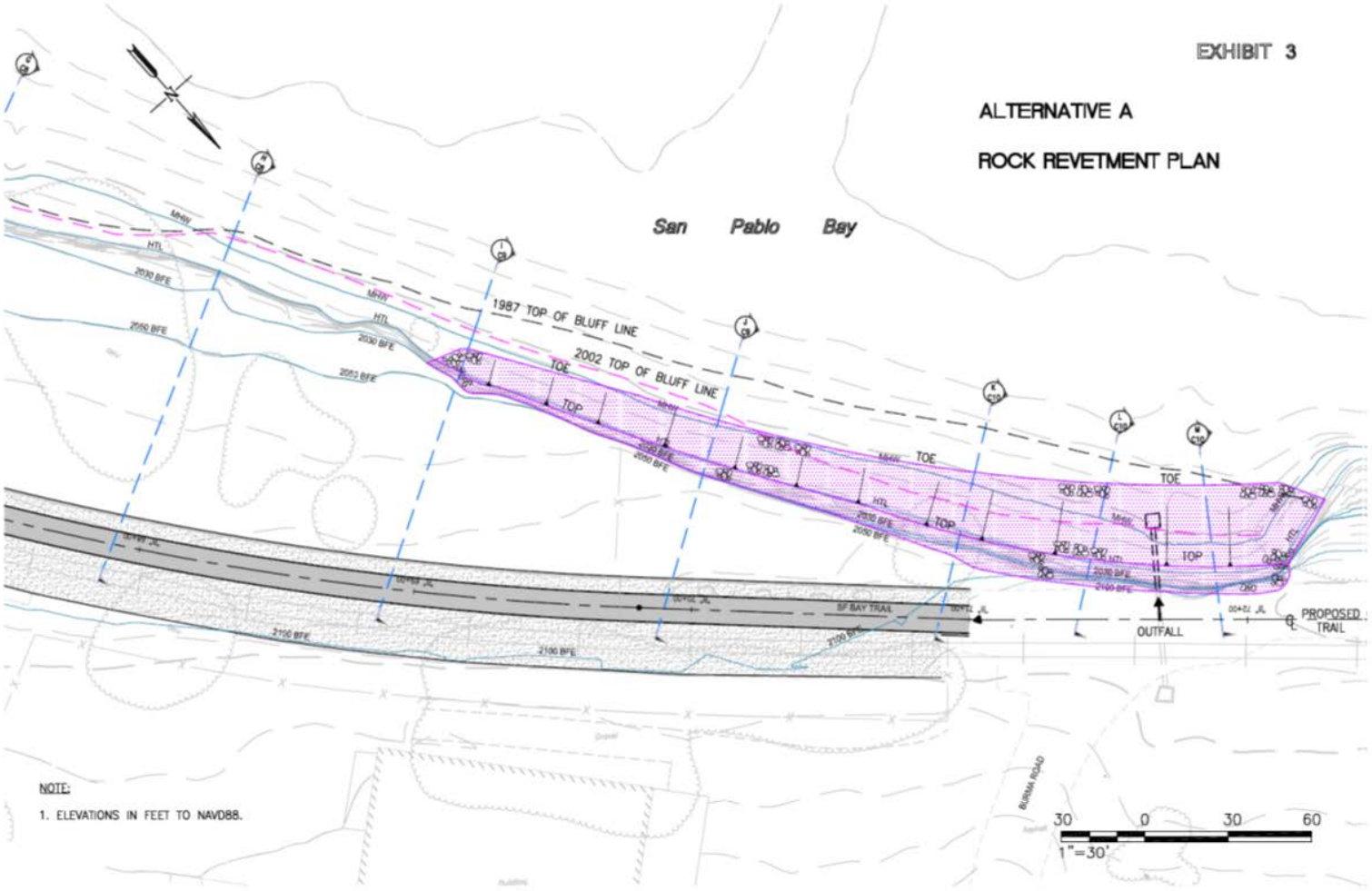


Figure 4 Rock Revetment Layout Plan

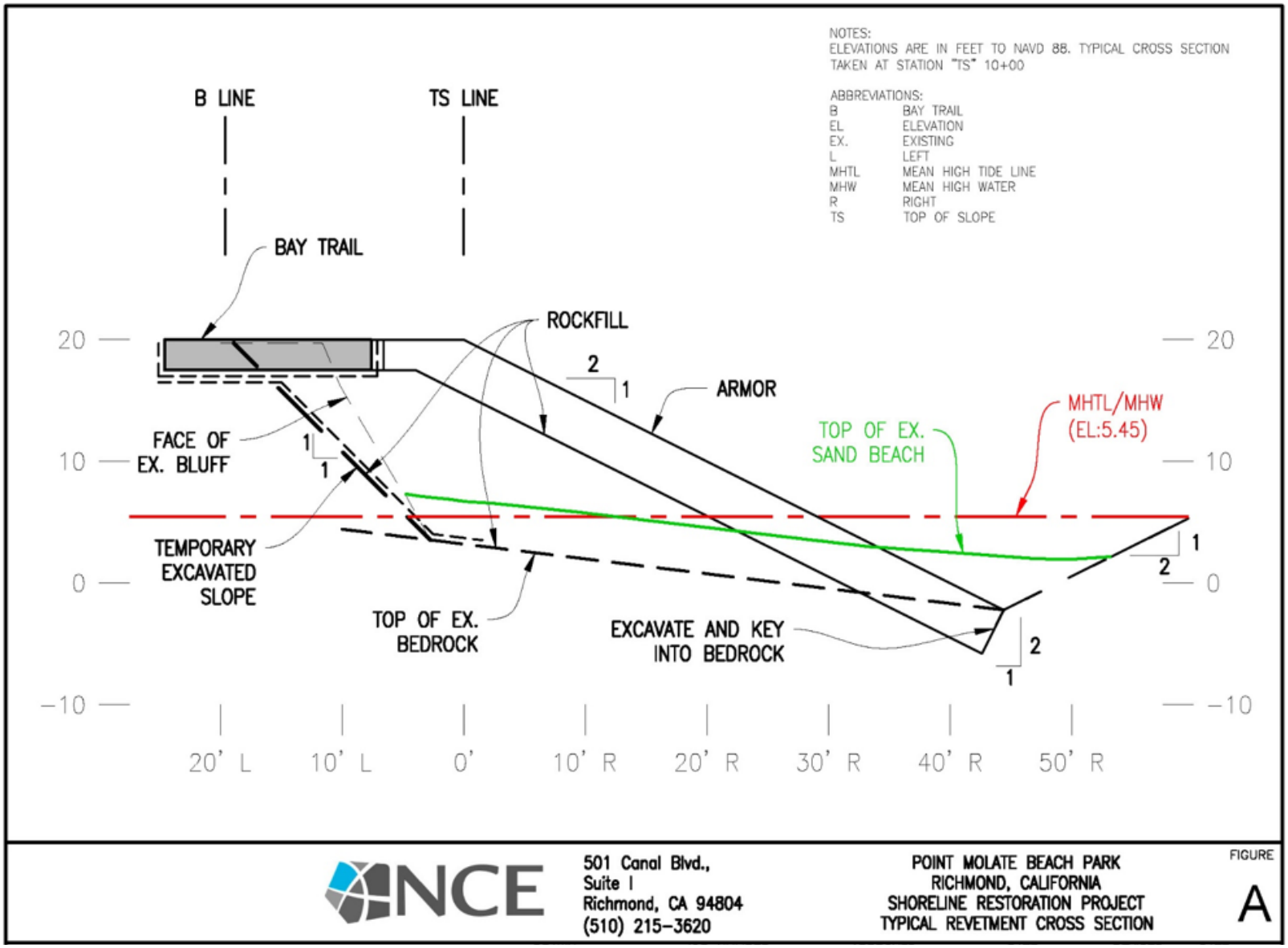


Figure 5 Typical Revetment Cross Section

Project Site Preparation

Clearing and grubbing would be kept to the minimum required to meet the specifications and design drawings, with slopes and bluff left free of brush, trees, stumps or other objectionable materials and dressed to a smooth surface. The geotextile filter fabric would be placed on undisturbed native soil, on an excavated and prepared subgrade, or on acceptably placed and compacted fill and would act as barrier and protection between the bank soil and the rockfill. Unsatisfactory soils at the project site which have excessive in-place moisture content, soils that are loose, soils containing roots, sod, brush, or other organic materials, soils containing turf clods or rocks would be removed. Geotextile filter fabric would be covered by rockfill as soon as possible to limit exposure to sunlight.

The bluff would be trimmed to a uniform slope, as indicated on drawings. Areas to receive rockfill would be graded to establish a smooth surface and ensure that intimate contact is achieved between the subgrade surface and the geotextile filter fabric, and between the protected geotextile filter fabric. Stable and compacted subgrade soil would be prepared to the lines, grades, and cross sections shown on the design drawings. Termination trenches and transitions between slopes, embankment crests, benches, berms, and toes would be compacted, shaped, and uniformly graded. The subgrade would be uniformly compacted to the geotechnical engineer's site-specific requirements.

Sand would be excavated from below the revetment down to the bedrock and used for replenishment and left in a bulked uncompacted condition for subsequent movement and consolidation by wave action.

Construction Personnel and Equipment

Construction personnel would consist of approximately 15 laborers and supervisors at any given time, depending on tides, wave conditions, and the construction activities.

Typical equipment that could be used for the project includes excavators, backhoe, dump trucks, bulldozer, crane with grab, front end loaders, forklift, pickup trucks, utility line trucks.

Construction Sequence

Construction activities for the proposed rock revetment project would occur in the following general sequence:

1. Conduct pre-construction survey to confirm avoidance of any sensitive resources
2. Install stormwater Best Management Practices (BMPs), such as silt fence and gravel bags to ensure soil and runoff is contained onsite

3. Prepare site by removing debris from bluff and beach
4. Remove fencing and install temporary fencing and signage
5. Cut back the bluff to a safe slope for construction
6. Prepare equipment access down to the beach
7. Place geotextile
8. Remove beach sand from below revetment and replenish sandy beach
9. Place rockfill
10. Excavate key for armor toe
11. Conduct initial armor test panel construction and obtain appropriate approvals
12. Place armor
13. Install aggregate base for Bay Trail
14. Revegetate and restore disturbed areas
15. Cleanup and demobilize project site
16. Conduct post-construction inspections and monitoring

Inspections, quality control, and quality assurance are required for geotextile, rockfill, and armor placement. Monitoring of beach sand replenishment is required.

Construction Traffic and Parking

Construction vehicles would access the site via Stenmark Drive, then proceed to the rock revetment project site. Vehicles would enter the existing ingress/egress entrance on the west side of Stenmark Drive approximately 100 feet north of buildings located near the rock revetment project site. It is estimated that trip generation would include the following:

- One-time mobilization and demobilization of heavy equipment (excavator, front end loader, crane, bulldozer, and backhoe) at the start and end of earthwork or other construction stage, as needed
- One-time delivery of geotextile filter material
- Approximately 450 dump truck deliveries to bring rockfill and rock armor (the project design calls for approximately 2,182 tons of rock fill/rock, and the average dump truck can haul approximately 7 tons)

There would be no parking of project construction vehicles on Stenmark Drive or other surface streets, unless necessary to complete a specific construction task.

Construction Laydown and Staging Area

Construction staging would be located adjacent to the project between Stenmark Drive and bluff as shown on **Figure 6**.

Construction Schedule

Construction of the proposed rock revetment and a compacted aggregate base of the San Francisco Bay Trail would take place in one phase and would be anticipated to be completed within 2 to 3 months. Construction would generally occur between 8:00 a.m. and 5:00 p.m., on a 5-day-per-week, 8-hour-per-day basis. However, due to the constraint of tides and wave action within the project site, the City may have to relax time constraints for remote locations and tides. Additional work hours and days may be necessary to make up for unanticipated schedule delays or to perform certain inspections and quality control activities. All construction work performed outside of the normal work schedule would be coordinated with the appropriate agencies and conform to the City ordinances.

Wastewater generated during construction may include stormwater runoff and equipment wash water. Construction would adhere to a stormwater pollution prevention plan (SWPPP), which would incorporate BMPs for runoff and erosion control. Site-specific BMPs would be designed and installed by the contractor in compliance with all applicable regulations and permit conditions of the SWPPP and City requirements.

Monitoring and Maintenance

The rock armor revetment is designed for long-lasting protection provided the project is constructed according to the design. The need for maintenance inspections over the initial decades of its life would be limited.

Monitoring of the movement of sand out over the existing sand beach would be needed in the early life of the project to ensure that it packs down under tidal and wave conditions and is not a cause of soft fluidized sand and human safety concerns.

3.7 CONSERVATION MEASURES AND CONSTRUCTION CONTROLS

There are numerous measures required by ordinance and policy that are integrated into the project design and construction documents. These are outlined below.



Figure 6 Construction Staging Area

Air Quality

The following measures shall be implemented to minimize impacts to air quality during construction:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure in 13 California Code of Regulations [CCR] 2485). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Hydrology and Water Quality

Construction activities that disturb one acre or more of land, and construction on smaller sites that are part of a larger project, must comply with a California State Water Resources Control Board (SWRCB) Construction General Permit (Order 2009-0009-DWQ) that regulates stormwater leaving construction sites. Site owners must notify the state, prepare, and implement a Stormwater Pollution Prevention Plan (SWPPP), and monitor the effectiveness of the plan. The SWPPP must outline measures that would protect hydrology and water quality resources, including groundwater, from negative impacts during construction.

Construction site stormwater BMPs would follow the Caltrans Construction Site Best Management Practices Manual (Caltrans 2017) to control and minimize the impacts of construction related activities. The following BMPs, at a minimum, would be implemented at the site during construction:

1. Temporary erosion and sediment control BMPs to prevent the transport of earthen materials and other construction waste materials from disturbed land areas, stockpiles, and staging areas during periods of precipitation or runoff (such as silt fence, erosion control fabric, fiber rolls).
2. Tracking controls (such as designated ingress and egress areas) and designated staging areas outside of drainage areas.
3. Revegetation of all disturbed areas, including staging with native species only.
4. Temporary BMPs to prevent wind erosion and sediment transport of disturbed areas, such as use of water for dust control and covering of stockpiles.
5. Construction boundary fencing to limit land disturbance to areas not planned for construction.

Regulatory Compliance and Approvals

Shoreline restoration and resiliency projects are required to apply for and receive permits before work can commence within the shoreline of San Francisco Bay.

Projects that might affect riparian habitat, wetlands, or other aquatic habitat include those that change hydrology or drainage such as rock revetments, rock riprap, pilings, retaining walls, culverts, or outfalls; those that that fill wetlands; and restoration projects. Multiple agencies are involved in permitting, planning, environmental review, construction, and post-construction monitoring for the proposed project to protect federal, state, and local environmental resources. The City will be seeking permits, review, and/or approval from the following agencies:

- California Department of Fish and Wildlife
- National Marine Fisheries Service
- San Francisco Bay Conservation and Development Commission (BCDC)
- San Francisco Bay Regional Water Quality Control Board (RWQCB)
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service (USFWS)

Section 4 Environmental Evaluation

The following sections evaluate the potential adverse impacts of the project in compliance with CEQA. Appendix G of the CEQA Guidelines (California Natural Resources Agency 2019) provides a sample checklist with a series of questions designed to enable the lead agency to identify project impacts with respect to 20 environmental topics; this IS generally follows this checklist. Except where a specific threshold has been adopted by a public agency and is specified in the sections below, such as an air quality threshold, the Appendix G questions are used as thresholds of significance in this document.

Potential environmental impacts are described as follows:

- **Potentially Significant Impact**: An environmental impact that could be significant and for which no feasible mitigation is known. If any potentially significant impacts are identified in this Checklist, an EIR must be prepared.
- **Less than Significant Impact with Mitigation Incorporated**: An environmental impact that requires the implementation of mitigation measures to reduce that impact to a less than significant level.
- **Less than Significant Impact**: An environmental impact may occur; however, the impact would not exceed significance thresholds.
- **No Impact**: No environmental impacts would result from implementation of the project.

4.1 AESTHETICS

Environmental Setting

Current and Surrounding land uses include Industrial, Open Space, and Parks and Recreation. The project area includes remnants of a paved lot or access road, and a bluff area. The area surrounding the project site is primarily Point Molate Beach Park parking lot, parts of Stenmark Drive, and an old hanger building (Steel building). Habitats in the project area include ruderal/developed land, northern coastal bluff scrub, native grassland, rocky and sandy intertidal zones, and landscape plantings. Habitats within the project site include ruderal/developed land, northern coastal bluff scrub, and landscape plantings.

Existing views from the project area are primarily of the San Francisco Bay waterfront. The project is located approximately 1 mile north of the I-580/Richmond-San Rafael (RSR) Bridge, providing distant views of the bridge looking south. Point Molate and a former shipping dock are seen to the northwest. The project area is adjacent to the Point Molate Beach Park, which provides public access to the project site. Views of the project site are most clearly seen from the San Francisco Bay. These views would be seen by commuters on the ferry that runs between San Francisco and Vallejo, and to commercial and recreational boaters.

Existing sources of light near the project site include vehicular traffic along Stenmark Drive, vehicles in Point Molate Beach Park parking lot, and RSR Bridge. No additional sources of light or glare exist in the immediate project area.

Environmental Checklist

Except as provided in Public Resources Code Section 21099, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			✓	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway?				✓
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				✓

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				✓

Answers to Checklist Questions

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. A rock-based revetment used to arrest and avoid excessive shoreline erosion is a natural shoreline management strategy that would result in minimal visual changes to the project area. The most noticeable visual change would be to immediate views from the beach or offshore looking towards the proposed project. The project would not significantly alter or block any existing views or scenic vistas and does not include any above grade structures. There are no designated scenic vistas in the project area.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway?

No Impact. The project is not in the vicinity of a state scenic highway. The nearest designated state scenic highway, State Route 24, is approximately 10.5 miles southeast of the project.

c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

No Impact. The project is in an urbanized area and proposes to address shoreline erosion and construct the compacted aggregate base for a segment of the future Bay Trail to better serve the community and protect the shoreline.

There are no General Plan policies governing scenic quality along the shoreline. The Municipal Code Section 15.04.205.010 protects and regulates Public, Cultural, and Parks and Recreation Districts (City of Richmond 2020). The project would comply with municipal code and the goals identified within the Point Molate Vision document (City of Richmond 2018). Therefore, the proposed project would not conflict with applicable zoning or other regulations governing scenic quality.

d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

No Impact. Lighting would not be introduced as part of the proposed project. In addition, nighttime construction would not be required and therefore no new source of substantial light or glare would occur as a result of construction or operation of the project.

4.2 AGRICULTURAL AND FORESTRY RESOURCES

Environmental Setting

The project site is within the City's existing Beach Park, which was part of the former Navel Fuel Depot. There are no agriculture or forestry land uses on or near the project area (Contra Costa County Department of Conservation and Development 2017a). The Contra Costa County Important Farmland 2008 Map depicts that the majority of farmland of regional or state importance is in the eastern regions of Contra Costa County (California Department of Conservation 2009).

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code (PRC) § 12220(g)), timberland (as defined by PRC § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

Answers to Checklist Questions

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. .As discussed in the Environmental Setting section, the project is not located in an area of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland

Mapping and Monitoring Program of the California Resources Agency. Additionally, the project does not propose features that would result in a change in land use; therefore, the project would have no impact on farmland or change to non-agricultural use.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. There are no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) in the vicinity therefore, there are no Williamson Act contracts in the vicinity. Because there are no agricultural zoning designations and no Williamson Act contracts associated with the project, there would be no impact.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code (PRC) § 12220(g)), timberland (as defined by PRC § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. There are no forestland or timberland land uses or zoning designations in the project vicinity. The nature of the project has no impact on land development or conversion of land use. Therefore, the project does not have the potential to conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There are no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), forestland or timberland in the vicinity. Therefore, the project does not have the potential to result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

4.3 AIR QUALITY

Environmental Setting

The topography of a region can substantially impact air flow and resulting pollutant concentrations. California is divided into 15 air basins with similar topography and meteorology to better manage air quality throughout the state. Each air basin has a local air district that is responsible for identifying and implementing air quality strategies to comply with ambient air quality standards.

The project is located within the San Francisco Bay Air Basin, which includes Marin, Napa, San Mateo, Contra Costa, Alameda, Santa Clara, and parts of Sonoma and Solano counties. Air quality regulation in the San Francisco Air Basin is administered by the Bay Area Air Quality Management District (BAAQMD).

Air pollution within the City is generated by stationary, areawide, and mobile sources. Stationary sources include both point and area sources. Point-source emissions occur at specific locations and are usually associated with manufacturing and industry (City of Richmond 2012). A certain amount of air pollution comes from industrial sources, such as refineries and power plants; however, a greater percentage of harmful air emissions comes from cars and trucks, construction equipment, and other motor vehicles. In the wintertime, the largest single source of air pollution is residential wood burning (BAAQMD 2020).

Due to its proximity to the Golden Gate and the location of the East Bay Hills to the east, Richmond is subject to windy conditions and often cooled by heavy fog during the summer months. Because of this, the City's air quality is generally better than in other parts of the Bay Area (City of Richmond 2012).

Regulatory Setting

Both the EPA and CARB have established ambient air quality standards for common air pollutants. These ambient air quality standards are prescribed levels of pollutants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, federal and state standards differ in some cases.

Federal Regulations

The EPA is responsible for enforcing the federal Clean Air Act and the 1990 amendments to it, as well as the National Ambient Air Quality Standards (NAAQS) that the EPA establishes. These standards identify levels of air quality for six criteria

pollutants, which are considered the maximum levels of ambient air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants are ozone, carbon dioxide (CO_2), nitrogen dioxide, sulfur dioxide, respirable particulate matter with an aerodynamic diameter of 10 micrometers (PM_{10}), fine particulate matter with an aerodynamic diameter of 2.5 micrometers ($PM_{2.5}$), and lead.

State Regulations

CARB oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act, responding to the federal Clean Air Act Amendment requirements, and regulating emissions form motor vehicles and consumer products within the state. In general, California standards are more stringent than federal standards. This is particularly true for ozone and PM_{10}.

Under the transportation conformity regulations (40 Code of Federal Regulations [CFR] 93.123(c)(5)), construction-related activities that cause temporary increases in emissions are not required to conduct a hot-spot analysis. A “hot spot” is an area where air toxics levels are higher than in the overall region. This may be caused by emissions from a local facility. These temporary increases in emissions are those that occur only during the construction phase and last 5 years or less at any individual site.

Federal and State Air Quality Attainment Status

Air quality conditions in the Bay Area are compared against ambient air quality standards set at the federal level (NAAQS) and at the state level (California Ambient Air Quality Standards). The attainment status is classified for each pollutant.

Under the NAAQS, the Bay Area is classified as nonattainment for ozone and particulate matter of 2.5 microns in diameter ($PM_{2.5}$). Although the U.S. Environmental Protection Agency (EPA) issued a final rule in 2013 to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard, the Bay Area continues to be designated as “nonattainment” for the 24-hour $PM_{2.5}$ NAAQS standard until BAAQMD submits a “redesignation request” and a “maintenance plan” to EPA, and EPA approves the proposed redesignation. For the pollutants nitrogen dioxide, carbon monoxide and sulfur dioxide, the area is designated as attainment. While BAAQMD monitoring data show the region meets the PM_{10} NAAQS, the area is technically designated “unclassified.” At the state level, the area is considered nonattainment for ozone, $PM_{2.5}$ and PM_{10} and considered “attainment” for all other criteria air pollutants (California Air Resources Board [CARB] 2019c).

Regional Regulations

The BAAQMD is the regional agency tasked with managing air quality in the region. The BAAQMD adopted the 2017 Clean Air Plan (BAAQMD 2017a) to plan for and achieve compliance with the federal and state ozone standards. The 2017 plan updates the 2010 Clean Air Plan pursuant to air quality planning requirements. To fulfill state ozone planning requirements, the 2017 Plan includes a wide range of control measures designed to decrease emissions of harmful air pollutants, such as particulate matter, ozone (measured as reactive organic compounds (ROG) and nitrogen oxides (NOx), and toxic air contaminants; decrease greenhouse gas emissions; and decrease emissions of CO_2 by reducing fossil fuel combustion (BAAQMD 2017a).

The BAAQMD has published their *CEQA Air Quality Guidelines* (BAAQMD 2017b) that are used in this analysis to evaluate air quality impacts of projects; while these guidelines have been updated to reflect current Supreme Court opinions, they are currently being further updated. The Guidelines provide BAAQMD-recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements. The control measures identified in the 2017 Plan are identified in the Guidelines as recommendations and/or mitigation measures.

Thresholds of Significance

In June 2010 (updated 2017), BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA that meet or exceed federal and state standards. These thresholds were designed to establish the level at which BAAQMD believe air pollution emissions would cause significant environmental impacts under CEQA.

Table 1 presents the significance thresholds used in this analysis, including annual emissions for operational emissions and daily standards for short-term construction-related emissions. A project with daily emission rates below these thresholds is considered to have a less than significant effect on air quality (BAAQMD 2017b).

Table 1. BAAQMD Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NOx	54	54	10

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Annual Average Emissions (tons/year)
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
Carbon Monoxide	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	

Source: Bay Area Air Quality Management District. 2017. *CEQA Guidelines*. May.

CUMULATIVE IMPACTS

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

HEALTH EFFECTS

Ozone, PM_{10} and $PM_{2.5}$ emissions can cause adverse health impacts. High concentrations of ozone have the potential to irritate lungs, and long-term exposure may cause lung tissue damage and cancer. Typical sources of low-altitude ozone are almost entirely formed from ROG/volatile organic compounds (VOC) and NOx in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes (CARB 2019a).

Particulate matter PM_{10} (respirable particulate matter) and $PM_{2.5}$ (fine particulate matter) can irritate the eyes and respiratory tract and decrease lung capacity. Both are associated with increased cancer and mortality and contribute to haze and reduced visibility (CARB 2019b).

If emissions generated from project construction do not exceed the applicable BAAQMD thresholds for ozone, PM_{10}, and $PM_{2.5}$, the emission of criteria pollutants for which the area is non-attainment would not be associated with adverse health impacts.

SCREENING CRITERIA - CONSTRUCTION RELATED IMPACTS

Criteria Air Pollutants and Precursors

For construction projects, the BAAQMD has identified screening criteria to assist with determining whether the project would substantially impact air quality.

If all of the following construction screening criteria are met, the construction of the proposed project would result in a *less than significant impact* from criteria air pollutant and precursor emissions. If not, then construction emissions need to be quantified (BAAQMD 2017b).

1. The project is below the applicable screening level size shown in Table 3-1 of the BAAQMD CEQA Guidelines (Operational-Related);
2. All *Basic* Construction *Mitigation Measures* would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
   a. Demolition
   b. Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously)
   c. Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development)
   d. Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model for grading, cut/fill, or earth movement)
   e. Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	

c) Expose sensitive receptors to substantial pollutant concentrations?			✓	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

Answers to Checklist Questions

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. Projects that could generate emissions above the BAAQMD recommended significance thresholds would be considered to potentially conflict with or obstruct implementation of the applicable air plan.

The proposed project is an infrastructure project that involves only construction activities and no operational effects. As identified by BAAQMD, construction-related activities result in the generation of criteria air pollutants including carbon monoxide, sulfur dioxide, particulate matter (PM_{10}, and $PM_{2.5}$), precursor emissions such as ROG and NO_X, and greenhouse gas (GHG) emissions from exhaust, fugitive dust, and off-gas emissions.

During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include carbon monoxide, NOx, ROG, directly emitted PM_{10}, and $PM_{2.5}$, and toxic air contaminants such as diesel exhaust particulate matter. These emissions would be temporary and limited to the immediate area surrounding the construction site

Screening

As discussed in the Project Description, construction of the project would take place in one phase and would be anticipated to be completed within two (2) to three (3) months. There would not be simultaneous occurrence of more than two construction phases at once. The project does not fall under any of the operational-related categories presented in Table 1; there are no operational emissions associated with the project. The project involves restoration and repair of an existing damaged slope. There is no structure or roadway demolition associated with the project. Emissions would be generated temporarily during construction only. The proposed project meets all the construction screening criteria required by BAAQMD. Therefore, the project meets the screening criteria requirements for a *less than significant* determination without conducting additional analysis.

b) Could the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact. The project region is non-attainment for federal ambient air quality standards for ozone and $PM_{2.5}$, and state ambient air quality standards for ozone, PM_{10}, and $PM_{2.5}$.

The BAAQMD has established that if a project exceeds the identified significance thresholds, its emissions would be considered cumulatively considerable and additional analysis to determine cumulative impacts would be unnecessary.

As evaluated in a) above, the project does not result in an exceedance for any criteria air pollutant for which the region is in non-attainment; therefore, there would be no cumulatively considerable net increase in criteria pollutants that would adversely impact human health.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact.The BAAQMD defines sensitive receptors to include residential dwellings, including apartments, houses, and condominiums; schools, colleges, and universities; daycare centers and hospitals, and senior-care facilities. Most of the surrounding area is undeveloped except for parking. Potential short-term exposure of sensitive receptors to pollutant concentrations from temporary construction activities would be considered less than significant. Once construction is completed, the proposed shoreline restoration would have no operational emissions and would not expose sensitive receptors to pollutants. The project would not introduce new sensitive receptors, nor would it introduce a new toxic air contaminant source.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. Temporary construction activities associated with the proposed project would involve the use of a variety of gasoline or diesel-powered equipment emitting temporary exhaust fumes and odors. However, construction-related emissions would occur intermittently throughout the workday and would dissipate rapidly with increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent objectionable odors. Potential short-term exposure of people using other areas of the park to objectionable construction odors would be less than significant.

4.4 BIOLOGICAL RESOURCES

Environmental Setting

Habitat Types

The project area encompasses four distinct habitat types: landscape plantings, rocky shoreline, ruderal/developed, and sandy shoreline. General descriptions of these natural communities that occur within the project area are provided below.

Landscape Plantings

This habitat includes established plants and trees that are part of beach park landscaping. These species include Monterey pine (*Pinus radiata*), eucalyptus (*Eucalyptus* sp.), and acacia (*Acacia* sp.). The understory of the beach park is dominated by annual grasses which appear to be regularly mowed by maintenance crews. Patches of purple needlegrass (*Stipa pulchra*) were observed in the beach park area, but not in adequate numbers or density to be considered a native grassland community.

Within the project area, landscape plantings are located on the west side of the project area going south, where the sandy shoreline ends.

Rocky Shoreline

This habitat includes rocks that are largely anthropic in origin and lies mostly adjacent to ruderal areas.

Within the project area, rocky shoreline is located on the northwest corner of the project area and leads into coastal bluff scrub.

Ruderal/Developed

Ruderal and developed areas still exhibit the impacts of development, often characterized by pavement of heavily compacted soil. Plants are mostly non-native invasive with few native species present and are characterized by the ability to thrive in areas of frequent disturbance.

Within the project area, ruderal vegetation is located on the north and east side of project area where previous construction that results in a graded and compacted pad.

Sandy Shoreline

Sandy shoreline habitat is characterized by deep sand that includes saltwater and a tidally influenced shoreline.

Within the project area, sandy shoreline is located on the west side of the project area where the San Francisco Bay touches meets the coastal edge.

Wildlife

A query of federally listed wildlife species for the USGS 7.5-minute quadrangle encompassing the project area was obtained from the USFWS's Sacramento Endangered Species Office Information for Planning and Consultation (IPaC) website on March 1, 2018 and April 1, 2018 (USFWS n.d.). Additional information about the distribution of special status species with the potential to occur within the project area was compiled from the CDFW California Natural Diversity Database for occurrences of special status species within a 2-mile radius of the proposed project alignment; from aerial photographs of the project area; and from USGS 7.5-minute quadrangle maps of the project area. Information on the distribution of special status species with potential to occur in the project region also was compiled from published literature.

The database searches identified 24 federally listed fish and wildlife species and two federally listed plant species with potential to occur within the project area. The official list is provided within the Biological Assessment (BA; NCE 2018a), provided as **Appendix B**. A reconnaissance-level field survey of the project area was conducted on June 25, 2020 during the blooming season for the two federally listed plant species with potential to occur within the project area. This plant survey focused on identifying the presence of listed species or their habitat within the project vicinity **(Appendix C)**. During the survey, NCE did not find the two special status plant species identified in the research, bentflower fiddleneck or beach bur, in or around the location of proposed ground disturbing activities.

Based on literature review, the reconnaissance-level field survey, and habitat assessment of the project area, the Biological Resources Assessment (BRA) concluded that the project may contain potential habitat for special status species (**Appendix B**).

Regulatory Setting

Special Status Species

State and federal legislation regarding endangered species provides the CDFW and the USFWS with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as special status species.

Permits may be required from both the CDFW, a Trustee Agency under CEQA, and USFWS if activities associated with a proposed project will result in the "take" of a listed species, including migratory birds. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch,

capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 United States Code [U.S.C.], Section 1532(19), 50 CFR, Section 17.3). Both agencies review CEQA documents to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Special Status Habitats

Federal

The Clean Water Act (CWA), passed in 1972, regulates and protects surface water quality across the United States. Sections 401 and 404 relate directly to local agency planning. Section 401 of the CWA requires a State Water Quality Certification for all federal permit or license applications for any activity that may result in a discharge to a water body to ensure compliance with state water quality standards. Most Certifications are issued in connection with Section 404 permits for dredge and fill discharges (City of Richmond 2012).

The Migratory Bird Treaty Act (MBTA) makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit. Migratory bird species protected by the Act are listed in 50 CFR 10.13. The USFWS has statutory authority and responsibility for enforcing the MTBA.

Local

CITY OF RICHMOND MUNICIPAL CODE

The Code's Tree Preservation Standards (15.04.840.050) states that the Director of the Department of Public Works shall review all projects, both new development and additions or renovations to existing properties, to ensure their compliance with the provisions of the Urban Forest Management Plan and related city or any other specific ordinances and guidelines. Landmark trees and major groves would be preserved as required by the Director of the Department of Public Works and this Code.

CITY OF RICHMOND GENERAL PLAN

The Conservation, Natural Resources and Open Space Element of the General Plan includes the following policies aimed at protecting natural resources considered "vital to the City and surrounding region because they provide a biologically diverse environment for people."

Policy CN1.1 – *Habitat and Biological Resources Protection and Restoration* provides guidance for protection of natural resources by coordinating with the CDFW, San Francisco Bay RWQCB, East Bay Regional Park District, and other regional agencies

to identify areas of special protection and establish appropriate protection measures for those areas. The policy also includes directives to implement conservation measures to protect resources; use siting and design to protect wetlands; restore and protect creek and riparian areas; and at a minimum require mitigation of impacts to sensitive species in coordination with the USFWS, CDFW, and other regulatory agencies.

Policy CN1.2 – *Local Native Plant Species* promotes the use of locally propagated native plant and tree species, including removal and control of invasive exotic plant species.

Policy CN6.2 - *Protection and Expansion of Tree Resources* protects native trees, heritage trees and oak woodlands, and promotes trees as economic and environmental resources for the use, education and enjoyment of current and future generations

CITY OF RICHMOND URBAN GREENING MASTER PLAN

The City's Urban Greening Master Plan is structured around five core goals and identifies policies and actions to achieve these goals. Goal 1 seeks a net zero loss of trees. The Plan supports greening efforts in all areas of the City, although is primarily focused on planting street trees and additional landscaping.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Wildlife (CDFW) or U.S. Fish & Wildlife Service (USFWS)?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?				✓
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		✓		

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			✓	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Answers to Checklist Questions

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Wildlife (CDFW) or U.S. Fish & Wildlife Service (USFWS)?

Less than Significant Impact with Mitigation Incorporated.

A BRA was prepared by NCE in May 2020 to review the proposed project in sufficient detail to determine the extent to which the project may affect any federally designated special status species, and/or designated critical habitat. The BRA (NCE 202020a) was prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)).

As previously mentioned, database searches identified 24 federally listed fish and wildlife species and 2 federally listed plant species with potential to occur within the project area. The official list is provided in Appendix B of the attached BRA (**Appendix B**). The field survey, conducted by NCE on April 20, 2018, focused on identifying the presence of special status species or their habitat within the project area.

Species identified in the literature and database review for which the project was determined to have no effect can be seen in the official list provided in Appendix B of the attached BRA (**Appendix B**). Suitable habitat for these species is absent from the project area; therefore, no effects on these species are expected to occur as a result of project activities.

Based on literature review, the reconnaissance-level field survey, and habitat assessment of the project area, the BRA concluded that the project may contain the potential habitat for several special status species or sensitive animals; these include nesting birds, foraging birds, and monarch butterfly.

The construction would avoid most tree and shrub removal, while protecting special status species habitat. The project would involve minimal loss of foraging, nesting, and/or roosting habitat that is abundantly available regionally. Appropriate best management practices would be employed to protect these resources.

Migratory Birds

The project area and adjacent lands contain trees which may provide habitat for migratory birds. A conclusive investigation of nesting birds was not conducted; however, osprey nests are known to occur within a mile of the project site. Trees, shrubs, and other habitats in the project vicinity may provide suitable nesting habitat for migratory birds, including raptors. Migratory birds are protected under the MBTA, and birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5. Both make it illegal to "take" protected species except under the terms of a permit. It is possible that nesting habitat could be disturbed during construction due to tree removal, noise, and vibrations from construction equipment. This would be a potentially significant impact on migratory birds and/or birds of prey.

- ***Mitigation Measure BIO-1***: If any construction activities (e.g., grubbing or grading) are scheduled during the bird nesting season (typically defined by CDFW as February 15 to September 15), the City or approved construction contractor shall retain a qualified biologist to conduct a pre-construction survey of the project area and a 100-foot buffer, as access is available, to locate active bird nests, identify measures to protect the nests, and locate any other special status species.

  The pre-construction survey shall be conducted no more than 14 days prior to the implementation of construction activities (including staging and equipment storage). Any active nest should not be disturbed until young have fledged or under the direction provided by a qualified biologist. Any special status species shall not be disturbed without the direction of a qualified biologist. If an active nest is found during construction, disturbance shall not occur without direction from a qualified biologist.

Finding*: Implementation of* ***Mitigation Measure BIO-1*** *would reduce potentially significant impacts to migratory and nesting birds to less than significant.*

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?

No Impact. Sensitive natural communities are those that are listed in the CDFW's California Natural Diversity Database due to the rarity of the community in the state or throughout its entire range. During the April 20, 2018 survey, no sensitive natural communities or riparian habitats were identified within the project area and the immediate vicinity. Thus, the proposed project should have no impact on any riparian habitats or sensitive natural communities.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. A survey was conducted to assess the presence of wetlands by NCE on December 18, 2017. The survey determined there are no state-or federally protected wetlands in the project area.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact with Mitigation Incorporated. As discussed above, the project area may contain migratory bird and bird of prey nesting habitat. Construction could temporarily interrupt movement of native resident or migratory birds through and near the project site. Implementation of **Mitigation Measure BIO-1** identified in question a, above, would protect migratory species utilizing the project area for nesting against significant impacts.

Finding*. Implementation of* ***Mitigation Measure BIO-1 2*** *provide sufficient species protection during construction to mitigate potential adverse effects on resident or migratory species to less than significant.*

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. The project would require the removal or pruning of shrubs within City property, and the removal of one 12" tree that is failing with the slope. The project would comply with the City Code (City of Richmond 2020a) Section 15.04.840.050 regarding tree preservation. Therefore, the proposed project would not conflict with local policies and ordinances protecting biological resources.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. There are no known Habitat Conservation Plans or Natural Community Conservation plans associated with the project area.

4.5 CULTURAL RESOURCES

Environmental Setting

The Beach Park and surrounding vicinity is rich in cultural resources spanning prehistoric and historic period occupations. The project vicinity has been the subject of seven site investigations since 1981. Much of the APE has experienced some level of previous disturbance (e.g., cut and fill activities and urban development), and continuous erosion of the bluff removes cultural material every year.

Site Investigation

The area of potential effect (APE) for cultural resources includes the Area of Direct Impact (ADI) and the Area of Indirect Impact. The proposed ADI is approximately 0.59 acres. In the absence of substantial vertical elements, there is no need to expand the limits of the Area of Indirect Impact beyond those of the ADI.

A records search was conducted at the Northwest Information Center for resources within the APE, and resources in the vicinity around the APE (archival study area). An emphasis was placed on identifying the extent of previously inventoried areas and the location of previously recorded archaeological sites.

The search results indicated two historic sites inside the project area and one prehistoric site adjacent to the project area. The prehistoric site is a prehistoric shellmound discussed in Section 4.18, Tribal Cultural Resources. The historic sites include a Chinese Shrimp Camp and a recorded segment of the Richmond Beltline Railroad.

Environmental and geotechnical sampling was conducted on March 8, 2016 along the proposed Bay Trail alignment in support of project design development (Bardsley and Leacox 2016a, 2016b). A Native American monitor was present during the sampling effort. As part of that effort, three drill holes (B-15, -16, and -17) were excavated within the present project area. No cultural material was recovered from the drill holes.

Pedestrian surveys of the APE were conducted on June 8 and 9, 2020. Fieldwork was performed in accordance with federal and State of California standards. A full accounting of the methods and findings are located in Appendix D, Cultural Resources Technical Report.

Findings

The Chinese Shrimp Camp was occupied by Chinese Americans from the mid to late 1860s to approximately 1912 and is located within the project area. The site is listed in the Richmond Office of Historic Preservation Historic Properties Directory as eligible under category 5S2 (individual property eligible for local listing or designation). The site is also considered eligible to the National Register of Historic

Places (National Register) and the California Register of Historical Resources (California Register) under Criterion D/4. Evidence of the Shrimp Camp was observed extending some 200 feet along the bluff face within the southeastern two-thirds of the proposed project area. The horizon varies in thickness from one foot to two feet five inches and matches the description of Feature 4 as presented by Taggert and Haydu (2009). As it extends to the north, the Shrimp Camp horizon appears less well preserved and it grades into or is truncated by modern fill.

A portion of the Richmond Beltline Railroad is also recorded within the project area and was established in 1903 along Richmond's western waterfront and around Point San Pablo. There is approximately 105 feet of the railroad located within the project area, plus approximately 300 feet to the northwest and the southeast past the APE boundary. As a result of the current project, a previously unrecorded portion of the Beltline has been documented, extending south from the southern extent of the previously recorded segment, through Point Molate Beach Park, to Castro Point. In some locations, the railroad grade retains sufficient integrity of setting to convey a sense of place specific to the time when the segment and linear feature at large were in use. However, the recorded segment lacks distinctive engineering features and structural integrity. The integrity level for short segments of the recorded grade where vestiges of the original work are relatively unaltered is high. However, most of the grade has been subjected to alterations, maintenance, repair, and neglect. Large portions of the Beltline are buried under fill, overgrown with vegetation, or have been demolished. Based on field examination, the segment within the proposed project area is not eligible for listing on the National Register list.

Regulatory Setting

Federal

The National Historic Preservation Act (NHPA) was enacted by Congress in 1966 to establish national policy for historic preservation in the United States. The NHPA establishes the role and responsibilities of the federal government in historic preservation. The NHPA directs agencies to identify and manage historic properties under their control; to undertake actions that will advance the Act's provisions and avoid actions contrary to its purposes; to consult with others while carrying out historic preservation activities; and to consider the effects of their actions on historic properties. The project is receiving a permit from the USACE; therefore, the NHPA regulations apply.

State

The California Register of Historical Resources (CRHR) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The CRHR helps government agencies identify

and evaluate California's historical resources and indicates which properties are to be protected, to the extent prudent and feasible, from substantial adverse change (PRC § 5024.1(a)). Any resource listed in, or eligible for listing in, the CRHR is to be taken into consideration during the CEQA process.

PRC § 5097.5 prohibits excavation or removal of any "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. PRC § 5097.5 states that any unauthorized disturbance or removal of archaeological or historical materials or sites located on public lands is a misdemeanor.

Local

The Historic Resources Element is an optional element that Richmond has elected to include in its General Plan. The element is consistent with State of California Government Code which authorizes local jurisdictions to adopt additional elements to those required by state law when they relate to the physical development of the jurisdiction (Code section 65303). *Policy HR1.1 Preservation of Diverse Resources* directs the City to protect, preserve and enhance the diverse range of historic, cultural and archaeological sites and resources in the City for the benefit of current and future residents and visitors.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines § 15064.5?				✓
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § § 15064.5?			✓	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			✓	

Answers to Checklist Questions

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines § 15064.5?

No Impact. There are no aboveground historic resources within the project area. The site was the location of a historic Chinese shrimp camp, and cultural resources

related to this use are known to exist in the project area. This resource is discussed in question b, below.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?

Less than Significant Impact. Results from the pedestrian survey and archival research show that within the project area is a historic site that represents the remains of a Chinese shrimp camp. The site is listed in the Richmond Office of Historic Preservation Historic Properties Directory as Eligible under category 5S2 (individual property eligible for local listing or designation). The site is considered Eligible to the National Register and California Register under Criterion A and D and Criterion 4, respectively. The City has recently nominated the site to the National Register and the State Historical Resources Commission is scheduled to review eligibility on November 6, 2020.

Wave-related erosion on the shoreline has caused the bluff face to recede and has resulted in the loss of a substantial amount of archaeological deposit once associated with site. Over just the last four years (2016-2019), the bluff has receded approximately 4.8 in the northern portion of the project area and 2.8 feet in the southern portion of the project area. How much it receded before 2016 is unclear. This erosion has resulted in the loss of an undetermined amount of archaeological deposit.

Implementation of the proposed project would substantially reduce, if not eliminate, the potential for the future loss of additional archaeological deposits. However, an estimated 164 cubic yards of material containing archaeological deposits would need to be removed during construction to stabilize the bluff, which would result in some loss of the historic resource.

Cleaning of the bluff face preparatory to setting geotextile and rock armoring would result in the loss of currently exposed deposits. Given that P-07-000277 (CA-CCO-506H) has been recommended as Eligible for listing on the National Register and California Register (Taggart and Haydu 2009b), this loss of archaeological deposit would constitute an adverse effect to a resource considered an historic property.

However, this effect is not anticipated to be significant, defined as removing the resource's eligibility for listing. The primary goal of the proposed project is to stabilize the bluff, thereby checking the amount of future erosion. This would be beneficial in that it would serve to protect remaining deposits that are located within the project area. Therefore, the project would overall be considered protective of the remaining resource. **Mitigation Measures TCR 1 through TRC 3** would further minimize effects by requiring an Archaeological Monitoring Plan that outlines procedures for the appropriate identification and treatment of archaeological resources discovered during grading or construction activities.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact. Adjacent to the proposed project area is a prehistoric shellmound with burials. The core site area, which yielded human remains, is 300 feet from the proposed project area. Based on this finding, the proposed project does not have the potential to disturb human remains within or adjacent to the project area. See Tribal Cultural Resources, Section 4.18, for a description of mitigation measures developed in consultation with local Native American tribes for unanticipated discoveries.

4.6 ENERGY

Environmental Setting

The City relies on clean energy sources, waste reduction practices, sustainable buildings and innovative land use planning to reduce energy impacts. The use of progressive measures has resulted in significant reductions in fossil fuel use as well as cost savings and emission reductions (City of Richmond 2012). There are no existing energy sources or uses within the project area.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

Answers to Checklist Questions

a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. Energy for the project would only be required during construction and would not require additional capacity on a local or regional scale. **Construction controls for air quality**, which require implementation of recommended BAAQMD construction BMPs, would reduce use of fossil fuels and increase energy efficiency of construction vehicles. Because energy use would be temporary during construction and would comply with BAAQMD efficiency requirements and the City's fossil fuel reduction goals, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. The impact would be less than significant.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The project would not conflict or obstruct the goals and policies of the City's Energy and Climate Change Element of the General Plan. Implementing BMPs to reduce fossil fuel use by construction vehicles would be consistent with these goals and policies.

Because the project would conform with the Goals and Policies of the Energy and Climate Change Element of the General Plan, the project would have no impact.

4.7 GEOLOGY AND SOILS

Environmental Setting

A geotechnical investigation was conducted at the project site; the Geotechnical Report prepared for the project is included as **Appendix E** (NCE2018).

The project area lies on the edge of the San Francisco Bay. In general, the area is underlain with two to four feet of marine sediment, likely the marine sand that was observed at the surface over shallow bedrock. The bedrock is likely comprised of variably weathered and fractured sedimentary rock materials consisting of sandstones, siltstones, and shales (NCE 2018).

Regional Geologic Setting

The project area is located in the eastern portion of the San Francisco Bay Area, which lies within the Coast Ranges geomorphic province. The San Francisco Bay is generally a northwest-trending wide depression that is bounded by similarly trending ridges that comprise the Berkeley Hills to the east and the San Francisco and Marin Peninsulas to the west. This bay trough and ridge structure was formed as a result of a combination of faulting and warping related to the San Andreas Fault system whereby the bay is underlain by a down dropped or tilted block (California Division of Mines and Geology 1969). The oldest and most widespread rocks in the San Francisco Bay Area are composed of the Jurassic-Cretaceous age Franciscan Formation. The Franciscan Formation can be fault-contacted with other Mesozoic sedimentary rocks and is then in turn overlain by Tertiary and Quaternary-age sedimentary and volcanic rock units. Within the San Francisco region, many of the valleys have been in-filled with quaternary-age sediments (e.g., alluvium and bay deposits) and include marine and non-marine clays, silts, sands, and gravels.

Seismicity and Faulting

The project area is within a seismically active region, and historically numerous moderate to strong earthquakes related to the San Andreas system of faults have occurred in this region. Active faults are considered to be those that have moved during the past 11,000 years, and generally only active faults are considered in evaluating seismic risk for building construction. The nearest active fault is the Hayward fault, an Alquist-Priolo Fault located approximately 5 miles to the west of the project area (USGS n.d.). Other major faults that could cause significant shaking at the project area are the Concord, Franklin, Moraga, Pinole, San Andreas Wildcat Fault.

Liquefaction

The *Susceptibility Map of the San Francisco Bay Area* identifies the project area as the chance for liquification to be 'very low'. Liquefaction can occur when wet or saturated cohesionless soils temporarily lose strength due to the buildup of excess water pressure during events such as earthquakes. Soil most susceptible to liquefaction is loose, clean, saturated, uniformly graded sand.

Groundwater

The project area lies within the East Bay Plain sub-basin of the Santa Clara Valley groundwater basin which extends from Hayward in the south to Richmond and is bounded on the east by the Berkeley Hills (San Francisco Bay RWQCB 2017). The project area lies on margins of the Bay in areas that have a high groundwater table that leaves the soils at these localities permanently saturated. In the project area, sea level rise is anticipated to raise the groundwater table.

Soils

Soil types found in Richmond include Tierra Loam, Millsholm Loam, Los Osos Clay Loam and Clear Lake Clay. The predominant drainage class of these soils, which is a measure of the expected natural frequency and duration of wet periods, are moderately well drained or better (City of Richmond 2012).

There are two Natural Resource Conservation Service (NRCS) Soil Survey soils mapped in the project area. The project area is primarily composed of urban land followed by Millsholm loam, 20 to 60 percent slopes, moist, MRLA 15. These types of soils are generally considered to have a moderate to low expansion potential. MLRAs are used in statewide agricultural planning. MRLA 15 is classified as Central California Coast Range.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including risk of loss, injury, or death involving:			✓	
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			✓	

ii. Strong seismic ground shaking?			✓	
iii. Seismic-related ground failure, including liquefaction?			✓	
iv. Landslides?			✓	
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			✓	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			✓	

Answers to Checklist Questions

a) Would the project directly or indirectly cause potential substantial adverse effects, including risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact. The Division of Mines and Geology has not completed an Alquist-Priolo Earthquake Fault Zoning Map in the San Quentin Quadrangle where the project is located. While there are no active faults located within the project area, three faults occur within the vicinity: San Andreas, San Gregorio, and Rogers Creek faults. Because there are no known faults directly within the project area, impacts are considered less than significant. No mitigation is necessary.

ii. Strong seismic ground shaking?

Less than Significant Impact. Several faults exist within the San Francisco Bay region and the probability of seismic shaking exists throughout the region. The project would consist of installing a rock revetment, replacing a culvert, and providing additional pedestrian access to the coast. No buildings or other structures

are proposed as part of the project. Thus, the project would not expose people to substantial adverse effects related to seismic shaking.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The USGS Susceptibility Map of the San Francisco Bay Area shows a very low to very high susceptibility for liquefaction in the project area. The project area contains eroded coastline/small landslide area which could potentially create a hazard to human health, safety, and the public. Installation of the proposed rock revetment as part of the proposed project would halt coastal erosion/small landslides, thus reducing adverse effects, and potential impacts related to risk of loss, injury, or death to less-than-significant levels.

iv. Landslides?

Less than Significant Impact. See answer to (a) iii above.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. During construction, portions of the project site would have areas of exposed soil that if exposed to rain or high wind events could cause erosion. Land disturbing activities that are part of project construction would be required to incorporate Best Management Practices (BMP's) as required by the construction general permit (CGP) that would adequately address soil erosion and runoff. The BMP's may include silt fencing, construction limit fencing, linear sediment controls such as fiber rolls, and stabilized construction access areas. As a result, bare areas, or exposed topsoil due to project construction would be stabilized prior to project close out. Compliance with the CGP would minimize soil erosion or the loss of topsoil to a less-than-significant level.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onor off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. The project is not located within an unstable geologic unit. Based on the NRCS soil description, the Millsholm loams located at the project site are known to have low expansion potential. The proposed project would fix unstable conditions along the coastline and is not located on expansive soil, and therefore would have a less-than-significant impact related to off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact. See answer to (c) above.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The project does not propose use of septic tanks and would not require use of alternative wastewater disposal services; therefore, there would be no impact from these systems.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact. The Northwest Information Center records search did not identify previously recorded or existing paleontological resources within the project area, and no such resources were observed during a surface reconnaissance surveys by NCE archaeologists. No unique geological resources were identified during review of geologic resources within the project boundary. The geologic formation upon which the project site is located has produced few significant paleontological specimens of scientific consequence and thus would not be likely to yield unique paleontological resources (AES 2009). Furthermore, no unique geologic features are known to exist within the project area. Mitigation measures TCR-1 to TCR-3 would provide monitoring and procedures for unanticipated discoveries.

4.8 GREENHOUSE GAS EMISSIONS

Environmental Setting

The term *greenhouse gas* is used to describe atmospheric gases that absorb solar radiation and subsequently emit radiation in the thermal infrared region of the energy spectrum, trapping heat in the Earth's atmosphere. Greenhouse gases of concern include CO_2, methane, nitrous oxide, and fluorinated gases[1]. A growing body of research attributes long-term changes in temperature, precipitation, and other elements of Earth's climate to large increases in greenhouse gas emissions since the mid-nineteenth century, particularly from human activity related to fossil fuel combustion. Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases have a broader, global impact.

Greenhouse gases differ by the amount of heat each trap in the atmosphere, known as global warming potential, or GWP. Carbon dioxide is the most significant greenhouse gas, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The GWP of CO_2 is assigned a value of 1, and the warming potential of other gases is assessed as multiples of CO_2. For example, the 2007 *International Panel on Climate Change Fourth Assessment Report* calculates the GWP of methane as 25 and the GWP of nitrous oxide as 298, over a 100-year time horizon (IPCC 2007).

Generally, estimates of all greenhouse gases are summed to obtain total emissions for a project or given time period, usually expressed in metric tons or million metric tons CO_2e.

Regulatory Setting

Federal

The EPA has no regulations or legislation enacted specifically addressing greenhouse gas emissions reductions and climate change at the project level. In addition, the EPA has not issued explicit guidance or methods to conduct project-level greenhouse gas analysis.

State

CARB is the lead agency in the development of greenhouse gas reduction for the state. CARB and other state agencies are currently working on regulations and other initiatives to implement the AB 32 Climate Change Scoping Plan (CARB 2018), which set 2030 targets. By 2050, the state plans to reduce emissions to 80 percent below 1990 levels. On September 8, 2016, Governor Brown signed Senate

[1] U.S. Environmental Protection Agency. "Overview of Greenhouse Gases." https://www.epa.gov/ghgemissions/overview-greenhouse-gases.

Bill (SB) 32, which legislatively established the greenhouse gas reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued California's 2017 Climate Change Scoping Plan. While the state is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the state, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term state emissions reduction goal of 80 percent below 1990 levels by 2050.

Regional - Construction Emissions

The BAAQMD does not have an adopted Threshold of Significance for construction-related greenhouse gas emissions. For operational, on-going emissions, the significance threshold is 1,100 metric tons per year (Table 2). Sources of construction-related greenhouse gases only include exhaust, for which the BAAQMD recommends following the same detailed guidance as for criteria air pollutants and precursors (BAAQMD 2017b).

Table 2. Greenhouse Gas Operational Threshold of Significance

Greenhouse Gas Emissions	
Land Use Projects – direct and indirect emissions	Compliance with a Qualified Greenhouse Gas Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) Adjusted to 660 metric tons annually or to 2.6 metric tons per capita (for 2030) *
Note: ROG = reactive organic gases, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. *BAAQMD does not have a recommended post-2020 greenhouse gas threshold.	

BAAQMD relies on the lead agency to quantify and disclose emissions that would occur during construction and make a determination of significance of greenhouse gas emissions in relation to meeting AB 32 greenhouse gas reduction goals (BAAQMD 2017b). They also recommend implementing BMPs to reduce greenhouse gas emissions during construction.

Local

In 2007, the City signed the *U.S. Conference of Mayors Climate Protection Agreement*, committing the City to reduce greenhouse gas emissions to meet or surpass the Kyoto Protocol targets. The City Council subsequently initiated a

citywide agreement greenhouse gas emissions inventory as a means of establishing a baseline for emissions, identifying sources of energy use, and providing a foundation for developing relevant energy and climate change policies.

Recently approved state legislation (AB 32 and SB 375) and new air emissions standards adopted by CARB lay the foundation for local policy development on energy and climate change in Richmond. Richmond's Energy and Climate Change Element of the General Plan includes goals, policies, and actions to position the City for sustainable, physical, and economic development now, and in the future (City of Richmond 2012).

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Answers to Checklist Questions

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. The project would result in short-term, temporary increases in GHG emissions during construction due to equipment and vehicle use at the site. During the construction period of 2-3 months, heavy equipment such as excavators, haul trucks, as well as worker commutes would generate exhaust. Emissions from construction equipment powered by gasoline and diesel engines would include CO, NOx, VOCs, directly emitted PM_{10} and $PM_{2.5}$, and toxic air contaminants, such as diesel exhaust particulate matter.

Because the project does not propose a new, long-term operational source of GHGs, project effects would be considered less than cumulatively significant. In addition, BMPs identified by the District as being effective in minimizing GHG emissions, such as using alternative fuel (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet; using local building materials of at least 10 percent; and recycling or reusing at least 50 percent of construction waste or demolition materials.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. Project-related emissions would be short-term (over the course of up to 2-3 months) and increases in greenhouse gases that could be attributed to the project would not interfere with adopted goals and policies. The greenhouse gas emissions generated during construction would not be considered significant and would not limit the state's ability to attain the reduction targets identified in AB 32, the Scoping Plan, or SB 32. Additionally, implementation of the project would not conflict with any of the greenhouse gas emission policies within the Energy and Climate Change Element of the General Plan. Therefore, the proposed project does not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Environmental Setting

The project is located in a previously disturbed area within the Point Molate Beach Park. More specifically, the culvert replacement component of the project would occur on a portion of Burma Road where it intersects with Stenmark Drive further inland. The rock revetment installed as part of the proposed project would be a continuation of the existing rock revetment adjacent to the park boundary to the west and would continue approximately 300 feet along the shoreline boundary of the park. The new pedestrian access path would replace the existing pedestrian access to the beach within the existing footprint.

Due to the past industrial activities within the project area, any new projects that include soil excavation create potential environmental concerns for exposing hazardous waste not previously remediated. Any soil excavation activities as a part of the project construction would require compliance with the Land Use Controls document prepared for the Former Point Molate Naval Depot (NFD) site. This document requires the City to implement specific mitigation measures as part of a soils management plan.

General Area History

The area had several uses up until World War II. In the early 1800s, the area was used by the padres of Mission Delores and later became a Spanish Rancho. In the late 1860s, Chinese fisherman developed a shrimp fishing camp, which lasted for more than 40 years, and by 1899 a quarry was in operation in the vicinity of the project site and continued as late as 1915. In 1908, the California Wine Association constructed a winery (i.e., Winehaven Winery) at Point Molate for processing grapes. At its peak, the winery became the largest winery in the United States. In 1919, the winery was shut down during prohibition, and, as a result, went mostly unused from about 1920 until the late 1930s. In 1937, the California Wine Association dissolved and began selling off its holdings.

In the early 1940s, the Navy established the NFD at Point Molate for fuel storage and distribution for the Pacific Fleet. Reportedly, the configuration today is largely similar to what it has historically been since being completed in 1943. The NFD property still contains approximately 20 large concrete underground storage tanks (USTs; each with 2.1 million gallons capacity) that have been built into the hillside and covered by native soil and several smaller USTs connected to refueling piers by over nine miles of buried pipeline.

Several fuel types were stored in the USTs over the years including Navy Special Fuel Oil, a black viscous bunker fuel, diesel fuel, F-76 (marine diesel), JP-5, (jet

turbine fuel), and aviation and motor vehicle gasoline (RWQCB 2011). Historical releases of fuel occurred during transfer of fuel to and from the USTs.

The facility also operated a sanitary sewer system and a ballast water fuel reclamation/treatment system. The reclamation/treatment system included three former treatment ponds. The ponds were built on the site of a larger single pond that was used for the disposal of oily wastes from various facility activities.

In 1995, fuel storage and supply operations ceased, and the Navy designated the NFD for closure under the fourth round of the Base Realignment and Closure (BRAC) Act. In September 1998, operational closure of the facility occurred.

In October 2003, the Navy transferred 85 percent (373 acres of 413 acres) of the NFD (USTs, drainage basins, and shoreline areas) to the City. The Navy retained 15 percent to continue restoration activities. In 2008, the Navy and the City entered into an Early Transfer Cooperative Agreement where the City would complete environmental remediation activities to satisfy the requirements of a California San Francisco Regional Water Quality Control (RWQCB) Order. In May 2010, based on a finding of suitability for early transfer, the remaining 15 percent of the NFD was transferred to the City.

The former NFD is on the Cortese List and the project area is within the boundaries of this former facility (Point Molate/Richmond NSC, Envirostor ID 7970002). This site was recently remediated and a Covenant to Restrict Use of Property was recorded with the County, which specifies restrictions for use of the site in a Land Use Controls document to protect human health and safety and the environment (City of Richmond, 2010a).

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			✓	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

Answers to Checklist Questions

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Transport and use of hazardous materials during construction are anticipated to be minimal. The use, storage, and management of fuels and other vehicle-related chemicals as well as construction materials would be managed according to the onsite SWPPP. For example, the SWPPP requires that equipment fueling and maintenance, if performed at the job site, must be performed in a designated area utilizing secondary containment with a spill kit nearby. Rinsing of concrete tools and chutes would also be performed according to the SWPPP, including utilizing concrete washouts and/or requiring that wastewater be kept within the concrete truck and hauled offsite for recycling. No disposal of hazardous materials is anticipated as part of this project, and no dewatering is required during construction.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. As described in checklist question a), hazardous materials used as part of the proposed project are expected to be minimal and the required onsite SWPPP would manage use of fuels and chemicals. Should a spill occur, spill procedures in the SWPPP would be followed.

As described in the setting, the project area was recently remediated as a part of the NFD to levels safe for non-residential uses. Therefore, hazardous materials are not anticipated to be encountered during construction. The exposure to construction workers or people in the vicinity to a release of hazardous materials during construction would be less than significant.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The closest school to the project area is Washington Elementary School, located approximately 3.0 miles east from the project site, and no schools are planned within ¼ mile during the construction period. The project construction would have no impact on existing or proposed schools.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further, also known as the Cortese List.

As discussed in the setting, the former NFD is on the Cortese List and the project area is considered a part of this former facility (Point Molate/Richmond NSC, Envirostor ID 7970002). This site was recently remediated and a Covenant to Restrict Use of Property was recorded with the County, which specifies restrictions for use of the site to protect human health and safety and the environment (City of Richmond, 2010a).

The area is recorded on California Water Board's Geotracker website as 'Completed-Case Closed.' The project area was a place of sandblasting activities or sandblast grit disposal. The site was remediated by over excavation under the Superfund program. The evaluation of analytical data that were collected after the removal action was completed indicates that all current and future human health risks and hazard indices have been reduced to acceptable levels. The results of the ecological risk assessment also indicate that Site 2 does not pose an ecological risk. Therefore, construction of the proposed project would not create a significant hazard to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The nearest airport, Marin County and Oakland International Airport, is over 10 miles from the project site. The project area is not located within a comprehensive land use planning area for an airport, and the project does not involve habitable improvements that would be sensitive to airport operations.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project would not create traffic congestion that would interfere with an emergency evacuation or emergency response plan during construction. The project is located along the Bay in an area where a private road once existed and is now closed to the public. The proposed project would not block emergency vehicle access along Stenmark Drive, which provides a route to buildings within the project area.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The project area is located in a locally designated Very High Fire Hazard Severity Zone. The project proposes to address erosion along a 300-foot section along the Bay and does not construct buildings. Although the project would construct the compacted aggregate base that will be used as the foundation for a small portion of the Bay Trail that would introduce more people to the area, the project itself would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.10 HYDROLOGY AND WATER QUALITY

Environmental Setting

Watershed and Water Quality

The project area is in the Central Basin of the San Francisco Bay Basin (SWRCB 2017). The Central Basin is included on the 2016 CWA Section 303(d) list of impaired water bodies for chlordane, DDT, dieldrin, dioxins, furans, invasive species, mercury, polycyclic aromatic hydrocarbons, polychlorinated biphenyls (PCBs), and selenium. Total Maximum Daily Load requirements are in effect for mercury and PCBs including requirements in the City's municipal stormwater permit (San Francisco Bay Municipal Regional Permit Provisions C.11 [Mercury Controls] and C.12. [PCB Controls]).

The proposed project parallels the San Francisco Bay coastline and is located within the Angel-Island San Francisco Bay Estuaries watershed (Hydrologic Unit Code 180500021001). Within the project vicinity there are several small ephemeral streams which drain flows from upland areas through existing culverts or overland flow to the San Francisco Bay.

Existing Stormwater Drainage Patterns

An Aquatic Resources Delineation Report was conducted within the project area to identify of waters of the United States, including wetlands (WOUS) **(Appendix F).**

Within the survey area, there is an unnamed drainage that is not recognized by the USGS National Hydrography Dataset. The unnamed drainage is identified by the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) as riverine. The riverine segment appears to be culverted underneath the project area. The culvert outfall is located at the approximate location of the NWI riverine segment western endpoint. The outfall of the culvert is adjacent to the San Francisco Bay. The USFWS NWI also recognized the shoreline of San Francisco Bay as saline emergent wetland.

Direct precipitation and storm events are the primary surface water sources for the unnamed drainage. It is assumed that during storm events, stormwater is discharged from the culvert outfall. This stormwater is then conveyed through the damaged 12-inch culvert via the unnamed drainage to San Francisco Bay.

Flood, Tsunami and Seiche Hazards

The project falls within the former NFD, which is an area that has not been delineated on Federal Emergency Management Agency (FEMA) map panels.

According to the Tsunami Inundation Map for Emergency Planning, Richmond Quadrangle, tsunami inundation areas are located along the San Francisco Bay and

does not extend inland into the project area (California Emergency Management Agency 2009).

Tsunamis, or seiches as they are called when they occur within an enclosed body of water, can also be generated within the Bay by the Hayward fault, which passes under San Francisco Bay. Because the project area does not contain landlocked bodies of water, there would be no risk associated with seiche hazard.

A coastal erosion assessment was completed and identifies sea level elevations anticipated in different years, and in different wave run-up or tsunami conditions **(Appendix G).** Tsunami wave-run up conditions could persist and not inundate the proposed trail based on current and future sea level rise projections through 2050, and sea level rise projections for 2030, 2050, and 2100 in non-seiche and non-tsunami conditions are not expected to inundate the trail portion of the project area.

Regulatory Setting

Federal

Clean Water Act

The CWA, passed in 1972, regulates and protects surface water quality across the United States. Sections 401 and 404 relate directly to local agency planning. Section 401 of the CWA requires a State Water Quality Certification for all federal permit or license applications for any activity that may result in a discharge to a water body to ensure compliance with state water quality standards. Most Certifications are issued in connection with Section 404 permits for dredge and fill discharges. Activities in waters of the U.S. that are regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects.

NPDES Permit

The CWA requires National Pollution Discharge Elimination System (NPDES) permits for stormwater discharges from municipal storm drain systems. The *Water Quality Control Plan for the San Francisco Bay Basin* (San Francisco Bay RWQCB 2017; Basin Plan) is the Water Board's planning document. The Water Board issues the municipal stormwater NPDES permits to address stormwater impairments and recommend actions. The City of Richmond and 15 other cities and towns, Contra Costa County, and the Contra Costa County Clean Water Program are co-permittees under a single stormwater NPDES Permit (No. CAS0029912 or successor permit).

State

As noted above, the project is within the jurisdictional limits of the San Francisco Bay RWQCB. Because the project proposes to disturb 1 acre or more, it is subject

to Construction General Permit Order 2009-0009-DWQ, which regulates stormwater leaving construction sites. Under this order, site owners must notify the state, prepare and implement a SWPPP, and monitor the effectiveness of the plan. The SWPPP must outline measures which will protect hydrology and water quality resources, including groundwater, from negative impacts during construction.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			✓	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			✓	
i. result in substantial erosion or siltation onor off-site;			✓	
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding onor off-site;			✓	
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			✓	
iv. impede or redirect flood flows?			✓	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			✓	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			✓	

Answers to Checklist Questions

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant Impact. As discussed in the project description (Section 3), the project plans to reconstruct a culvert that has deteriorated and broken at the bluff face, increasing erosion and siltation being drained to the Bay. The existing

outfall drains the upland watershed above the top of the bank; thus, the culvert reconstruction and bluff stabilization would eliminate erosion on the site and improve water quality leaving the project site.

The project would comply with all required permits, including the preparation and implementation of a SWPPP. This document includes measures to minimize impacts to stormwater quality during construction. Water quality BMPs following the Caltrans Construction Site BMP Manual would be implemented as part of the project.

The project would also comply with the General Plan requirement to implement BMPs to reduce erosion potential, including, but not limited to, scheduling construction during the dry season, temporary and permanent erosion and sediment controls, and preventing runoff during construction. With these protection measures, no significant impacts to surface or groundwater quality would occur.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact. Construction of the proposed project would require shallow subsurface excavations; however, impacts to groundwater movement or groundwater tables are not anticipated as a result. The proposed project does not require the use of groundwater wells.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation onor off-site?

Less than Significant Impact. The project proposes features that would have a minor effect on drainage by repairing a broken culvert and stabilizing the bluff. The project would use rock revetment comprised of various layers of rock and geotextile placed on the shoreline. The rock armor revetment is designed for long lasting protection and the need for maintenance inspections over the initial decades of its life would be limited. After construction, a monitoring and maintenance plan would be implemented to monitor the movement of sand out over the existing beach to ensure that it packs down under tidal and wave condition and is not the cause of soft fluidized sand. Construction BMPs would reduce erosion potential during construction activities. Therefore, the proposed project would have a less-than-significant impact on erosion within the project area.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding onor off-site?

Less than Significant Impact. The project plans to improve storm drainage within the site by reconstructing the culvert that drains the upland watershed above the top of the bank. As part of the project, this pipe would be replaced with a new 15" reinforced concrete culvert, connecting from an existing drainage inlet just north of the bluff to the face of the new rock revetment. Therefore, the project would have a beneficial impact on surface runoff within the area and it would not result in flooding onor off-site.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. The project does not propose features that would increase runoff at the site, and the site drains directly to the Bay. Construction BMPs and the SWPPP would control sources of polluted runoff and would reduce erosion potential during construction activities. Therefore, the project would have a less than significant impact on stormwater drainage systems and would not result in new substantial sources of polluted runoff.

iv. Impede or redirect flood flows?

Less than Significant Impact. The project would not construct structures within an existing floodway and therefore would not impede or redirect flood flows. Therefore, the impacts would be less than significant.

d) Is the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant Impact. The project falls within an area subject to tsunami conditions. Tsunami wave-run up conditions could affect the bluff stabilization but not inundate the proposed trail based on current and future sea level rise projections through 2050. Sea level rise projections for 2030, 2050, and 2100 in non-seiche and non-tsunami conditions are not expected to inundate the proposed trail. There are no operational hazardous materials associated with the proposed project that could be released during project inundation.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. The Basin Plan sets forth water quality standards for the surface and ground waters of the region. The project is not anticipated to conflict with water quality standards and would therefore not obstruct implementation of a water quality control plan.

The State Sustainable Groundwater Management Act requires local agencies of groundwater basins in high or-medium priority areas to implement sustainable groundwater management plans. The project area is not within a priority groundwater basin (Department of Water Resources 2019) and therefore there are no applicable sustainable groundwater management plans associated with the project.

4.11 LAND USE AND PLANNING

Environmental Setting

Current land uses in the project area include Parks and Recreation. Zoning surrounding the project area includes parks and recreation, single family hillside residential, and multi-family residential. On September 15, 2020, the City council adopted a general plan amendment and rezoning for the Point Molate Mixed Use Project which identifies the project area as parks and recreation; this decision will become effective October 15, 2020 unless legally challenged. Prior to this change, the size was designated Open Space, Parks and Recreation and Interim Study Overlay District. Interim Study Overlay Districts are areas where previous zoning is no longer appropriate under the current General Plan. Such designation in specific Districts allow for development proposals to be reviewed while zoning reclassification is underway.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				✓

Answers to Checklist Questions

a) Would the project physically divide an established community?

No Impact. The proposed project would construct a rock revetment wall and replace a culvert to arrest coastal erosion and to provide safe coastal access to pedestrians in a public park. No new roadways or structures are proposed that could result in dividing an established community.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. Construction activities would occur within the City-owned park. The project would comply with, and therefore not conflict with, the City's land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating environmental effects by implementing controls to protect or avoid impacts to

sensitive resources and mitigating any impacts to less than significant levels, as described in the other sections of this initial study. The project would not conflict with either the previous or the current zoning and general plan designations.

4.12 MINERAL RESOURCES

Environmental Setting

Minerals are naturally occurring chemical elements or compounds, or groups of elements and compounds, formed from inorganic processes and organic substances including, but not limited to, coal, peat, and oil-bearing rock, but excluding geothermal resources, natural gas, and petroleum. Rock, sand, gravel, and earth are also considered minerals when extracted by surface mining operations (City of Richmond 2012).

Mineral production in Richmond has been largely limited to sand, gravel, and rock products. Mining for manganese, crude oil, and clay once occurred the area. Mining for sandstone and crushed rock was until recently limited to one quarry on Canal Boulevard near the Port of Richmond and another at Point Molate. The Canal Boulevard quarry has been closed and remediated. The Point Molate quarry is focused on recycling and handling operations rather than extraction. No quarry operations currently operate in the City or are anticipated to in the future (City of Richmond 2012).

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

Answers to Checklist Questions

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The project site is not located within the overlay zone designated in the Zoning Ordinance for areas with known mineral resources. Given the absence of known mineral resources within the project site, the project would have no impact on significant mineral resources.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The project area is not classified by the City or County land use plans as a Mineral Resources Zone. Therefore, the project would have no impact on an important mineral resource recovery site.

4.13 NOISE

Environmental Setting

Noise is defined as a sound or series of sounds that are intrusive, objectional, or disruptive to daily life. Noise levels are measured to regulate ambient noise and protect residents of Richmond from exposure to excessive noise. Different land uses have different acceptability levels in terms of noise disturbance. For example, industrial uses have a higher noise threshold than residential uses. Noise standards provide a means of assessing exposure and compatibility based on specific uses.

The State of California's General Plan Guidelines define land use compatibility standards for a range of noise exposure levels (City of Richmond 2012). Richmond's significant noise generators include motor vehicles, airports, railroads, Bay Area Rapid Transit, and a variety of stationary sources common to an urban setting. Significant noise generators in the vicinity of the project include activities associated with recreation and open space (children playing, etc.). The project vicinity is park and open space. There are no sensitive receptors in or near the project area.

Environmental Checklist

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Generation of excessive groundborne vibration or groundborne noise levels?			✓	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

Answers to Checklist Questions

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of

standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. During construction, workers and persons visiting in the area would be temporarily exposed to minor ground borne vibration and noise generated by construction equipment, such as compaction equipment, excavators, backhoes, and loaders. No pile driving is anticipated for the project, which is the primary source of ground borne vibrations and noise during construction.

Because generation of ambient noise would be temporary during construction, would comply with the City Noise Ordinance requirements for construction projects, and construction equipment noise from the project is exempt from the Noise Ordinance thresholds, the project would not result in ambient noise levels in excess of established standards set forth in the General Plan or Noise Ordinance.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Vibration is described in terms of frequency and amplitude. Unlike sound, there is no standard way of measuring and reporting amplitude. Construction vibration is generally associated with pile driving and rock blasting. Occasionally, large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity. Construction activities would result in intermittent exposure of ground borne vibration in the project area. However, this impact to the project area would be temporary and would not occur at the boundary of a residential zone. Because impacts would be temporary and would comply with the City Noise Ordinance and General Plan Noise policies, the impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels

No Impact. A review of the project area indicates that the project is not located in an airport land use plan or within the vicinity of a private airstrip. The Oakland International Airport is located approximately 10 miles south of the proposed project. Therefore, the project would not expose people working in or visiting the project area to excessive noise levels.

4.14 POPULATION AND HOUSING

Environmental Setting

As of 2018, the City had an estimated population of 109,340 residents and an estimated housing stock of 38,607 dwelling units (California Department of Finance 2014-2018). There are no dwellings near the project area. The project area is currently used by residents, recreationalists, and other individuals who visit the Point Molate Beach Park adjacent to the project site.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

Answers to Checklist Questions

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project would install a rock revetment to halt coastal erosion, replace a collapsed culvert and provide safe public pedestrian access to the coast at Point Molate. The proposed project would not induce population growth directly by adding new housing or commercial uses, or indirectly by adding new infrastructure.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. Construction of the proposed project would not result in the removal of homes within or adjacent to the project site and would not displace existing residents. Therefore, no homes or persons would be displaced as a result of the proposed project.

4.15 PUBLIC SERVICES

Environmental Setting

Fire Protection

The Richmond Fire Department has seven stations distributed across a 56-mile service area and provides fire protection services in the project area. The closest stations to the proposed project area are:

- Station 61 located approximately 2.1 miles southeast of the project site.

Police Protection

The Richmond Police Department provides law enforcement and police protection in the project area. The nearest police station is located approximately 4.8 miles southeast of the project site. The Department is broken into three different districts (Northern, Central, and Southern). Each district is divided again into three smaller beats. Every officer in the Patrol Bureau is assigned to a beat. The project area is in the Southern District (21 total officers) in Beat 1 and has seven officers providing law enforcement and police protection to the area. In case of emergencies, the community can reach an on-call first responder on a 24-hour basis at the City Emergency Operations Center.

Environmental Checklist

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantial adverse physical impacts associated with the need and/or provision of new or physically altered governmental services and/or facilities in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services?				✓
i. Fire protection?				✓
ii. Police protection?				✓
iii. Schools?				✓
iv. Parks?				✓
iv. Other public facilities?				✓

Answers to Checklist Questions

a) Would the project result in substantial adverse physical impacts associated with the need and/or provision of new or physically altered governmental services and/or facilities in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services?

i. Fire protection?
ii. Police protection?
iii. Schools?
iv. Parks?
v. Other public facilities?

No Impact. The proposed project would not increase dwelling units or road capacity at the project site, and thus involves no increase in demand for public services such as schools, libraries, or parks.

During construction, the project may have a negligible increase in emergency services demand to protect construction equipment or personnel. There are adequate fire and police services to protect the construction site and construction workers without affecting emergency service ratios, response times or other performance objectives. Therefore, the proposed project would not require new or physically altered governmental services and/or facilities to maintain acceptable service ratios, response times, or other performance objectives.

4.16 RECREATION

Environmental Setting

Recreational facilities within the area include the City-owned Point Molate Beach Park which was reopened in 2014 following a renovation project to replace picnic tables, resurface the parking lot, and provide a portable, Americans with Disabilities Act-accessible toilet facility. Also, the project site is adjacent to a segment of the larger (approximately 500-mile) San Francisco Bay Trail, which the EBRPD is currently planning in partnership with the City. The San Francisco Bay Trail organization describes plans for the San Francisco Bay Trail in the project vicinity as a 2.5-mile multi-use pedestrian path from the RSR Bridge to the northern border of the City's Point Molate property (San Francisco Bay Trail, 2018). As noted in the project description, a portion of the planned Bay Trail alignment was lost due to bank failure. As part of this project, an 80-foot-long foundational section of the Bay Trail would be constructed where it coincides with the Beach Park slope stabilization, aligned at the top of the rock revetment. This foundation would consist of compacted aggregate base; in the future, it is planned that the EBRPD will install 10 feet of asphalt paving with 5-foot, decomposed granite shoulders to match the overall new trail.

Regional and State Parks

Richmond has approximately 5,718 acres of regional and state parklands. These parklands provide active and passive recreational opportunities for. These parklands range in character from large-scale hillside open space areas to shoreline parks.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			✓	

Answers to Checklist Questions

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact. The proposed project would not lead to an increase in the area's permanent population or housing stock, either directly or indirectly. Therefore, no increased demand for parks and recreational facilities would be generated by the project. Rather, the project would improve recreational facilities in the City and help meet the demand for improved park facilities in the area. Construction of a compacted aggregate base of the Bay Trail would be used as the foundation for the future 10-feet of asphalt paving with five-foot decomposed granite shoulders that will be constructed by the EBRPD to match the overall proposed new trail.

b) Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. The proposed project would increase safety for users of Beach Park and provide the foundation for the proposed trail. Furthermore, the proposed project would provide a safer shoulder area for a small segment of the San Francisco Bay Trail that would be constructed in cooperation with the City and the EBRPD in 2021. Therefore, the proposed project would provide both indirect and direct beneficial impacts on recreation.

4.17 TRANSPORTATION

Environmental Setting

Regional access to the project area is provided by I-580 at the Stenmark Drive exit. I-580 connects the City to the City of San Rafael via the RSR Bridge. Stenmark Drive is a 2-lane road exiting from I-580; I-580 has 10 travel lanes and runs in a general east-west direction away south of the project site. In 2014, I-580 carried approximately 7,000 cars during peak hours and 82,000 vehicles per day (Caltrans, 2017).

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			✓	
b) Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			✓	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓
d) Result in inadequate emergency access?				✓

Answers to Checklist Questions

a) Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant Impact. Visitors currently access the project area through Stenmark Drive. The project does not propose new roadways but does propose to construct the compacted aggregate base for the planned Bay Trail that is scheduled for construction in 2021. Therefore, the project would be consistent with City and EBRPD plans and policies related to bicycle and pedestrian access.

b) Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

Less than Significant Impact. CEQA Guidelines §15064.3, subdivision (b) pertains to the use of VMT to analyze transportation impacts. The Governor's Office

of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018) provides technical recommendations regarding the assessment of VMT, non-binding thresholds of significance, potential exemptions or presumptions of less-than-significant CEQA impacts, and mitigation measures. Section F of the Technical Advisory notes that maintenance activities and the installation of operational features such as upgrading traffic control devices, adding turn pockets, or installing traffic calming measures are "unlikely to lead to a substantial or measurable increase in vehicle travel." As noted in CEQA Guidelines Section 15064.3(b)(2), transportation projects "that reduce, or have no impact on, vehicle-miles traveled should be presumed to cause a less that significant transportation impact."

The proposed project would not increase the number of travel lanes over existing conditions. Therefore, the project is unlikely to induce vehicle travel, except perhaps a slight increase in visitors to Beach Park; therefore, the project's operational effect on VMT is negligible.

Construction equipment and worker vehicles would generate vehicle trips over the approximately 60 days of construction, which would be temporary and a minor addition to existing VMT. Therefore, the proposed project would have a less than significant impact on VMT.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project would not modify or add to the existing roadway infrastructure. Therefore, no increase in traffic hazards for Beach Park users would occur.

d) Would the project result in inadequate emergency access?

No Impact. The proposed project would not be located on a public roadway and therefore would not affect emergency response to the project area. Project construction would not require closure of travel lanes that could impede circulation of emergency vehicles along Stenmark Drive.

4.18 TRIBAL CULTURAL RESOURCES

Environmental Setting

The Bay Area has been inhabited by prehistoric peoples since the terminal Pleistocene (Moratto 1984). By the time of Spanish settlement in 1776, seven native languages were spoken within the region including Southern Pomo, Wapo, Patwin, Coast Miwok, Bay Miwok, Karkin Costanoan, and San Francisco Costanoan (Milliken et al. 2007).

Ethnographic literature indicates that the region surrounding the project APE was near the northwestern extent of the Ohlone or Costanoan people's pre-contact territory (Levy 1978). Their territory ranged from the San Francisco Peninsula in the north to Big Sur in the south and from the Pacific Ocean in the west to the Diablo Range in the east. Their vast region included the San Francisco Peninsula, Santa Clara Valley, Santa Cruz Mountains, Monterey Bay area, as well as present-day Alameda County, Contra Costa County, and the Salinas Valley.

The Ohlone people today belong to one of several geographically distinct groups. The Muwekma Ohlone Tribe has members from around the Bay Area and comprises descendants of the Ohlones from the San Jose, Santa Clara, and San Francisco missions. The Ohlone Costanoan Esselen Nation, consisting of descendants of intermarried Rumsen Costanoan and Esselen speakers of Mission San Carlos Borromeo, are centered within the Greater Monterey Bay Area. The Amah-Mutsun Tribe, located inland from Monterey Bay, are descendants of Mutsun Costanoan speakers of Mission San Juan Bautista. The Costanoan Rumsien Carmel Tribe of Pomona/Chino are descendants from Mission San Carlos and now reside in southern California (NCE 2020b).

Site Investigation

A records search was conducted at the Northwest Information Center for resources within the APE, and resources in the vicinity around the APE (archival study area). An emphasis was placed on identifying the extent of previously inventoried areas and the location of previously recorded archaeological sites. The search results indicated two historic sites inside the project area and one prehistoric site adjacent to the project area.

P-07-000162 (CA-CCO-283) represents the remains of a prehistoric shellmound site, the core of which is located outside and to the north of the APE. Once quite concentrated, over time the shellmound has been graded, resulting in diffuse scattering and spreading of the archaeological deposit. The resource includes artifacts, faunal remains, and human interments located along the Richmond shoreline between Point Molate and Castro Point. This resource is located over 300

feet to the north of the APE; however, a diffuse and redeposited tendril of the midden stretches into the APE.

Evidence of a distal arm of the shell midden created by past grading was observed within the bluff face stratigraphy during the June 2020 pedestrian survey of the project area. The shell lens, visible at the north end of the proposed project area, is sandwiched between two modern aggregate fill layers demonstrating that the archaeological material was bladed from the core site area and used as fill. The prehistoric site is recommended as not eligible for the National Register list, but the site is managed as eligible for listing.

The Native American Heritage Commission (NAHC) conducted a review of their Sacred Lands files on September 19, 2020. The NAHC provided a list of Native American individuals and organizations that may have knowledge of cultural resources in the project area. Letters with maps identifying the scope of the proposed project area were sent by NCE on May 27, 2020.

NCE initiated follow up phone calls with the tribes. Three tribes responded and requested for recommended field crew training, Native American Monitoring, and recommended that an archeologist be present on-site during construction. Voicemails were left with the other three tribes but as of this time, the City has not received a response.

The Cultural Resource Inventory Report prepared for the project is included as **Appendix D**.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in CRHR, or in a local register of historical resources as defined in PRC § 5020.1(k), or		✓		
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

Answers to Checklist Questions

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in CRHR, or in a local register of historical resources as defined in PRC § 5020.1(k)?

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant Impact with Mitigation Incorporated. The City requested a Sacred Lands Search from the NAHC and received a response on September 20, 2019, indicating the search was positive for sacred lands in the area. Although the pedestrian survey determined that the visible archaeological materials appear to be fill, there remains a potential for project activities to inadvertently impact tribal cultural resources during ground-disturbing activities. Inquiry letters were mailed on City letterhead to the tribes identified by NAHC on May 27, 2020. Three of the tribes out of the six notified responded with recommendations for the proposed project.

Mitigation Measures TCR-1 through TCR-3 were developed in consultation with the tribes to ensure that construction crews are sensitive to potential cultural resources and understand the processes needed to protect them, and that avoidance and minimization measures and procedures for respectfully protecting inadvertent discoveries are implemented.

- ***Mitigation Measure TCR-1***: The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers, before any project-related construction activities begin. The WEAP shall be developed in coordination with culturally affiliated Native American tribes and a qualified archaeologist, as defined by the Secretary of the Interior's Professional Qualifications Standards for Archeology. The City may invite Native American representatives from interested culturally affiliated Native American tribes to participate.

- The WEAP shall include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations. The WEAP shall also describe appropriate avoidance and impact minimization measures for resources that could be located at the project area or mitigation site and provide procedures and contact information should workers encounter any potential cultural resources or tribal cultural resources. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

- ***Mitigation Measure TCR-2:*** The City shall retain a qualified archaeologist that meets or exceeds the Secretary of the Interior's (SOI) standards to prepare an Archaeological Monitoring Plan prior to ground-disturbing activities implementing the project. The monitoring plan shall describe the procedures for the appropriate identification and treatment of archaeological resources inadvertently discovered during grading or construction activities. The plan shall include provisions to halt work in the immediate area in the event of a discovery, as specified in TCR-3.

- ***Mitigation Measure TCR-3*****:** The City shall retain an SOI-qualified archaeological monitor and Native American monitors prior to the commencement of ground-disturbing activities to implement the activities prescribed by the Archaeological Monitoring Plan. The monitors shall be granted stop-work authority in the event an inadvertent discovery is made. The monitors shall immediately evaluate the discovery to determine whether additional treatment is warranted. Construction activities shall not resume in the immediate area of the discovery until authorized by the monitors.

Finding: *Implementation of* ***Mitigation Measures TCR-1, TCR-2, and TCR-3*** *would ensure that construction crews are sensitive to potential Tribal Cultural Resources and understand the processes needed to protect them, and that avoidance and minimization measures and procedures for respectfully protecting inadvertent discoveries are implemented, which would reduce the potential for impacts to Tribal Cultural Resources to less than significant.*

4.19 UTILITIES AND SERVICE SYSTEMS

Environmental Setting

No connections to a wastewater treatment facility occur within the project area. Fire hydrants in the area are operated by the City and are currently inactive but may be turned on during construction of the project if necessary, to provide a source of water for dust control. Drainage in the project area is currently provided through a broken culvert pipe.

Environmental Checklist

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				✓
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				✓
c) Result in a determination by wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
d) Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals??			✓	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			✓	

Answers to Checklist Questions

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact. Construction of the proposed project may require the use of water for dust mitigation. Water tanks could be filled using designated fire hydrants located in the project area or trucked to the project site. The proposed project would not require the construction or expansion of any new water or wastewater facilities for

either construction or operations. Water usage for construction of the proposed project would be negligible and existing resources have the capacity to serve any temporary water needs.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

No Impact. See answer to (a) above.

c) Would the project result in a determination by wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The project does not require wastewater services. There would be no increase in sewage generation or direct demand for sewer line capacity, wastewater treatment requirements, or wastewater treatment facilities as a result of implementation or construction of the proposed project.

d) Would the project generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. Construction activities for the proposed project would generate construction waste requiring disposal at area landfills. The types of construction waste that would be generated include excess soil from grading activities, metal culvert pipe, excess paving materials, and refuse from the shoreline. Minimal hazardous wastes generated during construction would be handled and disposed of consistent with applicable federal, state, and local statutes and regulations, including the City's Solid Wastes Ordinance (City of Richmond, 2010).

4.20 WILDFIRE

Environmental Setting

The California Department of Forestry and Fire Protection (CAL FIRE) designates fire hazard severity zones for areas under state jurisdiction. For areas under local jurisdiction, CAL FIRE identifies areas that the department considers to be Very High Fire Hazard Severity Zones (VHFHSZs); the local jurisdiction must choose whether to adopt the CAL FIRE recommendations. The project area is not within a state designated VHFHSZ; however, the City has adopted the CalFire recommended local designation of VHFHSZ. The project area is located in a locally designated VHFHSZ (**Figure 7**).

Environmental Checklist

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

Answers to Checklist Questions

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

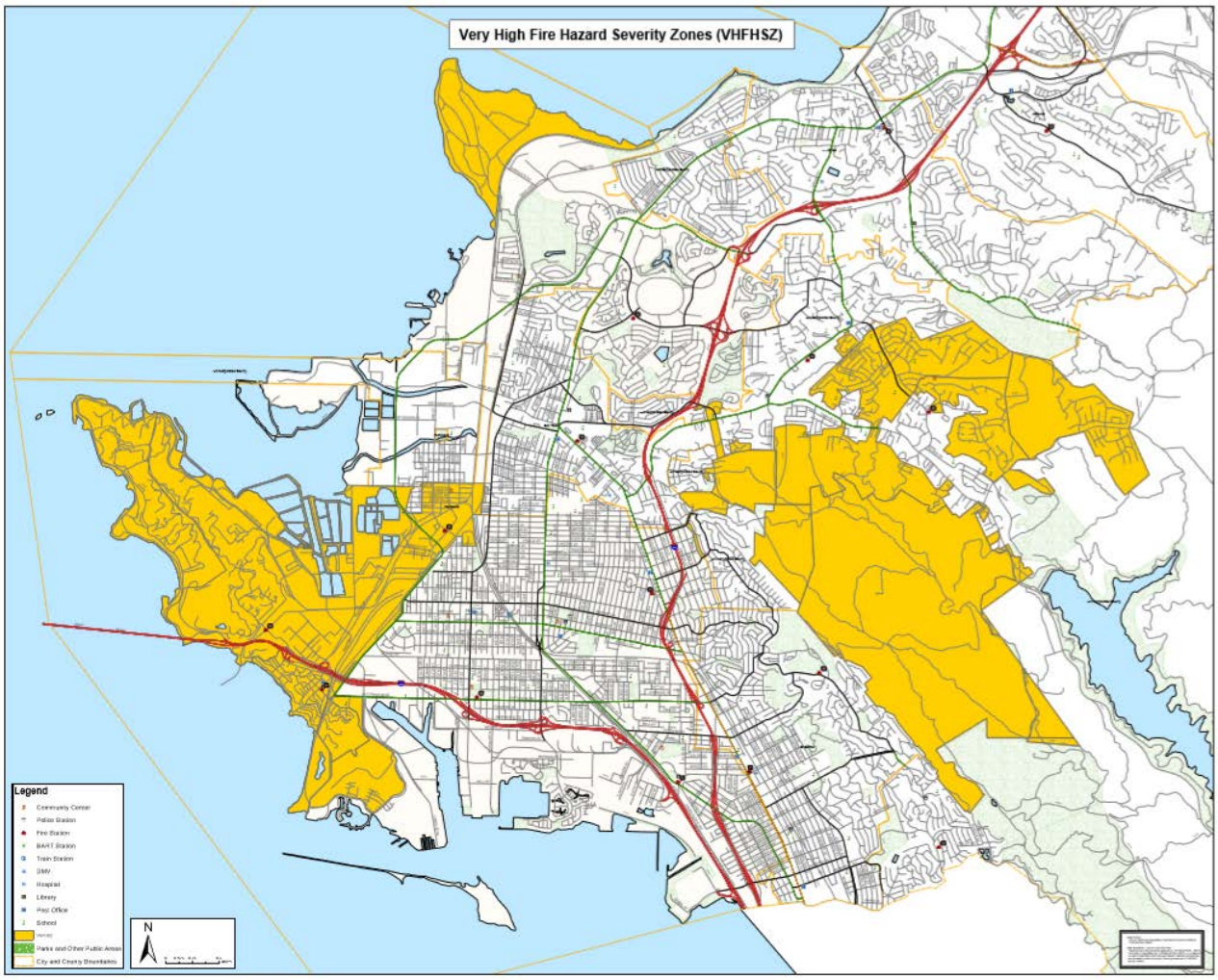


Figure 7 Local Very High Fire Hazard Severity Zones

No Impact. The project is in a locally designated VHFHSZ, and the City does not have an adopted emergency plan for the project area. The proposed project improvements would not affect access or fire response capabilities within the area.

b) Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The project would address erosion along the shoreline. The project does not propose to construct or modify habitable structures within the project area that could expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines

or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The project would not require the maintenance or installation of associated infrastructure to protect new uses such as residential or commercial structures. The project provides infrastructure improvements that are not fire sensitive. Therefore, the project would not exacerbate fire risk within the project area.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The project provides infrastructure improvements that are not fire sensitive. The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, or the effects of probable future projects.)			✓	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

Answers to Checklist Questions

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigation Incorporated. The IS has determined that the proposed project would not substantially degrade the quality of environment with regard to agriculture and forestry, aesthetics, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, or wildfires.

As discussed in Section 4.4, Biological Resources, project construction could potentially impact migratory birds and birds of prey during the breeding season; however, with implementation of **Mitigation Measure BIO-1,** impacts would be reduced to less than significant levels by requiring pre-construction nesting surveys and measures to protect active nests.

The project's potential effects on historic and archeological resources are described in Section 4.18, Tribal Cultural Resources. Project construction could encounter

unanticipated tribal resources connected to the shellmound identified and recorded in the vicinity of the project site. **Mitigation Measures TCR-1 through TCR-3** would reduce potential impacts to less than significant levels through education of construction workers, monitoring by a qualified archaeologist and tribal monitors, and procedures for managing any resources identified.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, or the effects of probable future projects.)?

Less than Significant Impact. The proposed project would not involve development or changes in land use that would result in increased population growth or demand for public services. The project would not contribute to increased automobile traffic in the area, and it would facilitate the construction of the base of the Bay Trail by stabilizing the slope and protecting the trail alignment, increasing bicycle and pedestrian access. The project would reduce coastal erosion, improve drainage, and provide improved pedestrian coastal access to the public.

The project would not result in an increase in population or growth that would require new housing, facilities, or structures that would cause environmental degradation. The project would not result in an exceedance for any criteria air pollutant for which the region is in non-attainment; therefore, there would be no cumulatively considerable net increase in criteria pollutants. The project would be consistent with local, state, and federal regulations pertaining to the protection and mitigation of impacts to sensitive resources, and compliance with the terms of permitting conditions would ensure that adverse impacts to resources would be mitigated and would not result in cumulative impacts.

Two other projects have recently been approved in the project vicinity. The Point Molate Mixed-Use Development Project was approved on September 15, 2020, which includes the project site within planned open space. This project is a mixed-use development of approximately 80 acres of the approximately 413-acre Point Molate area (of which approximately 271 acres is above water and 142 acres are submerged in the Bay) that includes a variety of residential and commercial uses, as well as supporting road and utility infrastructure. Construction of the Point Molate Project is expected to take seven to nine years, starting in early 2021. In addition, the California Coastal Commission has approved the demolition of the Terminal Four Wharf, Warehouse, and Piling Removal Project, located approximately 1.65 miles north of the project site. The dates for construction of the Terminal Four project are not yet known; this project would have a relatively low number of vehicle trips and a short construction schedule.

All identified potentially significant impacts from construction and implementation would be reduced to less than significant with the mitigation measures that have been included in the project. Biological species will be protected by implementation of **Mitigation Measures Bio-1**. Neither the Mixed-Use nor the Terminal Four projects identified significant and unavoidable impacts to biological resources, therefore no cumulatively considerable effect will occur. While some loss of archaeological deposits would occur during construction, this loss is less than what is naturally lost to the Bay from annual erosion while the slope remains unprotected, thus the long-term effects are beneficial; **Mitigation Measures TRC 1 – TRC 3** mitigate the potential for loss of unanticipated finds to less than significant. No significant adverse effects on cultural resources were identified in either the Mixed Use or Terminal Four projects, and mitigation measures for unanticipated discoveries were adopted for both projects; therefore, the potential for cumulative loss of cultural resources is less than significant. As discussed throughout this environmental document, the project would not contribute to a substantial decline in water quality, air quality, noise, biological resources, agricultural resources, or cultural resources under cumulative conditions. Cumulatively considerable impacts associated with the project would be less than significant.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. All potential impacts associated with construction and implementation of the project identified in this Mitigated Negative Declaration would be either less than significant after mitigation or less than significant and do not require mitigation. No adverse effects on human beings, such as noise or hazards, were identified. Additionally, implementation of BMPs and compliance with state and federal regulations protecting human and environmental health during construction, such as preparation of a SWPPP and Spill Prevention Plan, would be implemented. Therefore, the project would not result in substantial adverse effects on human beings, either directly or indirectly.

Section 5 Mitigation Monitoring and Reporting Plan

CEQA requires review of any project that could have significant adverse effects on the environment. In 1988, CEQA was amended to require reporting on and monitoring of mitigation measures adopted as part of the environmental review process. This Mitigation Monitoring and Reporting Plan (MMRP) is designed to aid the City in their implementation and monitoring of measures proposed in the IS for the proposed project.

Table 3 provides details of the MMRP. The mitigation measures are taken from the IS and are assigned the same number as in the IS. The MMRP describes the actions that must take place to implement each mitigation measure, the timing of those actions, and the entities responsible for implementing and monitoring the actions.

In addition to the mitigation measures, the MMRP includes conservation measures and additional construction controls incorporated into the project to help the lead agency track implementation of these activities.

The table consists of the following columns:

- Monitoring and Reporting Action – Listing of the Mitigation Measure, Conservation Measure, or Construction Control from the IS.
- Implemented By – Entities required to implement the action(s).
- Monitored By – Entity responsible for monitoring the action(s).
- Monitoring Schedule – Time(s) when monitoring will be conducted.
- Verification of Compliance – Documentation that the required action was completed.

Table 3. Mitigation Monitoring and Reporting Plan

Project Mitigation Measures, Conservation Measures, and Construction Controls	Implemented By	Monitored By	Monitoring and Reporting Action	Monitoring Schedule	Verification of Compliance
Mitigation Measures					
Mitigation Measure BIO-1					
If any construction activities (e.g., grubbing or grading) are scheduled during the bird nesting season (typically defined by CDFW as February 15 to September 15), the City or approved construction contractor shall retain a qualified biologist to conduct a pre-construction survey of the project area and a 100-foot buffer, as access is available, to locate active bird nests, identify measures to protect the nests, and locate any other special status species. The pre-construction survey shall be conducted no more than 14 days prior to the implementation of construction activities (including staging and equipment storage). Any active nest should not be disturbed until young have fledged or under the direction provided by a qualified biologist. Any special status species shall not be disturbed without the direction of a qualified biologist. If an active nest is found during construction, disturbance shall not occur without direction from a qualified biologist.	Project Contractors shall hire a qualified biologist to conduct pre-construction surveys as described. Project Contractors shall prepare construction plans that incorporate preconstructio n surveys and buffer zones. If required, avoidance procedures shall be implemented.	Project Contractors City of Richmond Capital Projects Division and qualified Biologist	Review and approve a qualified biologist. Review pre-construction survey reports. If active nests are found, inspect construction site to confirm buffer zones.	No more than 14 days before start or restart of construction during the months of February through August.	*Verified by:* *Date:*
Mitigation Measure TCR-1					
The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP])	Project Contractor	City of Richmond Capital	Verify attendance and training by all project personnel prior to beginning work onsite.	Prior to construction commencement.	*Verified by:* *Date:*

Project Mitigation Measures, Conservation Measures, and Construction Controls	Implemented By	Monitored By	Monitoring and Reporting Action	Monitoring Schedule	Verification of Compliance
for all personnel involved in project construction, including field consultants and construction workers, before any project-related construction activities begin. The WEAP shall be developed in coordination with culturally affiliated Native American tribes and a qualified archaeologist, as defined by the Secretary of the Interior's Professional Qualifications Standards for Archeology. The City may invite Native American representatives from interested culturally affiliated Native American tribes to participate. The WEAP shall include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating state laws and regulations. The WEAP shall also describe appropriate avoidance and impact minimization measures for resources that could be located at the project area or mitigation site and provide procedures and contact information should workers encounter any potential cultural resources or tribal cultural resources. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.		Projects Division			
Mitigation Measure TCR-2					
The City shall retain a qualified archaeologist that meets or exceeds the Secretary of the Interior's (SOI) standards to prepare an Archaeological Monitoring Plan prior to ground-disturbing activities implementing the project. The monitoring plan shall describe the procedures for the appropriate identification and treatment of archaeological resources inadvertently	City of Richmond Capital Projects Division and SOI Archaeologist	City of Richmond Capital Projects Division, qualified Archaeologist	Review and approval of archaeologist. Review and approval of the monitoring plan that includes archaeological mitigation. Incorporate appropriate notes into construction documents.	Prior to construction.	*Verified by:* *Date:*

Project Mitigation Measures, Conservation Measures, and Construction Controls	Implemented By	Monitored By	Monitoring and Reporting Action	Monitoring Schedule	Verification of Compliance
discovered during grading or construction activities. The plan shall include provisions to halt work in the immediate area in the event of a discovery, as specified in TCR-3.		and Contractor			
Mitigation Measure TCR-3					
The City shall retain an SOI-qualified archaeological monitor and Native American monitors prior to the commencement of ground-disturbing activities to implement the activities prescribed by the Archaeological Monitoring Plan. The monitors shall be granted stop-work authority in the event an inadvertent discovery is made. The monitors shall immediately evaluate the discovery to determine whether additional treatment is warranted. Construction activities shall not resume in the immediate area of the discovery until authorized by the monitors.	Project Contractor and Archaeologist	Contractor, City of Richmond Capital Projects Division, and qualified Archaeologist	Review and approval of archaeologist. Review and approval of the construction plan that includes archaeological mitigation. Inspect site during construction.	Prior to construction. Field inspections during construction.	*Verified by:* *Date:*
Conservation Controls Incorporated into Project					
Air Quality					
The following measures shall be implemented to minimize impacts to air quality during construction: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power	Project Contractors, BAAQMD, and City of Richmond Capital Projects Division	BAAQMD and City of Richmond Capital Projects Division	Capital Projects Division to verify inclusion of BAAQMD BMPs in applicable construction plans and specifications submitted before construction. City of Richmond Capital Projects to inspect site during construction to ensure compliance with project construction plans.	Prior to any earthwork. Field inspections during construction.	*Verified by:* *Date:*

Project Mitigation Measures, Conservation Measures, and Construction Controls	Implemented By	Monitored By	Monitoring and Reporting Action	Monitoring Schedule	Verification of Compliance
vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph. 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure in 13 CCR 2485). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 8. A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations					
Hydrology and Water Quality					

Project Mitigation Measures, Conservation Measures, and Construction Controls	Implemented By	Monitored By	Monitoring and Reporting Action	Monitoring Schedule	Verification of Compliance
Construction activities that disturb one acre or more of land, and construction on smaller sites that are part of a larger project, must comply with a California State Water Resources Control Board (SWRCB) Construction General Permit (Order 2009-0009-DWQ) that regulates stormwater leaving construction sites. Site owners must notify the state, prepare, and implement a Stormwater Pollution Prevention Plan (SWPPP), and monitor the effectiveness of the plan. The SWPPP must outline measures that would protect hydrology and water quality resources, including groundwater, from negative impacts during construction. Construction site stormwater BMPs would follow the Caltrans Construction Site Best Management Practices Manual (Caltrans 2017) to control and minimize the impacts of construction related activities. The following BMPs, at a minimum, would be implemented at the site during construction: 1. Temporary erosion and sediment control BMPs to prevent the transport of earthen materials and other construction waste materials from disturbed land areas, stockpiles, and staging areas during periods of precipitation or runoff (such as silt fence, erosion control fabric, fiber rolls). 2. Tracking controls (such as designated ingress and egress areas) and designated staging areas outside of drainage areas. 3. Revegetation of all disturbed areas, including staging with native species only. 4. Temporary BMPs to prevent wind erosion and sediment transport of disturbed areas, such as use of water for dust control and covering of stockpiles.	Project Contractors, and Richmond Capital Projects Division	City of Richmond	Richmond Capital Projects Division to verify inclusion of BMPs in applicable construction plans and specifications submitted before construction. Richmond Capital Projects Division to inspect site during construction to ensure compliance with project construction plans.	Prior to any earthwork. Field inspections during construction.	*Verified by:* *Date:*

Project Mitigation Measures, Conservation Measures, and Construction Controls	Implemented By	Monitored By	Monitoring and Reporting Action	Monitoring Schedule	Verification of Compliance
5. Construction boundary fencing to limit land disturbance to areas not planned for construction.					

Section 6 References

AN West, Inc. 2018. *Point Molate Beach Park Shoreline Restoration Alternatives Study Report*.

Analytical Environmental Services (AES). 2009. *Point Molate Mixed Use Tribal Destination Resort and Casino Project EIR/EIS*. Accessible from: https://www.ci.richmond.ca.us/1863/Point-Molate-Resort-and-Casino

Association of Bay Area Governments (ABAG). 2015. *Bay Trail Plan*. Accessible from: http://baytrail.org/wp-content/uploads/2015/12/San-Francisco-Bay-Trail_-Bay-Trail-Plan-Summary.pdf

BAAQMD (Bay Area Air Quality Management District). 2017a. "Executive Summary." *2017 Clean Air Plan.* Accessible from: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/execsummary-pdf.pdf?la=en

BAAQMD. 2017b. *CEQA Air Quality Guidelines*. June 2010, revised May 2017. Accessible from: http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines

BAAQMD. 2020. "About Air Quality." Last modified December 12, 2016. Accessible from: http://www.baaqmd.gov/about-air-quality

Bardsley, B., and Leacox, M. 2016a. *San Francisco Bay Trail at Point Molate: Hazardous Waste Memorandum – Phase I Environmental Site Assessment*. Prepared by NCE, Richmond office. Prepared on behalf of the East Bay Regional Park Department and the City of Richmond.

Bardsley, B., and Leacox, M. 2016b. *San Francisco Bay Trail at Point Molate: Phase II Environmental Site Assessment*. Prepared by NCE, Richmond office. Prepared on behalf of the East Bay Regional Park Department and the City of Richmond.

Bay Conservation and Development Commission (BCDC). 2015. *San Francisco Bay Plan*. Accessible from: http://www.bcdc.ca.gov/plans/sfbay_plan#2

Caltrans. 2017. 2017 Traffic Volumes. Accessible from: https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-505-980

CARB. 2018. AB 32 Climate Change Scoping Plan. Accessible from: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

CARB. 2019a. "Ozone & Health." Accessible from: https://ww2.arb.ca.gov/resources/ozone-and-health

CARB. 2019b. "Inhalable Particulate Matter and Health." Accessible from: https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health

CARB. 2019c. "Area Designations Maps/State and National." Last reviewed December 28, 2018.

California Department of Conservation, Division of Land Resource Protection. 2009. *Contra Costa County Important Farmland 2008.* Accessible from: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/con08.pdf

California Department of Conservation. 2019. "Williamson Act Program." Accessible from: https://www.conservation.ca.gov/dlrp/lca

California Department of Finance. 2014-2018. American Community Survey (5-year estimates). Accessible from: http://dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/#ACS2017xx5

California Division of Mines and Geology. 1969. *Geologic and Engineering Aspects of San Francisco Bay Fill.* Special Report 97.

California Department of Fish and Wildlife (CDFW). (2008). *California Fish and Game Code*. Gould Publications, Binghamton, NY.

California Emergency Management Agency, University of Southern California, and California Geological Survey. 2009. Tsunami Inundation Map for Emergency Planning, State of California and County of Contra Costa, Richmond Quadrangle, San Quentin Quadrangle.

California Natural Resources Agency. 2020. "2020 CEQA Statue and Guidelines." Accessible from: http://resources.ca.gov/ceqa/

Caltrans (California Department of Transportation). 2017. *Construction Site Best Management Practices (BMP) Manual*. CTSW-RT-17-314.18.1. https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/csbmp-may-2017-final.pdf

City of Richmond. 2010. *Covenant to Restrict Use of Property Environmental Restriction (Re: Former Naval Fuel Depot Point Molate, Richmond CA. Contra Costa County Document No. 2010-0060368-00 recorded March 29, 2010)*.

City of Richmond. 2010. Richmond Municipal Code 1988. Chapter 9.20: Solid Wastes. Accessible from: https://library.municode.com/ca/richmond/codes/code_of_ordinances?nodeId=ARTIXHE_CH9.20SOWA

City of Richmond. 2011. Richmond Municipal Code 1988. Chapter 9.52: Community Noise Ordinance. Accessible from: https://www2.municode.com/library/ca/richmond/codes/code_of_ordinances?nodeId=ARTIXHE_CH9.52CONOOR

City of Richmond. 2012. *Richmond General Plan 2030.* Accessible from: http://www.ci.richmond.ca.us/2608/General-Plan-2030

City of Richmond. 2018. Point Molate Vision. Accessible from: https://richmondpointmolate.org/point-molate-community-vision-meeting

City of Richmond. 2020a. "Code of Ordinances." [Online content updated on May 28, 2020]. Accessible from:

https://library.municode.com/ca/richmond/codes/code_of_ordinances?noded=CH

City of Richmond. 2020b. Point Molate Mixed Use Plan. Accessible from http://www.ci.richmond.ca.us/3757/Point-Molate-Mixed-Use-Project#:~:text=The%20Point%20Molate%20Mixed%20Use,Winehaven%20buildings%2C%20and%20residential%20development.&text=Approximately%201%2C260%20newly%20constructed%20residential%20units

Contra Costa County Department of Conservation and Development, GIS Group. 2017a. Contra Costa County General Plan Land Use Element. Accessible from: http://www.co.contra-costa.ca.us/DocumentCenter/View/30949/Land-Use-Element-Map?bidId=

Contra Costa County Department of Conservation and Development, GIS Group. 2017b. 2016 Agricultural Reserves Map, Contra Costa County, CA. Accessible from: http://www.co.contra-costa.ca.us/DocumentCenter/View/882/Map-of-Properties-Under-Contract?bidId=

Department of Water Resources. 2019. Groundwater Basin Boundary Assessment Tool (BBAT). Accessible from: https://gis.water.ca.gov/app/bbat/

Fellers, G. M., A. E. Launer, G. Rathbun, S. Bobzien, J. Alvarez, D. Sterner, R. B. Seymour, and M. Westphal. 2001. "Overwintering tadpoles in the California red-legged frog (*Rana aurora draytonii*)." *Herpetological Review* 32:156-157.

IPCC, 2007: "Summary for Policymakers." In: Climate Change 2007: *The Physical Science Bases*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

East Bay Regional Park District (EBRPD). 2013. *East Bay Regional Park District 2013 Master Plan*. Accessible from: http://www.ebparks.org/about/planning/mp/default.htm. Accessed April 30, 2018

Levy, R. 1978. "Costanoan." In *Handbook of North American Indians*, Vol. 8. Edited by Robert Heizer, pp 485-495. U.S. Printing Office, Smithsonian Institution, Washington D.C.

Milliken, R., R.T. Fitzgerald, M.G. Hylkema, R. Groaz, T. Origer, D.G. Bieling, A. Leventhal, R.S. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D.A. Fredrickson. 2007. "Punctuated Culture Change in the San Francisco Bay Area." In *California Prehistory: Colonization, Culture, and Complexity*. Edited by T.L. Jones and K.A. Klar, pp. 99-124. AltaMira Press, New York.

Moratto, M.J. 1984. *California Archaeology*. Second printing 2004. Reprinted with permission of the author by Coyote Press, Salinas, California.

NCE. 2020a. *Biological Resource Assessment, Point Molate Beach Park Shoreline Restoration.*

NCE. 2020b. *Cultural Resources Inventory Report, Point Molate Beach Park Shoreline Restoration*.

NCE. 2020c. *Aquatic Resource Delineation Report, Point Molate Beach Park Shoreline Restoration.*

NCE. 2018 *Geotechnical Report, Point Molate Beach Park Shoreline Restoration*
NRCS. 2010-. *Web Soil Survey.* Version 3.3. Database. Accessed May 21, 2019. Accessible from: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Regional Water Quality Control Board (RWQCB). 2011. Revised Tentative Order, Updated Site Cleanup Requirements and Rescission of Order Nos. 95-235, 97-124 and 97-125, City of Richmond and United States Department of Defense, Department of the Navy. Accessible from: https://www.waterboards.ca.gov/rwqcb2/board_decisions/tentative_orders/pt_molate/Point_Molate_TO_SCR.pdf

OPR (Governor's Office of Planning and Research). 2017. *Technical Advisory on AB 52.* Accessible from: http://nahc.ca.gov/wp-content/uploads/2017/06/Technical-Advisory-AB-52-and-Tribal-Cultural-Resources-in-CEQA.pdf

OPR. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* Accessible from: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

San Francisco Bay RWQCB (Regional Water Quality Control Board). 2017. Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin. Updated with amendments through May 4, 2017. Accessible from: https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html

San Francisco Bay Trail. 2018. *The Bay Trail in Richmond New Year 2018 Report*. Accessible from: http://www.pointrichmond.com/baytrail/pdfs/2018NYReport.pdf.

Sawyer, John, and Keeler-Wolf, Todd. (2010). *A Manual of California Vegetation, 2 Edition*. California Native Plant Society, Sacramento, CA.

SWRCB (State Water Resources Control Board). 2017. *Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin*. Updated with amendments through May 4, 2017. Accessible from: https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html

Taggart, Mike, and Damon Haydu. 2009a Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment. Submitted on behalf of the City of Richmond to the U.S. Department of the Interior, Bureau of Indian Affairs, Pacific Region Office, Sacramento, California.

USGS. 2005. San Francisco Bay Region Geology and Geologic Hazards, Susceptibility Map of the San Francisco Bay Area Interactive map. Accessible from: http://geomaps.wr.usgs.gov/sfgeo/liquefaction/susceptibility.html

USGS. 1995. "San Quentin Quadrangle California 7.5 Minute Series (Topographic)". Reston, Virginia. Online at: http://www.worldcat.org/title/san-quentin-quadrangle-california-75-minute-series-topographic/oclc/43533861

USGS (U.S. Geological Survey). n.d. "Alquist-Priolo Faults". Earthquake Hazards Program. Accessible from: https://earthquake.usgs.gov/learn/topics/geologicmaps/apfaults.php.

USFWS (U.S. Fish and Wildlife Service). n.d. "Information for Planning and Consultation (IPaC). Accessible from: https://ecos.fws.gov/ipac/

University of California, Division of Agriculture and Natural Resources (2009). *Facts About Serpentine Rocks and Soil Containing Asbestos in California*. Accessible from: https://anrcatalog.ucanr.edu/pdf/8399.pdf

Appendix A

Alternatives Study Report

Point Molate Beach Park

Shoreline Restoration

Alternatives Study Report

February 13, 2017

Prepared for

Nichols Consulting Engineers



By

2.13.2017

A-N West, Inc.
Consulting Civil and Structural Engineers

Existing Site Conditions

The Beach Erosion Assessment for the Beach Park shows that the bluff along the north end of the Park northwards to the existing revetment has receded due to a combination of storm drain outfall failure and natural shoreline processes resulting from the action of tides, waves, wind, seepage and rain.

Further along the beach to the south, the bluff is continuing to recede to a lesser extent.

The extent of bluff recession is shown on Exhibits 1 and 2.

Phased Approach

The immediate need is to address the erosion where the bluff has moved back to the proposed trail alignment at the north end of the Park.

Phase 1 addresses approximately 400 feet of shoreline at the north end of the Park. The aim is to protect the trail and to halt the active erosion both at the north end of the Park and further down the beach to the south. Two alternatives for partial shoreline restoration have been selected from the design concepts considered. The expectation is that both alternatives will halt the erosion to the south because the shoreline is effectively being restored to that of an earlier time. There could be localized beach erosion occurring just past the end of Phase 1 construction.

Phase 2 addresses the beach to the south that is presently under active erosion. Because the extent of the effect of the Phase 1 restoration on the beach to the south cannot be determined, the Phase 2 process will take place several years after completion of Phase 1. This process will involve an appraisal of bluff changes and the taking of appropriate actions to improve the shoreline. These actions may involve different types of bluff stabilization to those of Phase 1.

Description of the Design Alternatives for Phase 1

It would be expected that restoring the beach out to nearer the 1987 bluff line at the location of greatest recession would be most effective in halting further recession along the beach to the south. However, partial restoration should be sufficient to halt further recession at a reasonable cost.

No borings have been taken at the site. The further development of the adopted Alternative will require soils borings and evaluation of soils data to confirm the suitability of the design, to set design criteria, specify materials, and to finalize dimensions.

The existing outfall drains the watershed at the back of the shore. This drain has not been maintained for many years. This deferred maintenance now needs to be addressed by repair of the remaining drainage line and reconstruction of the outfall to the extent and in a form compatible with the partial shoreline restoration.

In summary, the design Alternatives need to:

1. Repair and protect the bluff at the proposed trail to the north of the Park to ensure that the trail will not be damaged in the future
2. Prevent recession at the restoration and prevent further recession along the beach to the south.
3. Incorporate a repaired and restored storm drain outfall

Two design alternatives have been developed. Both use traditional and well tested forms of construction used for marine waterfront structures.

Alternative A - Revetment

The plan and typical section for the Alterative A is included as Exhibits 3 & 4.

This alternative uses processed rock materials.

The advantages of this revetment alternative are:

- Limited types of materials used and associated lesser complexity
- Lower cost
- Better wave energy reduction
- Negligible impact on existing bank material which may include cultural resources

Alternative B2 - Piled Wall

The plan and typical section for the Alterative B2 is included as Exhibits 5 and 6.

This alternative uses precast concrete and processed rock materials. Precast concrete is preferred over reinforced concrete because of the greater care that can be taken at a precast yard and the resulting more durable and higher quality concrete. Precast prestressed concrete rectangular piles and precast panels are connected. Pre-drilling of holes for the piles would allow better control of the positioning and alignment of the piles and assist driving through hard material.

The vertical wall reflects wave energy which requires a blanket or apron of rock protection in front to prevent scour erosion of the beach and the resulting reduction in lateral support to the piles.

The final portion of the protection to the south is like Alternative A. If the piled wall were to be extended the full length and abruptly terminated, there would be erosion caused by reflected wave energy.

The advantages of the precast concrete concept are:

- Limited or no cofferdam construction in comparison with reinforced concrete construction

The disadvantages of the precast concrete concept are:

- More types of materials, more types of equipment used and greater complexity of construction
- Higher cost than for a processed rock revetment

Two alignments were initially considered for this wall. Alignment B1 was closer to the trail. Alignment B2 is further out from the trail alignment beyond the 2002 top of bluff line. Alignment B1, being close in alignment to the present bluff would result in continuing active erosion further down the beach to the south and therefore did not meet the second need of the project. Alignment B2 also has the added advantage of limiting wave spray on the trail.

Both selected Alternatives involve only partial restoration of the shoreline over the portion of beach extending approximately 400 feet from the existing revetment. The approximate percentage restoration by volume for both Alternatives is about 50 percent of the volume of material eroded since 1987.

Both Alternatives are shown with bluff protection extended to TS Station 12+90 on Exhibit 3. Further extension to the south would limit the accessible area for park users. The attractiveness of the Beach Park is dependent on its being perceived as a natural shoreline park.

Other Concepts Considered

Sheet piling was not considered because of the potential for rock being close to the surface. If borings proved otherwise, then this might be considered further. However, the form of construction would be like that of Alternative B2 - Piled Wall.

Reinforced concrete walls were considered. A conventional cantilever type wall founded in the underlying soils would be feasible, A cofferdam along the front of the wall would be required to allow work to proceed in the dry. Precast concrete is preferred for marine concrete construction due to its greater durability.

Steel sheet piling and reinforced concrete construction are more susceptible to corrosion than precast concrete construction.

Other shoreline protection measures such as gabions and articulated mats are not suitable for saline water, due to deterioration resulting from corrosion.

Environmental Considerations

Cultural Resources

It is understood that the site may have remains of an Indian settlement. Preferably the existing beach should not be disturbed. If it is necessary to disturb the soils, such sites are subject to monitoring during construction, screening of excavated soil, and removal of remains to one of a limited number of approved custodial locations able to accept the remains. The design Alternatives under consideration will result in negligible disturbance of existing soil.

Relationship with respect to Mean High Water

The restoration alternatives show limited extension beyond the 1987 top of bluff line. It is believed that recession began before 1987. Partial restoration construction can be assumed as terminating behind the mean high water line at the start of beach recession.

Construction Feasibility

The feasibility of constructing the two alternatives with reduced environmental impact has been considered.

Alternative A - Revetment

A buttress of rockfill is constructed in front of the existing eroded bluff by means of dumping and grading out with a dozer and excavator, working out from the existing revetment. The buttress is built up full height to the existing grade. Crane mats are placed and a crane with clamshell and grapple are

used to excavate the key and place rock on the flank of the rockfill buttress. After placing the armor rock, the very top of the buttress is taken down and the rockfill material replaced with stone to the typical section shown in Exhibit 4.

Should borings show the presence of hard material at the key, then the rockfill material could be ramped down at about 15 percent slope for access by a tracked rock breaker. Following this operation, the buttress would be raised full height.

Alternative B2 - Piled Wall

A buttress of rockfill is constructed in front of the existing eroded bluff by means of end dumping and grading out with a dozer, working out from the existing revetment. The buttress is built up full height to the existing grade. Crane mats are placed and a crane used to drive the piles which could weigh up to approximately 20 ton. After excavating and placing the apron rock, precast panels would be installed and lightweight fill placed as backfill to the panels.

Should borings show the presence of hard material, then predrilling of piles would be necessary.

Should borings show the presence of hard material at the apron, then the rockfill material could be ramped down at about 15 percent slope for access by a tracked rock breaker. Following this operation, the buttress would be raised full height.

Construction Cost

Budget construction cost estimates have been made for Alternative A - Revetment and Alternative B2 - Piled Wall. These are shown in Exhibit 7.

The cost of Alternative A is about half that of Alternative B2.

A contingency of 40 percent has been used for the alternatives. Both alternatives are dependent upon certain assumptions regarding the subsurface conditions and will need to be confirmed.

In the case of Alternative A, no rock breaking for the key has been assumed. Sufficiently compact material is assumed to be present below the buttress and associated preliminary excavation is assumed as being minimal.

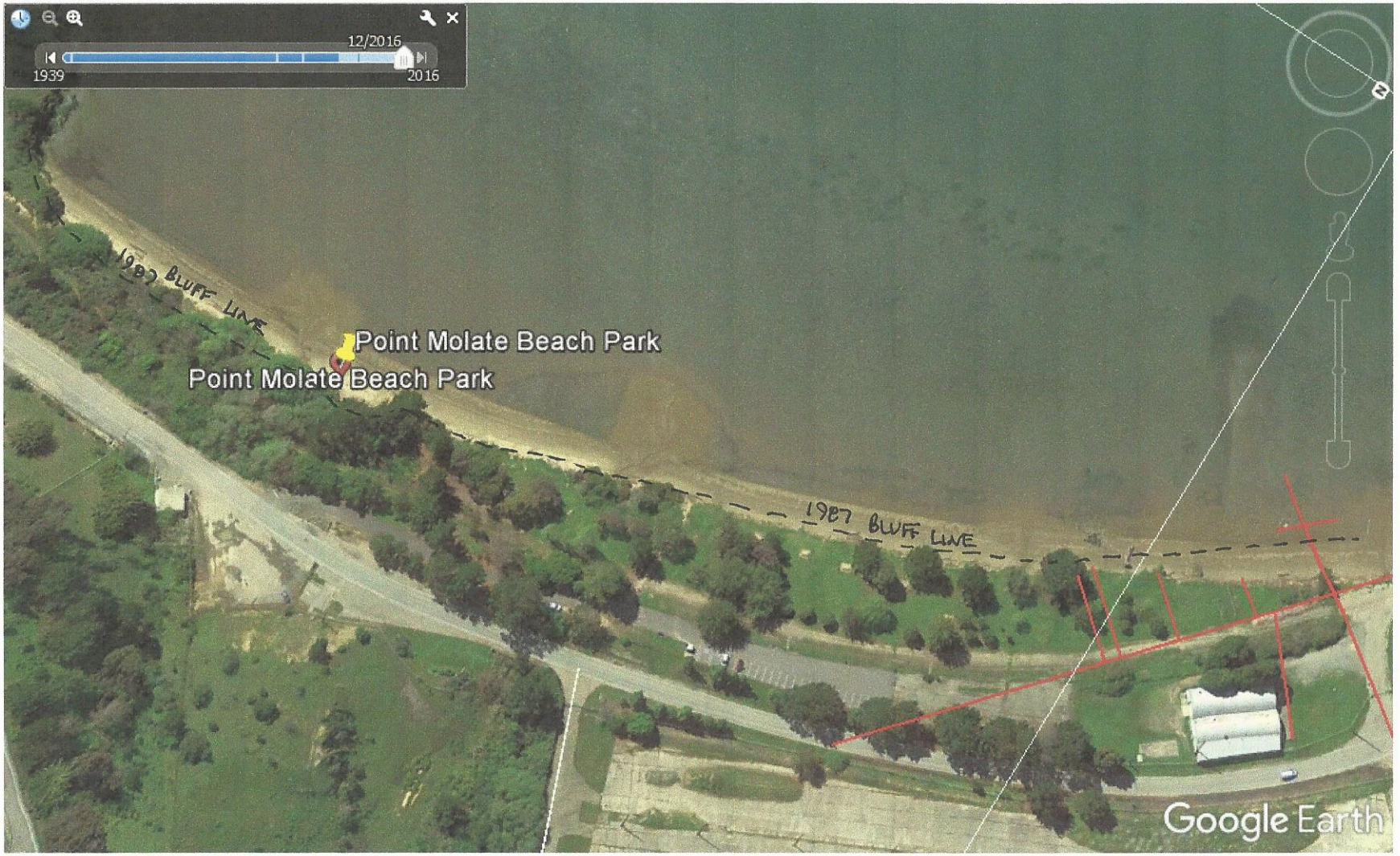
In the case of Alternative B2, no predrilling for piles nor rock breaking for the apron has been assumed. Sufficiently compact material is assumed to be present below the buttress and associated preliminary excavation is assumed as being minimal.

For this budget estimate, the rockfill has been assumed to be reasonably well graded angular rock fragments, and the rock armor assumed to match the Caltrans ½ ton rock slope protection specification.

Recommendation

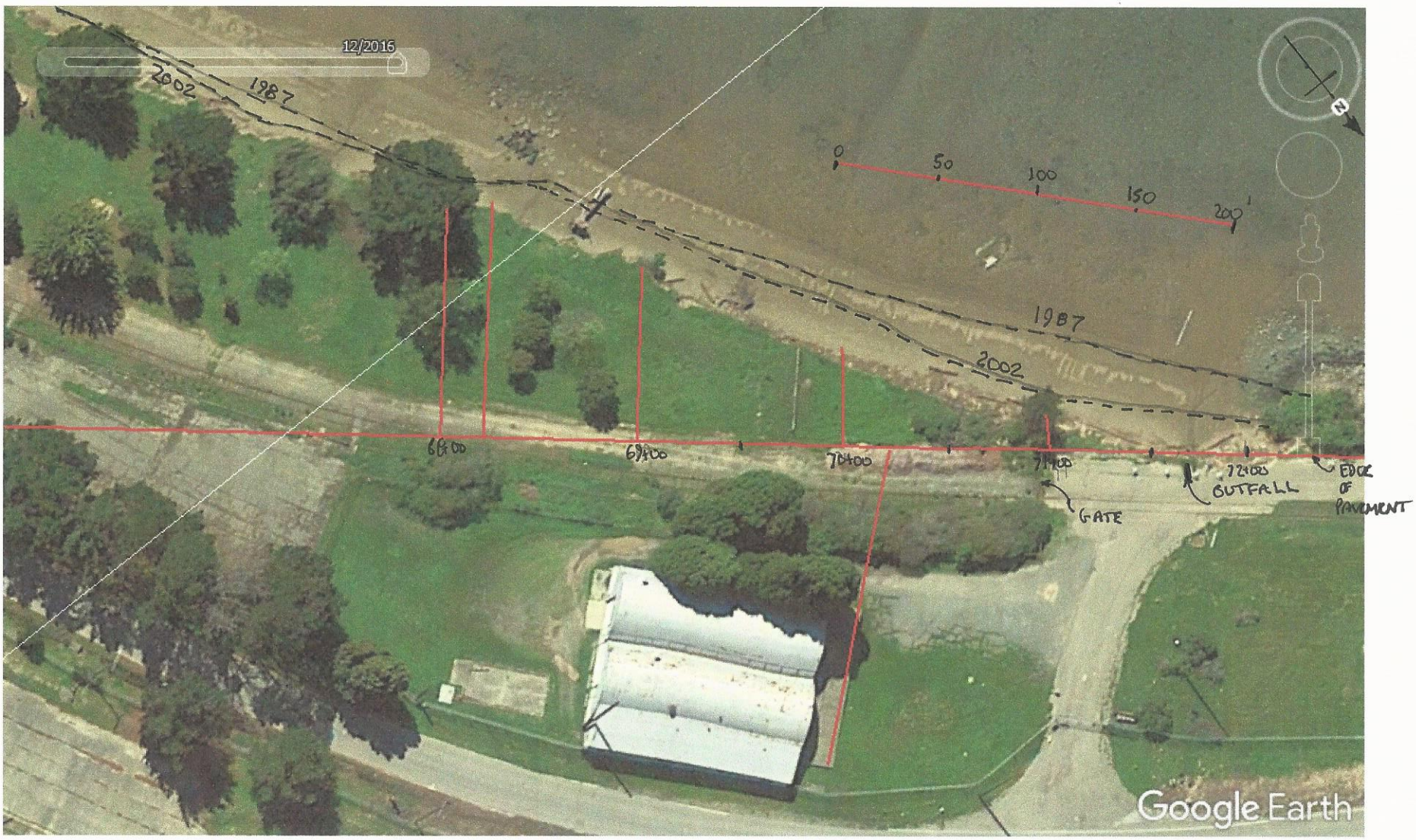
The recommended alternative is Alternative A – Revetment as shown on Exhibits 3 and 4.

EXHIBIT 1



DEC 2016

EXHIBIT 2

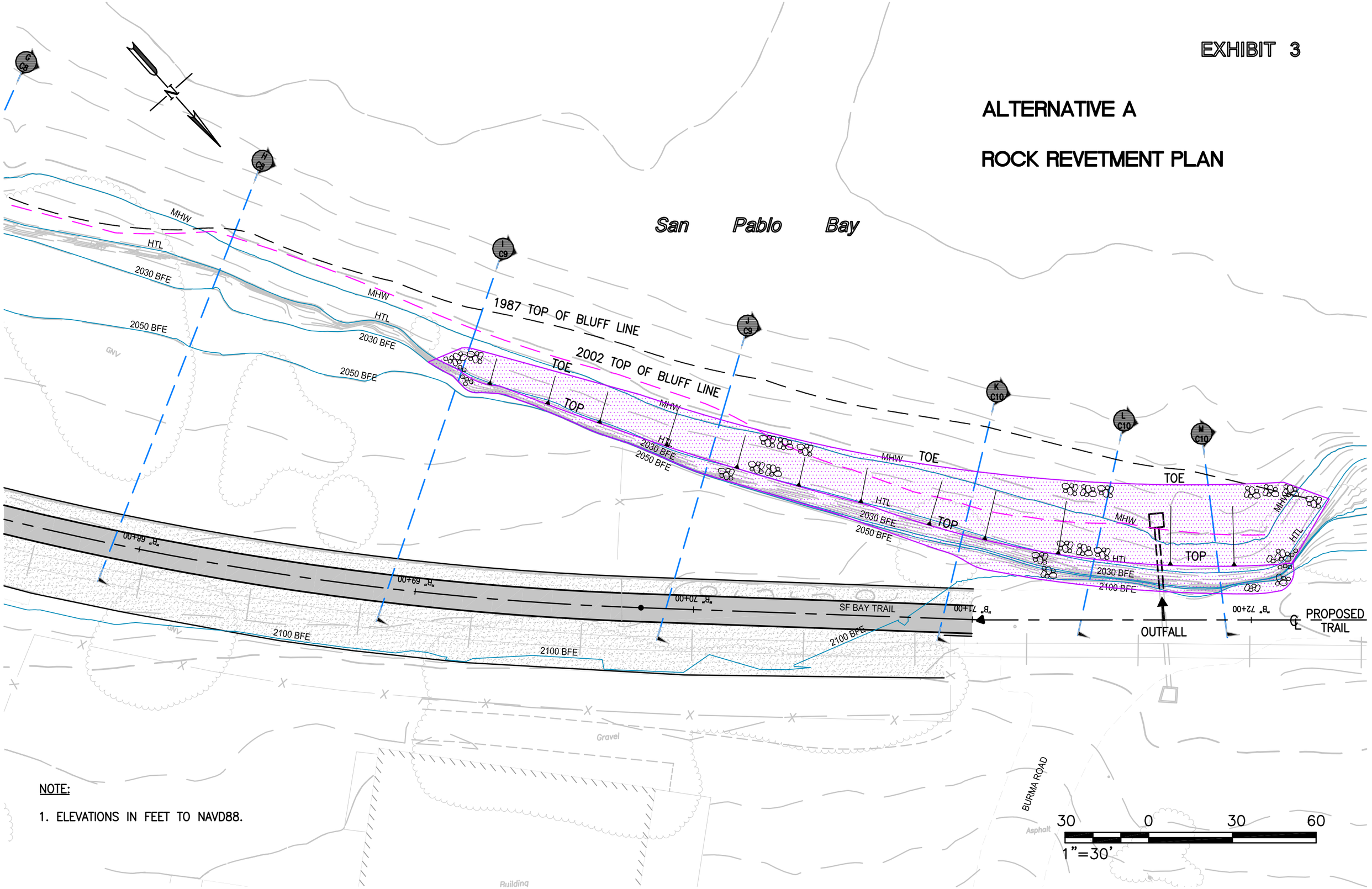


2016

EXHIBIT 3

ALTERNATIVE A

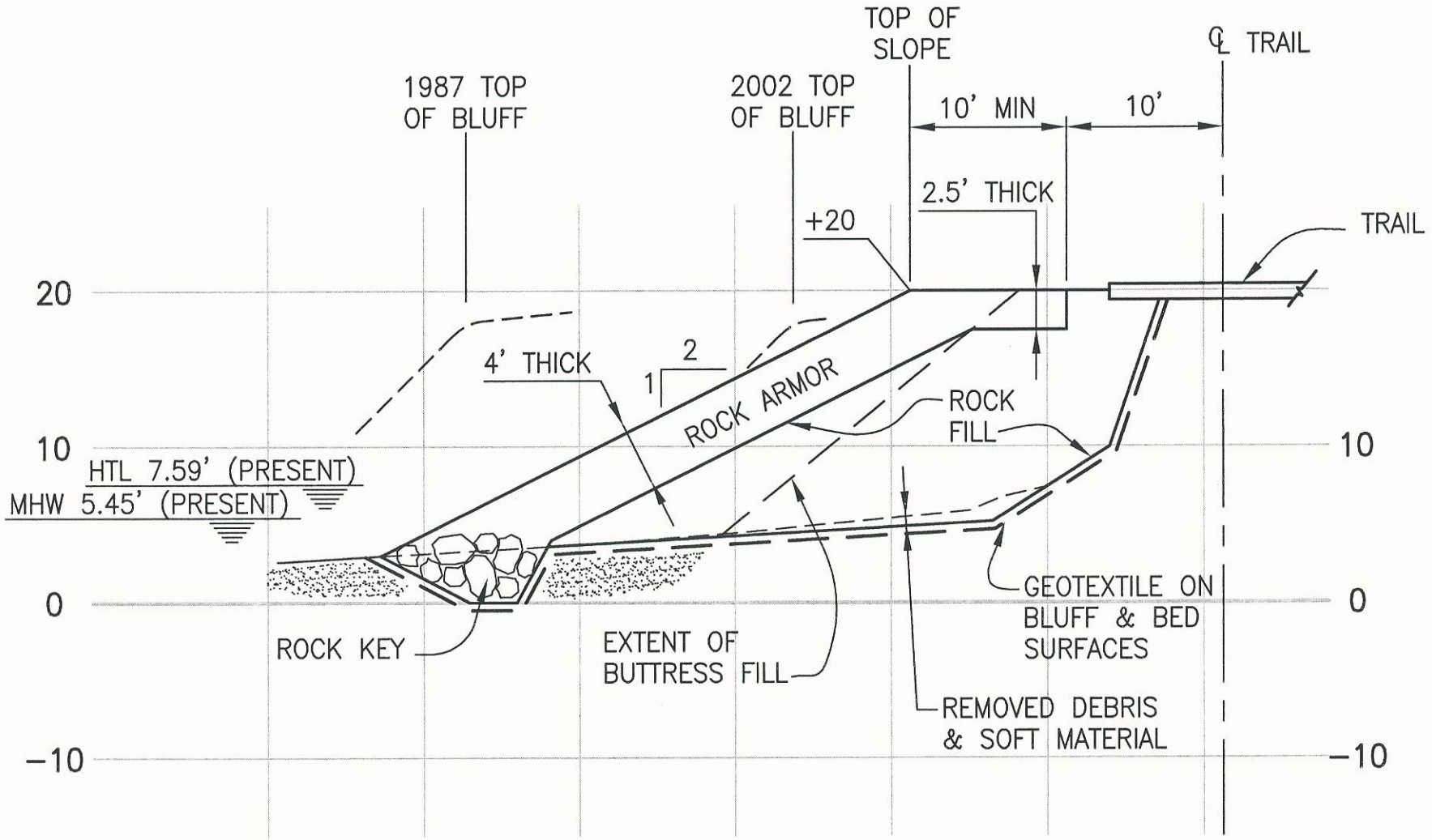
ROCK REVETMENT PLAN



NOTE:

1. ELEVATIONS IN FEET TO NAVD88.

EXHIBIT 4



10 0 10 20

1"=10'

TYPICAL SECTION – ALTERNATIVE A

1"=10'

EXHIBIT 5

ALTERNATIVE B2

PILED WALL PLAN

San Pablo Bay

1987 TOP OF BLUFF LINE

2002 TOP OF BLUFF LINE

1987 TOP OF BLUFF LINE

MHW

HTL

2030 BFE

2050 BFE

2100 BFE

TOE

TOP

PILE

PANEL

SF BAY TRAIL

OUTFALL

PROPOSED TRAIL

"B" 68+00

"B" 69+00

"B" 70+00

"B" 71+00

"B" 72+00

BURMA ROAD

Gravel

Asphalt

Building

GNV

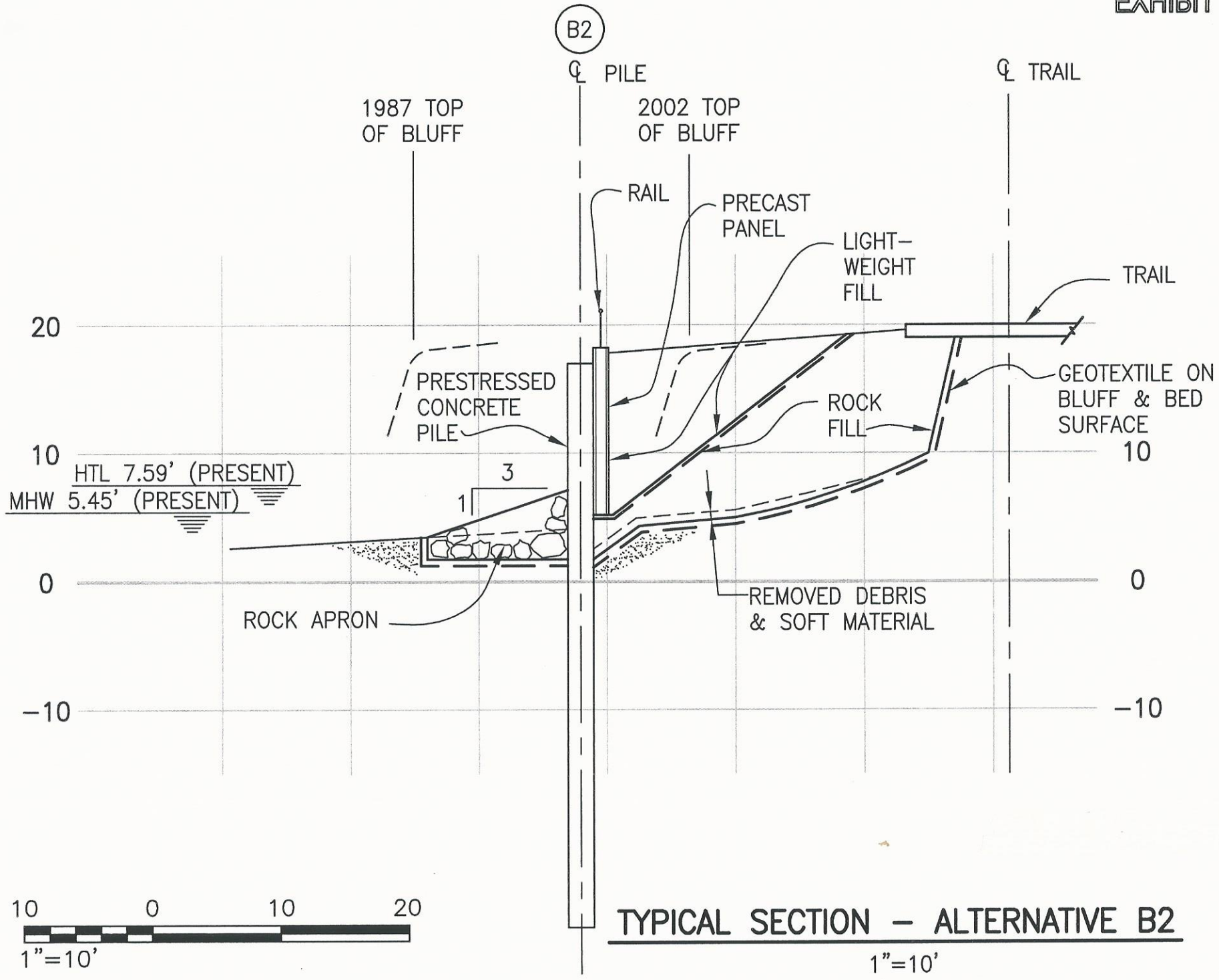
30 0 30 60

1"=30'

NOTE:

1. ELEVATIONS IN FEET TO NAVD88.

EXHIBIT 6



TYPICAL SECTION – ALTERNATIVE B2

1"=10'

Point Molate Beach Park Partial Shoreline Restoration EXHIBIT 7
Budget Cost Estimates
Excluding Cost of Outfall Restoration

ALTERATIVE A - ROCK REVETMENT

ITEM	UNIT	QTY	UNIT COST	AMOUNT
Mobilization	Lump Sum	1	30,000	30,000
Clearing and Excavation	Cubic Yard	300	20	6,000
Geotextile Fabric	Square Yard	470	10	4,700
Rockfill	Cubic Yard	830	80	66,400
Rock	Cubic Yard	1380	145	200,100
	Subtotal			307,200
	Contingency (40%)			122,880
	Estimated Total			430,080

ALTERNATIVE B2 - PILED WALL - ON ALIGNMENT B2 AWAY FROM EXISTING SHORE

ITEM	**UNIT**	**QTY**	**UNIT COST**	**AMOUNT**
Mobilization	Lump Sum	1	60,000	60,000
Clearing and Excavation	Cubic Yard	300	20	6,000
Prestressed piles, furnish	Linear Foot	1475	120	177,000
Prestressed piles, drive	Each	35	2,000	70,000
Precast Panels	Cubic Yard	80	1,200	96,000
Rockfill	Cubic Yard	770	80	61,600
Lightweight Backfill	Cubic Yard	500	90	45,000
Rock Apron	Cubic Yard	740	145	107,300
Geotextile	Square Yard	1330	10	13,300
Railing	Linear Foot	200	30	6,000
	Subtotal			642,200
	Contingency (40%)			256,880
	Estimated Total			899,080

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Appendix B

Biological Resources Assessment



Biological Resources Assessment

Point Molate Beach Park Shoreline Restoration Project

May 2020

NCE

Richmond, CA
501 Canal Blvd., Suite I
Richmond, CA 94804



City of Richmond
Engineering and Capital Improvements
450 Civic Center Plaza
Richmond, CA 94804

Report for:

BIOLOGICAL RESOURCES ASSESSMENT

Point Molate Beach Park Shoreline Restoration Project
Contra Costa County, California

Prepared for:

City of Richmond
450 Civic Center Plaza
Richmond, CA 94804

Prepared by:



Mack Casterman
Staff Scientist

Reviewed by:



Dave Rios, CPESC, CPSWQ
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NCE Project Number: 568.40.55

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1.0 INTRODUCTION

This Biological Resources Assessment was prepared for the site of the Point Molate Beach Park Shoreline Restoration Project (Project). This report describes the biological resources found in the area and the potential for impacts to those biological resources that must be considered under the California Environmental Quality Act (CEQA). The report concludes with an analysis of those potential impacts and how they may be reduced to less than significant with appropriate mitigation measures.

The objectives of this report are to:

- Summarize all site-specific information related to existing biological resources;
- Draw reasonable conclusions about the biological resources that could occur onsite based on habitat suitability, historical occurrences, and the proximity of the site to a species' known range;
- Identify and discuss the potential impacts to biological resources from the Project likely to occur on and near the site within the context of CEQA; and
- Identify avoidance and mitigation measures that would reduce potential impacts and that are generally consistent with recommendations of the resource agencies for affected biological resources.

1.1 PROJECT SITE AND STUDY AREA

The project site is located within the 11-acre Point Molate Beach Park in the City of Richmond (City), Contra Costa County, California within the United States Geological Survey (USGS) San Quentin, California 7.5-minute series topographic quadrangle in Section 9, Township 1 North, Range 5 West of the Mt. Diablo Meridian. (**Figure 1, Appendix A**). The Project site is located within the following APN: 561-100-008. Photographs of the site are found in **Appendix B**.

The Project site stretches along a third of a mile of Richmond's shoreline and covers an approximately 300-foot section of Point Molate Beach Park (Beach Park) starting at Burma Road and moving south. The Project site covers approximately 1 acre.

According to the City's Zoning Map, the Project site is zoned Open Space, Parks and Recreation, and Low Density Residential (City of Richmond 2017).

Project Description

The proposed Project is located within the 11-acre Point Molate Beach Park (Beach Park) in the City of Richmond, Contra Costa County, California, on the shoreline of San Pablo Bay. The City has identified the need to restore actively eroding portions of the shoreline. Continual coastal wave and tidal action is causing a loss of park area; the coastal erosion is more prominent and severe at the north end of Beach Park, where the bluff is higher. Severe undercutting is present near a broken storm drain outfall located near the northern end of the Project area. The erosion is also threatening the alignment of the San Francisco Bay Trail (Bay Trail).

To protect existing recreational facilities and transportation infrastructure located along the shoreline, revetments are required to support coastal-dependent uses (public beaches, the bike/pedestrian trail, and parks). The proposed Project meets requirements under California Coastal Act Section 30235, which

states that shoreline-protective structures shall be permitted if: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline altering construction is required to protect the existing threatened structure; and (4) the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply.

Two alternatives were considered: (1) rock revetment and (2) a concrete wall supported on piles. The construction of a rock revetment was identified as the most environmentally appropriate alternative because it would have a negligible impact on existing bank material that may contain cultural resources, provides better wave energy reduction, uses limited types of materials, and can be constructed in less time and thus at a lower cost. The proposed rock revetment would comprise an approximately 300-foot-long rock structure consisting of various layers of rock and geotextile placed on the shoreline. A depth of approximately 4 feet of sand would be removed in the rock revetment area to allow placement of the various layers. Sand removed from the base of the rock revetment would be placed and spread out over the sand beach at the toe of the rock revetment and along the bluff extending further into Beach Park. The revetment would consist of rockfill placed against geotextile-lined bluff and protected with armor stone keyed into the underlying rock. The rockfill, which would consist of material ranging from 2 to 12 inches in size, would buttress the existing bluff and serve as backing for the armor stone layer. The geotextile would prevent the passage of soil material, relieve hydrostatic pressure, and allow drainage of the bluff into the rockfill. The armor would consist of unweathered sandstone, igneous rock, metamorphic rock, or dolomitic sandstone.

An existing 12-inch storm drain outfall pipe drains the upland watershed above the top of the bank. The pipe is very deteriorated and broken at the bluff face. As part of the proposed Project, this pipe would be replaced with a new 15-inch storm drain outfall pipe, connecting from an existing drainage inlet just north of the bluff to the face of the new rock revetment.

In addition, a portion of the proposed Bay Trail alignment was lost due to bank failure, and this section of the Bay Trail would be constructed as a part of this Project. An 80-foot-long section of the trail would be constructed as a part of this Project where it coincides with the slope stabilization. The Bay Trail segment would be aligned at the top of the rock revetment. The trail would include 10 feet of asphalt paving with 5-foot decomposed granite shoulders to match the proposed new trail.

Construction staging would be located adjacent to the Project between Stenmark Drive and the bluff. Project construction is expected to begin in late fall 2020 and last up to three months.

1.2 LOCAL ORDINANCES AND REGULATIONS

The City of Richmond General Plan presents relevant local requirements (City of Richmond 2012) including a discussion of trees and general habitat areas that should be protected. Specifically, the General Plan identifies significant, native, and heritage trees; oak woodlands; wetlands; marshlands; baylands; creek corridors; riparian areas; and habitats which are unique or rare.

1.2.1 City of Richmond Code of Ordinances

The Project will require compliance with the City of Richmond Code of Ordinances (City of Richmond 2017). These specific ordinances include:

- Chapter 12.44 Excavation, Grading and Earthwork Construction

- Section 12.44.030 requires grading permits from the Building Official for grading work except as otherwise provided in Section 12.44.030

- Chapter 10.8 Trimming, Pruning, Care, Planting, Removal and Moving of Trees, Shrubs or Plants
  - Section 10.08.030 requires permits be obtained prior to cutting, removing, or interfering with any tree, shrub or plant upon any street, park, pleasure ground, boulevard, alley, or public place of the city of Richmond.

1.2.2 San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission (BCDC) has authority over projects within the Shoreline Band, determined as the area 100 feet landward from mean high tide. The Project is within the shoreline band. The Project must comply with relevant BCDC policy and plans regulating land use within the shoreline band. Foremost among these is the San Francisco Bay Plan (SFBCDC, 2008). The following policies excerpted from the Bay Plan apply to the proposed Project (SFBCDC 2008):

Within priority use areas, such as shorelines designated for ports, other water dependent uses, airports, wildlife refuges and water based recreation, the BCDC can only authorize those uses for which the shoreline has been designated or an interim use that will not preclude the future use of the site as designated. Maximum feasible public access to the shoreline must be provided as part of the Project. The Bay Plan designation for this area is Waterfront Park, Beach.

San Pablo Peninsula - Significant potential for creating a permanently protected open space and park facility. Limited commercial development can be compatible with park.

Former Naval Fuel Depot Point Molate - Develop for park use. Landward of Western Drive should be developed consistent with recreation policy 4-b.(Policy 4-b pertains to historic buildings). Provide trail system linking shoreline park areas and vista points in hillside open space areas. Provide public access to historical district with interpretation of this resource. The Point Molate Pier should be re-used for water-oriented recreation and incidental commercial recreation. Encourage water-oriented recreation, including mooring facilities for transient recreational boats, excursion craft and small watercraft. Protect existing eelgrass beds.

Public Access Policies

3. Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.

4. Public access should be sited, designed, and managed to prevent significant adverse effects on wildlife. To the extent necessary to understand the potential effects of public access on wildlife, information on the species and habitats of a proposed project site should be provided, and the likely human use of the access area analyzed. In determining the potential for significant adverse effects (such as impacts on endangered species, impacts on breeding and foraging areas, or fragmentation of wildlife corridors), site specific information provided by the project applicant, the best available scientific evidence, and expert advice should be used. In addition, the determination of significant adverse effects may also be considered within a regional context. Siting, design, and management strategies should be employed to avoid or minimize adverse effects on wildlife, informed by the advisory principles in the Public Access Design Guidelines. If significant adverse effects cannot be avoided or reduced to a level below significance through siting, design and management

strategies, then in lieu public access should be provided, consistent with the project and providing public access benefits equivalent to those that would have been achieved from on-site access. Where appropriate, effects of public access on wildlife should be monitored over time to determine whether revisions of management strategies are needed.

1.3 RELEVANT FEDERAL AND STATE LAWS

1.3.1 California Environmental Quality Act (CEQA)

The Project will require compliance with CEQA and the City will serve as the lead agency. The City will conduct an environmental review, which will comprise a review of all studies conducted in compliance with CEQA and the creation and adoption of appropriate mitigation and monitoring measures. The Project will be required to conform to any element of the Richmond General Plan 2030 which protects sensitive natural resources (e.g., native plant communities, open space, etc.) (City of Richmond 2012).

1.3.2 Threatened and Endangered Species

Permits may be required from both the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS) if activities associated with a proposed project will result in the "take" of a listed species. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

1.3.3 Migratory Birds

State and federal laws protect most birds. The Federal Migratory Bird Treaty Act (16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. The CDFW Fish and Game Code has similar requirements to the Federal Migratory Bird Treaty Act. This act encompasses whole birds, parts of birds, and bird nests and eggs. If a bird species protected under the federal or state migratory bird protections, regardless of its federal or state status, were to nest near the site prior to or during proposed construction activities, such activities could result in the abandonment of active nests or direct mortality to these birds and would constitute a violation of state and federal law.

1.3.4 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

1.3.5 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" or "Aquatic Resource" (hereafter referred to as "jurisdictional waters") subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide
- All interstate waters including interstate wetlands
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce
- All impoundments of waters otherwise defined as waters of the United States under the definition
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above)

The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high-water marks" on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

Discharge of fill into jurisdictional waters is subject to USACE permit requirements. In addition to a USACE permit, the California Regional Water Quality Control Board (RWQCB) issues a Section 401 Water Quality Certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the Construction General Permit. Federally funded projects must also comply with Executive Order 11990 (Protection of Wetlands).

The CDFW has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2008b). Activities that would disturb these drainages are regulated by the CDFW through a Lake and Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

2.0 METHODS

The purpose of this Biological Resources Assessment is to describe the biological resources found within the Project site and the potential for impacts to those biological resources that must be considered under CEQA. Research was conducted on biological resources known to occur in the area and site visits included both a reconnaissance-level survey and an Aquatic Resources Delineation.

The following site-specific references and background information was reviewed:

- Analytical Environmental Services, 2009. *Point Molate Mixed-use Tribal Destination Resort and Casino Project DEIS/DEIR.*
- *California Natural Diversity Database* (CNDDB). 2018. California Department of Fish and Game, Sacramento, CA. Accessed online.
- California Native Plant Society. 2018. *Inventory of Rare and Endangered Vascular Plants of California*. Accessed online.
- LSA, 2011. *Natural/Cultural Resource Information, Point Molate Bay Trail*. Technical memorandum to EBRPD.
- LSA, 2011. *Wetland delineation Study, Point Molate Bay Trail.* Technical memorandum to EBRPD.
- Natural Resource Conservation Service. United States Department of Agriculture. *Web Soil Survey*. Accessed online.
- Tetra Tech, Inc., 1998. *Special Status Plant Survey and Habitat Assessment. Navy Fuel Depot, Point Molate, Contra Costa County, California*.
- U.S.G.S. *San Quentin, California* (1995) 7.5 minute quadrangle.
- Information for Planning and Conservation (IPaC). 2017. United States Fish and Wildlife Service. Accessed online.

The site was visited on April 20, 2018 by NCE biologist Mack Casterman. Plant communities and habitats were observed and recorded. Transects were traversed on foot and the site was photographed. The purpose of the survey was to identify and map plant communities at the Project site and to determine the presence of any special status species or their habitat.

3.0 RESULTS

3.1 SOILS AND TOPOGRAPHY

3.1.1 Soils

According to the Natural Resources Conservation Service, soils found in the immediate vicinity of the Project site are **Millsholm loam**, 20% to 60% slopes and **Urban land** (NRCS 2017). This soil unit is not known to contain serpentine (University of California, 2009). A summary of this soil unit is found in **Table 1** below and is illustrated in **Figure 2**.

Table 1: Soils Occurring at the Project Site

Soil Series/Soil	Map Symbol	Parent Material	Drainage class	% of Project boundary
Millsholm loam, 20 to 60 percent slopes, moist, MLRA 15	MeG	Residuum weathered from sandstone and shale	well drained	8.8%
Urban land	Ub	Generally, pavement and buildings		89.1%
Water				2.1%

Source: NRCS 2018

3.1.2 Topography

Topography in the vicinity of the site ranges from rolling to steep. Elevations of the Project site range from approximately 0 feet to 50 feet (0 meters to 15.24 meters) above mean sea level.

3.1.3 Climate

The climate in Contra Costa County (CCC) varies depending on the location and topography. Western CCC experiences cool summers and mild winters due to its proximity to San Francisco and San Pablo Bays. Elevation and proximity to the sea have a direct effect on the average annual precipitation across the County. Richmond in western CCC receives approximately 22.28 inches of annual precipitation (NRCS 1977).

3.2 HABITATS

3.2.1 Project Site and Vicinity

Habitats adjacent to the Project site include ruderal/developed land, northern coastal bluff scrub, native grassland, rocky and sandy intertidal zones, and landscape plantings. Habitats at the Project site include ruderal/developed land, rocky and sandy intertidal zones, and landscape plantings. Site photographs are found in **Appendix B**.

Landscape plantings: This habitat includes established plants and trees that are part of beach park landscaping. These species include Monterey pine (*Pinus radiata*), eucalyptus (*Eucalyptus* sp.), and acacia (*Acacia* sp.). The understory of the beach park is dominated by annual grasses which appear to be regularly

mowed by maintenance crews. Patches of purple needlegrass (*Stipa pulchra*) were observed in the beach park area, but not in adequate numbers or density to be considered a native grassland community.

Rocky shoreline: This habitat is mostly adjacent to ruderal areas with rocks that are largely anthropic in origin.

Sandy shoreline: This habitat includes salt water and tidally influenced shoreline characterized by deep sand.

Ruderal/Developed: A habitat of previously developed areas that still exhibit development impacts often characterized by pavement or heavily compacted soil. Plants are mostly non-native invasive with few native species present. These include ripgut brome (*Bromus diandrus*), Italian ryegrass, Italian thistle (*Carduus pyncnocephalus*), field mustard (*Brassica rapa*), sticky tarweed (*Holocarpha virgata*), wild radish (*Raphanus sativus*), bristly ox-tongue (*Picris echioides*), artichoke thistle (*Cynara cardunculus*), and winter vetch (*Vicia villosa*).

Non-native plants that are invasive on and adjacent to the site include French broom (*Genista monspessulana*), pampas grass (*Cortaderia jubata*), and ice plant (*Carpobrotus edulis* x *chilensi*), a non-native found on the beach south of Beach Park. Multiple invasive exotics listed by the California Invasive Plant Council (Cal-IPC) as species of 'High' concern were found on the site. These are Himalayan blackberry (*Rubus discolor*), French broom (*Genista monspesulana*), and fennel (*Foeniculum vulgare*).

Wildlife Habitats. The habitats within and surrounding the Project site support a varied assemblage of wildlife, which may move through the region or migrate seasonally. Intact or partially intact native grassland, high salt marsh, and willow scrub-shrub wetlands are increasingly scarce in the Bay area, and therefore crucially important to native wildlife.

Many shoreline habitats along San Francisco and San Pablo Bay are bisected by roads and rail. In addition, there are no through roads and traffic is limited. Because of this lower disturbance regime, the habitats found in the vicinity of the Project are particularly important for wildlife.

The proximity of habitat types provide for several resident and migratory birds and makes the area particularly rich in avian fauna. Pelagic birds, shorebirds, waterfowl, passerines, raptors, and others can be found in the vicinity from time to time. These and other birds may nest, forage, or winter in habitats on or adjacent to the site. The shoreline, wetlands, and upland habitats in the vicinity also provide foraging and cover for several mammal species. These include coyote (*Canis latrans*) and mule deer (*Odocoileus hemionus*).

3.3 SPECIAL STATUS SPECIES

A wide variety of taxa native to the state of California have low populations, limited distributions, or are otherwise vulnerable to extinction or extirpation with the state. Although they may include Ecologically Significant Units and sub-species as well as species, these taxa are collectively referred to as "special status species" (SSS).

These flora and fauna may be considered "rare" and are vulnerable to extirpation as the state's human population grows, the habitats these species occupy are converted to agricultural and urban uses, and they are subject to other impacts such as climate change or wildfires. State and federal laws have provided the CDFW and the USFWS with the responsibility for conserving and protecting the diversity of plant and animal

species native to the state. Because of the diversity of habitats within the state, a relatively large number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered (CNPS 2017). Additionally, conservation groups such as the American Fisheries Society, the World Conservation Union, and the Xerces Society have developed lists and categorized species that are of particular conservation concern.

Several special status plants and animals have the potential to occur within the Project site (**Figure 4**). Relevant information was reviewed to assess the likelihood of special status species within the Project site and is summarized in **Table 2**, found below. Sources of information for this table included past biological studies conducted in the vicinity, the California Department of Fish and Wildlife (CDFW), *California Natural Diversity Database*, the *California Native Plant Society's* (CNPS) *Inventory of Rare and Endangered Plants of California* as well as a query of federally listed wildlife species from the United States Fish and Wildlife Service's (USFWS) Sacramento Endangered Species office via the Information for Planning and Consultation (IPaC) website. The CNDDB records and other maps of SSS were reviewed within a 2-mile buffer around the Project site. The CNPS inventory search considered species known to occur within the 9 quadrangles surrounding the proposed Project locations. The database searches occurred between March 1 and April 1 of 2018. This information was used to evaluate the potential for special status plant and animal species to occur on the site. The CNDDB is a volunteer database of historical occurrences; therefore, it may not contain all known or gray literature records.

Table 2: List of Special Status Species that May Occur in the Project Vicinity

Species	Status	Habitat	Occurrence in the Project Site
Plant Species			
Alkali milk-vetch (*Astragalus tener* var. *tener*)	CNPS 1B.2	Valley grassland, alkali sink, freshwater wetlands.	**Unlikely.** Species distribution limited to specific areas. Potential habitat does not exist on site
Beach bur (*Ambrosia chamissonis*)	CNPS A2	Coastal habitat.	**Possible.** Observed on sandy shoreline south of Project site. Suitable habitat occurs on or near the site.
Bent-flowered fiddleneck (*Amsinckia lunaris*)	CNPS 1B.2	Coastal bluff scrub, cismontane woodlands, grasslands.	**Possible.** Suitable habitat occurs on or near the site.
Brewer's calandrinia (*Calandrinia breweri)*	CNPS 4.2	Chaparral, Coastal scrub	**Unlikely.** Species distribution limited to specific areas.
Bristly leptosiphon (*Leptosiphon acicularis*)	CNPS 4.2	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland	**Unlikely.** Species distribution limited to specific areas. Potential habitat does not exist on site**.**
California seablite (*Suaeda californica*)	FE, CNPS 1B.1	Marshes and swamps (coastal salt). 0 - 15 meters. Blooms July - October.	**Absent.** No records from Contra Costa County. Potential habitat does not exist on site
Coast rockcress (*Arabis blepharophylla)*	CNPS 4.3	Broadleafed upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub	**Unlikely.** Species distribution limited to specific areas. Potential habitat does not exist on site.
Loma Prieta hoita (*Hoita strobilina*)	CNPS 1B.1	Usually serpentinite, mesic habitats including chaparral, cismontane woodland, and riparian woodland. 30 - 860 meters. Blooms May - October.	**Unlikely.** Species distribution limited to specific areas. Potential habitat does not exist on site.
Marin Dwarf-flax (*Hesperolinon congestum*)	FT, CNPS 1B.1	Serpentine endemic.	**Unlikely.** Species distribution limited to specific areas.
Marsh gumplant (*Grindelia stricta* var. *angustifolia*)	CNPS 4	Coastal salt marshes.	**Unlikely.** Was observed near the site in 1998 (Tetra Tech, 1998), but suitable habitat does not exist on site**.**
Michael's rein orchid (Piperia michaelii)	CNPS 4.2	Coastal bluff scrub, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest	**Absent.** No records from Contra Costa County. Potential habitat does not exist on site

Species	Status	Habitat	Occurrence in the Project Site
Ocean bluff milk-vetch (*Astragalus nuttallii var. nuttallii)*	CNPS 4.2	Coastal bluff scrub, Coastal dunes	**Unlikely.** Species distribution limited to specific areas. Potential habitat does not exist on site
Oregon meconella *(Meconella oregana)*	CNPS 1B.1	Coastal prairie, Coastal scrub	**Unlikely.** Species distribution limited to specific areas
Point Reyes birds-beak (*Cordylanthus maritimus* ssp. *palutris*)	CNPS 1B.2	Coastal salt marsh, wetland riparian.	**Unlikely.** Alkali pool and salt marsh could support this species. Assumed extirpated from the East Bay.
San Francisco gumplant *(Grindelia hirsutula var. maritima)*	CNPS 3.2	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland	**Possible.** Suitable habitat occurs on or near the site**.**
Santa Cruz tarplant (*Holocarpha macradenia*)	FT, CE, CNPS 1B.1	Coastal prairie, coastal scrub, and valley and foothill grassland. 10 - 220 meters. Blooms June - October.	**Unlikely.** Species distribution limited to specific areas. Potential habitat does not exist on site.
Showy Indian Clover (*Trifolium amoenum*)	FE, CNPS 1B.1	Valley grassland, riparian.	**Absent.** No records from Contra Costa County.
Soft birds-beak (*Chloropyron molle ssp. molle*)	CNPS 1B.2	Coastal salt marsh, wetland riparian.	**Unlikely.** Alkali pool and salt marsh could support this species. Reported from Point Pinole.
Suisun marsh aster (*Symphyotrichum lentum*)	CNPS 1B.2	Freshwater wetlands, brackish marsh.	**Unlikely.** Historic record from the adjacent fuel depot site (AES, 2009). Suitable habitat does not exist on site.
Tiburon Jewelflower (*Streptanthus glandulosus* ssp. *niger*)	FE, CNPS 1B.1	Serpentine endemic.	**Unlikely.** Species distribution limited to specific areas. Suitable habitat does not exist on site.
Tiburon Mariposa Lily (*Calochortus tiburonensis*)	FT, CNPS 1B.1	Serpentine endemic.	**Unlikely.** Species distribution limited to specific areas. Suitable habitat does not exist on site.
Tiburon Paintbrush (*Castilleja affinis* ssp. *Neglecta*)	FE, CNPS 1B.2	Serpentine endemic.	**Unlikely.** Species distribution limited to specific areas. Suitable habitat does not exist on site.
White-rayed Pentachaeta (*Pentachaeta bellidiflora*)	FE, CNPS 1B.1	Valley grassland. Affinity for serpentine.	**Unlikely.** Species distribution limited to specific areas. Suitable habitat does not exist on site.
Avian Species			
Allen's hummingbird (*Selasphorus sasin*)	BCC	Coast chaparral, brushland, and edges of redwood forest.	**Possible.** May occur seasonally on or near the site.

Species	Status	Habitat	Occurrence in the Project Site
Bald eagle (*Haliaeetus leucocephalus*)	BCC, BEPA	Near seacoasts, large lakes, and rivers where fish are present.	**Possible.** Bald eagles may occur incidentally on the site if they forage over adjacent areas. They are unlikely to nest on the site.
Bell's sparrow (*Amphispiza belli*)	BCC	Sagebrush, chaparral, dry foothills.	**Possible.** This species may occur incidentally on the site or may nest in shrubs on or near the site.
Black oystercatcher (*Haematopus bachmani*)	BCC	Intertidal zone of rocky shorelines. Nests in pebble or scrape on the beach.	**Present.** Observed on site.
Black-vented shearwater (*Puffinus opisthomelas*)	BCC	Usually within a few miles of shore during winter. Breeds in Mexico.	**Unlikely.** May occur incidentally off shore near the site. Suitable nesting habitat is absent from the site.
Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*)	CSC	Coastal marsh and grassland. High salt marsh and adjacent uplands. Nest on or near the ground in herbaceous vegetation.	**Possible.** This species may occur incidentally on the site or may nest on or near the site.
Burrowing owl (*Athene cunicularia*)	BCC	Open country, prairies, deserts, fallow fields, coastal dunes with mammal burrows and friable soils.	**Unlikely.** Suitable habitat does not exist on the site.
Ridgway's rail (*Laterallus jamaicensis coturniculus*)	CT, FP, ABC WLBCC, IUCN NT, BCC	Most common in tidal emergent wetlands dominated by pickleweed (*Salicornia* sp.) or brackish marshes supporting bulrush (*Scirpus* sp.). Nesting occurs March-June in dense vegetation near upper limits of tidal flooding.	**Possible.** Potential nesting habitat does not exist on site. Dispersing birds could use adjacent salt marsh habitats.
California brown pelican (*Pelecanus occidentalis californicus*)	F Delisted-2009, C Delisted 2009, FP	Frequents estuarine, marine subtidal, and marine pelagic waters. Breeds March - August on Channel Islands (Anacapa, Santa Barbara, and Santa Cruz).	**Present.** Observed near the site.
California clapper rail (*Rallus longirostris obsoletus*)	FE, CE, FP, ABC WLBCC	Requires emergent wetlands and tidal sloughs, although occasionally uses transition zone between wetland and adjacent upland habitat. Nesting occurs mid-March to July in lower zones of saline emergent wetlands, where cordgrass (*Spartina* sp.) is abundant and tidal sloughs are nearby.	**Possible.** Potential nesting habitat does not exist on site. Dispersing birds could use adjacent salt marsh habitats.

Species	Status	Habitat	Occurrence in the Project Site
California least tern (*Sternula antillarum browni*)	FE, SE, FP, ABC WLBCC,	Migratory. Feeds in shallow estuaries or lagoons where small fish are abundant. Breeds in abandoned salt ponds and along estuarine shores in San Francisco Bay. Breeding occurs in areas free of human or predatory disturbance from April-August.	**Unlikely.** Does not occur on the site**.** May forage in shallow near shore waters during summer.
Costa's hummingbird (*Calypte costae*)	BCC	Very arid regions where there is some minor brush or scrub cover. In summer, the breeding range extends into California.	**Possible.** This species may occur incidentally on the site or may nest in shrubs on or near the site.
Fox sparrow (*Passerella iliaca*)	BCC	Thickets and edges of forests or chaparral. Nests near the ground.	**Possible.** This species may occur incidentally on the site or may nest in shrubs on or near the site.
Lawrence's goldfinch (*Carduelis lawrencei*)	BCC	Nesting habitat is dry and open woods that are near both brushy areas and fields of tall annual weeds.	**Possible.** This species may occur incidentally on the site or may nest in shrubs on or near the site.
Least Bittern (*Ixobrychus exilis*)	BCC	Nests in large marshes with dense vegetation. The nest is a well-concealed platform built from cattails and other marsh vegetation.	**Unlikely.** May occur incidentally near the site. Suitable nesting habitat is absent from the site.
Lesser yellowlegs (*Tringa flavipes*)	BCC	Coastal mudflats and flooded fields during winter.	**Unlikely.** May occur near the site in winter. Suitable nesting habitat is absent from the site.
Lewis's woodpecker (*Melanerpes lewis*)	BCC	Mixed oak woodland, ponderosa pine.	**Unlikely.** May occur on or near the site in winter.
Loggerhead shrike (*Lanius ludovicianus*)	BCC	The bird requires an open habitat with an area to forage, elevated perches and nesting sites. Prefers shorter vegetation.	**Possible.** May occur on the site in winter.
Long-billed curlew (*Numenius americanus*)	BCC	Mudflats, salt marshes, beaches; breeds in grasslands.	**Unlikely.** May occur on or near the site in winter.
Marbled godwit (*Limosa fedoa*)	BCC	Mudflats, salt marshes, beaches; breeds in grasslands.	**Unlikely.** May occur on or near the site in winter.
Northern harrier (*Circus cyaneus*)	CSC	Open grasslands, marshes, and riparian woodlands. Nests in undisturbed open field or meadow.	**Possible.** Northern harrier may occur incidentally on the site if they forage over adjacent areas. Suitable nesting habitat is absent from the site.
Nuttall's woodpecker (*Picoides nuttallii*)	BCC	Oak woodland, riparian habitat, and chaparral.	**Possible.** This species may occur incidentally on the site or may nest in trees on or near the site.
Oak titmouse (*Baeolophus inornatus*)	BCC	Open mixed oak woodlands.	**Unlikely.** Suitable habitat does not exist on the site.

Species	Status	Habitat	Occurrence in the Project Site
Olive-sided flycatcher (*Contopus cooperi*)	BCC	Coniferous and eucalyptus woodlands.	**Possible.** This species may occur incidentally on the site or may nest in trees on or near the site.
Osprey (*Pandion haliaetus*)	CSC	Nests near large bodies of water with fish.	**Possible.** Nests have been observed along the shoreline within a mile of the Project site.
Peregrine falcon (*Falco peregrinus anatum*)	CE	Individuals breed on cliffs in the Sierra or in coastal habitats; occurs in many habitats of the state during migration and winter.	**Unlikely.** Peregrine falcon may occur incidentally on the site if they forage over adjacent areas. Suitable nesting habitat is absent from the site.
Pink-footed shearwater (*Puffinus creatopus*)	BCC	This species is pelagic, occurring in the Pacific Ocean. It predominantly nests on offshore islands off Chile.	**Unlikely.** Suitable habitat does not exist on the site.
Red knot (*Calidris canutus* ssp. *Roselaari*)	BCC	Mudflats, salt marshes, beaches; breeds in tundra.	**Unlikely.** May occur on or near the site in winter.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	CSC	Breeds in forested wetlands, brackish and freshwater marshes.	**Possible.** This species may occur on or near the site or may nest in willow thickets on the site.
San Pablo song sparrow (*Melospiza melodia samuelis*)	CSC, BCC	California Endemic. Year-round range confined to tidal and muted tidal salt marshes fringing San Pablo Bay. Dense vegetation is required for nesting sites, song perches, and as cover from predators.	**Possible.** Potential nesting habitat does exist near site.
Short-billed dowitcher (*Limnodromus griseus*)	BCC	Mudflats, salt marshes, beaches; breeds in bogs, tidal marshes, and forests.	**Unlikely.** May occur on or near the site in winter.
Short-eared owl (*Asio flammeus*)	BCC	Open country and grasslands.	**Possible.** This species may occur incidentally on the site or may nest in grassland on or near the site.
Swainson's hawk (*Buteo swainsoni*)	BCC	Open and semi-open country – deserts, grasslands, and prairies. Nests in isolated or riparian trees.	**Possible.** Swainson's hawk may occur incidentally on the site if they forage over adjacent areas. They are unlikely to nest on the site.
Tricolored blackbird (*Agelaius tricolor*)	BCC, CSC	Meadows, rangeland; nests in large emergent marshes, especially cattails.	**Unlikely.** Suitable habitat does not exist on the site.

Species	Status	Habitat	Occurrence in the Project Site
Western snowy plover (*Charadrius alexandrinus nivosus*)	FT, CSC, ABC WLBCC, BCC	Can be found on sandy beaches, sand spits, dune-backed beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Breeding occurs March-September in shallow scrapes or depressions in the sand.	**Possible.** Beaches in project vicinity are too small to allow nesting, but birds may occasionally forage in these habitats.
Whimbrel (*Numenius phaeopus*)	BCC	Mudflats, salt marshes, beaches; breeds in tundra.	**Unlikely.** May occur on or near the site in winter.
Yellow rail (*Coturnicops noveboracensis*)	BCC	Wet meadows, fens, and shallow marshes. May winter on the California coast.	**Possible.** May occur on the site.
Yellow warbler (*Dendroica petechia* ssp. *Brewsteri*)	BCC	Riparian trees and shrubs, particularly willow.	**Possible.** May occur on the site.
Mammal Species			
Salt-marsh harvest mouse (*Reithrodontomys raviventris*)	FE, CE, FP, IUCN EN	Found only in saline emergent wetlands of San Francisco Bay and its tributaries. Pickleweed saline emergent wetlands are preferred, while adjacent grasslands may also be used. Nests in grass and sedges, not burrows. Breeding occurs March - November.	**Unlikely.** Potential salt marsh habitat is marginally large enough.
Salt-marsh vagrant shrew (*Sorex vagrans halicoetes*)	CSC	High salt marsh; Salicornia.	**Unlikely.** Potential salt marsh habitat is marginally large enough.
San Pablo vole (*Microtus californicus snpabloensis*)	CSC	Salt marshes adjacent to southeastern part of San Pablo bay.	**Unlikely.** Potential salt marsh habitat is marginally large enough.
Herptile Species			
California red-legged frog (*Rana draytonii*)	FT, CSC, IUCN VU	A pond frog that inhabits humid forests, woodlands, grasslands, and streamsides; however, frequents otherwise permanent sources of water. Breeds January-April and can be found in damp woods during non-breeding periods.	**Unlikely.** Suitable habitat for this species is present in the general vicinity. No permanent sources of water are found on the site, which is generally dry and faces southwest.

Species	Status	Habitat	Occurrence in the Project Site
Fish Species			
Central California coast steelhead (*Oncorhynchus mykiss*)	FT, AFS TH	Require cool freshwater for spawning and rearing sites. Adult runs occur during the winter, while the amount of time spent in fresh versus salt water varies considerably. Typically, steelhead enter the streams and rivers between late December-April, while spawning occurs in late spring.	**Absent.** Does not occur on the site. May be present in near shore waters.
Delta smelt (*Hypomesus transpacificus*)	FT	Estuary of Sacramento River. Brackish and fresh water.	**Absent.** Habitat not present.
Green sturgeon (*Acipenser medirostris*)	FT	Estuary of Sacramento River. Brackish and marine water.	**Absent.** Habitat not present**.**
Tidewater goby (*Eucyclogobius newberryi*)	FE	Lagoons formed by streams running into the sea. The tidewater goby prefers salinities of less than 10 ppt.	**Absent.** Habitat not present.
Invertebrate Species			
Monarch butterfly (*Danaus plexippus*)	Sensitive species under Richmond General Plan	Distribution and reproduction dependent upon milkweed plant (*Asclepiadaceae* sp.). Species is a migrant of a population that spends its summers in the eastern Rocky Mountains and winters in California as far north as Monterey, CA, in eucalyptus trees.	**Possible.** May occur on site.
Habitat			
Wetlands			**Absent.** No wetlands were identified during December 18 wetland delineation.
Native trees			**Present.** Numerous native tree species were observed within and adjacent to the project site.
Native grassland	S3	Open meadow areas throughout California	**Absent.** Native Coastal Terrace prairie grassland is in the vicinity of the project site but does not occur within the project site.
Critical Habitats			**Absent.** No designated Critical Habitats are located on site.

Sources: CNDDB 2018, AES 2009, USFWS 2018, LSA 2011, Tetra Tech 1998, and CNPS 2018.

Present: Species observed on the sites at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the sites, but it could occur there from time to time.
Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.

Absent: Species not observed on the sites and precluded from occurring there because habitat requirements not met.

STATUS CODES
FE: Federally Endangered
FT: Federally Threatened
FPE: Federally Endangered (Proposed)
FC: Federal Candidate

BEPA: Bald Eagle Protection Act

CE: California Endangered
CT: California Threatened
CR: California Rare
CP: California Protected
CSC: California Species of Special Concern
WL: California Watch List
FP: California Fully Protected

BCC: USFWS Birds of Conservation Concern

California Native Plant Society Listing (CNPS)
1A: Plants Presumed Extinct in California
1B: Plants Rare, Threatened, or Endangered in California and elsewhere
2: Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3: Plants about which we need more information – a review list
4: Plants of limited distribution – a watch list
A2: Locally Rare in Alameda and Contra Costa Counties
.1: Seriously threatened in California
.2: Moderately threatened in California
.3: Not very threatened in California

American Fisheries Society (AFS)
EN: Endangered
TH: Threatened
VU: Vulnerable

The World Conservation Union (IUCN)
CD: Conservation Dependent
CE: Critically Endangered
DD: Data Deficient
EN: Endangered
LC: Least Concern
NT: Near Threatened
VU: Vulnerable

Xerces Society: Red List (Xerces)
PE: Possibly Extinct
CI: Critically Imperiled
IM: Imperiled
VU: Vulnerable
DD: Data Deficient

3.4 AQUATIC RESOURCES DELINEATION

NCE conducted an Aquatic Resources Delineation on December 18, 2017 in accordance with the:

- 1987 Corps of Engineers Wetland Delineation Manual;
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), May 2010; and,
- A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, August 2008

One culvert outfall was identified. The culvert was crushed and was suspended about five feet above the ground surface. The culvert outfall was dry, and the culvert outfall did not show evidence of frequent and regular surface water flows. In addition, NCE has been on-site many times over the past ten years and has never seen flow from the culvert. It is assumed that during storm events, that stormwater is discharged from the culvert outfall. This discharge has the potential to affect the integrity of the water quality of San Francisco Bay, a Traditional Navigable Waterway. Therefore, the buried underground culvert is proposed as federally and state of California jurisdictional and subject to regulation under the CWA. A total of 0.0011 acres of buried underground aquatic resource (culvert) was delineated at the Project.

The Project is adjacent to the San Pablo Bay. Tidal datums that delineate USACE jurisdiction were gathered from Richmond tidal gauge Station ID 9414863, which is nearest to the Project survey area. The Richmond station datum is related to NAVD 88 using National Geodetic Survey data. The Mean High Water in the Project area is 5.45 feet above sea level based on NAVD 88. The High Tide Line is 7.59 feet based on the highest astronomical tide recorded at the Richmond tidal gauge.

4.0 POTENTIAL IMPACTS AND MITIGATION MEASURES

4.1 PROJECT SPECIFIC IMPACTS AND MITIGATION MEASURES

The Point Molate Beach Park Shoreline Restoration Project has the potential to cause direct impacts to biological resources during construction. The proposed Project would address active beach bluff erosion with rock slope protection and infrastructure improvements. These actions will require grading, vegetation removal, and soils disturbance. These activities cause noise, create dust and vibration, and have the potential to impact native plant communities and water quality. Wildlife species may be disturbed during these activities and their habitats may be impacted. The applicant proposes to avoid and minimize the potential for these impacts by implementing specific mitigation measures.

4.1.1 Impacts to Sensitive Habitats

CDFW defines Sensitive Natural Communities as those natural communities with ranks of S1-S3. These Sensitive Natural Communities require consideration during the environmental review process of CEQA and its equivalents. During the April 20, 2018 site visit, no sensitive natural communities were identified within the Project site.

4.1.2 Impacts to Habitats for Rare and Endangered and Other Special Status Species

Flora

Two special status plant species have the potential to occur within the Project site: beach bur and bent flowered fiddleneck (**Table 2**). These plant species are uncommon in Contra Costa County. Impacts to these species should be avoided where possible.

The potential for these special status plant species to occur on site prior to construction activities is very low. However, pre-construction surveys are recommended. These surveys will focus on the area within and in the vicinity of proposed ground disturbing activities and should occur during the appropriate blooming season. The purpose of these surveys is to determine the presence or absence of the species on site prior to the time of construction.

If these pre-construction special status plant species surveys result in a determination that the species are absent from areas impacted by construction activities, then there would be no impact to the species and mitigation would not be warranted.

Fauna

Several of the special status or sensitive animal species that occur, or once occurred, regionally, have the potential to occur at the site (**Table 2**). These include nesting birds, foraging birds, and the monarch butterfly. These species may occur on the site incidental to home range and migratory movements using the site infrequently. They may also forage on the site year-round or during migration.

The construction will avoid most tree and shrub removal, while protecting special status species habitat. The Project will involve minimal loss of foraging, nesting, and/or roosting habitat that is abundantly available regionally. Appropriate best management practices will be employed to protect these resources. Therefore, the loss of habitat for these species would be considered less than significant.

A conclusive investigation of nesting birds was not conducted; however, osprey nests are known to occur within a mile of the Project site. Trees, shrubs, and other habitats in the Project vicinity may provide suitable nesting habitat for migratory birds, including raptors. If a migratory bird, regardless of its federal or state status, were to nest near the site prior to or during proposed construction activities, such activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting success of special-status or non-special-status migratory birds, including tree-nesting raptors, or result in mortality of individual birds constitute a violation of state and federal laws (see **Section 1.3.3**).

4.1.3 Mitigation Measures

The proposed Project requires a Section 404 permit from USACE, a Section 401 Water Quality Certification from the San Francisco Bay RWQCB, a Section 1600 permit from CDFW, and a BCDC permit. Following consultation and permitting with these regulatory agencies, mitigation and monitoring measures will be identified to reduce impacts to sensitive species and their habitats. These requirements are likely to include measures such as pre-construction surveys for nesting birds. Implementation of these mitigation measures is expected to reduce the potential for significant impacts to those resources.

4.2 CONCLUSION

The proposed Project requires construction near San Pablo Bay in the vicinity of sensitive habitats. Several special status species have the potential to use these habitats, and the potential exists to adversely affect these species and their habitats. However, the Project has been designed to avoid sensitive species with timing and pre-construction surveys, implementation of BMPs for avoiding impacts to water quality, and restoration of areas where vegetation is unavoidably impacted. These mitigation measures supplemented by permit conditions will allow this public infrastructure to be constructed and utilized, while avoiding significant impacts to the natural resources of the site.

5.0 REFERENCES

Analytical Environmental Services, (2009). *Point Molate Mixed-use Tribal Destination Resort and Casino Project DEIS/DEIR.*

California Department of Fish and Wildlife (CDFW). (2008b). *California Fish and Game Code*. Gould Publications, Binghamton, NY.

California Department of Fish and Wildlife (CDFW). (2018a). "California Wildlife Habitat Relationships." California Interagency Wildlife Task Group, Vers. 8.2, Sacramento, California.

California Natural Diversity Database (CNDDB). (2018). "RareFind 5." Biogeographic Data Brach, Sacramento, CA. https://www.wildlife.ca.gov/Data/CNDDB, accessed January 22, 2018 and May 25, 2020

California Native Plant Society. (2018). "Inventory of Rare and Endangered Vascular Plants of California (online edition)." California Native Plant Society. Sacramento, CA. http://www.rareplants.cnps.org/, accessed January 22, 2018 and May 25, 2020

City of Richmond. (2017). "Code of Ordinances." [online] https://library.municode.com/ca/richmond/codes/code_of_ordinances?nodeId=CH, accessed January 25, 2018.

City of Richmond. (2012). "Richmond General Plan 2030." City of Richmond Planning and Building Services, April 2012, Richmond, CA

EPA and U.S. Army Corps of Engineers. (2007). "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* & *Carabell v. United States*." Environmental Protection Agency and U.S. Army Corps of Engineers, Washington, D.C.

LSA Associates. (2011). *San Francisco Bay Trail: Pinole Shores to Bayfront Park Project EIR*. Produced for EBRPD.

LSA Associates. (2011). *Wetland Delineation Study, Point Molate Bay Trail*. Technical memorandum to EBRPD.

LSA Associates. (2011). *Natural/Cultural Resource Information, Point Molate Bay Trail*. Technical memorandum to EBRPD.

Natural Resource Conservation Service (NRCS), United States Department of Agriculture. (2017). Soils Survey data for the project site. [online]. http://websoilsurvey.nrcs.usda.gov/app/

Natural Resource Conservation Service (NRCS), (1977). "Soil Survey of Contra Costa County, California." United States Department of Agriculture Soil Conservation Service in Cooperation with University of California Agricultural Experiment Station.

San Francisco Bay Conservation and Development Commission, (2008). *San Francisco Bay Plan.* State of California.

Sawyer, John, and Keeler-Wolf, Todd. (2010). *A Manual of California Vegetation, 2 Edition*. California Native Plant Society, Sacramento, CA.

Shuford, W.D., and Gardali, T., editors. (2008). *California Bird Species of Special Concern: A Ranked Assessment of species subspecies, and distraction populations of birds of immediate conservation concern in California. Studies of Western Birds 1.* Western Field Ornithologists, Camarilla, California, and California Department of Fish and Game, Sacramento, California.

Stebbins, Robert C., (1985). *A Field Guide to Western Reptiles and Amphibians*. Second Edition, Revised, 336 pp., Houghton Mifflin Company, Boston, MA.

Tetra Tech, Inc., (1998). *Special Status Plant Survey and Habitat Assessment. Navy Fuel Depot, Point Molate, Contra Costa County, California*.

United States Geological Survey. (1995). "San Quentin Quadrangle California 7.5 Minute Series (Topographic)." Reston, Virginia.

United States Fish and Wildlife Service (USFWS 2018), Sacramento Endangered Species Office. Information for Planning and Consultation (IPaC). https://ecos.fws.gov/ipac/, accessed January 24, 2018 and May 25, 2020

APPENDIX A - FIGURES

Project Site and Vicinity Map, Soils Map, Habitat Map, CNDDB Species Map

APPENDIX B

SITE PHOTOGRAPHS



Northern terminus of bluff work looking south



Eroded Beach Bluff work area looking north



Failed culvert proposed for replacement looking east



Area of eroding bluff for proposed revetment looking north

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Appendix C

Plant Survey Memo

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MEMORANDUM

Date:07/30/2020
Project No: 568.40.55
To: The City of Richmond
From:Quinn Radford
Subject:Special Status Species Plant Survey

The Biological Resource Assessment (BRA) for The Point Molate Beach Park Shoreline Restoration Project (project) identified 2 potential special status species plants that had potential to occur on the project site. These plants are Bentflower fiddleneck (*Amsinckia lunaris*) and Beach bur (*Ambrosia chamissonis*). It was recommended in the BRA that these flowers be surveyed for to determine presence or absence prior to construction.

On June 25, 2018 NCE surveyed in and around the location of proposed ground disturbing activities at Point Molate Beach Park to determine whether the aforementioned plants were present on site. This survey was during the blooming season for these species. Most of the park has been "substantially changed during the historic and modern era. Foremost among the alterations is the substantial importation of a large amount of fill that covers the site." [1] This documented disturbance has created an unfavorable environment for native plant species. Most of the vegetation within the project is indicative of a highly disturbed environment due to the overwhelming abundance of highly competitive non-native plant species that thrive in these conditions.

During the survey NCE did not find the bentflower fiddleneck of beach bur in or around the location of ground disturbing activities. Neither of these species are residents of Point Molate Beach Park near the proposed construction activities.

[1] Taggart, Mike and Damon Haydu 2009. Cultural Resources Study: Point Molate Tribal Destination Resort and Casino Project: Volume II: Archeological Resources. Prepared by Analytical Environmental Services, Sacramento, CA

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Appendix D

Cultural Resources Inventory Report

NCE

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Cultural Resources Survey Report for the Point Molate Beach Restoration Project, Contra Costa County, California



Prepared For:
U.S. Army Corps of Engineers, San Francisco District
1455 Market Street,
San Francisco, CA 94103

Prepared By:
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June 2020

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ADMINISTRATIVE SUMMARY

The City of Richmond (City) has identified the need to restore actively eroding portions of the shoreline at Point Molate Beach Park (Beach Park) on the shoreline of San Pablo Bay in Contra Costa County, California. The bluff at the north end of the Beach Park, from the south end of the existing rock revetment near Stenmark Drive to approximately 300 feet south, has receded due to a combination of a collapsed culvert and natural shoreline processes resulting from the action of tides, waves, wind, seepage, and rain. This coastal erosion has undercut the shoreline and the planned alignment for the Bay Trail at Point Molate (Bay Trail), a Class I bike trail currently being designed for the East Bay Regional Park District (EBRPD) and the City.

This report describes a cultural resources survey of the proposed trail alignment. The survey was intended to demonstrate compliance with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA). The City is the lead state agency and the U.S. Army Corps of Engineers (USACE) is the lead federal agency. An Area of Potential Effect (APE) was defined for the proposed project that includes a horizontal footprint of 0.59 acres. The extent of excavation would vary by project element. Project-related above-ground improvements would be limited to the trail surface and the surface of the rock revetment. The proposed project area was surveyed for the presence of cultural resources. Three previously recorded resources are present within or immediately adjacent to the proposed project APE. No previously undocumented resources were identified as a result of the present inventory.

- P-07-000162 (CA-CCO-283) represents the remains of a prehistoric shell mound site, the core of which is located outside and to the north of the APE. Once quite concentrated, over time the shell mound has been graded, resulting in diffuse scattering and spreading of the archaeological deposit. Evidence of a distal arm of the shell midden created by past grading was observed within the bluff face stratigraphy during the present pedestrian survey. The shell lens, visible at the north end of the proposed project area, is sandwiched between two modern aggregate fill layers demonstrating that the archaeological material was bladed from the core site area and used as fill.
- P-07-000277 (CA-CCO-506H) represents the remains of a Chinese shrimp camp (Shrimp Camp) occupied by Chinese-Americans from the mid to late 1860s to approximately 1912. The Shrimp Camp was revisited as a part of the present inventory effort. Emphasis was placed on documenting evidence of the Shrimp Camp in the bluff face. As such, evidence of the Shrimp Camp was observed along the bluff face within the southeastern two-thirds of the proposed project area. At its northern extension, the deposit appears poorly preserved and grades into the modern fill. The cultural horizon varied in thickness between one foot and two feet five inches.
- P-07-004593 represents a segment of the Richmond Beltline Railroad, established along Richmond's western waterfront and around Point San Pablo in 1903. The railroad remained functional through 1955. A 761-foot-long segment of the Beltline Railroad was relocated and recorded as part of the present inventory. This segment still contains rails and ties; however, no ties were visible as they are covered with asphalt. Only the tops of the rails are visible.

Previous studies have provided recommendations as to whether or not the identified resources are eligible for listing on the California Register of Historical Resources (California Register) and/or the National Register of Historic Places (National Register). A summary of those recommendations is provided in the table below.

Primary Site #	Trinomial Site #	Age	Status	Description	Eligibility Status
P-07-000162	CA-CCO-000283	Prehistoric	Previously Recorded; site form not updated	Shell mound	Not Listed; recommended Not Eligible, manage as Eligible
P-07-000277	CA-CCO-000506H	Historic	Previously recorded; site form updated	Chinese Shrimp Camp	Listed; Eligible
P-07-004593	n/a	Historic	Previously recorded; new segment added in site form update	Richmond Beltline Railroad	Not listed; recommended Not Eligible

Construction of the proposed project would result in the loss of approximately 10 cubic yards of archaeological deposit associated with site P-07-000162. Given that site P-07-000162 has been recommended Not Eligible for listing on the National Register and California Register, this loss of archaeological deposit would have no significant impact. It has been recommended that special consideration given to site P-07-000162 due to the presence of human remains within the core of the deposit, located over 300 feet to the north of the APE. The likelihood of finding human remains within the present APE is considered remote; however, it is recommended that a Native American and an archaeological monitor be present during the disturbance of the archaeological deposit.

Site P-07-000277 is considered Eligible to the National Register and California Register under Criterion D/4. During the present study, evidence of the Shrimp Camp was observed extending some 200 feet along the bluff face within the southeastern two-thirds of the proposed project area. Over the years, wave-related erosion has caused the bluff face to recede. This erosion has resulted in the loss of an undetermined amount of archaeological deposit. Implementation of the proposed project would substantially reduce, if not eliminate, the potential for the future loss of additional archaeological deposits. However, an estimated 163 cubic yards of archaeological deposit would be removed during the implementation of the proposed project. Cleaning of the bluff face preparatory to setting geotextile and rock armoring would result in the loss of currently exposed deposits. This represents a significant impact.

A component of the project is to replace a collapsed culvert in-kind. The culvert runs perpendicular to and underneath a segment of the Richmond Beltline Railroad (P-07-004593) within the project area; therefore, removal of the rails will be necessary to install the new culvert. Given that P-07-004593 has been recommended Not Eligible for listing on the National Register and/or California Register, the removal of rails within the project area will result in no significant impact to a historic property.

In summary, the proposed Point Molate Beach Restoration Project will have an adverse effect on a cultural resource recommended as eligible for listing on the National and the State Register (the Chinese Shrimp Cam, P-07-000277). This adverse effect may be addressed with one or more of the following measures:

- Acceptance of a minimal loss of archaeological deposits in favor of the beneficial nature of the project.
- Development and implementation of a data recovery plan in compliance with standards established by the UCACE, the California SHPO, and the secretary of the Interior.
- Development and implementation of an inadvertent discovery plan.

- Redesign of the project to eliminate or reduce the impact to site P-07-000277 to a less than significant level (note: further redesign of the slope stabilization and culvert elements was deemed infeasible by engineering after the alternatives analysis).

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND & DESCRIPTION

The City of Richmond (City) has identified the need to restore actively eroding portions of the shoreline at Point Molate Beach Park (Beach Park) on the shoreline of San Pablo Bay in Contra Costa County, California (**Figure 1**; see **Appendix A**). The park is in the southernmost portion of the larger Point Molate property, formerly the Point Molate Naval Fuel Depot. The Beach Park is accessed via Stenmark Drive, approximately 1.5 miles north of the Richmond-San Rafael Bridge. Continual coastal wave and tidal action are causing a loss of park area and severe undercutting is present near a collapsed culvert.

The City proposes to restore actively eroding portions of the shoreline at the Beach Park. The bluff at the north end of the park, from the south end of the existing revetment near Stenmark Drive to approximately 300 feet south, has receded due to a combination of a collapsed culvert and natural shoreline processes resulting from the action of tides, waves, wind, seepage, and rain. Left unchecked, this erosion will continue to encroach upon park facilities, trees, and open space. This coastal erosion has undercut the shoreline and the planned alignment for the Bay Trail at Point Molate (Bay Trail), a Class I bike trail currently being designed for the East Bay Regional Park District (EBRPD) and the City.

The City conducted an assessment to characterize erosion at the site and developed erosion-repair alternatives (A-N West 2017). Preliminary design alternatives included placing a rock revetment or constructing a piled retaining wall with riprap protection. The construction of a rock revetment was identified as the preferred alternative. The project limits encompass approximately one acre along the shoreline at the Beach Park, starting at the existing shoreline rock revetment near Stenmark Drive and continuing approximately 300 feet southward (**Figure 2**). The proposed project is located within the following assessor's parcel numbers: 561-400-008, 561-100-008, and 561-080-006.

This report describes a cultural resources survey of the proposed trail alignment. The survey, conducted by NCE, is intended to demonstrate compliance with the CEQA and Section 106 of the NHPA. All work was designed to comply with the current state, federal (U.S. Army Corps of Engineers [USACE]), and professional standards. Those standards state that the goals of the inventory are to:

- Establish an APE;
- Identify prehistoric and historic period archaeological resources, and architectural resources within or adjacent to the APE;
- Evaluate identified resources as to their eligibility for listing on the National Register and/or California Register;
- Provide a determination of effect and management recommendations for any National Register/California Register eligible properties that may be affected by the proposed project.

1.2 DEFINITION OF THE UNDERTAKING

The proposed Point Molate Beach Park Shoreline Restoration Project will constitute the proposed undertaking, as that term is commonly used in cultural resources management. The proposed undertaking requires compliance with Public Resource Code (PRC) Section 21083.2 and 21084.1 of the CEQA. Also, since the project would affect waters of the United States, the project proponent must meet requirements of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act, and, therefore, is seeking a permit from the USACE, San Francisco

District. The USACE is the lead federal agency overseeing compliance with Section 106 of the NHPA.

1.3 UNDERTAKING DESCRIPTION

Substantial bluff erosion has occurred within the Beach Park. The proposed beach restoration would involve the placement of an approximate 300-foot-long rock revetment situated at the north end of the Beach Park where erosion is the most pronounced. Based on a comparison of detailed topographic maps prepared in March of 2016 and December of 2019, the bluff face within the project area has receded approximately 4.8 feet at the north end and approximately 2.9 feet at the south end. The proposed project design would restore the bluff out to its 1987 location and in so doing would halt further recession along the beach to the south. The proposed design intentionally limits the length of rock armor slope to preserve most of the beach area habitat and maintain recreational access and function. Placement of the rock revetment would absorb erosive forces along the bluff, reducing future erosion of the bluff and reducing the volume of sediment entering the Bay.

The proposed project area consists of a flat, graded, asphalt, and concrete-covered terrace commonly known as Drum Lot 2. The Beach Park lies below (west of) the Drum Lot along the shoreline and features picnic tables, parking, and beach access. Stenmark Drive, the main road into Point San Pablo, passes between the Drum Lot and the Beach Park. Behind the Drum Lot (to the east), coastal scrub covers the steep hillside.

The proposed rock revetment consists of layers of rock and geotextile placed on the shoreline. Sand would be removed to a depth of up to four feet to allow placement of the various layers. Sand removed from the rock revetment area will be dispersed over the sand beach at the toe of the rock revetment and along the bluff extending further into Beach Park. To provide long-lasting, sustainable construction, the revetment will consist of rockfill placed against the geotextile-lined bluff and protected with armor stone keyed into the underlying rock. The rock armored slope would vary from 2H:1V to 1.5H:1V. At this inclination, the rock armor will be stable and integrate effectively with the existing topography. Approximately five cubic yards of fill will be placed below the existing high tide line per linear foot of bluff repair. The rockfill, consisting of material ranging from two to 12 inches in size, will buttress the existing bluff and serve as backing for the armor stone layer. The geotextile will prevent the passage of soil material, relieve hydrostatic pressure, and allow drainage of the bluff into the rockfill. The rock armor will consist of un-weathered sandstone, igneous rock, metamorphic rock, or dolomitic sandstone.

The proposed project requires the removal of soil and debris from an approximate 0.29 acres (12,420 sq. ft.) area (i.e., the revetment area). Debris removal includes 1,207 cubic yards of sand from below the bluff and 218 cubic yards of bedrock. Sediments that comprise the bluff face are friable and unstable. To create a stable working surface, the surface of the bluff would be scraped, creating a 1:1 slope, allowing for the placement of geotextiles, rockfill, and rock armor. This slope clean-up will result in the removal of approximately 324 cubic yards of material. The project will require the placement of approximately 1,043 square yards of geotextile fabric. Approximately 1,442 cubic yards of rockfill will be placed to form the revetment and 1,698 cubic yards of rock armor placed against the bluff face to create the outer protection of the revetment.

An existing 12-inch culvert drains the upland watershed above the top of the bank. The pipe has deteriorated and collapsed at the bluff face. As part of the proposed project, this pipe would be replaced with a new 15-inch reinforced concrete culvert, connecting from an existing drainage inlet just north of the bluff to the face of the new rock revetment.

A portion of the proposed Bay Trail alignment was lost due to bank failure. An 80-foot long section of the Bay Trail will be constructed as a part of the proposed project where it coincides with the slope stabilization. The Bay Trail segment will be aligned at the top of the rock revetment. The trail will include 10-feet of asphalt paving with five-foot decomposed granite shoulders to match the proposed new trail.

Construction staging would be located adjacent to the project between Stenmark Drive and the bluff. After construction, all disturbed areas will be regraded and seeded per project specifications.

Three cultural resources are known to be present within and adjacent to the proposed project area. The first is a prehistoric shell midden recorded immediately north of the proposed project area. This resource has been recommended Not Eligible to both the National Register and California Register. Excavations conducted at the site indicate that midden deposits may have been redeposited south into the proposed project area. Human burials were also discovered at this site.

The second resource is the historic Chinese Shrimp Camp, an archaeological resource that has been recommended eligible to both the National Register and California Register. Test excavations conducted at the Shrimp Camp document intact cultural deposits exposed above the shoreline and near the present project area. Shoreline migration over the last decade has resulted in the erosion and loss of soils, including archaeological deposits known to be associated with the Shrimp Camp.

The third resource is a segment of the Richmond Beltline Railroad, established along Richmond's western waterfront and around Point San Pablo in 1903. The railroad remained functional through 1955. A component of the project is to replace the collapsed culvert in-kind. The culvert runs perpendicular to and underneath extant rails; therefore, removal of the rails will be necessary to install the new culvert. Given that P-07-004593 has been recommended Not Eligible for listing on the National Register and/or California Register, the removal of rails within the project area will result in no significant impact to a historic property.

1.4 Area Of Potential Effect

Generally, an APE consists of an Area of Direct Impact (ADI) and an Area of Indirect Impact (AII).

The ADI takes into consideration the lateral extent of the proposed disturbance and the depth of that disturbance. The proposed undertaking consists of four primary elements. Construction of the revetment will extend over an area approximately 300 feet by 40 feet (0.29 acres) and will involve excavations in some areas to a depth of approximately four feet. Reconstruction of the culvert will extend over an area approximately 30 feet by four feet (<0.01 acres) and will require excavations to a depth of approximately eight feet. Construction of the lost portion of the Bay Trail will extend over an area 80 feet by 15 feet (0.03 acres) and will involve excavations to a depth of approximately two feet. Much of this excavation would occur in previously disturbed surface soils. Subsurface excavation would include removing existing road and railroad base material. Excavation is not proposed below the level of previous disturbance except for scaling the friable soils along the bluff face.

Staging and material placement will occur on paved surfaces on the bluff mostly between the existing railroad tracks (Richmond Beltline) and Stenmark Drive. A small area west of the revetment area along Stenmark will also be used for staging. The area required for staging is

approximately 0.66 acres. The culvert replacement and Bay Trail segment are located within small portions of the area also designate for staging. Besides the project components, no other excavation will occur within the staging areas. When combined, the proposed undertaking would have an ADI of 0.95 acres (revetment area plus staging) (see **Figure 2**). Access to the project area would be along existing roads (Stenmark Drive).

The AII takes into consideration elements that extend vertically above the present ground surface. At issue is whether any such elements would adversely impact the integrity of nearby historic properties. Project-related above-ground improvements would be limited to the trail surface and the surface of the rock revetment. In the absence of substantial vertical elements, there is no need to expand the limits of the AII beyond those of the ADI.

2.0 ENVIRONMENTAL SETTING

The San Pablo Peninsula extends from Point San Pablo south to Point Potrero. The peninsula is bounded on the north by San Pablo Bay, on the west and south by San Francisco Bay, and on the east by a tidal marsh, an alluvial plain and commercial and industrial development. The shorelines are characterized by low elevation marsh and tidelands that are dominated by marsh flats and meandering creek channels with a few isolated areas of higher elevations.

2.1 GEOLOGY

The generalized geology of the Richmond area has been mapped by several geologists (e.g., Graymer 2006; Nilsen 1975). The project area lies within the Coast Ranges geologic and physiographic province. This province is characterized by northwest-southeast trending valleys and intervening mountain ranges that are structurally controlled by faulting and folding, the result of the collision of the Farallon and North American Plates. The plates are comprised of rocks of the Franciscan Complex, which are Cretaceous and Jurassic in age (100 to 65 million years old). The Franciscan Complex or Formation is composed of chert, basalt, greywacke sandstone, shale, schist, serpentine, and other high-pressure metamorphic rocks, such as blueschist (Page 1966). The dominant geological structure on the peninsula is the Potrero Hills, which form a northwest-southeast trending headland characterized by steep slopes and narrow drainages. Historically, these hills were drained by a series of seasonal drainages that have, for the most part, been altered and filled as a result of development.

2.2 SOILS

Soils within the project area have been mapped by the National Resources Conservation Service as belonging to the Millsholm loam and Urban Land series (NRCS 2020; see also Hockett and Burger 2016). The Millsholm loam Series soils are present throughout most of the project area. Soils of the series are derived from loamy residuum weathered from sandstone and shale. These soils have a Liquid Limit ranging from 30 to 40 percent, a Plasticity Index between 15 and 16 percent within the upper 60 inches and are generally considered to have a moderate to low expansion potential. Urban Land soils have not been classified or rated.

2.3 FLORA AND FAUNA

The natural vegetation of the project area consisted of Coastal Saltmarsh and Coastal Prairie-Scrub Mosaic, which is a community of open to dense, broad-leaved evergreen shrubs with a dense lower story of perennial graminoids and succulent forbs (Küchler 1977:31). Today, much of the San Pablo Peninsula is covered with European-derived grasses and thickets of brushland consisting mostly of poison oak, coffeeberry, and California sagebrush. There is little overstory vegetation present on the peninsula, except for a few native buckeye, coast live oak, bay laurel, and dense stands of introduced eucalyptus near Winehaven. Other plants identified in the area include Suisun Marsh Aster, Lupin, California Pipevine, Epilobium, Seep-Spring Monkey Flower, Muhlenberg's Centaury, French Broom, and Toyon (Heal 2016; Rowan et al. 2014).

The general project area supports a varied assemblage of wildlife, which may move through the region or migrate seasonally. A variety of habitat types present nearby make the area attractive to several resident and migratory birds. Pelagic birds, shorebirds, waterfowl, passerines, raptors, and others can be found in the area. These and other birds may nest, forage, or winter in habitats on or adjacent to the project corridor. The shoreline, wetland, and upland habitats in the vicinity also provide forage and cover for several mammal species. Wildlife identified in the Pt. Molate area includes Mule Deer, coyote, Osprey, Wild Turkey, Pacific Chorus Frog, Harbor Seals, Dolphin, Striper, and Oysters (Heal 2016; Rowan et al. 2014).

3.0 CULTURAL SETTING

Analytical Environmental Services (AES) conducted an extensive archaeological study of lands immediately adjacent to the present project area in 2009. Due to the scale of that proposed undertaking, a thorough context was drafted. Given the high level of relevancy between the 2009 study area and the present project area, the following cultural setting overview is paraphrased from the Taggart and Haydu (2009a) report with supplemental prehistoric Bay Area information acquired from Milliken et al. (2007) and additional historic information derived from Booker (2013) and Cole (2014).

3.1 PREHISTORIC OVERVIEW

The Bay Area has been inhabited by prehistoric peoples since the terminal Pleistocene (Moratto 1984). By the time of Spanish settlement in 1776, seven native languages were spoken within the region including Southern Pomo, Wapo, Patwin, Coast Miwok, Bay Miwok, Karkin Costanoan, and San Francisco Costanoan (Milliken et al. 2007).

Early archaeological excavations focused primarily on shell mounds, a fairly ubiquitous prehistoric site type found throughout the region. More than 100 shell mounds were recorded in Alameda and Contra Costa County during the early years of the Twentieth Century by the University of California, Berkeley archaeologists. These features have provided archaeologists with a wealth of information about Bay Area prehistoric human land use patterns and subsistence practices (Banks and Orlins 1981). The Bay Area is recognized as a discrete archaeological entity derived from an economy primarily focused on the intensive use of shellfish which resulted in the accumulation of the large shell middens (Moratto 1984).

Culture chronology within the region is a subject of significant debate between researchers (e.g., Beardsley 1948, 1954; Bennyhoff and Hughes 1987; Bennyhoff 1972; Heizer 1949, Heizer and Fenenga 1939, Lillard et al. 1939; and Lillard and Purves 1936). In the last 50-60 years, the archaeological recognition of sub-regional cultural variation, beyond the classic Central California Taxonomic System (CCTS) has led to more refined cultural chronologies based on specific artifact types and/or assemblages (e.g., Bennyhoff and Fredrickson 1994; La Jeunesse and Pryor 1990; Milliken et al. 2007; Moratto 1972; Olsen and Payen 1968; Ragir 1972; Sundahl 1982; and White 2002). For purposes of this report, the Bay Area cultural sequence provided by Milliken et al. (2007) is used except for the Paleoindian Period.

3.1.1 Paleoindian Period (13000 to 10000 BP)

The climate during the Paleoindian Period was cool and moist, supporting extensive pine forests. Archaeological evidence, although sparse, indicates that people lived in small groups, collecting shellfish and harvesting wild seeds. The artifact assemblage includes basketry, seagrass cordage, incipient milling stones (e.g., metates and manos), beads, chert tools, and fish-like effigies (SBMNH 2002).

3.1.2 Early Holocene/Lower Archaic (10000 – 5500 BP)

Within the Bay area, this period within is characterized by a generalized mobile forager subsistence pattern, typified by the more widespread use of milling stones and hand stones compared with the Paleoindian Period and by a variety of large wide-stemmed and leaf-shaped projectile points made from local Franciscan chert tool stone (Hylkema 2002). Burials have been dated to this period; however, there is an overall lack of associated artifacts.

3.1.3 Early Period/Middle Archaic (5500 – 2500 BP)

Pine forests were extensive during the Early Period, reflecting a cool and wet climate that continued from the earlier Paleoindian Period. Considerably more evidence exists for occupation during this period which is commonly referred to as the "Millingstone Culture" due to the abundance of milling stones. The first mortar and pestle groundstone implements are documented in the Bay Area during this period. In fact, during the latter stages of the Early Period, the mortar and pestle wholly replace milling slabs and hand stones (Milliken et al. 2007). As such, seed and plant processing formed a major part of the diet. Shellfish-gathering and fishing appear more important than hunting during this time. A typical Early Period marker is the net sinker (i.e., stone weights to help sink a net).

In addition to the abundance of milling stones, the Early Period is also typified through a strong association of artifacts with buried human remains. The artifact assemblage includes projectile points and blades, charm stones, rectangular *Olivella* and *Haliotis* beads (cut and/or perforated), bone and antler implements, quartz crystals, and red ochre. Many of these artifacts served as funerary objects that were coupled with highly specific mortuary practices (e.g., interment westerly orientation). Other artifacts associated with the Early Period, but somewhat less consistently, include baked clay objects, human bone, trident harpoon tips, and pipes (Milliken et al. 2007).

3.1.4 Lower Middle Period/Initial Upper Archaic (2500 – 1520 BP)

This period is marked by the disappearance of the rectangular shell bead, used for 3,000 years prior, within the Bay Area, Central Valley, and Southern California. New decorative (and presumed religious) objects appeared including tiny saucer-shaped, split-beveled, and spire-lopped *Olivella* beads and circular *Haliotis* ornaments (Elsasser 1978; Luby 2004). New tool types made from bone appear such as barbless fish spears, elk femur spatulae, whistles, and basketry awls. Mortars and pestles continue to be the primary groundstone implements. Net sinkers, a typical marker of the Early Period, disappear during the Lower Middle Period (Milliken et al. 2007).

Although shellfish and seed/nut processing remained important, one major shift in subsistence during this period was a focus on big game such as elk, deer, and sea mammals. This is evidenced not only by faunal remains but by the occurrence of large projectile points hafted to dart shafts and thrown with an atlatl (i.e., throwing board or stick).

3.1.5 Upper Middle Period/Late Upper Archaic (1520 – 900 BP)

Fishing and sea mammal hunting became more important during the Upper Middle Period. New inventions, including shell hooks and single-barbed bonefish spears, enabled coastal peoples to catch a wider variety of fish. Intensified fishing led to population increase and large, permanent coastal settlements. New or distinct artifact types include intricate ceremonial blades, fishtail charmstones, new *Haliotis* ornament forms, mica ornaments, Olivella wall beads, ear spools, and large mortars (Elsasser 1978; Tamez 1978).

Other markers of the Upper Middle Period include the sudden collapse of the Olivella saucer bead trade, the appearance of *Olivella* saddle beads, and the arrival of the Meganos extended burial mortuary pattern (i.e., dorsal extended interments) (Bennyhoff 1994).

Within the Bay Area during this period, the *Olivella* saddle bead type is replaced with a variety of wide and tall bi-symmetrical forms and the appearance of unperforated rectangular and horizontally-perforated half oval *Haliotis* ornaments (Milliken et al. 2007). Although grave accompaniments continue during this period, the quantity and variety of mortuary artifacts are reduced compared to earlier periods.

3.1.6 Initial Late Period/Lower Emergent (900 – Contact)

The Initial Late Period is typified by a resurgence of mortuary artifacts. Typical artifacts include *Haliotis* beads, ornaments, and whole shells, *Olivella* beads, charm stones, *Saxidomus nuttalli* (clam) beads, magnesite, and steatite beads, ear spools and tubes, mammal bone tubes, incised bird bone whistles, barbed harpoon tips, antler arrow shaft straighteners, baked clay objects, wooden fishhooks, netting and basketry, and mortars and pestles (Heizer 1939).

This period is also referred to as the Emergent Period due to increased levels of sedentism, status ascription, and ceremonial integration evidenced in the archaeological record within Central California (Milliken et al. 2007).

Within the Central Valley, the bow and arrow replaced the atlatl and dart about 1500 BP, reflecting a shift in targeted faunal subsistence resources. However, arrow-sized projectile points (Stockton Serrated series) do not appear in the Bay Area until after 1250 A.D. (Justice 2002). Napa Valley obsidian is a common tool stone from which these projectile points are manufactured, whereas other tools continued to be made from local Franciscan chert (Bieling 1997; Hylkema 2002).

Milling stones and hand stones are still present. Marine fishing remained a major part of the diet for coastal peoples. Sardines taken with nets were particularly important. Hunting of land animals and gathering of wild plants, with an emphasis on acorns, helped to supplement the marine diet.

3.2 Ethnographic Overview

3.2.1 Ohlone Territory & Origins

Ethnographic literature indicates that the region surrounding the current project area was near the northwestern extent of the Ohlone or Costanoan people's pre-contact territory (Levy 1978). Their territory ranged from the San Francisco Peninsula in the north to Big Sur in the south and from the Pacific Ocean in the west to the Diablo Range in the east. Their vast region included the San Francisco Peninsula, Santa Clara Valley, Santa Cruz Mountains, Monterey Bay area, as well as present-day Alameda County, Contra Costa County, and the Salinas Valley.

The Ohlone language belongs to the Costanoan sub-family, a group of eight languages that were spoken by approximately 50 autonomous groups that occupied lands from the Carquinez Straight in Contra Costa County south into Monterey County. Villages were comprised of 50 to 500 members each, with an average of 200; members interacted freely in matters of marriages, trade, religious, and other cultural practices (Levy 1978). The vicinity of the current project area is within the area attributed to the Huchiun Costanoan (Milliken 1995).

Linguistic evidence suggests Ohlone people migrated from the San Joaquin-Sacramento River system and arrived in the San Francisco and Monterey Bay Areas around 2400 BP (Levy 1978). This migration is thought to have displaced or assimilated earlier Hokan-speaking populations. In the vicinity of the project area, ancient shell mounds dated from Newark and Emeryville areas suggest villages were established in those areas as early as 5900 BP (Stanger 1968).

3.2.2 Ohlone Settlement and Subsistence

The Ohlone inhabited sedentary villages with targeted seasonal resource procurement. They are in many ways thought of as hunter-gatherers but can also be considered harvesters because of the common practice to set annual fires to generate new and higher density seed crops (Brown 1973; Levy 1978). Their staple diet consisted of processed acorns, nuts, grass seeds, and berries, supplemented by game including grizzly bear, elk, pronghorn, and deer. Seafood includes various fish, mussels, and abalone, and riverine resources such as salmon, perch, and

stickleback (Levy 1978). Waterfowl, captured with nets and decoys, and other birds are also found within the ethnographic Ohlone diet including ducks, geese, quail, great horned owls, red-shafted flickers, downy woodpeckers, goldfinches, and yellow-billed magpies (Levy 1978; Teixeira 1997).

Ohlone houses consisted of dome-shaped structures ranging from six to 20 feet in diameter and built from woven or bundled mats of tules. At inland settlements located closer to redwood stands, houses were conical shaped and built from redwood bark attached to a wooden frame (Teixeira 1997).

3.2.3 Spanish Mission Era (1769-1833)

The arrival of missionaries and Spanish explorers had a profound impact on the relatively stable Ohlone culture and population. The goals of the Spanish missionaries were to establish a series of missions in strategic and defensible locations, convert Native Americans to Christianity, and expand the Spanish territory. In December of 1602, Spanish explorer Sebastian Vizcaíno may have been the first to make contact with the Ohlone people, known as the Rumsien, at Monterey (Levy 1978). For more than 160 years, nothing is documented in the historical record.

The next Spanish incursion did not take place until 1769, where Gaspar de Portolà, accompanied by Franciscan missionaries, landed at Monterey. Led by Father Junípero Serra, the missionaries introduced Spanish religion and culture to the Ohlone people. The Spanish erected a total of seven missions inside Ohlone territory between 1770 and 1823 (Teixeira 1997). Ohlone were brought into these missions to live and work, disrupting and undermining the traditional Ohlone social structure and way of life. Large numbers of Bay Area Native Americans were moved into three of the missions including Mission Santa Clara, Mission San Jose, and Mission San Francisco between 1794 and 1805. In the spring of 1795, food shortages and an epidemic struck the missions resulting in thousands of deaths and widespread panic. Escaping Ohlone spread the disease to outside villages (Milliken 1995). A total of 60,000 deaths were recorded (Bean 1994).

The first recorded contact of the Huchiun (the Ohlone people occupying lands near the current project area) occurred in 1772 at the Richmond Wildcat Creek village during a Spanish expedition led by Lt. Pedro Fages and Father Juan Crespi. The goal of the expedition was to find a land route to the Point Reyes area from the South Bay region. Soon after Mission San Francisco was established in the early 1770s, the Huchiun were moved to the mission between 1788 and 1803 where they intermarried with other Costanoan peoples, as well as non-Costanoan peoples from the Bay Area. By mid-1801, the costal Huchiun villages were all abandoned in favor of mission life (Milliken 1995).

It is estimated that the Native American population in the Bay Area was reduced by as much as 80 percent during the Spanish Mission Era (Pritzker 2000).

3.2.4 Ohlone Today

The Ohlone people today belong to one of several geographically distinct groups. The Muwekma Ohlone Tribe has members from around the San Francisco Bay Area and is composed of descendants of the Ohlones from the San Jose, Santa Clara, and San Francisco missions. The Ohlone Costanoan Esselen Nation, consisting of descendants of intermarried Rumsen Costanoan and Esselen speakers of Mission San Carlos Borromeo, is centered within the Greater Monterey Bay Area. The Amah-Mutsun Tribe, located inland from Monterey Bay, are descendants of Mutsun Costanoan speakers of Mission San Juan Bautista. The Costanoan Rumsien Carmel Tribe of Pomona/Chino are descendants from Mission San Carlos and now reside in southern California.

3.3 HISTORIC OVERVIEW

3.3.1 Mexican/Colonial Period (1821 – 1845)

Following the Spanish Mission Era (see **Section 3.2.3**), Mexico declared its independence from Spain, first as an empire in 1821, then as a republic in 1824. Spanish missions within what was known as Alta California were left to fend for themselves. In 1833, the Mexican government passed the Secularization Act which stripped the missions of their previously established landholdings. These holdings were issued to Mexican colonists as "ranchos". Indians, whose lives had become entrenched with the missions, were also "secularized." However, a simple return to aboriginal life was not possible. The disease was responsible for the further decline of native populations and those that remained lived in small pueblos established in secluded pockets of Alta California or became enlisted essentially as indentured servants to the burgeoning cattle ranch industry within the Central Valley (Cole 2014).

Several years before secularization, between 1813 and 1817, an outpost to Mission San Francisco named *San Ysidro de Los Juchiunes* was established in the Richmond-San Pablo area (Milliken 1995). Francisco Maria Castro, a father at Mission San Francisco, held title to San Ysidro de Los Juchinues. He filed a petition to the Mexican authorities in San Jose for the land in 1817 and his application was granted. The land grant was called *El Rancho de Los Cuchinyunes* and was later renamed Rancho San Pablo (otherwise known as the Castro Land Grant). This area, which the project area is located within, covering an area that now includes Richmond, El Sobrante, Pinole, as well as the San Francisco and San Pablo Bays. Castro used the land to raise cattle and planted the area's first fruit trees and grapes (Hoover et al. 1988). After Castro died in 1831, Rancho San Pablo was divided between his wife and 10 children; the land was still used for grazing cattle.

Between the 1830s and late 1840s, word had started to spread of the Bay Area's fertile and underpopulated land. Yerba Buena was the original name of the Mexican settlement that would later become San Francisco. Located near the northeastern end of the San Francisco Peninsula, it was originally intended as a trading post for ships visiting San Francisco Bay. The first homes in the settlement were built by William Richardson (a whaling captain) and Jacob Lesse (a merchant) in the mid-1830s. By 1845, Yerba Buena was inhabited by a few hundred people including Americans, Indians, Spanish, Dutch, and a few Hawaiians (Cole 2014).

3.3.2 The Rush to San Francisco and the Shrimping Industry (1848 – early 1900s)

When gold was discovered at Coloma in 1848, the Bay Area and the City of San Francisco especially, underwent significant and rapid transformation. Before the gold discovery, San Francisco was home to less than 1,000 people, but by the end of 1848, the population grew to nearly 25,000 (Wollenberg 2002). In 1850, the year California was admitted to the United States, the population of San Francisco exploded to more than 149,000 (Gilman et al. 1904).

The social and economic influence of the City affected the periphery of the Bay Area, including Point Molate where the project area is situated. To meet the growing resource demands of the City, shrimp camps run primarily by Chinese were established throughout the Bay Area. A shrimp camp was established at Point Molate sometime between 1865 and 1870 at the beach to the south of the point. By 1904, this camp consisted of 30 shacks, five wharves, and 10 boats (Cole 1980).

The Chinese shrimping industry was met with resistance from the local government. During the late 19th and early 20th Centuries, intimidation, taxation based on race, and even legislation were used to force Chinese shrimpers out of business. Legislative measures included forbidding shrimp fishing during the height of the season (1901), banning the exportation of shrimp

(1905), and outlawing bag netting as a means of procurement (1911) (Ellinger 2002; Hill 2001). These legislative measures were quite effective and resulted in wide-scale desertion of Chinese shrimp camps throughout the Bay Area. The Point Molate camp was reportedly abandoned by 1912. However, the settlement is still depicted in the 1915 San Francisco USGS 15' quadrangle illustrating 18 structures west of Western Drive and four wharves.

3.3.3 Richmond Beltline Railroad (1902 – 1995)

Due to the rapid increase of California's population, especially within the Bay Area, transportation became a challenge and the need for railroads became apparent. Travel by stagecoach was expensive, slow, and outdated. Roads were often impassable in the winter months due to mud or snow. Travel by rail, in stark contrast, offered comfort, and shorter travel times at a much lower cost (Robertson 1998).

The emphasis of railroad development during this time was focused on building a transcontinental railroad to link the east and west coasts. Two of these lines include the Southern Pacific Railroad (SPRR), now the Union Pacific Railroad, and the Atchison Topeka & Santa Fe Railroad (AT&SF RR), now the Burlington Northern Santa Fe Railway. The SPRR was founded by San Francisco businessmen in 1865 to connect San Francisco to San Diego. In 1868, the line was purchased by the Central Pacific Railroad, and by 1870, the two lines merged. In November 1874, the SPRR was built to Bakersfield. The first trains began running in September 1876 through Richmond to Los Angeles via the Tehachapi Loop. The AT&SF RR was chartered in 1863 and opened to traffic in 1864. It became one of the nation's longest rail lines by the 1890s, operating over 9,000 miles of track. As a result of poor management, the AT&SF RR went bankrupt in 1893 but was reorganized in 1895 as the Atchison, Topeka & Santa Fe Railway Company. The line was expanded in 1929 with Richmond becoming the western terminus.

In 1903, the Richmond Beltline Railroad (Beltline) was established along Richmond's western waterfront and around Point San Pablo, tying together a multitude of industries along the waterfront. Within a few short years, the northern portion of the western waterfront was home to many commercial enterprises, including the Standard Oil Long Wharf, a whale oil processing plant, an oil can factory (owned by Standard Oil) at Point Orient, a brick factory (Central Brick, just beyond Point San Pablo), two rock quarries (Blake Bros. and Healey & Tibbetts), a large winery complete with worker housing, a hotel, and a school (Winehaven). Also, a shipping terminal at Point San Pablo was built to handle all the cargo being produced at these enterprises (Bastin 2016). In 1915, Charles Van Damme founded the Richmond – San Rafael Ferry and Transportation Company which established a ferry terminal at Point San Quentin and ran to Point Castro (Harland and Fisher 1951).

By the end of the 1920s, the Beltline Railroad ran the length of the coast with spur lines connecting local industries with transcontinental railroad lines (Haydu and Rodman 2009). However, the use of the Beltline slowed during this time due to Prohibition overturning the previously booming business stemming from Winehaven. The Healey & Tibbetts quarry and the Central Brick Company also closed their doors during this time. Business picked up during the 1940s when the Navy acquired Winehaven, and set up a fuel depot, using the old winery housing for naval families. The Beltline ran until the late 1980s for avocational use and was discontinued in 1995 when the Navy abandoned the property at Point Molate (Bastin 2016).

3.3.4 Naval Fuel Depot (1941 – 1995)

On February 1, 1941, the Pacific Fleet established its headquarters at Pearl Harbor. At this time, Winehaven was acquired by the U.S. Navy and was modified for use as a fuel supply depot. For nearly half of a century, the Point Molate Naval Fuel Depot (NFD) served as an invaluable refueling station for the Pacific Fleet (Taggart and Haydu 2009a).

The Navy built a new pier at Point Molate, which extended a considerable distance into the Bay. The old wharf used by Winehaven last appears on the 1947 San Quentin 7.5' quadrangle, though it was fragmented and no longer connected to the shoreline. The Winehaven Hotel was used as a barracks and mess hall, while the cottages were used as housing for Navy personnel. The NFD commander occupied the spacious Winemaker's house (Taggart and Haydu 2009a).

The Navy burrowed into the hillsides to hide large storage tanks for bulk fuel and oil, which could be piped to tankers waiting at the end of the new pier. By 1944, the Navy had built 43 underground and 32 above-ground storage tanks. Between 1949 and 1960, the Navy demolished several buildings, including two large-frame industrial buildings and the schoolhouse. The Winehaven hotel and the administration building burned down in 1967 and most of the historical records were lost (Taggart and Haydu 2009a).

Following the end of World War II, activity at the NFD began to slow. At various times the government discussed closing the facility, but a string of foreign conflicts kept the Pacific Fleet and the NFD busy. The NFD was kept active during both the Korean War in the early 1950s and the Vietnam War in the mid-1960s to mid-1970s. The NFD was formally decommissioned in 1995 (Taggart and Haydu 2009a).

4.0 ARCHIVAL REVIEW

Before conducting the field survey, a records search request was submitted to the Northwest Information Center (NWIC). An emphasis was placed on identifying the extent of previously inventoried areas and the location of previously recorded archaeological sites. The general project area has been the subject of several recent record search requests, related to either the present project area or the Bay Trail alignment. Record search numbers include 15-0927, 15-0928, 15-1486; 17-0545; and most recently 19-0837. This most recent request covers the proposed project area and a quarter (0.25) mile buffer. This larger area is referred to herein as the archival study area. Significance evaluations for sites (i.e., those listed on the National Register/California Register) within or adjacent to the proposed project area were requested as part of the NWIC records search. This includes results from the California Inventory of Historical Resources database, the Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility database, and the OHP Historic Properties Directory for Contra Costa County, California. Record search results (**Appendix B**) are summarized below.

4.1 PREVIOUS INVENTORIES

Table 1 provides a summary of previous archaeological inventories that have been conducted within or that extend into the archival study area.

Table 1. Previous Inventories within the Archival Study Area.

Rpt #	Author	Year	Title	Survey Org.
S-006880	Chavez, David	1981	Cultural Resources Assessment for Replacement of Water Distribution System, Point Molate, Richmond, California	David Chavez & Associates
S-007186	Chavez, David, and John Holson	1985	Cultural/Archaeological Resources Investigation at the Naval Supply Center Fuel Department, Point Molate, Contra Costa County, California (Contract No. N62474-85-M-1179)	David Chavez & Associates
S-022310	Wiberg et al.	1999	Cultural Resources Evaluation and Impact Mitigation Program for the Western Drive Pipeline Replacement Project Near Point Molate, Contra Costa, California	Holman & Associates; Archaeological / Historical Consultants
S-035289	Kaijankoski, Phil	2008	A Geoarchaeological Investigation for CA-CCO-506H, Point Molate, Contra Costa County, California	Anthropological Studies Center, Sonoma State University
S-040390	Taggart, Mike, and Damon Haydu	2009b	Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume II: Archaeological Resources	Analytical Environmental Services
S-039952	Kaptain, Neal	2012	Results of Soil and Groundwater Investigation Borings Archaeological Monitoring for the Point Molate – IR Site 3 Project, City of Richmond, Contra Costa County, California. LSA Project #TER1202 (letter report)	LSA Associates, Inc.
S-039953	Jones, E. Timothy	2012	Archaeological Monitoring Results of Injection Borings for the Point Molate Soil and Groundwater Management Plan, Building 87 Area, Richmond, Contra Costa County. LSA Project #TER1202 (letter report)	LSA Associates, Inc.

4.2 PREVIOUSLY RECORDED RESOURCES

Table 2 provides the previously recorded sites identified within the archival study area.

Table 2. Previously Recorded Sites within the Archival Study Area.

Primary Site #	Trinomial Site #	Age	Description	Last Recorded	Eligibility Status	Project Area
P-07-000162	CA-CCO-000283	Prehistoric	Nelson No. 283; Shell mound and human remains	2008	Not Eligible; avoid subsurface disturbance	Adjacent
P-07-000277	CA-CCO-000506H	Historic	Chinese Shrimp Camp	2008	Listed; Eligible (5S2)	Inside
P-07-004593	n/a	Historic	Richmond Beltline Railroad	2008	Not listed; considered Not Eligible	Inside

4.3 OTHER HISTORIC REFERENCES CONSULTED

In addition to the NWIC records search, publicly available historic maps were also consulted including:

- 1830 Diseno del Rancho de San Pablo
- 1863 Rancho San Pablo Plat Map
- 1867 GLO Plat Map (T1N, R5W)
- 1895 USGS San Francisco 15' Quadrangle Map
- 1899 USGS San Francisco 15' Quadrangle Map
- 1915 USGS San Francisco 15' Quadrangle Map
- 1917 GLO Plat Map (T1N, R5W)
- 1947 USGS San Francisco 1:250,000 Map
- 1947 USGS San Quentin 7.5' Quadrangle Map
- 1948 USGS San Quentin 7.5' Quadrangle Map
- 1957 USGS San Francisco 1:250,000 Map
- 1959 USGS San Quentin 7.5' Quadrangle Map

Stenmark Drive, located along the west edge of the proposed project area appears to have been constructed at the turn of the 20th Century according to a comparison of the 1899 USGS San Francisco 15' quadrangle map (Stenmark Drive absent) and the 1915 USGS San Francisco 15' quadrangle map (Stenmark Drive present).

Research about the Chinese Shrimp camp suggests the camp was abandoned around 1912; however, several structures and piers/docks are depicted on the 1915 USGS San Francisco 15' quadrangle map.

5.0 CONSULTATION COMMUNICATIONS

5.1 NATIVE AMERICAN CONSULTATION

5.1.1 Consultation in Compliance with AB-52, CEQA

Project-related Native American consultation has been ongoing since 2016. During an earlier phase of consultation related to the Bay Trail project but still relevant to the current project, Ms. Sayers of the Indian Canyon Mutsun Band of the Costanoan called to inquire about the project (March 4, 2016). Details of the project were conveyed, especially those concerning known cultural resources in the vicinity, the previous identification of human remains near the proposed project area, as well as, geotechnical and environmental sampling activities required for Section 106/CEQA compliance. Ms. Sayers raised concerns about the subsurface disturbance activities and requested that a Native American monitor be present during the sampling effort. On March 8, 2016, Marlene Machabo of Indian Canyon met with the NCE archaeologist, geologist, and drilling sub-consultant. A field meeting was held before beginning the sampling effort. Emphasis was placed on culturally sensitive areas where drilling was either limited in maximum depth or was to be avoided altogether.

Concerning the presently proposed project, a letter was sent to the Native American Heritage Commission (NAHC) requesting a search of their Sacred Lands database and a list of contacts that may know of cultural or tribal resources within or immediately adjacent to the project area. A response was received on September 20, 2019, indicating that the Sacred Lands database search did not reveal the presence of Native American cultural resources within or immediately adjacent to the project area. The NAHC requested that six Native American cultural resource representatives be contacted (**Table 3**). Tribal representative inquiry letters were mailed on May 27, 2020. Receipt confirmation of the letters was received from every individual.

Table 3. Tribal Representatives Identified by the NAHC.

Representative	Title	Affiliation
Irenne Zwierlein	Chairperson	Amah Mutsun Tribal Band of Mission San Juan Bautista
Ann Marie Sayers	Chairperson	Indian Canyon Mutsun Band of Costanoan
Charlene Niimen	Chairperson	Muwekma Ohlone Indian Tribe of the SF Bay Area
Andrew Galvan	n/a	The Ohlone Indian Tribe
Katherine Erolinda Perez	Chairperson	Norht Valley Yokut Tribe
Corrina Gould	Chairperson	Confederated Villages of Lisian

NCE initiated follow-up calls on May 19, 2020, to the six tribes in the attached NAHC response.

- Ms. Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista recommended field crew training, that an archaeologist be present on-site during construction, and that she be informed of inadvertent discoveries. If prehistoric resources are encountered, she requested that a tribal monitor be present on-site as well.
- Ms. Sayers of the Indian Canyon Mutsun Band of Costanoan recommended that a Native American monitor and an archaeologist be present on-site during construction and that she be updated on the project.
- Mr. Galvan of the Ohlone Indian Tribe recommended that a Native American monitor and an archaeologist be present on-site during construction because he suspects that pre-contact cultural resources will be encountered.

Voicemails were left with the other three tribes but as of this time, NCE has not received a response.

As of June 29, 2020, no other tribal representatives have inquired about the project. Pursuant of California Public Resource Code Section 21080.3.1(b)(2) of the CEQA, the 30-day response timeframe for Native American inquiry for a project has expired.

Correspondence related to Native American consultation for purposes of AB-52 under the CEQA can be found in **Appendix C**.

5.1.2 Section 106 Consultation

Under 33 CFR Part 325 and the USACE Tribal Consultation Policy, it is stated that tribal consultation will be directed by USACE at the district or division level under the guidance of a Tribal Liaison (USACE 2012, 2013). It is, therefore, the assumed responsibility of the USACE to conduct Native American consultation for this project.

5.2 OTHER INTERESTED PARTY COORDINATION

On June 29, 2020 an email was sent to Pam Wong, Interim Executive Director of the Chinese Historical Society of America in San Francisco, to provide project background and inquire if the society had any concerns regarding project impacts to the Chinese Shrimp Camp. To date, a response has not been received.

Correspondence related to other interested party coordination can be found in **Appendix C**.

Point Molate Beach Park

Shoreline Restoration

Alternatives Study Report

February 13, 2017

Prepared for

Nichols Consulting Engineers



By

2.13.2017

A-N West, Inc.
Consulting Civil and Structural Engineers

Existing Site Conditions

The Beach Erosion Assessment for the Beach Park shows that the bluff along the north end of the Park northwards to the existing revetment has receded due to a combination of storm drain outfall failure and natural shoreline processes resulting from the action of tides, waves, wind, seepage and rain.

Further along the beach to the south, the bluff is continuing to recede to a lesser extent.

The extent of bluff recession is shown on Exhibits 1 and 2.

Phased Approach

The immediate need is to address the erosion where the bluff has moved back to the proposed trail alignment at the north end of the Park.

Phase 1 addresses approximately 400 feet of shoreline at the north end of the Park. The aim is to protect the trail and to halt the active erosion both at the north end of the Park and further down the beach to the south. Two alternatives for partial shoreline restoration have been selected from the design concepts considered. The expectation is that both alternatives will halt the erosion to the south because the shoreline is effectively being restored to that of an earlier time. There could be localized beach erosion occurring just past the end of Phase 1 construction.

Phase 2 addresses the beach to the south that is presently under active erosion. Because the extent of the effect of the Phase 1 restoration on the beach to the south cannot be determined, the Phase 2 process will take place several years after completion of Phase 1. This process will involve an appraisal of bluff changes and the taking of appropriate actions to improve the shoreline. These actions may involve different types of bluff stabilization to those of Phase 1.

Description of the Design Alternatives for Phase 1

It would be expected that restoring the beach out to nearer the 1987 bluff line at the location of greatest recession would be most effective in halting further recession along the beach to the south. However, partial restoration should be sufficient to halt further recession at a reasonable cost.

No borings have been taken at the site. The further development of the adopted Alternative will require soils borings and evaluation of soils data to confirm the suitability of the design, to set design criteria, specify materials, and to finalize dimensions.

The existing outfall drains the watershed at the back of the shore. This drain has not been maintained for many years. This deferred maintenance now needs to be addressed by repair of the remaining drainage line and reconstruction of the outfall to the extent and in a form compatible with the partial shoreline restoration.

In summary, the design Alternatives need to:

1. Repair and protect the bluff at the proposed trail to the north of the Park to ensure that the trail will not be damaged in the future
2. Prevent recession at the restoration and prevent further recession along the beach to the south.
3. Incorporate a repaired and restored storm drain outfall

Two design alternatives have been developed. Both use traditional and well tested forms of construction used for marine waterfront structures.

Alternative A - Revetment

The plan and typical section for the Alterative A is included as Exhibits 3 & 4.

This alternative uses processed rock materials.

The advantages of this revetment alternative are:

- Limited types of materials used and associated lesser complexity
- Lower cost
- Better wave energy reduction
- Negligible impact on existing bank material which may include cultural resources

Alternative B2 - Piled Wall

The plan and typical section for the Alterative B2 is included as Exhibits 5 and 6.

This alternative uses precast concrete and processed rock materials. Precast concrete is preferred over reinforced concrete because of the greater care that can be taken at a precast yard and the resulting more durable and higher quality concrete. Precast prestressed concrete rectangular piles and precast panels are connected. Pre-drilling of holes for the piles would allow better control of the positioning and alignment of the piles and assist driving through hard material.

The vertical wall reflects wave energy which requires a blanket or apron of rock protection in front to prevent scour erosion of the beach and the resulting reduction in lateral support to the piles.

The final portion of the protection to the south is like Alternative A. If the piled wall were to be extended the full length and abruptly terminated, there would be erosion caused by reflected wave energy.

The advantages of the precast concrete concept are:

- Limited or no cofferdam construction in comparison with reinforced concrete construction

The disadvantages of the precast concrete concept are:

- More types of materials, more types of equipment used and greater complexity of construction
- Higher cost than for a processed rock revetment

Two alignments were initially considered for this wall. Alignment B1 was closer to the trail. Alignment B2 is further out from the trail alignment beyond the 2002 top of bluff line. Alignment B1, being close in alignment to the present bluff would result in continuing active erosion further down the beach to the south and therefore did not meet the second need of the project. Alignment B2 also has the added advantage of limiting wave spray on the trail.

Both selected Alternatives involve only partial restoration of the shoreline over the portion of beach extending approximately 400 feet from the existing revetment. The approximate percentage restoration by volume for both Alternatives is about 50 percent of the volume of material eroded since 1987.

Both Alternatives are shown with bluff protection extended to TS Station 12+90 on Exhibit 3. Further extension to the south would limit the accessible area for park users. The attractiveness of the Beach Park is dependent on its being perceived as a natural shoreline park.

Other Concepts Considered

Sheet piling was not considered because of the potential for rock being close to the surface. If borings proved otherwise, then this might be considered further. However, the form of construction would be like that of Alternative B2 - Piled Wall.

Reinforced concrete walls were considered. A conventional cantilever type wall founded in the underlying soils would be feasible, A cofferdam along the front of the wall would be required to allow work to proceed in the dry. Precast concrete is preferred for marine concrete construction due to its greater durability.

Steel sheet piling and reinforced concrete construction are more susceptible to corrosion than precast concrete construction.

Other shoreline protection measures such as gabions and articulated mats are not suitable for saline water, due to deterioration resulting from corrosion.

Environmental Considerations

Cultural Resources

It is understood that the site may have remains of an Indian settlement. Preferably the existing beach should not be disturbed. If it is necessary to disturb the soils, such sites are subject to monitoring during construction, screening of excavated soil, and removal of remains to one of a limited number of approved custodial locations able to accept the remains. The design Alternatives under consideration will result in negligible disturbance of existing soil.

Relationship with respect to Mean High Water

The restoration alternatives show limited extension beyond the 1987 top of bluff line. It is believed that recession began before 1987. Partial restoration construction can be assumed as terminating behind the mean high water line at the start of beach recession.

Construction Feasibility

The feasibility of constructing the two alternatives with reduced environmental impact has been considered.

Alternative A - Revetment

A buttress of rockfill is constructed in front of the existing eroded bluff by means of dumping and grading out with a dozer and excavator, working out from the existing revetment. The buttress is built up full height to the existing grade. Crane mats are placed and a crane with clamshell and grapple are

used to excavate the key and place rock on the flank of the rockfill buttress. After placing the armor rock, the very top of the buttress is taken down and the rockfill material replaced with stone to the typical section shown in Exhibit 4.

Should borings show the presence of hard material at the key, then the rockfill material could be ramped down at about 15 percent slope for access by a tracked rock breaker. Following this operation, the buttress would be raised full height.

Alternative B2 - Piled Wall

A buttress of rockfill is constructed in front of the existing eroded bluff by means of end dumping and grading out with a dozer, working out from the existing revetment. The buttress is built up full height to the existing grade. Crane mats are placed and a crane used to drive the piles which could weigh up to approximately 20 ton. After excavating and placing the apron rock, precast panels would be installed and lightweight fill placed as backfill to the panels.

Should borings show the presence of hard material, then predrilling of piles would be necessary.

Should borings show the presence of hard material at the apron, then the rockfill material could be ramped down at about 15 percent slope for access by a tracked rock breaker. Following this operation, the buttress would be raised full height.

Construction Cost

Budget construction cost estimates have been made for Alternative A - Revetment and Alternative B2 - Piled Wall. These are shown in Exhibit 7.

The cost of Alternative A is about half that of Alternative B2.

A contingency of 40 percent has been used for the alternatives. Both alternatives are dependent upon certain assumptions regarding the subsurface conditions and will need to be confirmed.

In the case of Alternative A, no rock breaking for the key has been assumed. Sufficiently compact material is assumed to be present below the buttress and associated preliminary excavation is assumed as being minimal.

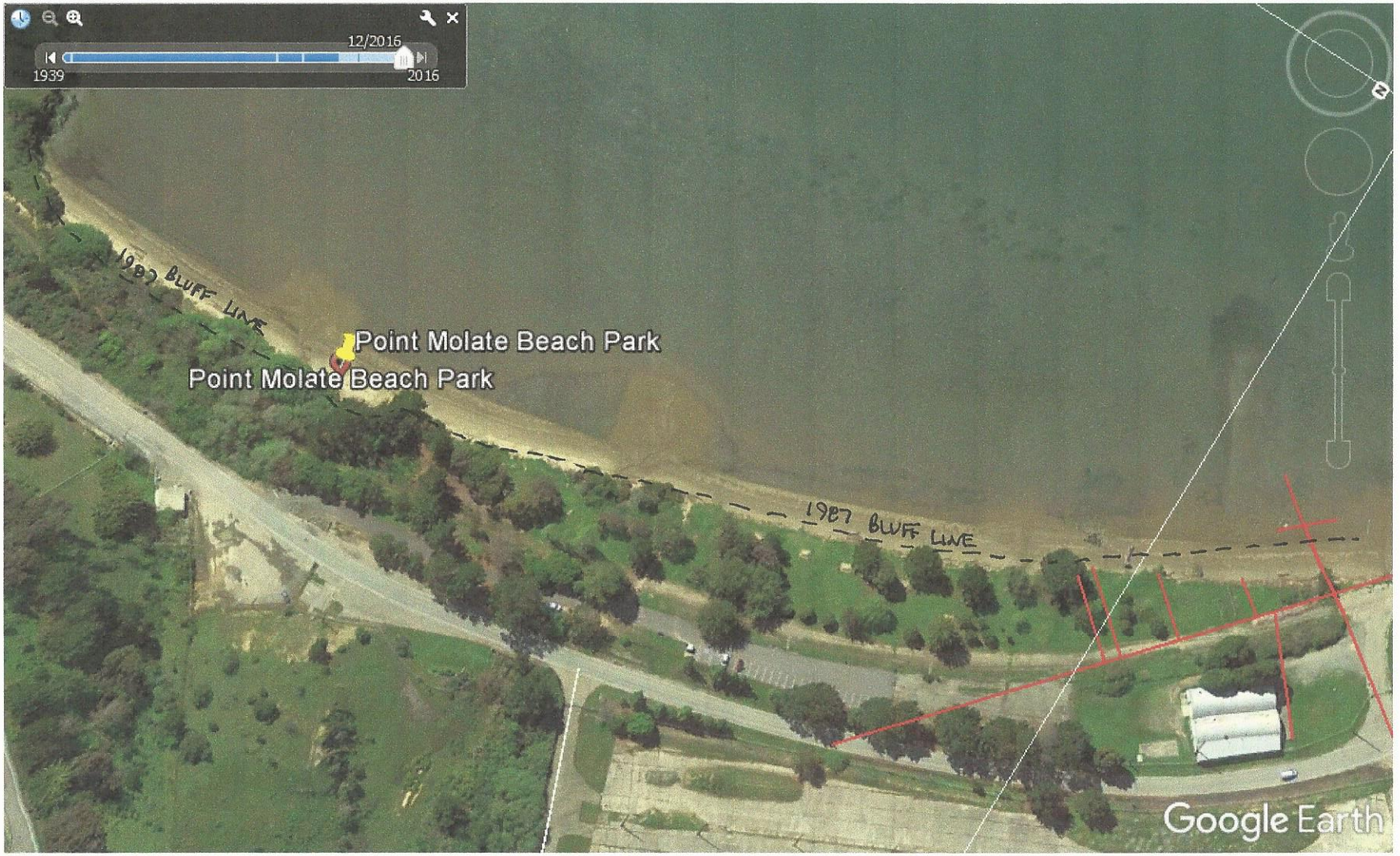
In the case of Alternative B2, no predrilling for piles nor rock breaking for the apron has been assumed. Sufficiently compact material is assumed to be present below the buttress and associated preliminary excavation is assumed as being minimal.

For this budget estimate, the rockfill has been assumed to be reasonably well graded angular rock fragments, and the rock armor assumed to match the Caltrans ½ ton rock slope protection specification.

Recommendation

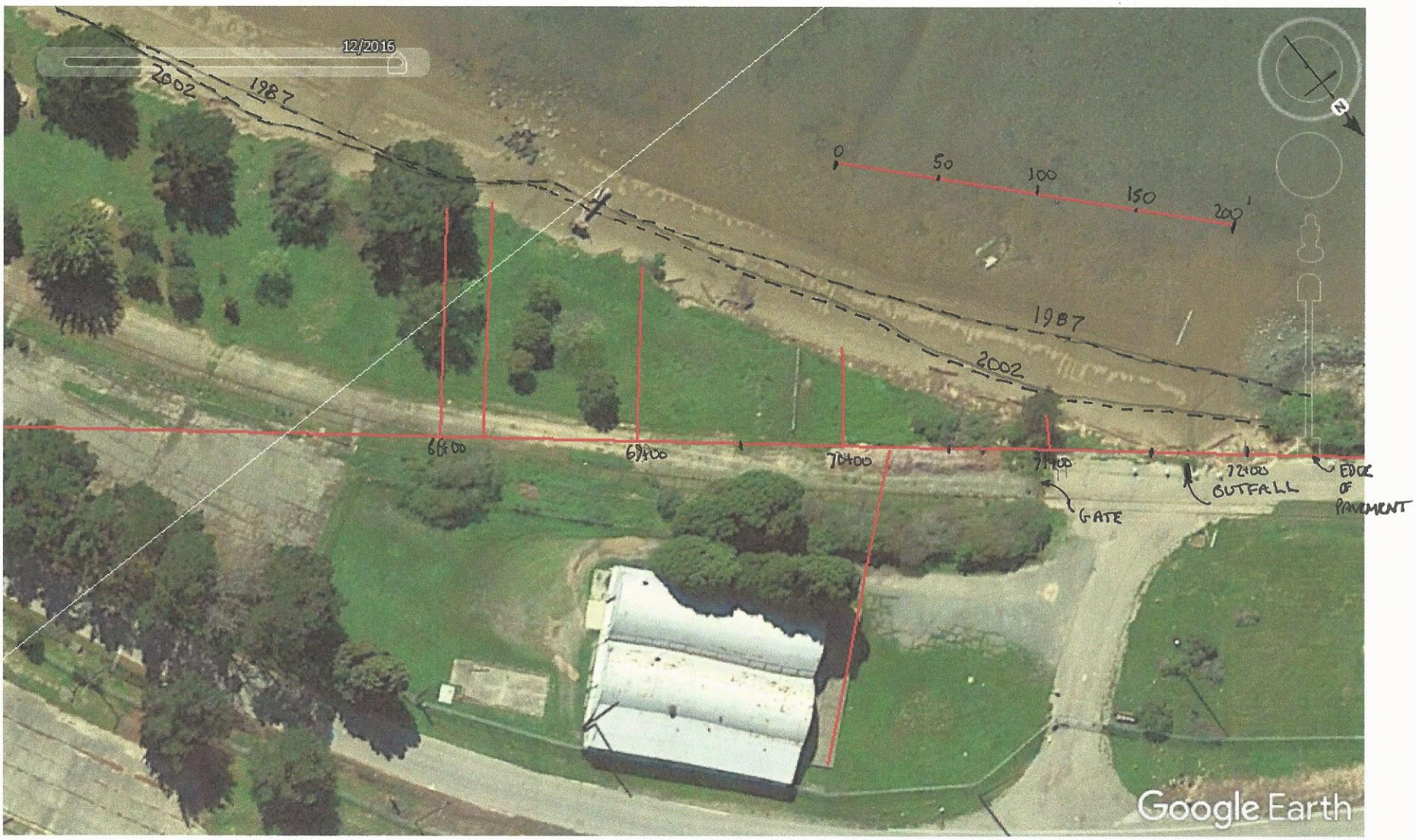
The recommended alternative is Alternative A – Revetment as shown on Exhibits 3 and 4.

EXHIBIT 1



DEC 2016

EXHIBIT 2

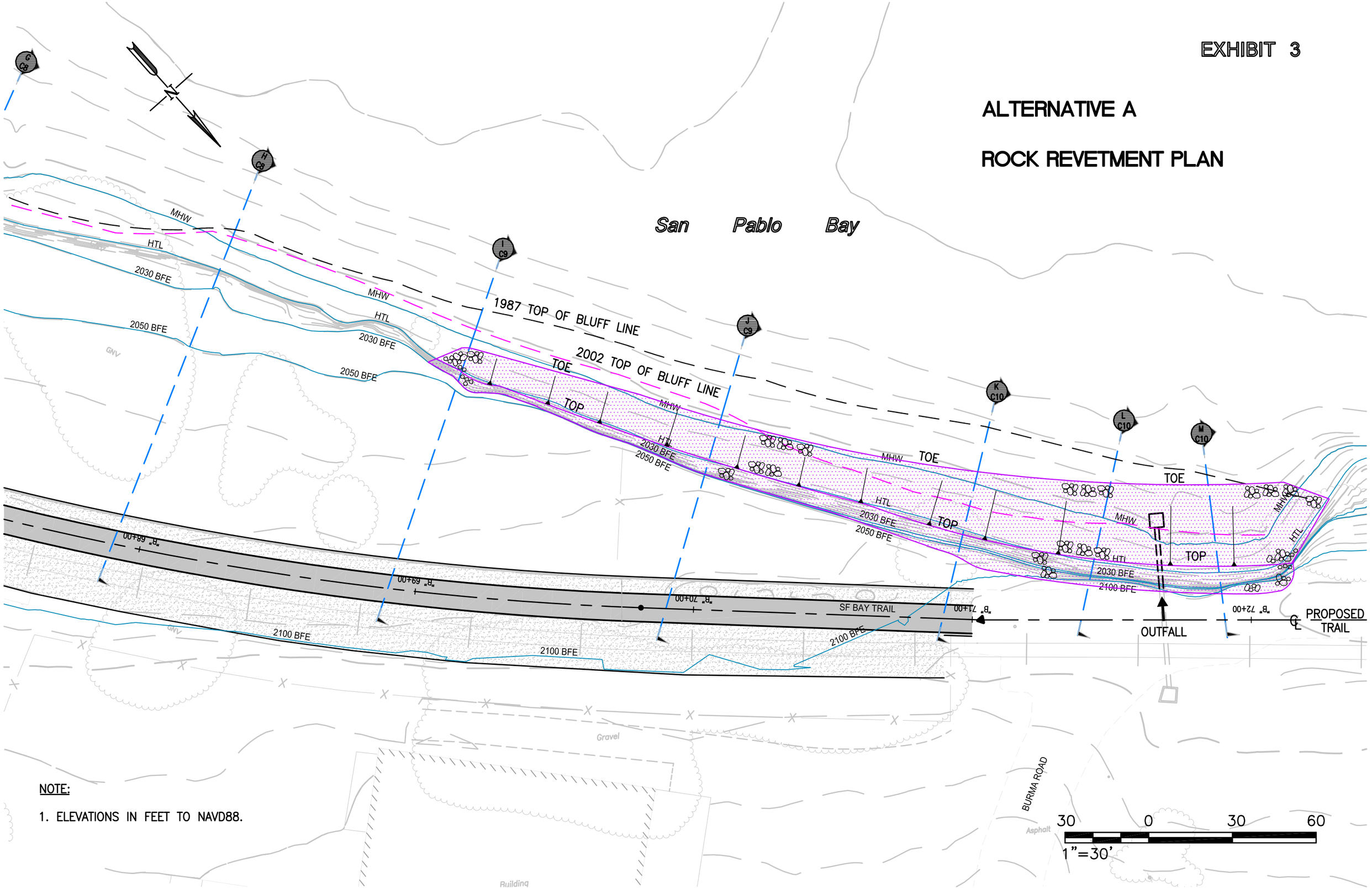


2016

EXHIBIT 3

ALTERNATIVE A

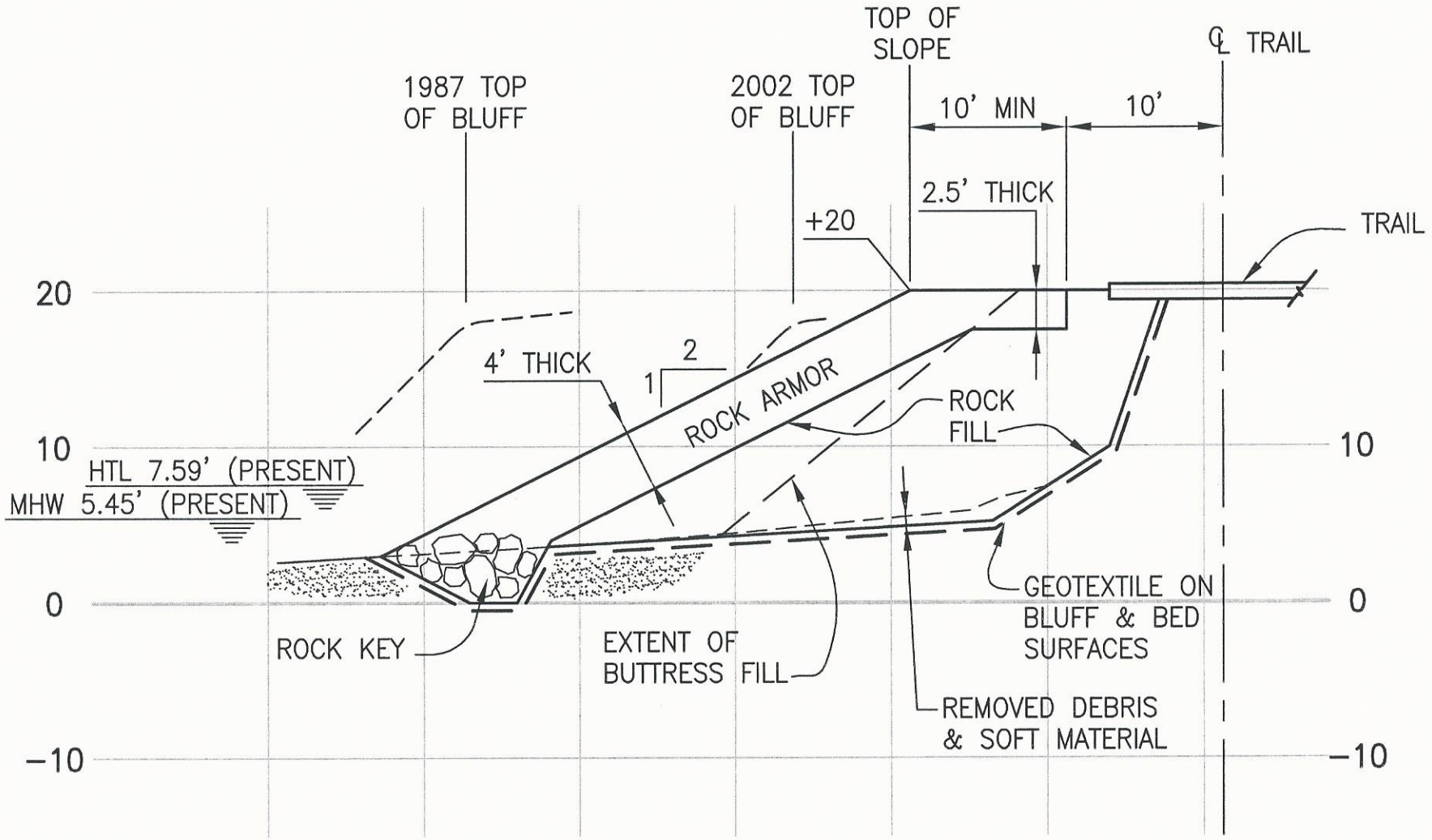
ROCK REVETMENT PLAN



NOTE:

1. ELEVATIONS IN FEET TO NAVD88.

EXHIBIT 4



10 0 10 20

1"=10'

TYPICAL SECTION – ALTERNATIVE A

1"=10'

EXHIBIT 5

ALTERNATIVE B2

PILED WALL PLAN

San Pablo Bay

1987 TOP OF BLUFF LINE

2002 TOP OF BLUFF LINE

1987 TOP OF BLUFF LINE

MHW

HTL

2030 BFE

2050 BFE

2100 BFE

TOE

TOP

PILE

PANEL

SF BAY TRAIL

OUTFALL

PROPOSED TRAIL

"B" 68+00

"B" 69+00

"B" 70+00

"B" 71+00

"B" 72+00

BURMA ROAD

Gravel

Asphalt

Building

GNV

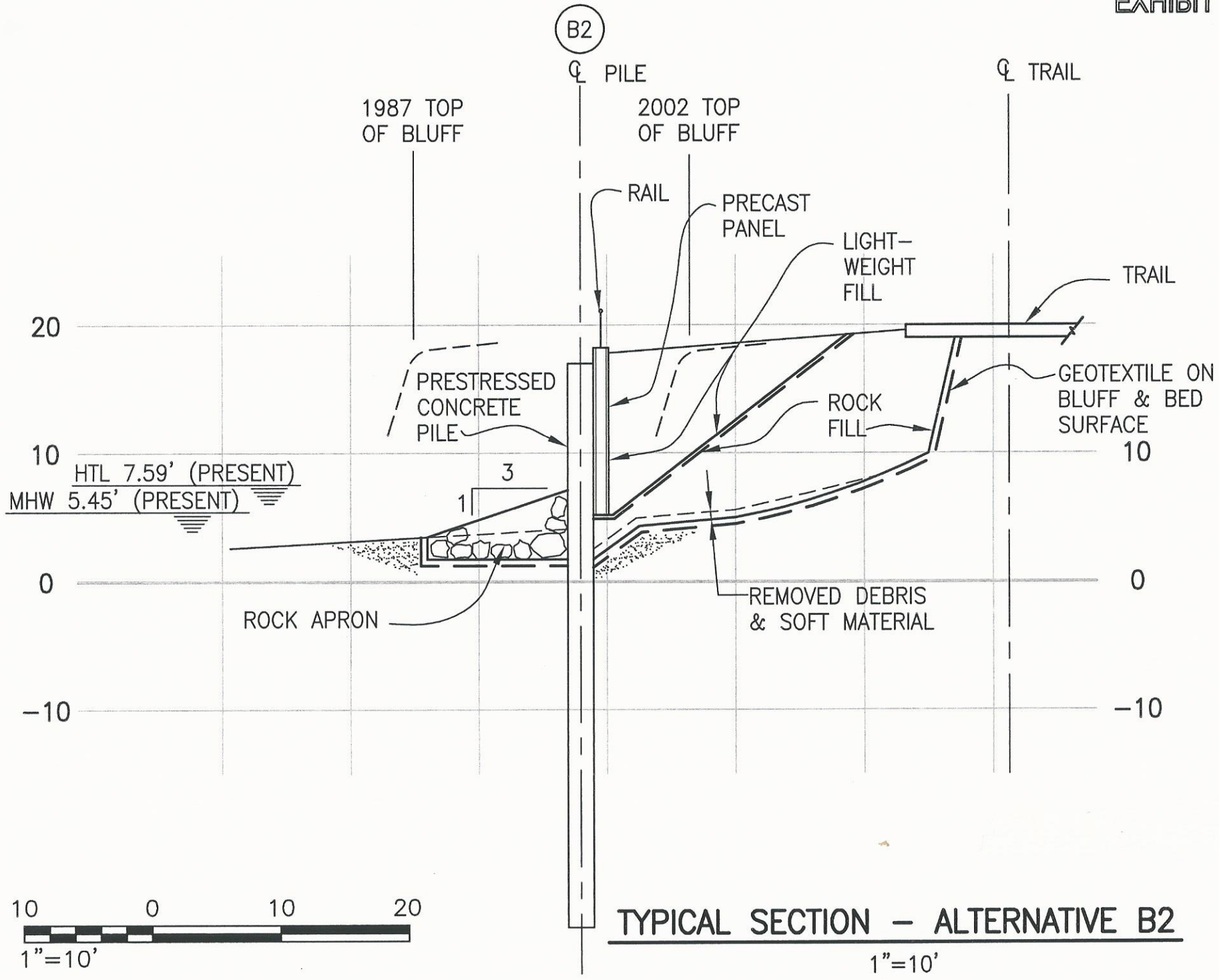
30 0 30 60

1"=30'

NOTE:

1. ELEVATIONS IN FEET TO NAVD88.

EXHIBIT 6



TYPICAL SECTION – ALTERNATIVE B2

1"=10'

Point Molate Beach Park Partial Shoreline Restoration EXHIBIT 7
Budget Cost Estimates
Excluding Cost of Outfall Restoration

ALTERATIVE A - ROCK REVETMENT

ITEM	UNIT	QTY	UNIT COST	AMOUNT
Mobilization	Lump Sum	1	30,000	30,000
Clearing and Excavation	Cubic Yard	300	20	6,000
Geotextile Fabric	Square Yard	470	10	4,700
Rockfill	Cubic Yard	830	80	66,400
Rock	Cubic Yard	1380	145	200,100
	Subtotal			307,200
	Contingency (40%)			122,880
	Estimated Total			430,080

ALTERNATIVE B2 - PILED WALL - ON ALIGNMENT B2 AWAY FROM EXISTING SHORE

ITEM	**UNIT**	**QTY**	**UNIT COST**	**AMOUNT**
Mobilization	Lump Sum	1	60,000	60,000
Clearing and Excavation	Cubic Yard	300	20	6,000
Prestressed piles, furnish	Linear Foot	1475	120	177,000
Prestressed piles, drive	Each	35	2,000	70,000
Precast Panels	Cubic Yard	80	1,200	96,000
Rockfill	Cubic Yard	770	80	61,600
Lightweight Backfill	Cubic Yard	500	90	45,000
Rock Apron	Cubic Yard	740	145	107,300
Geotextile	Square Yard	1330	10	13,300
Railing	Linear Foot	200	30	6,000
	Subtotal			642,200
	Contingency (40%)			256,880
	Estimated Total			899,080

6.0 INVENTORY METHODS

6.1 EXPECTATIONS

Archival research conducted on behalf of the current project indicates that historic and prehistoric period sites are located within or adjacent to the proposed project area. Historic period sites encountered will likely be associated with the Chinese Shrimp Camp or the Richmond Belt Rail Line. Prehistoric period sites, if encountered, will likely be associated with the prehistoric shell mound site located north of the project area.

6.2 INVENTORIED AREAS AND FIELD METHODS

The objective of the field inventory was to locate, describe, and evaluate cultural resources present within the project area. Fieldwork was performed following the State of California and federal (USACE) standards. The proposed project area was walked using closely spaced pedestrian transects. The project area is situated largely within previously disturbed areas, along a segment of the old Richmond Beltline Railroad (see **Figure 2**).

When an artifact or feature was encountered, the NCE archaeologist examined the immediate area to determine the type and extent of the cultural find.. Archaeological components, including diagnostic artifacts, artifact concentrations, and features, were described in a field notebook, photographed using a high-resolution camera, and plotted using a mapping grade Trimble Geo7x GPS receiver. At least two overview photographs were taken per site to capture the general surroundings with attention paid to capturing the horizon (if possible) to aid in future relocation. If applicable, photos of artifacts contain a scale and all photographs were GPS-plotted. Upon completion of the inventory, Trimble field data were differentially corrected using the nearest local base station and then converted to GIS shapefiles projected to NAD83 State Place California Zone III. Sites, if identified, were recorded on the California Department of Parks and Recreation (DPR) site forms and plotted on a USGS 7.5-minute map. Isolates, if identified, were mapped and photographed (if diagnostic). No artifacts were collected during the field survey. Surface visibility was good throughout the proposed project area.

A detailed photo log for the project is located in **Appendix D**.

Descriptive information was recorded to complete DPR 523 inventory forms provided in **Appendix E**.

6.3 PROJECT PERSONNEL AND DATES OF FIELD EXAMINATION

Molly Laitinen, NCE Staff Archaeologist, conducted an archaeological inventory of the proposed project area on June 8 and 9, 2020. Ms. Laitinen meets the Secretary of Interior's (SOI) Standards for Archaeology and Historic Preservation (36 CFR Part 61) and is a Registered Professional Archaeologist. She has five years of experience in historic preservation, archaeological investigation, and cultural resource evaluation as part of State, Federal, and professional standards in compliance with Section 106 of the NHPA and PRC Section 21083.2 of the CEQA.

Jeremy Hall, NCE Project Archaeologist, conducted an archaeological inventory of the proposed project area on March 7, 2016. Mr. Hall is a Registered Professional Archaeologist with over 15 years of experience in historic preservation, archaeological investigation, and cultural resource management. He is familiar with State, Federal, and professional standards in compliance with Section 106 of the NHPA and PRC Section 21083.2 of the CEQA. Mr. Hall meets qualifications as an archaeologist as defined by the Secretary of Interior's Standards for Archaeology and Historic Preservation (36 CFR Part 61).

Charles Zeier, NCE Senior Archaeologist, assisted with report preparation. Mr. Zeier is a Registered Professional Archaeologist with over 45 years of experience in historic preservation, archaeological and architectural surveys and evaluations, cultural resource management, Section 106 of the NHPA, and NEPA. Mr. Zeier meets the Secretary of Interior's Standards for Archaeology and Historic Preservation and is a Registered Professional Archaeologist.

6.4 GEOTECHNICAL/ENVIRONMENTAL SAMPLING MONITORING EFFORT

Environmental and geotechnical sampling was conducted along the proposed Bay Trail alignment in support of project design development (Bardsley and Leacox 2016a, 2016b). The sampling effort included the use of a four-inch diameter drill bit to penetrate the surface (asphalt, concrete, or compacted surface), followed by a four-inch diameter soil sampling canister that was pounded into the ground to the desired depth. The canister, containing three, six-inch-long sleeves, was then retracted and opened to retrieve the sleeves containing the soil samples. The back dirt produced from each sample was estimated at one-quarter of a five-gallon bucket. Because sensitive cultural resources were present along the alignment, an archaeological monitor was present during all drilling activities.

Ms. Sayers of the Indian Canyon Mutsun Band of the Costanoan requested that a Native American monitor be present during the sampling effort. Ms. Marlene Machabo of Indian Canyon acted as the Native American monitor. At the onset, sampling efforts were monitored both by the NCE archaeologist and Ms. Machabo. It soon became apparent that the relatively non-invasive drilling method resulted in very little back dirt. Ms. Sayers and Ms. Machabo agreed to limit the remainder of their monitoring effort to culturally sensitive areas. Sampling within culturally sensitive areas was completed on March 8, 2016.

As part of that effort, three drill holes (B-15, -16, and -17) were excavated within the present project area. No cultural material was recovered from either drill hole. Drill hole B-15 was restricted to a depth of two feet. Drill holes 16 and 17 were limited to a depth of four feet.

7.0 INVENTORY RESULTS

An intensive archaeological inventory of the proposed project APE did not result in the identification of previously unrecorded sites. Based on archival research, three previously recorded sites intersect with the proposed project area (**Figures 2 and 3**). As a result of the inventory, it was determined necessary to prepare site form updates for these resources (**Appendix F**).

7.1 P-07-000162 (CA-CCO-283) – SHELL MOUND WITH BURIALS

Site P-07-000162 represents the remains of a once extensive shell mound that includes artifacts, faunal remains, and human interments located along the Richmond shoreline between Point Molate and Castro Point. According to archival research, the core of this site, representing the majority of its archaeological deposit, is located over 300 feet to the north of the APE; however, a diffuse and redeposited tendril of the midden stretches into the APE.

Previous Investigations

Nelson (1907) first recorded the site as a prehistoric shell mound that rose more than nine feet above the surrounding surface and measured 200 by 150 feet. Driver and Treganza (1939) completed extensive excavations of the site and removed 20 burials, several with associated artifacts and ecofacts, which Beardsley (1954) later used to re-classify prehistoric central California. Site P-07-000162 is a type site for the Ellis Landing Facies of the Middle Horizon (ca. 2150 – 1000 B.P.). During a site visit in 1947, Beardsley noted the mound was shorter than previously recorded and spread more than 500 feet along the shoreline.

Work conducted by Chavez and Holson (1985) indicated that most of the midden had been removed and that remaining deposits had been mixed with imported fill. At that time, the mound had been graded and was roughly 800 feet in length between the base of Western Drive and the bluff face. The authors reported, "Removal of most of the archaeological midden appears to have taken place, with the remaining deposits having been moved around and mixed with imported fill (Chavez and Holson 1985:55)." The authors mapped the limited amount of shell and midden-like soils extending south as a linear tendril slightly overlapping the northern margin of the Chinese Shrimp Camp (P-07-000277).

In 1999, cultural constituents associated with P-07-000162 were encountered in subsurface contexts when fuel pipelines were constructed under Stenmark Drive (Busch 2007; Dore and Glennon 2000). Excavation results suggested the midden was located at least one meter below the modern roadbed and possibly as deep as three meters.

More recent investigations of the site (Taggart and Haydu 2009b) further indicate variable stratigraphic sequences, suggesting major episodes of disturbance, modification, and re-deposition of the archaeological matrix over time. Taggart and Haydu (2009b) divided the site into three areas: the core of the site, the northern periphery, and the southern periphery. Subsurface investigations in the core identified several prehistoric artifacts, no features, and several human bone fragments (reburied on-site). Midden soils in the core are contained in a layer some 20 to 50 cm thick. Based on the information provided by Dore and Glennon (2000), Taggart and Haydu (2009b) surmised that the midden is located at least one meter below the modern Burma roadbed, and perhaps as deep as three meters. This remnant of intact midden is the basal layer of the once-present, now truncated mound, and thus represents a very small portion of the original deposit. The midden soils contain marine shell, faunal remains, small amounts of fire-affected rock, and limited artifactual remains.

Subsurface investigations conducted in the southern periphery, on the north side of Burma Road, included five auger holes, two shovel probes, and two trenches. These excavations are located adjacent to the present APE. The subsurface investigations revealed a highly disturbed matrix that yielded few fragmentary artifacts. The redeposited materials reflect considerable vertical mixing. In some areas, midden soil layers are separated by layers containing modern debris. In other areas, prehistoric and recent material was found mixed in the same layers. Taggart and Haydu (2009b) suggested the southern tendril mapped by Chavez and Holson (1985) was a result of grading associated with the construction of the Richmond Beltline Railroad (P-07-004593) and excluded it from their depiction of the site boundary. Taggart and Haydu (2009b) only retained what they called the core site area which spans an area approximately 120 meters southeast-northwest by 55 meters southwest-northeast. This core area is located over 300 feet to the north of the APE.

In 2016, four proposed geotechnical drilling locations associated with the proposed Bay Trail were located within the core site area. The drilling was monitored by archaeological and tribal monitors and resulted in no findings (Bardsley and Leacox 2016a, 2016b).

Results of the Present Investigation

As previously noted by Chavez and Holson (1985) and Taggart and Haydu (2009b), site P-07-000162 has been drastically altered by historic and modern land use. Subsurface testing within and around the site indicates that cultural material from the original shell mound has been graded into a thin lens that extends southeast and northwest from the location of primary deposition. Evidence of this disturbance was confirmed most recently by Taggart and Haydu (2009b) who identified the vast majority of artifacts and the densest accumulation of marine shells in a smaller core area over 300 feet north of the APE. Taggart and Hydu (2009b) describe a thin distal tendril or arm, appearing to contain only shell fragments, identified south of the core area along the railroad tracks. After the leveling of the site area, presumably during the Navy Fuel Depot occupation of the area, additional significant disturbance occurred in conjunction with the construction of Western Drive, Stenmark Drive, Garden Road, and the Beltline Railroad. Other disturbances noted in the area include a north-south trending power line and a fuel pipeline.

Evidence of the distal arm of the shell midden created by past grading was observed within the bluff face stratigraphy during the present pedestrian survey. The shell lens is visible at the north end of the present APE, extending 11 meters between the existing rock revetment and where it terminates at the deteriorating culvert proposed to be replaced in-kind for this project. The lens is sandwiched between two modern aggregate fill layers (Personal Communication, Ryan Shafer, P.E., G.E., NCE, June 2020). This indicates that the archaeological material was bladed from the core site area and used as fill.

Five distinctive soil horizons were observed at the north end of the APE (**Figure 4**).

- **Strata VI**: The base soil horizon is a light brown, sandy clay with gravel colluvium derived from siltstone or claystone.
- **Strata V**: Above the base horizon is an old soil horizon that varied in thickness between 45 and 60 cm thick. The old soil horizon is a dark, organic, sandy clay layer diffusely staining the base horizon below. The old soil horizon appears similar to the tidal marsh horizon described by Taggart and Haydu (2009b). No cultural resources were identified within the two natural soil horizons.
- **Strata IV**: Above the old soil horizon is a light brown, clayey sand with gravel aggregate layer.
- **Strata III**: Above the aggregate layer is a shell lens measuring about 15-20 cm thick. The shell lens is 80% shell fragments measuring less than 1 cm to 3 cm in size. One clear glass fragment of an unknown origin was identified within the lens. The shell lens

was about 64 cm below the bluff surface, matching similar shell depth findings by Dore and Glennon (2000) and Taggart and Haydu (2009b).
- **Strata II and I**: Above the shell horizon is a thick road base/aggregate layer (II) topped with asphalt (I).

Wave-related undercutting of the bluff face has resulted in the loss cultural material. Based on a comparison of detailed topographic maps prepared in March of 2016 and December of 2019, the bluff face at the north end of the proposed project area has receded approximately 4.8 feet.

7.2 P-07-000277 (CA-CCO-506H) – CHINESE SHRIMP CAMP

Site P-07-000277 represents the remains of a Chinese shrimp camp occupied by Chinese-Americans from the mid to late 1860s to approximately 1912 (although it was still depicted on the 1915 USGS San Francisco 15' quadrangle map). At the peak of its occupation, the camp contained 30 shacks, five wharves, and 10 boats.

Previous Investigations

Site P-07-000277 has been recorded four times, first by Farren (1975) of the Contra Costa Planning Department, then by Chavez and Holson (1985) of Chavez & Associates, followed by Widell (1996) of the OHP, and most recently by Taggart and Haydu (2009b) of AES.

The site was first excavated and formally recorded by Chavez and Holson (1985) who identified several habitation-related artifacts, but none were recovered from recognizable features. Two jetty features were also identified during the 1985 effort. More extensive excavation was conducted by Taggart and Haydu (2009b). Their work produced hundreds of intact artifacts and 10 features (six associated with the Shrimp Camp's period of significance), as well as a more in-depth characterization of the horizontal and vertical distribution of the cultural deposit. Taggart and Haydu's (2009b) excavations resulted in a refined site boundary indicating that no substantial cultural material was present east of the Richmond Beltline Railroad, an area previously included in the site boundary by Chavez and Holson (1985). Details regarding excavation methods (trenches, shovel proves, excavation units) and identified cultural constituents can be found in Taggart and Haydu (2009:113-172). Of note, Taggart and Haydu were not able to test portions of the site located on what was then Navy property, which is now the proposed project area. They did, however, note Shrimp Camp deposits were present in the bluff face in the present project area.

According to Taggart and Haydu (2009b:168), two to 6.5 feet of modern fill cap the site with the more deeply buried portion located at the north end of the site. The source of the modern fill is suggested to be from mechanical earth-moving activities, but details about what those activities may have been are unknown. Speculation points toward the Navy's redevelopment of the area into a fueling station during World War II.

In 2016, four proposed geotechnical drilling locations associated with the proposed Bay Trail were located within the site area. The southern two sampling locations were restricted to a maximum depth of two feet and the northern two were restricted to a maximum depth of four feet. The drilling was monitored by archaeological and tribal monitors and resulted in no findings (Bardsley and Leacox 2016a, 2016b).

Results of the Present Investigation

The Shrimp Camp was revisited as a part of the present inventory effort. Emphasis was placed on documenting evidence of the Shrimp Camp in the bluff face. At the north end of the project area, the bluff is about 14 feet tall and gradually declines to 6.5 feet tall at the south end of the project area. Natural soil horizons dip to the south, gradually disappearing below the beach

surface. Examination of the bluff face indicates that the southern two-thirds of the project area contained four distinct soil horizons. From top to bottom, they include (**Figures 5 and 6)**:

- **Strata I (Modern Fill Horizon)**: The Modern Fill Horizon contains thin layers of different compacted soils appearing to have been deposited around the same time. Culverts extending out of the bluff face were not placed in excavated trenches as there is no evidence of scalloping. Instead, they appear to have been placed at the same time as the grade was being raised (presumably during the Navy Fuel Depot era). There is no evidence that bedding material was placed, and the modern fill appears uninterrupted around the culverts (Personal Communication, Ryan Shafer, P.E., G.E., NCE, June 2020). Taggart and Haydu (2009b) described the Modern Fill Horizon as thickest at the north end of their project area, tapering off towards the south, and varying in depth from 6.4 to 1.5 feet (Taggart and Haydu 2009b:169, Table 41). In contrast, results of the present field effort indicate that the Modern Fill Horizon extends 4.2 to 1.8 feet below the bluff surface. These differences can be accounted for by taking into consideration the extensive erosion of the bluff face that has occurred since the Taggart and Haydu study occurred, and the location of their excavation trenches compared to the present APE.
    - A flat rusted metal bar was seen sticking out of the Modern Fill Horizon near the top of the bluff face. About six inches wide, the length of the bar is unknown as only about 12 inches of it were exposed. No other artifacts were noted in observed exposures of the Modern Fill Horizon. The Modern Fill Horizon may contain other historic-period archaeological materials. If such materials are encountered, they will be in a highly disturbed, secondary context and will hold little informational value.
- **Strata II (Shrimp Camp Horizon)**: Evidence of the Shrimp Camp Horizon was observed along the bluff face within the southeastern two-thirds of the proposed project's APE. The horizon matches the description of Feature 4 presented by Taggart and Haydu (2009b). The Shrimp Camp Horizon appears to extend north of the revised site boundary defined by Taggart and Haydu (2009b). However, the northern extension appears poorly preserved and it grades into the Modern Fill Horizon. The Shrimp Camp Horizon consists of generally homogenous, reddish-brown sandy loam. It contains charcoal fragments and what appears to be a thin ash lens with finer charcoal flecks. The horizon varied in thickness between one foot and 2.5feet.
    - Eight bricks of similar material were identified within the APE during the present survey. Four broken bricks were observed on the beach at low tide. They are four inches long by four inches wide by two and a half inches deep. Four bricks (six inches long by four inches wide by 2.5 inches deep) were identified within the bluff face, at the top of the Shrimp Camp Horizon, beneath the Modern Fill Horizon. The bricks in the bluff face and those found on the beach are associated with the Shrimp Camp.
- **Strata III (Alluvial Horizon)**: This soil horizon varied from 1.5 to two feet in thickness. The soil is a dark, organic, sandy clay layer diffusely staining the base horizon below. The soil horizon appears similar to the grey soil described by Taggart and Haydu (2009b:157-165) and may have developed during prehistoric times; however, no cultural resources were identified within the horizon to date its origin.
- **Strata IV (Colluvial Horizon)**: This soil is a light brown, sandy clay with gravel colluvium derived from siltstone or claystone. Some 65% of the matrix consists of angular and sub-rounded rocks up to 6 cm long. No cultural resources were identified within this horizon.

Site Interpretation

The general area around P-07-000277 has undergone substantial changes during the historic and modern eras. Beginning in the 1940s, large amounts of fill were imported, some of which consisted of debris buried by the Navy. This material was placed atop the Shrimp Camp Horizon. The Beltline Railroad, buildings, parking lots, and roads were constructed atop the imported fill material. In 2001, approximately 200 tons (approximately 118 cubic yards) of pesticide-contaminated soils were excavated and removed from areas adjacent to Building 87 (the Quonset building located adjacent to the north of the APE), and four groundwater monitoring wells were installed. These disturbances make it highly unlikely that intact archaeological material associated with the Shrimp Camp will be located east of Western Drive (Taggart and Haydu 2009b:165-166, 169). More recently, wave-related undercutting of the bluff face has resulted in the loss of cultural material. Based on a comparison of detailed topographic maps prepared in March of 2016 and December of 2019, the bluff face at the south end of the proposed project area has receded approximately 2.9 feet, and 4.8 feet at the north end, as noted previously.

Taggart and Haydu (2009b:166) described the intact natural deposit beneath the Shrimp Camp Horizon as a transitional soil ranging from a tidal marsh soil at the northeast end of the site to a well-developed alluvial soil in the central and southern portions. They inferred that the site was located within a tidal inlet depicted on the 1895 and 1899 USGS San Francisco 15' quadrangle maps. This horizon was then scalloped during the occupation of the shrimp camp (shown on the 1915 USGS San Francisco 15' quadrangle map) potentially to remove the wet, low-lying tidal area. It can be inferred that the Shrimp Camp Horizon more closely matched the original underlying topography, whereas the Modern Fill Horizon reflects extensive leveling of the area, raising the bluff's surface elevation. The northernmost trench excavated by Taggart and Haydu (2009b), where Feature 4 was identified, was located south of the present APE, close to the small inlet depicted on historic maps. Stratigraphically, areas closer to the tidal inlet near the middle of the site required more fill, resulting in a thicker Modern Fill Horizon. As one moves to the north or south, away from the inlet depression, less fill material was required.

7.3 P-07-004593 – Richmond Beltline Railroad

In 1903, the Richmond Beltline Railroad (Beltline) was established along Richmond's western waterfront and around Point San Pablo. Within a few short years, the northern portion of the western waterfront was home to many commercial enterprises, including the Standard Oil Long Wharf, a whale oil processing plant, an oil can factory (owned by Standard Oil) at Point Orient, a brick factory (Central Brick, just beyond Point San Pablo), two rock quarries (Blake Bros. and Healey & Tibbetts), and a large winery complete with worker housing, a hotel, and a school (Winehaven). Also, a shipping terminal at Point San Pablo was built to handle cargo produced at these enterprises (Bastin 2016). In 1915, Charles Van Damme founded the Richmond – San Rafael Ferry and Transportation Company which established a ferry terminal at Point San Quentin (Harland and Fisher 1951).

By the end of the 1920s, the Beltline ran the length of the coast with spur lines connecting local industries with transcontinental railroad lines (Haydu and Rodman 2009). However, the use of the Beltline slowed during this time due to Prohibition overturning the previously booming business stemming from Winehaven. The Healey & Tibbetts quarry and the Central Brick Company also closed their doors during this time. Business picked up during the 1940s when the Navy acquired Winehaven and set up a fuel depot. The Beltline ran until the late 1980s for avocational use and was discontinued in 1995 when the Navy abandoned the property at Point Molate (Bastin 2016).

The Richmond Beltline Railroad was first recorded by Haydu and Rodman (2009) who documented that segment extending from Point Orient south through Winehaven to the

northern extent of the Point Moalte Beach Park. Hall (2016) recorded a segment of the same railroad extending south from the southern extent of the previously recorded segment, through Point Molate Beach Park, to Castro Point. It was determined that between 2009 and 2016, a portion of the grade was likely destroyed due to construction of Burma Road and was subsequently removed from site maps. No remnants of the grade were identified south of Castro Point. It is unknown if the Beltline extended south of Castro Point, or if the grade once present in that area was removed during the construction of area roadways.

A segment of the Beltline was relocated and recorded as part of the present inventory. An approximately 761-foot segment of the Beltline was re-visited including about 105 feet located within the project area, plus approximately 300 feet to the northwest and the southeast past the APE boundary. This segment contains the only portion of the grade still containing rails and ties. However, no ties were visible within the APE as they are covered with asphalt. Only the tops of the rails are visible.

Taggart and Haydu (2009b:46) describe the railroad segment within the vicinity of the proposed project area as,

> a single track, standard gauge rail line with medium crushed granite ballast. The rails are 2.5 inches wide and 5 inches high. The wooden ties are 8 inches wide, 6 inches tall, 8 feet in length, and soaked in creosote. The ties are set 16 inches apart on a ballast of medium crushed base rock. The ties are sometimes anchored to the ballast by round nails, on which the number "58" is stamped. The rails are anchored to the ties by metal plates which have the text "UNITED 110-130" imprinted on them.

The present condition of the railroad is consistent with previous recordings; the alignment has not changed. To the northwest of the APE, within a fenced area, approximately 360 feet of the railroad appears to have been completely removed. Southeast of the fence line, the railroad was intact for about 120 feet and then terminated. To the southeast of the APE, the railroad was intact and appeared to continue down the length of the Point Molate Beach Park parking lot before terminating. Where railroad ties are visible, they are in good condition if somewhat deteriorated. They are eight feet long by eight inches wide and the rails are spaced about five feet apart. No maker's marks or dates were visible on the ties or spikes. A parallel grade is located to the west of the mainline, extending through the Beach Park. Only ballast is visible along this portion of the line, which is used for access by the City of Richmond.

8.0 ELIGIBILITY RECOMMENDATIONS

Cultural resources are defined as buildings, sites, districts, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Numerous laws, regulations, and statutes at the Federal, State, and local level seek to protect and target the management of cultural resources.

The Point Molate Beach Restoration Project requires compliance with the CEQA and Section 106 of the NHPA. As part of that process, one critical component regarding the evaluation of cultural resources within or adjacent to the APE that may be affected by project-related activities, is the development of recommendations as to whether or not those resources are eligible for listing on the California Register and/or the National Register.

8.1 NATIONAL HISTORIC PRESERVATION ACT

Because the proposed project requires Federal involvement it must comply with Section 106 of the NHPA of 1966, as amended, and its implementing regulations found at 36 CFR Part 800. Section 106 requires federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting. The identified resource must be evaluated for significance using criteria established in 36 CFR 60.4, as described in the National Register of Historic Places section below.

If a resource is determined to be significant, that is, it is a *historic property*, Section 106 of the NHPA requires that effects of the proposed project on the resource be determined. A historic property is defined as:

> *…any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property (NHPA Sec. 301[5]).*

Section 106 of the NHPA prescribes specific criteria (outlined in 36 CFR 800.5) for determining whether a project would adversely affect a historic property. An impact is considered significant when a historic property is subjected to any of the following:

- physical destruction of or damage to all or part of the property,
- alteration of a property,
- removal of the property from its historic location,
- change of the character of the property's use or physical features within the property's setting that contribute to its historic significance,
- introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features,
- neglect of a property that causes its deterioration, and,
- transfer, lease, or sale of the property.

If the historic property will be adversely affected by the implementation of the project, then prudent and feasible measures to avoid or reduce adverse impacts must be taken. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures before project implementation.

8.1.1 National Register of Historic Places

The eligibility of a resource for listing in the National Register of Historic Places (National Register) is determined by evaluating the resource using criteria defined in 36 CFR 60.4 as

follows: *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and*

- **A (Event):** are associated with events that have made a significant contribution to the broad patterns of our history;
- **B (Person):** is associated with the lives of persons significant in our past;
- **C (Design/Construction):** embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- **D (Information Potential):** have yielded, or maybe likely to yield, information important to prehistory or history.

To be considered eligible under Criterion A, a property must be associated with events that are important within a defined context. Several distinct cultural periods are described in the cultural overview above. A prehistoric site that exemplifies an adaptive trend associated with a distinctive cultural period might be considered eligible under Criterion A. An ethnographic period site that is an outstanding example of changing lifeways and Native adaptation might also be considered as significant. Likewise, an historic period site that is considered eligible should represent an important contribution to an event within the associated context.

Criterion B applies to properties associated with individuals whose specific contributions to history can be identified and documented. As such, Criterion B usually applies to ethnohistoric and historic period sites because prehistoric sites generally lack associations with known individuals.

Criterion C applies to properties that embody distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable entity within a larger "district". Prehistoric site types that meet Criterion C are generally distinctive site types that reflect elements of community design or contribute to larger districts as key elements within a regional land use context.

Criterion D pertains to the information potential a property may contribute toward our understanding of prehistory or history. Research topics or themes presented in a historic context are the mechanisms by which properties are evaluated against this Criterion D.

8.2 California Environmental Quality Act

The CEQA requires that, for projects financed by or requiring the discretionary approval of public agencies in California, the effects of the project on Historical Resources must be considered (PRC Section 21083.2). *Historical Resources* are defined for CEQA purposes as "buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance" (PRC Section 50201).

Under the CEQA *Guidelines*, an effect is considered significant if a project will result in a substantial adverse change to the resource (PRC Section 21084.1). Actions that would cause a substantial adverse change to a historical resource include demolition, replacement, substantial alteration, and relocation. Before the significance of impacts can be determined and mitigation measures developed, the significance of cultural resources must be determined. The 2000 CEQA *Guidelines* (Section 15064.5) define four cases in which a property may qualify as a significant historical resource for CEQA review. The explanation of these criteria follows the National Register criteria (A, B, C, and D) defined above, but pertain to resources of local or state levels of significance rather than National levels of significance.

A. The resource is listed in or determined eligible for the listing in the California Register. Section 5024.1 defines eligibility requirements and states that a resource may be eligible for inclusion in the California Register if it:
   - **1 (Event):** Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
   - **2 (Person):** Is associated with the lives of persons important in our past;
   - **3 (Design/Construction):** Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual or possesses high artistic values; or
   - **4 (Information Potential):** Has yielded, or maybe likely to yield, information important in prehistory or history.

Properties that are listed in or eligible for listing in the National Register are automatically considered eligible for listing in the California Register, and thus are significant historical resources for CEQA (Public Resources Code section 5024.1[d][1]).

B. The resource is included in a local register of historic resources, as defined in section 5020.1(k) of the Public Resources Code, or is identified as significant in a historical resources survey that meets the requirements of section 5024.1(g) of the Public Resources Code (unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant).

C. The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record.

D. The lead agency determines that the resource may be a historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

A substantial adverse change to a historical resource is considered a significant effect on the environment under CEQA. When it is determined that a project may cause a substantial adverse change, alternative plans, or measures to mitigate impacts to the resource must be considered.

8.3 Integrity Criteria

Properties must not only demonstrate its significance under the National Register or California Register criteria, but it must also retain sufficient integrity to convey such significance. The evaluation of integrity must always be grounded in an understanding of a resource's physical features and how they relate to its significance. Aspects of integrity include the following:

1. **Location:** The place where the historic property was constructed or the place where the historic event occurred.
2. **Design:** The combination of elements that create the form, plan, space, structure, and style of a property.
3. **Setting:** The physical environment of a historic property.
4. **Materials:** The physical elements that were combined or deposited during a particular period and in a particular pattern or configuration to form a historic property.
5. **Workmanship:** The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. **Feeling:** A property's expression of the aesthetic or historic sense of a particular period.
7. **Association:** The direct link between an important historic event or person and a historic property.

8.4 LINEAR RESOURCE EVALUATION CRITERIA

Many historic period resources represent fragments of larger linear resources such as roads and utility lines. There are two issues here. The first is whether the site as a whole is significant under any state criteria. The second issue only relates to sites that are either evaluated as significant or are managed as if they are significant. This issue is whether or not segments recorded within the study area contribute to the eligibility of the larger site. Guidelines have been devised to evaluate individual segments of linear features. Mikesell (1990), Owen (1991), and Supernowicz (1991), Lindström and Hall (1994) combined historic context with property type requirements to create a framework for the comparative evaluation of "discrete segments of a linear feature." This same framework was subsequently included in a contextual history and evaluation methodology established by the USFS (U.S. Forest Service 1999). Those evaluation guidelines rely on the review of four specific criteria. Each criterion is described below.

- **Length:** Linear features were intended to connect distant points. The ability to understand the connective role of an individual segment is reflected, in part, by that segment's length. The segment should be of sufficient length to convey the functionality of the linear feature at large, and the segment's relationship to that larger feature. The more the segment conveys that sense of function and relation, the more likely it is to contribute to the overall feature's integrity of association with events or patterns important in history.
- **Distinctive Engineering Features and Associated Properties:** Examples of engineering features include bridges, rock retaining walls, and drainage structures. The presence of such features increases the richness of the resource and contributes to the overall feature's significance as a type or method of construction. Examples of associated properties include way stations, fences, and construction-related features or sites. The presence of associated properties also enriches the resource and contributes to their integrity of feeling.
- **Structural Integrity:** The ability to understand the original character and purpose of the segment is reflected, in part, by the feature's integrity of design, material, and workmanship. This criterion assesses the extent to which the segment retains those types of integrity. Subsequent natural and man-induced factors such as erosion and abandonment may conspire to diminish these types of structural integrity.
- **Setting:** The final criterion attempts to measure the integrity of the immediate context in which the segment exists. The segment should retain sufficient integrity of setting to convey a sense of place specific to the time when the segment and linear feature at large were in use. The integrity of the setting is reduced by the presence of non-related sites or linear features or alterations in the general landscape.

These criteria were used to assign segments of linear features into one of four integrity levels:

I. Primary feature (grade, flume, ditch, earthwork, etc.) is ***substantially intact***, as are the contour and bed; no major impacts, recent alterations, or significant erosion/deterioration.
II. ***Lightly impacted*** but the morphology is intact, with less than 25% altered or significantly eroded; at least half of structural elements, earthworks, or other elements are present.
III. ***Morphology is compromised***, but route/contour still discernable; 25-50% altered, impacted, or significantly eroded; structural or other elements are missing or rare.
IV. ***Route/segment difficult to discern***; over 50% altered, impacted, or significantly eroded; no remaining structural elements, earthworks, or other

elements. The grade may be unrecognizable as a historic feature, but convincing archival or contextual evidence exists.

In general, levels I or II have sufficient integrity to warrant considering the segment contributing to the significance of a linear site. Levels III and IV are generally judged to be lacking in such integrity and are not judged as contributing. Exceptions to this general rule are possible due to the possible presence of rare and significant elements within segments that have generally poor preservation. Even if a segment is not part of a significant site, characterization using these integrity levels provides a comparative framework for descriptive purposes.

8.5 CURRENT SITE EVALUATIONS

Archival research and inventory results indicate that five archaeological resources and one architectural resource are present, in part or whole, within the APE. **Table 4** lists the current eligibility status for sites that intersect or are adjacent to the proposed project area.

Table 4. Summary of Site Eligibility Status.

Primary Site #	Trinomial Site #	Age	Status	Description	Eligibility Status
P-07-000162	CA-CCO-000283	Prehistoric	Previously Recorded; site form not updated	Shell mound	Not Listed; recommended as not eligible, manage as Eligible
P-07-000277	CA-CCO-000506H	Historic	Previously recorded; site form updated	Chinese Shrimp Camp	Listed; Eligible
P-07-004593	n/a	Historic	Previously recorded; new segment added in site form update	Richmond Beltline Railroad	Not listed; recommended Not Eligible

8.5.1 P-07-000162 (CA-CCO-000283), Prehistoric Shell Mound, Manage as Eligible

Driver and Treganza (1939) excavated the site and removed 20 burials, several with associated artifacts and ecofacts. Subsequent work conducted by Chavez and Holson (1985) indicated that most of the midden had been removed and that remaining deposits were mixed with imported fill. Removal and/or mixing of the deposits most likely occurred in conjunction with the construction of the Richmond Beltline Railroad and/or Burma Road. Recent excavations by Taggart and Haydu (2009b) identified prehistoric artifacts and several human bone fragments (reburied on-site), all in mixed deposits. Based on their excavation results, Taggart and Haydu (2009b) recommended that while the site yielded important information in the past, it has since been degraded to the point that it no longer retains integrity and it no longer contains data necessary for addressing important research issues. As such, Taggart and Haydu recommended that site P-07-000162 is Not Eligible for listing on the National Register/California Register. However, due to the possible presence of human remains, the USACE recommended that the site be managed as if it were Eligible. NCE agrees with this recommendation.

8.5.2 P-07-000277 (CA-CCO-000506H), Chinese Shrimp Camp, Eligible

The site represents the remains of a Chinese shrimp camp occupied by Chinese-Americans from the mid to late 1860s to approximately1912. The site was first formally recorded and excavated by Chavez and Holson (1985) who identified several habitation-related artifacts, none of which were ties to recognizable features. More extensive excavations were conducted by Taggart and Haydu (2009) producing a more in-depth characterization of the horizontal and vertical distribution of the cultural deposit. Site P-07-000277 is listed in the Richmond OHP Historic Properties Directory as eligible under category 5S2 (individual property eligible for local listing or designation). The site is considered Eligible to the National Register and the California Register under Criterion D/4. Site visits and monitoring carried out as a part of the present

effort did not result in the development of information that would revise this earlier determination.

8.5.3 P-07-004593, Richmond Beltline Railroad, Not Eligible

A previously recorded segment of the Richmond Beltline Railroad extends from approximately Point Orient south through Winehaven to the northern extent of the Point Molate Beach Park. Based on archival research and archaeological examination, Haydu and Rodman (2009) were unable to tie the resource to an important event or person that has made a significant historical contribution. Design elements of the railroad grade are not unique or otherwise remarkable. Haydu and Rodman (2009) concluded that the segment they recorded was unlikely to yield information important to history beyond what is readily available within the historical record. Therefore, they recommended that the site is not eligible for inclusion to the National Register/California Register.

As a result of the present effort, a previously unrecorded portion of the Beltline has been documented, extending south from the southern extent of the previously recorded segment, through Point Molate Beach Park, to Castro Point. The recorded segment is long enough to understand the connective role of the individual segment along the western shoreline of the San Pablo Peninsula. In some locations, the railroad grade retains sufficient integrity of setting to convey a sense of place specific to the time when the segment and linear feature at large were in use. However, the recorded segment lacks distinctive engineering features and structural integrity. The integrity level for short segments of the recorded grade where vestiges of the original work are relatively unaltered is high. However, most of the grade has been subjected to alterations, maintenance, repair, and neglect. Large portions of the Beltline are buried under fill, overgrown with vegetation, or have been demolished.

It is recommended that the site cannot be tied to an important event or person that has made a significant historical contribution. Design elements of the railroad grade are not unique or otherwise remarkable, and the integrity of the site has largely been compromised. Finally, the linear resource is highly unlikely to yield information important to history beyond what is readily available as an article of the historical record. Based on field examination, it is recommended that the portion of the Beltline Railroad located within the proposed project area is best classified at integrity level III and is not eligible for listing on the National Register/California Register. This finding is consistent with the earlier recommendation provided by Haydu and Rodman (2009).

9.0 MANAGEMENT RECOMMENDATIONS

An APE was defined for the proposed Point Molate Beach Restoration Project that includes a horizontal footprint of 0.95 acres. This includes soil and debris removal from the revetment area (0.29 acres) and adjacent equipment and material staging (0.66 acres). The extent of vertical disturbance will vary by project element. Construction of the rock revetment would involve excavations in some areas to a depth of approximately four feet. Reconstruction of the culvert would require excavations to a depth of approximately eight feet. Debris removal includes 1,207 cubic yards of sand from below the bluff and 218 cubic yards of bedrock. Sediments that comprise the bluff face are friable and unstable. To create a stable working surface, the surface of the bluff will be scraped, creating a 1:1 slope, allowing for the placement of geotextiles, rockfill, and rock armor. This slope clean-up will result in the removal of approximately 324 cubic yards of material. The project will require the placement of approximately 1,043 square yards of geotextile fabric. Approximately 1,442 cubic yards of rockfill will be placed to form the revetment and 1,698 cubic yards of rock armor placed against the bluff face to create the outer protection of the revetment.

Construction of the lost portion of the Bay Trail would involve excavations to a depth of approximately two feet. Much of this excavation would occur in previously disturbed surface soils or modern fill. Subsurface excavation would include removing existing road and railroad base material.

No excavation would occur within proposed staging and material placement areas. Project-related above-ground improvements would be limited to the trail surface and the surface of the rock revetment. In the absence of substantial vertical elements, there is no need to expand the limits of the AII beyond those of the ADI.

The proposed project APE was surveyed for the presence of cultural resources. Three previously recorded resources are present within or immediately adjacent to the proposed project APE. No previously undocumented resources were identified as a result of the present inventory.

9.1 DETERMINATION OF EFFECT CONSIDERATIONS

Three resources present within or adjacent to the proposed project area require detailed consideration.

9.1.1 P-07-000162 (Shell Mound with Burials)

When first recorded by Nels Nelson in 1909, site P-07-000162 was 200 by 150 feet and stood an impressive nine feet in height. The site was subject to an extensive archaeological investigation between 1939 and 1940, yielding a rich cultural assemblage. By 1947, the height of the mound had been reduced and the site was spread out along the shoreline (Beardsley 1954). By the 1980s, the site had been regraded again and was further disturbed by the construction of Western Drive, Burma Road, Garden Road, the Richmond Beltline Railroad, and Navy spurs, and drastic landform re-contouring.

While the site has yielded important information in the past, it has since been degraded to the point that it no longer retains any semblance of integrity. As such, Taggart and Haydu (2009b) recommended site P-07-000162 as Not Eligible for listing on the National Register and/or California Register. However, even though P-07-000162 does not qualify as a historic property/historical resource, it should be afforded special consideration given the presence of human remains within the core of the deposit. Taggart and Haydu (2009b) recommended that the core site area, which yielded human remains, should be avoided by all ground disturbance.

A comparison of the site map and design drawings indicates that the north boundary of the proposed project area is over 300 feet south of the core area. Based on this finding, it is recommended that the proposed project does not have the potential to impact the core site area.

Present within the proposed project area is a thin lens of shell midden material redeposited during various construction and grading activities within the general site area. This lens of redeposited material is exposed in the bluff face between the north end of the project area and the location of the culvert scheduled for replacement (a distance of approximately 35 feet). As noted earlier in this report, wave-related erosion has caused the bluff face to recede. Over just the last four years (2016-2019) it has receded approximately 4.8 feet where the shell midden lens is located. How much it receded before 2016 is unclear. This erosion has resulted in the loss of an undetermined amount of archaeological deposit. Implementation of the proposed project would substantially reduce, if not eliminate, the potential for the future loss of additional archaeological deposits. It is acknowledged, however, that an estimated 10 cubic yards of archaeological deposit would be removed during the implementation of the proposed project. Given that P-07-000162 has been recommended as Not Eligible for listing on the National Register and/or California Register (Taggart and Haydu 2009b), this loss of archaeological deposit would have no significant impact.

Taggart and Haydu (2009b) recommend that special consideration be given to site P-07-000162 due to the presence of human remains within the core of the deposit. As mentioned, the proposed project area is located some distance from the core area and the likelihood of finding human remains within the project area is considered to be remote. However remote the possibility, a Native American and an archaeological monitor should be present during the disturbance of the archaeological deposit.

9.1.2 P-07-000277 (Chinese Shrimp Camp)

Site P-07-000277 represents the remains of a Chinese shrimp camp occupied for nearly six decades. The site is listed in the Richmond OHP Historic Properties Directory as Eligible under category 5S2 (individual property eligible for local listing or designation). The site is considered Eligible to the National Register and California Register under Criterion D and Criterion 4, respectively.

Portions of the site located immediately south of the proposed project area have received considerable archaeological attention (Chavez and Holson 1985, and Taggart and Haydu 2009b). Of note, previous investigators were not able to test portions of the site located on what was then Navy property, which is now the proposed project area. They did, however, note that Shrimp Camp deposits were present in the bluff face in the present project area. During the present study, evidence of the Shrimp Camp was observed extending some 200 feet along the bluff face within the southeastern two-thirds of the proposed project area. The horizon varies in thickness from one foot to 2.5 feet and matches the description of Feature 4 as presented by Taggart and Haydu (2009b). As it extends to the north, the Shrimp Camp Horizon appears less well preserved and it grades into or is truncated by modern fill.

As noted earlier in this report, wave-related erosion has caused the bluff face to recede. Over just the last four years (2016-2019), the bluff has receded approximately 4.8 in the northern portion of the project area and 2.8 feet in the southern portion of the project area. How much it receded before 2016 is unclear. This erosion has resulted in the loss of an undetermined amount of archaeological deposit. Implementation of the proposed project would substantially reduce, if not eliminate, the potential for the future loss of additional archaeological deposits. It is acknowledged, however, that an estimated 164 cubic yards of archaeological deposit would be removed during the implementation of the proposed project. Cleaning of the bluff face

preparatory to setting geotextile and rock armoring would result in the loss of currently exposed deposits. Given that P-07-000277 has been recommended as Eligible for listing on the National Register and California Register (Taggart and Haydu 2009b), this loss of archaeological deposit would constitute an adverse effect to a resource considered an historic property.

9.1.3 P-07-004593, Richmond Beltline Railroad

Site P-07-004593 is recommended as Not Eligible for listing on the National Register and/or California Register. Construction of a segment of the Bay Trail would occur along that portion of the railroad alignment within the proposed project area. Existing rails and ties would be removed to allow for the construction of the trail and the replacement of the collapsed culvert. Given that P-07-004593 is recommended as Not Eligible, project-related impacts to the site would have no significant impact.

9.3 Project Effect Discussion

As noted previously, wave-related erosion has resulted in the loss of a substantial amount of archaeological deposit once associated with site P-07-000277. The primary goal of the proposed project is to stabilize the bluff, thereby checking the amount of future erosion. This would be beneficial in that it would serve to protect remaining deposits that comprise site P-07-000277. However, future protection of the site would come at a cost – the loss of a thin strip of archaeological deposits now exposed in the bluff face. As currently designed, the Point Molate Beach Restoration Project will have an adverse effect on site P-07-000277, a property considered Eligible for listing on the National Register and the California Register. An estimated 164 cubic yards of archaeological deposit would be removed during the implementation of the proposed project. Whether that adverse effect is offset, in part or whole, by the beneficial nature of the project is subject to consultation between the project proponent and the lead federal agency. This adverse effect may be addressed via one or more of the following measures:

- Acceptance of a minimal loss of archaeological deposits in favor of the beneficial nature of the project.
- Development and implementation of a data recovery plan in compliance with standards established by the USACE and the California OHP.
- Development and implementation of an inadvertent discovery plan.
- Redesign of the project to eliminate or reduce the impact to site P-07-000277 to a less than significant level (note: further redesign of the slope stabilization and culvert elements was deemed infeasible by engineering after the alternatives analysis).

9.2 Other Management Considerations

NCE prepared this report for use by the City of Richmond as the intended beneficiaries of the work. Interpretations, conclusions, and recommendations contained within the report are based in part on the information presented in other reports that are cited in the text and listed in the references. This report is subject to limitations and qualifications inherent to the referenced documents.

Although improbable, previously unidentified cultural material, prehistoric burials, or paleontological resources might be discovered within the APE. Should human remains, paleontological, or previously unidentified cultural resources be encountered during construction activities, work must cease in the immediate area and the contractor must immediately report the finding to the County Coroner and California OHP (for human remains), and other designated officials as appropriate. The OHP will contact the appropriate tribal representatives and consult on the disposition of the remains and any associated artifacts.

Every reasonable effort has been made to identify cultural resources in the study area. If, however, prehistoric, or historic period resources are subsequently discovered that could be

adversely affected by project-related activities, all such activities should cease immediately and OHP and local (City of Richmond) representatives should be contacted immediately.

10.0 REFERENCES CITED

A-N West
2017 Point Molate Beach Park Shoreline Restoration Alternative Study Report. Prepared for Nichols Consulting Engineers.

Banks, Peter M. and Robert I. Orlins
1981 Investigation of Cultural Resources within the Richmond Harbor Redevelopment Project 11-A, Richmond, Contra Costa County, California. Prepared for the City of Richmond. Report on file Northwest Information Center, Sonoma State University, Rohnert Park, California.

Bardsley, Brett, and Michael Leacox
2016a San Francisco Bay Trail at Point Molate: Hazardous Waste Memorandum – Phase I Environmental Site Assessment. Prepared by NCE, Richmond office. Prepared on behalf of the East Bay Regional Park Department and the City of Richmond.
2016b San Francisco Bay Trail at Point Molate: Phase II Environmental Site Assessment. Prepared by NCE, Richmond office. Prepared on behalf of the East Bay Regional Park Department and the City of Richmond.

Bastin, Donald
2016 A Brief History of the Point San Pablo Peninsula. Electronic document, http://www.pointrichmond.com/pointsanpablo/history.htm, accessed April 11, 2016. Donald Bastin is the Executive Director of the Richmond Museum of History.

Bean, Lowell John (Editor)
1994 *The Ohlone: Past and Present Native Americans of the San Francisco Bay Region.* Ballena Press Publication, Menlo Park, California.

Beardsley, Richard K.
1948 Cultural Sequences in Central California Archaeology. *American Antiquity* 14:1-28.
1954 Temporal and Areal Relationships in Central California Archaeology. *University of California Archaeological Survey Reports*, 24 and 25. Berkeley, California.

Bennyhoff, James. A.
1972 Middle Horizon, Cosumnes District Chart. In Development of Regional Prehistoric Cultures, *Handbook of North American Indians, Volume 8,* California, edited by R. F. Heizer, pp.37-57. Smithsonian Institution Press. Washington D. C.
1994. Central California Augustine: Implications for Northern California Archaeology. In, Hughes (ed.), Toward a New Taxonomic Framework for Central California Archaeology. Contribution of the University of California Archaeological Research Facility, Berkeley, No. 52.

Bennyhoff, James A., and David A. Fredrickson
1994 A Proposed Integrative Taxonomic System for Central California Archaeology. In *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*, edited by R.E. Hughes. Contributions of the University of California Archaeological Research Facility No. 52.

Bennyhoff, James A., and Richard E. Hughes
1987 Shell Bead and Ornament Exchange Networks between California and the Western Great Basin. *Anthropological Papers of the American Museum of Natural History* 64(2):79-175.

Bieling, D. G.
1997 Obsidian Studies. In *Archaeological Investigations at Site CA-ALA-555, Alameda County, California*, edited by Randy S. Wiberg, pp. 67-82. Holman and Associates, San Francisco. Submitted to Standard Pacific of Northern California, Pleasanton. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California.

Booker, Matthew B.
2013 *Down by the Bay: San Francisco's History between the Tides.* University of California Press, Berkeley, California.

Brown, Alan K.
1973 Indians of San Mateo County. In *La Peninsula: Journal of the San Mateo County Historical Association*, Vol. XVII No. 4, Winter 1973–1974.

Busch, Gerald
2007. Personal communication between BRAC PMO West Disposal Project Manager and Michael Taggart.

Chavez, David, and John Holson
1985. Cultural/Archaeological Resources Investigation at the Naval Supply Center Fuel Depot, Point Molate, Contra Costa, California. Report on File at the California Historical Resources Information System, Northwest Information Center, Rohnert Park, California.

Cole, Susan D.
1980 *Richmond-Windows to the Past*. Wildcat Canyon Books, Richmond, California.

Cole, Tom
2014 *A Short History of San Francisco*. Third Edition, Heyday, Berkeley, California.

Dore, Christopher, and Daniel Glennon
2000. Archaeological Monitoring and Evaluation Report for the Navy Pt. Molate Supply Depot Clean Up. City of Richmond, Contra Costa County, California. Report on file at the California Historical Resources Information System Northwest Information Center, Rohnert Park.

Driver, Harold E., and Adan E. Treganza
1939 Cited in Taggart and Haydu 2009a (no bibliographic entry available).

Ellinger, Mike
2002. From the Bottom Up: The Tiny Bay Shrimp Makes History. Bay Nature, Jan-Mar.

Elsasser, A. B.
1978 Development of Regional Prehistoric Cultures. In *Handbook of North Americans, Volume 8, California*, edited by R. F. Heizer, pp 37-57. Smithsonian Institution, Washington, D.C.

Farren, Charles A.
1975 Archaeological Site Record for P-07-000277. On file at the Northwest Information Center, Rohnert Park, California.

Gilman, Daniel, Harry Peck, and Frank Colby
1904 *The New International Encyclopedia*. Dodd, Mead, and Company, New York.

Graymer R. W.
2006 Geologic Map of the San Francisco Bay Region. U.S. Geological Survey Investigation File 2918.

Harland, George H. and Clement Fisher
1951 *Of Walking Beams and Paddle Wheels: A Chronicle of San Francisco Bay Ferryboats.* El Camino Press, Salinas.

Haydu, Damon and Tobin Rodman
2009 Archaeological Site Record for P-07-004593. On file at the Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Heal, John
2016 San Francisco Bay Trail at Point Moalte: Preliminary Biological Assessment. Prepared by NCE, Richmond office. Prepared on behalf of the East Bay Regional Park Department and the City of Richmond.

Heizer, Robert F.
1939 Some Sacramento Valley-Santa Barbara Archaeological Relationships. *The Masterkey* 13(1):31-35.
1949 California, I: The Early Horizon. *University of California Anthropological Records* 12(1).

Heizer, Robert F., and Franklin Fenenga
1939 Archaeological Horizons in Central California. *American Anthropologist* 41(3):378-399.

Hill, Alison
2001. Chinese Camp History. San Francisco Gate Online - May

Hockett, Chris, and David Burger
2016 San Francisco Bay Trail at Point Molate: Geotechnical design and Materials Report. Prepared by Cal Engineering and Geology, Walnut Creek. Prepared on behalf of the East Bay Regional Park Department and the City of Richmond.

Hoover, Mildred B., Hero E. Rensch, and William N. Abeloe
1988 *Historic Spots in California.* The fourth edition, revised by Douglas E. Kyle. Stanford University Press, Stanford, California.

Hylkema, M. G.
2002 Tidal Marsh, Oak Woodlands, and Cultural Florescence in the Southern San Francisco Bay Region. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by J. M. Erlandson and T. L. Jones, pp. 233-262. Cotsen Institute of Archaeology, University of California, Los Angeles.

Justice, Noel D.
2002 *Stone Age Spear and Arrow Points of California and the Great Basin.* Indiana University Press, Bloomington, Indiana.

Küchler, August W.
1977 *The Map of the Natural Vegetation of California*. University of Kansas, Lawrence.

La Jeunesse, R. M., and John Pryor
1990. Sky Rocket, CA-CAL-629/630; Burial Appendix 2. Unpublished report prepared for the Meridian Gold Company RMK Project, Copperopolis. Department of Anthropology, California State University, Fresno.

Levy, Richard
1978 Costanoan. In *Handbook of North American Indians, Vol. 8*, edited by Robert Heizer, pp 485-495. U.S. Printing Office, Smithsonian Institution, Washington D.C.

Lillard, J. B., and W. K. Purves
1936 The Archaeology of the Deer Creek-Cosumnes area, Sacramento County, California. Sacramento: Sacramento Junior College, Department of Anthropology Bulletin 1.

Lillard, J. B., R. F. Heizer, and F. Fenenga
1939 An Introduction to the Archaeology of Central California. Sacramento Junior College, Department of Anthropology, Bulletin 2.

Lindström, Susan G. and Jeffrey T. Hall
1994 Cultural Resources Inventory and Evaluation Report for the Proposed Spooner Summit and East Shore Project (Big Gulp) Timber Sales. Prepared by Biosystems Analysis, Santa Cruz, California. Forest Service report (TY-93-775, and 05-19-321). Carson Ranger District, Carson City, Nevada (NSM report 3-157 and 18-315).

Luby, E. M.
2004 Shell Mounds and Mortuary Behavior in the San Francisco Bay Area. *North American Archaeologist* 25:1-33.

Mikesell, S.
1990 Historical Overview of Old US 50, 1895-1940. Manuscript on file at Caltrans. 3-EDJ-50, P.M. 39.7/67.8, 03-910076. Sacramento, California.

Millikin, Randall
1995 A Time of Little Choice, The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810. *Ballena Press Anthropological Papers* No. 43.

Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groaz, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson
2007 Punctuated Culture Change in the San Francisco Bay Area. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 99-124. AltaMira Press, New York.

Moratto, Michael J.
1972 A Study of Prehistory in the Southern Sierra Nevada Foothills, California. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Oregon, Eugene.

1984 *California Archaeology.* The second printing, 2004. Reprinted with permission of the author by Coyote Press, Salinas, California.

Natural Resource Conservation Service (NRCS)
2020 United States Department of Agriculture, Natural Resources Conservation Service Web Soil Survey. Electronic document, http://websoilsurvey.nrcs.usda.gov/, accessed June 2020.

Nilsen, T.
1975 Preliminary photointerpretation map of landslides and other surficial deposits of the Richmond 7.5 minute Quadrangle Contra Costa and Alameda Counties, California. U.S. Geologic Survey Open-File Map 75-277-47.

Nelson, Nels C.
1907 Site records for CA-CCO-282, CA-CCO-283, and CA-CCO-284. On File at the California Historical Resources Information System, Northwest Information Center, Rohnert Park, California.

Olsen, W. H. and L. A. Payen
1968 Archaeology of the Little Panoche Reservoir, Fresno County, California. Sacramento: California Department of Parks and Recreation, Archaeological Reports 11.

Owen, Kenneth N.
1991 Historical Trails and Roads in California: A Cultural Resources Planning Study, Volume 1, Historical Context, and Typology. Manuscript on file at CalTrans, Sacramento, California.

Page, Ben M.
1966 Geology of the Coast Ranges of California. In *Geology of Northern California*. Bulletin 190. California Division of Mines and Geology, San Francisco.

Pritzker, Barry M.
2000 *A Native American Encyclopedia-History, Culture, and Peoples*. Oxford University Press, New York.

Ragir, S. R.
1972 *The Early Horizon in Central California Prehistory*. Contributions of the University of California Archaeological Research Facility 15. Berkeley.

Robertson, Donald B.
1998 *Encyclopedia of Western Railroad History, Volume IV: California.* Caxton Printers, Ltd., Caldwell, ID.

Rowan, Harriet, Semany Gashaw, and Phil James
2014 Point Molate Beach: A Hidden Gem. Electronic document, http://richmondconfidential.org/2014/09/13/point-molate-beach-a-hidden-richmond-gem/, accessed March 24, 2016.

Santa Barbara Museum of Natural History (SBMNH)
2002 13,000 Years of Change Along the Central Coast. Electronic document, https://www.sbnature.org/research/anthro/chumash/timel.htm, accessed January 22, 2016.

Stanger, Frank M. (Editor)
1968 *La Peninsula* Vol. XIV No. 4.

Sundahl, E.
1982 The Shasta Complex in the Redding Area, California. Unpublished Masters thesis, Department of Anthropology, California State University, Chico.

Supernowicz, D.
1991 California Archaeological Resource Identification and Data Acquisition Program: Historic Trails and Roads, A Contextual History, Management Plan and Procedures for Evaluating Historic Roads and Trails on the Lake Tahoe Basin Management Unit. Manuscript on file, El Dorado National Forest, Placerville, California.

Taggart, Mike, and Damon Haydu
2009a Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment. Submitted on behalf of the City of Richmond to the U.S. Department of the Interior, Bureau of Indian Affairs, Pacific Region Office, Sacramento, California.
2009b Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume II: Archaeological Resources. Submitted by Analytical Environmental Services on behalf of the City of Richmond to the U.S. Department of the Interior, Bureau of Indian Affairs, Pacific Region Office, Sacramento, California.

Tamez, S.
1978 A Preliminary Report of the Analysis of Three Olivella Bead Manufacturing Sites in Sonoma, County. In Archaeological Investigations at CA-SON-455, Sonoma County, California: A Compilation of Student Papers, edited by D. A. Fredrickson. Department of Anthropology, Sonoma State University. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California.

Teixeira, Lauren
1997 *The Costanoan/Ohlone Indians of the San Francisco and Monterey Bay Area: A Research Guide*. Menlo Park, California: Ballena Press Publication.

U.S. Forest Service
1999 Draft Contextual History, Evaluation Methodology, and Management Plan for Prehistoric and Historic Roads and Trails within the Lake Tahoe Basin Management Unit. Manuscript on file at the U.S. Forest Service, Lake Tahoe Basin Management Unit, South Lake Tahoe, California.

White, G.
2002 Final Report of Testing and Mitigation at Four Sites on the Level (3) Long Haul Fiber Optic Alignment, Colusa County, California. Unpublished report prepared for Kiewit Pacific Corporation, Northern California District Headquarters, Concord, California. Archaeological Research Program, Chico.

Wiberg, Randy S.
1999 Cultural Resources Evaluation and Impact Program for the Western Drive Pipeline Replacement project Near Point Molate, Contra Costa County California. Report on File at the California Historical Resources Information System, Northwest Information Center, Rohnert Park.

Widell, Cherilyn
1996 Archaeological Site Record for P-07-000277. On file at the Northwest Information Center, Rohnert Park, California.

Wollenberg, Charles
2002 *Berkeley: A City in History*. First Edition, University of California Press, Berkeley, California.

Appendix A

REPORT FIGURES

(SENSATIVE MATERIAL REDACTED FOR PUBLIC DISTRIBUTION)



Legend

Project Area

NCE

Richmond

Point Molate Shoreline Restoration Project

Project Area Vicinity Map

N

1:24,000

0 1,000 2,000 ft.

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
ESRI USA Topo Basemap	568.40.55	jhall	6/26/2020	-	mlaitinen

Document Path: C:_Working_GIS Projects\Richmond - Pt Molate\GIS\AGP\Pt Molate - jhall.aprx

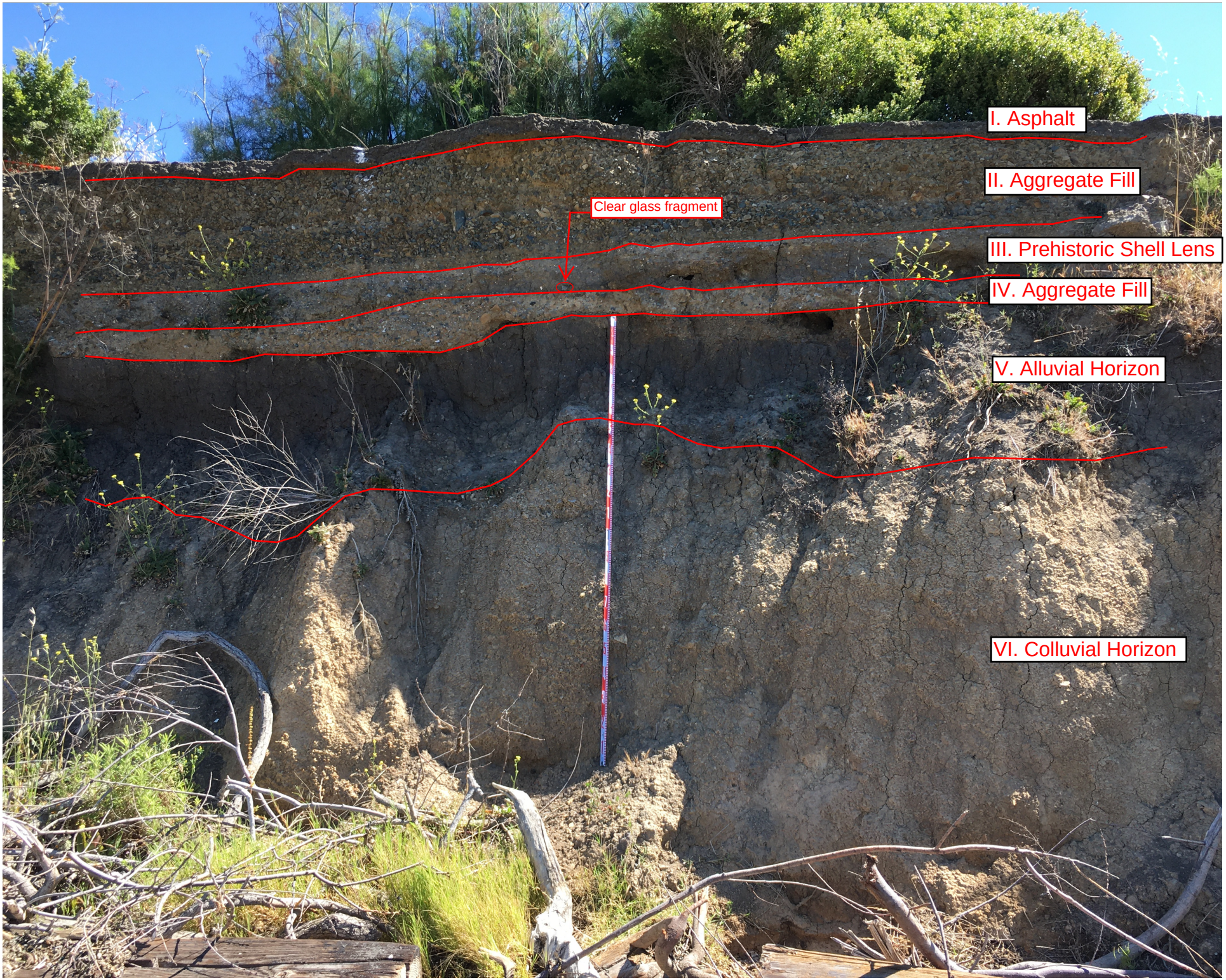


Figure 4. P-07-000162 Profile 1: secondary deposit / shell lens smear

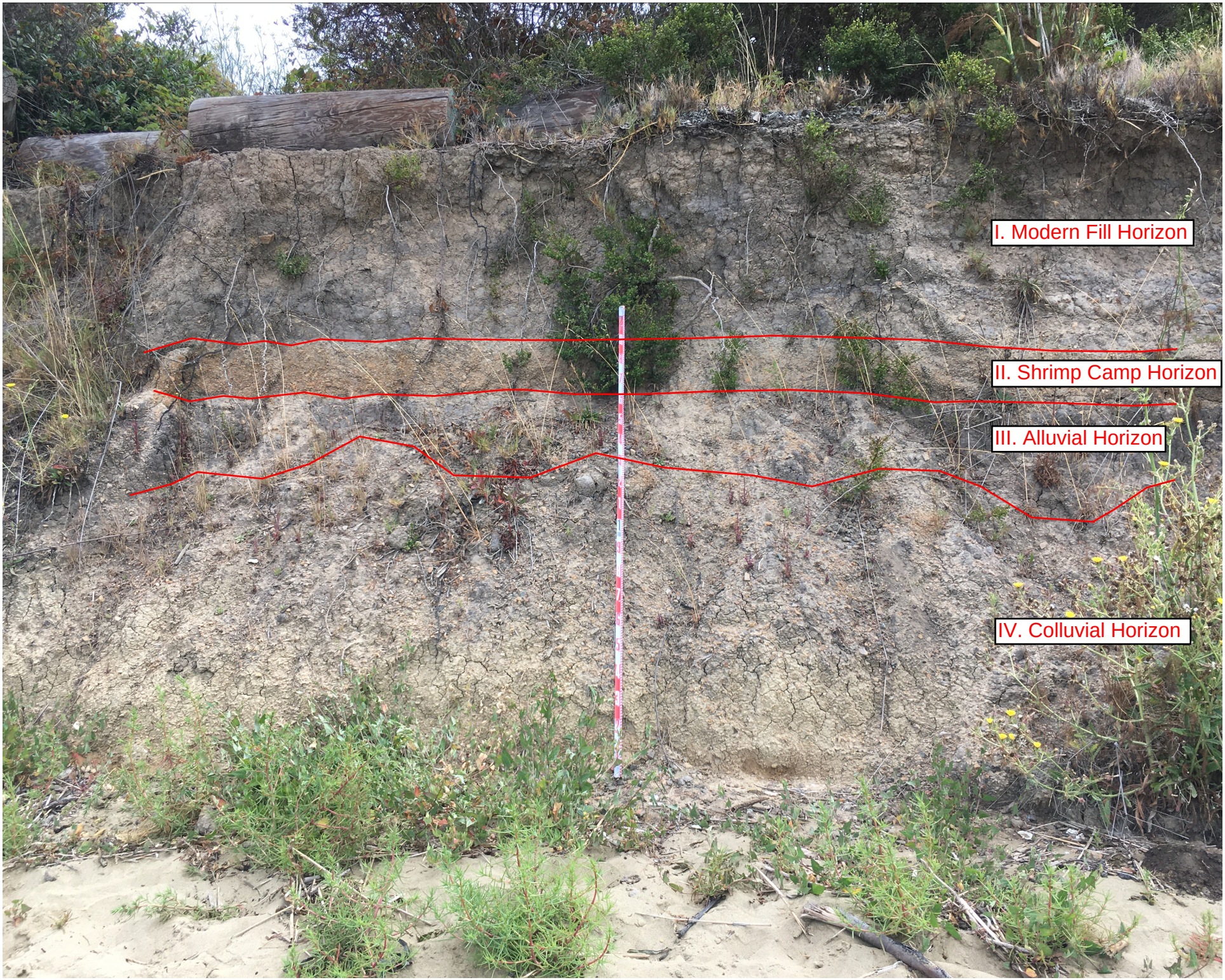


Figure 5. P-07-000277 Profile 1: Shrimp Camp Horizon



Figure 6. P-07-000277 Profile 2: Shrimp Camp Horizon

Appendix B

RECORDS SEARCH RESULTS
(SENSITIVE MATERIAL REDACTED FOR PUBLIC DISTRIBUTION)

From:

CALIFORNIA INVENTORY
OF
HISTORIC RESOURCES

March 1976

Edmund G. Brown Jr.
Governor
State of California

Claire T. Dedrick
Secretary for Resources

Herbert Rhodes
Director
Department of Parks and Recreation

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
P.O. Box 2390 Sacramento 95811

SANDY GULCH. 3 MILES S.E. OF WEST POINT, *THEME: EXPLORATION/SETTLEMENT.*

STEVENOT,(ARCHIE) BIRTHPLACE. CARSON HILL. *THEME: ECONOMIC/INDUSTRIAL.*

STONE BUILDING (RUIN). POVERTY FLAT. *THEME: EXPLORATION/SETTLEMENT.*

STONE CORRAL. 9.3 MILES WEST OF VALLEY SPRINGS, *THEME: ECONOMIC/INDUSTRIAL.*

STONE CREEK SETTLEMENT,(RUINS). SALT SPRING VALLEY. *THEME: EXPLORATION/SETTLEMENT.*

***THORN HOUSE.** 87 E. ST. AND CHARLES ST., SAN ANDREAS. *THEME: ARCHITECTURE.*

TOWER RANCH BARN AND HOUSE SITE. TOWERS ROAD, *THEME: ECONOMIC/INDUSTRIAL.*

TRAVER,(PETER L.) BUILDING. MURPHYS. *THEME: ECONOMIC/INDUSTRIAL.*

VALLECITO. 4.7 MILES SOUTH OF ANGELS CAMP, *THEME: EXPLORATION/SETTLEMENT.*

VALLECITO BELL MONUMENT. VALLECITO. *THEME: EXPLORATION/SETTLEMENT.*

VALLEY SPRINGS. *THEME: ECONOMIC/INDUSTRIAL.*

WEST POINT. *THEME: ECONOMIC/INDUSTRIAL.*

COLUSA COUNTY - 6 SITES (ALSO 33 ARCHAEOLOGICAL SITES)**

COLUSA COUNTY COURTHOUSE. 6TH ST. AND JAY ST., COLUSA. *THEME: ARCHITECTURE.*

***GRAND ISLAND SHRINE.** 8 MILES S. OF COLUSA ON CA. 45, COLUSA. *THEME: RELIGION.*

HALL OF RECORDS AND COUNTY JAIL. COLUSA. *THEME: GOVERNMENT.*

LETTS VALLEY. MENDOCINO NATIONAL FOREST, *THEME: EXPLORATION/SETTLEMENT.*

***NOWI RANCHERIA (4-COL-7).** *THEME: ABORIGINAL.*

SWIFT'S STONE CORRAL. 6 MILES WEST OF MAXWELL, *THEME: ECONOMIC/INDUSTRIAL.*

CONTRA COSTA COUNTY - 108 SITES (ALSO 352 ARCHAEOLOGICAL SITES)**

ALTAMIRANO,(ABILINO) ADOBE. OFF OF MULLTHWAITE ROAD NEAR MARTINEZ, *THEME: EXPLORATION/SETTLEMENT.*

ALVARADO ADOBE. 2748 SAN PABLO AVENUE, SAN PABLO. *THEME: EXPLORATION/SETTLEMENT.*

BABBE'S LANDING. FOOT OF SELLERS ROAD, ON DUTCH SLOUGH, NEAR CYPRESS ROAD, OAKLEY. *THEME: ECONOMIC/INDUSTRIAL.*

BACON,(SAM) STORE. CONCORD. *THEME: ECONOMIC/INDUSTRIAL.*

BAY POINT (SEAL BLUFF). NEAR PORT CHICAGO, *THEME: ECONOMIC/INDUSTRIAL.* p.70

BERRYESSA ADOBE SITE. ESCOBAR AND ALHAMBRA AVENUES, MARTINEZ. *THEME: EXPLORATION/SETTLEMENT.*

BROWLER SALOON. MAIN STREET, CLAYTON. *THEME: ECONOMIC/INDUSTRIAL.*

BYERS HOUSE. BYERS LANE, BYRON. *THEME: EXPLORATION/SETTLEMENT.*

BYRON HOTSPRINGS HOTEL. BYRON HOTSPRINGS ROAD, WEST OF COUNTY ROAD J-4, *THEME: SOCIAL/EDUCATION.*

BYRON I.O.O.F. HALL. BYRON. *THEME: SOCIAL/EDUCATION.*

BYRON-GRANGE HALL. BYRON. *THEME: SOCIAL/EDUCATION.*

C AND H SUGAR COMPANY. ON CARQUINEZ STRAITS, CROCKETT. *THEME: ECONOMIC/INDUSTRIAL.*

CALIFORNIA AND NEVADA RAILROAD. KENNEDY GROVE PARK, EL SOBRANTE. *THEME: ECONOMIC/INDUSTRIAL.*

CALIFORNIA AND NEVADA RAILROAD, TERMINUS. ORINDA PARK, *THEME: ECONOMIC/INDUSTRIAL.*

CANARY COTTAGE. ORINDA. *THEME: ECONOMIC/INDUSTRIAL.*

CASTRO HOME. EL CERRITO. *THEME: EXPLORATION/SETTLEMENT.*

CHINESE FISH CAMP. SOUTH OF POINT MALOTE, *THEME: ECONOMIC/INDUSTRIAL.*

CLAYTON TOWN SITE. CLAYTON. *THEME: EXPLORATION/SETTLEMENT.*

COATS HALL. HIGHWAY 4, OFF OAK STREET, BRENTWOOD. *THEME: EXPLORATION/SETTLEMENT.*

CONCORD FIREHOUSE. WILLOW PASS ROAD, CONCORD. *THEME: GOVERNMENT.*

CONCORD PLAZA. CONCORD. *THEME: ECONOMIC/INDUSTRIAL.*

CONTRA COSTA TUNNEL. ABOVE PRESENT CALDECOTT TUNNEL, STATE HIGHWAY 24, *THEME: ECONOMIC/INDUSTRIAL.*

COPPER AND SILVER MINES, SITE. CLAYTON. *THEME: ECONOMIC/INDUSTRIAL.*

COWELL CEMENT PLANT SITE. CONCORD. *THEME: ECONOMIC/INDUSTRIAL.*

DARBY HOUSE SITE. EAST OF SAND CREEK ROAD, NEAR BRENTWOOD, *THEME: EXPLORATION/SETTLEMENT.*

DELAVEAGA HOME. ORINDA. *THEME: EXPLORATION/SETTLEMENT.*

***EAST BROTHER ISLAND LIGHT STATION.** JUNCTION OF SAN FRANCISCO BAY AND SAN PABLO BAY AT SAN PABLO STRAITS, *THEME: ARCHITECTURE.*

EDWARDS,(THOMAS) HOMESTEAD. LORING AND RALPH, CROCKETT. *THEME: EXPLORATION/SETTLEMENT.*

ELLIS LANDING. FOOT OF TENTH STREET, RICHMOND. *THEME: ECONOMIC/INDUSTRIAL.*

EMPIRE BASIN AREA. SEVEN MILES EAST OF ANTIOCH, *THEME: ECONOMIC/INDUSTRIAL.*

EMPIRE RAILROAD MONUMENT (PART OF TRACK). FOOT OF F STREET, ANTIOCH. *THEME: ECONOMIC/INDUSTRIAL.*

FAGES,(CAPTAIN PEDRO) TRAIL. 856 DANVILLE BLVD., DANVILLE. *THEME: EXPLORATION/SETTLEMENT.*

FAIRGROUND SITE. CONCORD. *THEME: SOCIAL/EDUCATION.*

***FERNANDEZ,(BERNARDO) HOUSE.** 100 TENNENT AVE., PINOLA. *THEME: ARCHITECTURE.*

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
010068	07-000962	SANKO RD	SANKO MUSEUM	PLEASANT HILL	C		HIST.SURV.	4523-0010-0000		7R	
156325		901 TAYLOR BLVD		PLEASANT HILL			PROJ.REVW.	FCC051006F	10/17/05	6Y	
010069	07-000963	315 TWIN VIEW DR	THE ENCLOSURE, ROGERS HOUSE	PLEASANT HILL	P	1867	HIST.SURV.	4523-0011-0000		7R	
010070	07-000964	3000 VESSING RD	HENRY VESSING HOUSE	PLEASANT HILL	P		HIST.SURV.	4523-0012-0000		7R	
010071	07-000965	3025 VESSING RD	BERWICK VESSING HOUSE	PLEASANT HILL	P		HIST.SURV.	4523-0013-0000		7R	
010620	07-001127	CANYON LAKE DR	PORT COSTA MERCANTILE	PORT COSTA	C	1912	HIST.SURV.	4569-0001-0005		3D	
010621	07-001128	CANYON LAKE DR	WHEAT DOCK	PORT COSTA	C	1880	HIST.SURV.	4569-0001-0006		3D	
010617	07-001124	CANYON LAKE DR	BULL VALLEY INN	PORT COSTA	C	1897	HIST.SURV.	4569-0001-0002		3D	
010619	07-001126	CANYON LAKE DR	CONCRETE WAREHOUSE	PORT COSTA	C	1886	HIST.SURV.	4569-0001-0004		3D	
010618	07-001125	CANYON LAKE DR	BURLINGTON HOTEL	PORT COSTA	C	1909	HIST.SURV.	4569-0001-0003		3D	
010616	07-001123	CARQUINEZ STRAIT	PORT COSTA GRAIN WAREHOUSE STE	PORT COSTA	C	1876	HIST.SURV.	4569-0001-0001		5D2	
010623	07-001130	CARQUINEZ STRAIT	PORT COSTA, TOWN OF PORT COSTA	PORT COSTA	C	1876	HIST.SURV.	4569-0001-9999		3S	
090696	07-001774	CARQUINEZ STRAIT	TOWN OF PORT COSTA	PORT COSTA	U		HIST.RES.	SPHI-CCO-002	08/15/68	7L	
010622	07-001129	1 PLAZA EL HAMBRE	PORT COSTA SCHOOL	PORT COSTA	C	1912	ST.FND.PRG	619.0-HP-88-07-008	12/14/88	3	
							HIST.RES.	NPS-88000563-0000	05/25/88	1S	
							HIST.SURV.	4569-0001-0007	01/01/88	1S	
							TAX.CERT.	537.9-07-0005	10/20/86	2D3	
006551	38-000972		WAPAMA (STEAM SCHOONER)/ TONGASS	RICHMOND	F	1915	HIST.RES.	NHL-73000228-0000	04/20/84	1S	AC
							HIST.RES.	NPS-73000228-0000	04/24/73	1S	AC
							HIST.SURV.	4101-0504-0000	01/01/73	1S	
100627	07-001836		FERRY POINT PIER,POINT RICHMOND	RICHMOND	C	1899	HIST.RES.	DOE-07-96-0131-0000	01/25/96	2S2	A
							PROJ.REVW.	FHWA960117A	01/25/96	2S2	A
103990	07-001905		BUILDING #69 / NAVAL FUEL DEPOT /	RICHMOND		1942	HIST.RES.	DOE-07-96-0121-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103991	07-001906		BUILDING #73 / POINT MOLATE NAVAL	RICHMOND		1943	HIST.RES.	DOE-07-96-0128-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103992	07-001907		BUILDING #76 / POINT MOLATE NAVAL	RICHMOND		1942	HIST.RES.	DOE-07-96-0127-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103993	07-001908		BUILDING #77 / POINT MOLATE NAVAL	RICHMOND		1946	HIST.RES.	DOE-07-96-0123-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103994	07-001909		BUILDING #82 NAVAL FUEL DEPOT POIN	RICHMOND		1944	HIST.RES.	DOE-07-96-0122-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103995	07-001910		BUILDING #83 NAVAL FUEL DEPOT POIN	RICHMOND		1944	PROJ.REVW.	USN960916A	09/27/96	6Y	
103996	07-001911		BUILDING 101 NAVAL FUEL DEPOT POIN	RICHMOND		1943	HIST.RES.	DOE-07-96-0120-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103997	07-001912		BUILDING 115 NAVAL FUEL DEPOT POIN	RICHMOND		1943	HIST.RES.	DOE-07-96-0125-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103998	07-001913		BUILDING 121 NAVAL FUEL DEPOT POIN	RICHMOND		1942	HIST.RES.	DOE-07-96-0124-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103999	07-001914		TANK #24 NAVAL FUEL DEPOT POINT MO	RICHMOND		1942	HIST.RES.	DOE-07-96-0130-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103989	07-001904		BUILDING 24 NAVAL FUEL DEPOT POINT	RICHMOND		1945	HIST.RES.	DOE-07-96-0129-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
148468			GARRARD BOULEVARD TUNNEL/DORNAN DR	RICHMOND	M	1913	HIST.RES.	DOE-07-04-0014-0000	06/17/04	2S2	A
							PROJ.REVW.	FHWA040526A	06/17/04	2S2	A
012802	07-001177	10TH ST	ELLIS LANDING SITE	RICHMOND	S	1869	HIST.SURV.	4802-0019-0000	01/01/80	2S2	
012796	07-001171	10TH ST	BROOKS ISLAND	RICHMOND	C		HIST.SURV.	4802-0013-0000		5S2	
083101	07-001748	127 11TH ST		RICHMOND	P	1915	PROJ.REVW.	HUD930624C	07/26/93	6Y	
066115	07-001233	539 11TH ST		RICHMOND	U		PROJ.REVW.	HUD890818B	09/14/89	6Y	
131200		129 12TH ST		RICHMOND	P	1925	HIST.RES.	DOE-07-02-0009-0000	03/28/02	6Y	
							PROJ.REVW.	HUD020214I	03/28/02	6Y	
066056	07-001231	136 12TH ST		RICHMOND	U		PROJ.REVW.	HUD890728A	08/25/89	6Y	
065389	07-001220	561 12TH ST		RICHMOND	U		PROJ.REVW.	HUD880901A	10/04/88	6Y	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
083361	07-001752	630 12TH ST		RICHMOND	P	1918	PROJ.REVW.	HUD930701K	08/03/93	6Y	
072880	07-001312	645 12TH ST		RICHMOND	U	1915	PROJ.REVW.	HUD910731A	08/21/91	6Y	
067491	07-001269	555 13TH ST		RICHMOND	P	1927	PROJ.REVW.	HUD900618E	07/18/90	6Y	
083357	07-001751	143 15TH ST		RICHMOND	P	1921	PROJ.REVW.	HUD930701J	08/03/93	6Y	
067498	07-001273	215 15TH ST		RICHMOND	U	1920	HIST.RES.	DOE-36-91-0001-0000	07/19/90	6Y	
							PROJ.REVW.	HUD900618D	07/19/90	6Y	
083356	07-001750	242 16TH ST		RICHMOND	P	1921	PROJ.REVW.	HUD930701I	08/03/93	6Y	
179923		623 17TH ST		RICHMOND	P	1919	PROJ.REVW.	HUD100825A	09/08/10	6Y	
135571		440 18TH ST		RICHMOND	P	1907	HIST.RES.	DOE-07-02-0069-0000	08/16/02	6Y	
							PROJ.REVW.	FHWA020717A	08/16/02	6Y	
135572		442 18TH ST		RICHMOND	P	1917	HIST.RES.	DOE-07-02-0070-0000	08/16/02	6Y	
							PROJ.REVW.	FHWA020717A	08/16/02	6Y	
135573		465 19TH ST	SAMARAITAN WAY CHRISTIAN CENTER	RICHMOND	P	1930	HIST.RES.	DOE-07-02-0071-0000	08/16/02	6Y	
							PROJ.REVW.	FHWA020717A	08/16/02	6Y	
067853	07-001280	242 1ST ST		RICHMOND	U	1920	PROJ.REVW.	HUD900718B	08/13/90	6Y	
126064	07-002472	421 21ST ST		RICHMOND	U	1907	HIST.RES.	DOE-07-00-0001-0000	07/17/00	6Y	
							PROJ.REVW.	HUD000616C	07/17/00	6Y	
147298		165 22ND ST		RICHMOND	P	1956	HIST.RES.	DOE-07-04-0011-0000	01/23/04	6Y	
							PROJ.REVW.	HUD040107E	01/23/04	6Y	
066274	07-001238	171 22ND ST	TRANSITIONAL HOUSING	RICHMOND	U		PROJ.REVW.	HUD871028A	10/28/87	6Y	
067464	07-001266	628 22ND ST		RICHMOND	P	1929	PROJ.REVW.	HUD900525C	06/19/90	6Y	
131297		700 22ND ST		RICHMOND	P	1908	HIST.RES.	DOE-07-02-0016-0000	04/11/02	6Y	
							PROJ.REVW.	HUD020405C	04/11/02	6Y	
160531		820 23RD ST		RICHMOND	P	1929	PROJ.REVW.	FCC060206AA	02/16/06	6Y	
175132		315 25TH ST	RAYMOND APARTMENTS	RICHMOND	P	1915	PROJ.REVW.	HUD090210D	03/05/09	6Y	
131454		638 26TH ST		RICHMOND	P	1946	HIST.RES.	DOE-07-02-0018-0000	06/17/02	6Y	
							PROJ.REVW.	HUD020607B	06/17/02	6Y	
096118	07-001831	401 27TH ST	RICHMOND HALL OF JUSTICE	RICHMOND	M	1940	HIST.RES.	DSA-07-SPS-3117	04/17/95	7K	
067488	07-001268	121 2ND ST		RICHMOND	P	1910	PROJ.REVW.	HUD900620A	07/19/90	6Y	
070104	07-001298	155 2ND ST		RICHMOND	U	1918	PROJ.REVW.	HUD910222G	03/18/91	6Y	
065956	07-001229	159 2ND ST		RICHMOND	U		PROJ.REVW.	HUD890613B	07/12/89	6Y	
067497	07-001272	230 2ND ST		RICHMOND	P	1930	PROJ.REVW.	HUD900618C	07/19/90	6Y	
068085	07-001281	247 2ND ST		RICHMOND	U	1920	PROJ.REVW.	HUD900718A	08/16/90	6Y	
072795	07-001310	431 2ND ST		RICHMOND	U	1925	PROJ.REVW.	HUD910715K	08/08/91	6Y	
067465	07-001267	566 2ND ST		RICHMOND	P	1915	PROJ.REVW.	HUD900525E	06/19/90	6Y	
101820	07-001839	980 31ST ST		RICHMOND	P	1939	PROJ.REVW.	HUD960408G	04/18/96	6Y	
166173		821 33RD ST		RICHMOND	P	1942	PROJ.REVW.	HUD070525G	05/30/07	6Y	
131456		859 33RD ST		RICHMOND	P	1944	HIST.RES.	DOE-07-02-0020-0000	06/17/02	6Y	
							PROJ.REVW.	HUD020607D	06/17/02	6Y	
074201	07-001360	615 34TH ST		RICHMOND	U	1928	PROJ.REVW.	HUD911202K	12/31/91	6Y	
131295		419 35TH ST		RICHMOND	P	1939	HIST.RES.	DOE-07-02-0014-0000	04/11/02	6Y	
							PROJ.REVW.	HUD020405A	04/11/02	6Y	
161322		555 37TH ST	HOLY TRINITY EPISCOPAL CHURCH	RICHMOND	P	1940	PROJ.REVW.	FCC060214H	02/28/06	6Y	
012801	07-001176	3RD ST	MAPLE HALL	RICHMOND	P	1900	HIST.SURV.	4802-0018-0000		3S	
067303	07-001262	230 3RD ST	PROPERTY REHABILITATION	RICHMOND	U		PROJ.REVW.	HUD900409C	04/23/90	6Y	
162609		268 3RD ST		RICHMOND		1915	PROJ.REVW.	HUD060622A	06/23/06	6Y	
076958	07-001735	519 3RD ST		RICHMOND	U	1930	PROJ.REVW.	HUD920429D	05/27/92	6Y	
012805	07-001179	9005 47TH ST	EAST SHORE PARK	RICHMOND	M	1860	HIST.SURV.	4802-0022-0000		7R	
069260	07-001290	151 4TH ST		RICHMOND	U	1930	PROJ.REVW.	HUD901023J	11/26/90	6Y	
067416	07-001263	158 4TH ST		RICHMOND	P	0	PROJ.REVW.	HUD900607C	07/12/90	6Y	
162602		250 4TH ST		RICHMOND	P	1903	PROJ.REVW.	HUD060622A	06/23/06	6Y	
067496	07-001271	259 4TH ST		RICHMOND	P	1918	PROJ.REVW.	HUD900618B	07/19/90	6Y	
066094	07-001232	261 4TH ST		RICHMOND	P	1908	PROJ.REVW.	HUD060622A	06/23/06	6Y	
							PROJ.REVW.	HUD890810D	09/07/89	6Y	
162606		301 4TH ST		RICHMOND	P	1914	PROJ.REVW.	HUD060622A	06/23/06	6Y	

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162603		257 5TH ST		RICHMOND	P	1975	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162605		267 5TH ST		RICHMOND	P	1946	PROJ.REVW.	HUD060622A	06/23/06	6Y	
065942	07-001228	461 5TH ST	REHABILITATION RESID	RICHMOND	U		PROJ.REVW.	HUD890628A	06/29/89	6Y	
072390	07-001308	555 5TH ST		RICHMOND	U	1920	PROJ.REVW.	HUD910610B	07/10/91	6Y	
066578	07-001239	583 5TH ST		RICHMOND	U		PROJ.REVW.	HUD880330F	04/27/88	6Y	
129136	07-002518	1837 5TH ST		RICHMOND	P		HIST.RES.	DOE-07-01-0021-0000	12/03/01	6Y	
							PROJ.REVW.	HUD011127C	12/03/01	6Y	
132335		132 6TH ST		RICHMOND	P	1940	HIST.RES.	DOE-07-02-0037-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712I	07/18/02	6Y	
132338		228 6TH ST		RICHMOND	P	1979	HIST.RES.	DOE-07-02-0040-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712M	07/18/02	6Y	
069257	07-001287	565 6TH ST		RICHMOND	U	1920	PROJ.REVW.	HUD901023G	11/26/90	6Y	
067009	07-001251	640 6TH ST		RICHMOND	U		PROJ.REVW.	HUD891120F	12/26/89	6Y	
069261	07-001291	749 6TH ST		RICHMOND	U	1925	PROJ.REVW.	HUD901023K	11/26/90	6Y	
070103	07-001297	866 6TH ST		RICHMOND	U	1930	PROJ.REVW.	HUD910222F	03/18/91	6Y	
137731		1536 6TH ST		RICHMOND	P	1940	HIST.RES.	DOE-07-03-0018-0000	03/07/03	6Y	
							PROJ.REVW.	HUD030303D	03/07/03	6Y	
126300	07-002475	22 7TH ST		RICHMOND	P	1912	HIST.RES.	DOE-07-00-0003-0000	07/17/00	6Y	
							PROJ.REVW.	HUD000613D	07/17/00	6Y	
132333		303 7TH ST		RICHMOND	P	1979	HIST.RES.	DOE-07-02-0035-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712H	07/18/02	6Y	
129183	07-002525	770 7TH ST		RICHMOND	P	1916	HIST.RES.	DOE-07-01-0028-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009H	11/20/01	6Y	
133049		877 7TH ST		RICHMOND	P	1943	HIST.RES.	DOE-07-02-0062-0000	08/20/02	6Y	
							PROJ.REVW.	HUD020808N	08/20/02	6Y	
132339		832 8TH ST		RICHMOND	P	1920	HIST.RES.	DOE-07-02-0041-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712N	07/18/02	6Y	
132343		833 8TH ST		RICHMOND	P	1925	HIST.RES.	DOE-07-02-0045-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712R	07/18/02	6Y	
072812	07-001311	927 8TH ST		RICHMOND	U	1925	PROJ.REVW.	HUD910722A	08/12/91	6Y	
132342		648 9TH ST		RICHMOND	P	1908	HIST.RES.	DOE-07-02-0044-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712Q	07/18/02	6Y	
129191	07-002532	670 9TH ST		RICHMOND	P	1905	HIST.RES.	DOE-07-01-0035-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009O	11/20/01	6Y	
070385	07-001306	726 9TH ST		RICHMOND	U	1920	PROJ.REVW.	HUD910508F	05/30/91	6Y	
076956	07-001734	719 ALAMO AVE		RICHMOND	U	1930	PROJ.REVW.	HUD920429C	05/27/92	6Y	
101819	07-001838	808 ALAMO AVE		RICHMOND	P	1936	PROJ.REVW.	HUD960408F	04/18/96	6Y	
014445	07-001201	201 ALVARADO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0393	11/05/79	1D	C
075789	07-001419	214 ALVARADO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0010	11/05/79	1D	A
076451	07-001711	215 ALVARADO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0371	11/05/79	1D	C
076377	07-001673	218 ALVARADO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0333	11/05/79	1D	C
075994	07-001524	233 ARIZONA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0115	11/05/79	1D	A
075852	07-001452	237 ARIZONA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0043	11/05/79	1D	A
075776	07-001411	311 ARIZONA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0002	11/05/79	1D	A
074480	07-001391	318 ARIZONA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0219	11/05/79	1D	C
132189		5953 ARLINGTON RD		RICHMOND	P	1951	HIST.RES.	DOE-07-02-0023-0000	07/10/02	6Y	
							PROJ.REVW.	HUD020702C	07/10/02	6Y	
130654		613 BANKS DR		RICHMOND	P	1950	HIST.RES.	DOE-07-02-0005-0000	03/20/02	6Y	
							PROJ.REVW.	HUD020314K	03/20/02	6Y	
065900	07-001227	330 BARRETT AVE	REHABILITATION RESID	RICHMOND	U		PROJ.REVW.	HUD890525R	06/15/89	6Y	
132464		334 BARRETT AVE		RICHMOND	P	1920	HIST.RES.	DOE-07-02-0046-0000	07/19/02	6Y	
							PROJ.REVW.	HUD020628C	07/19/02	6Y	
135575		1800 BARRETT AVE	ODYSSEY SCHOOL KINDERGARTEN AND DA	RICHMOND	P	1948	HIST.RES.	DOE-07-02-0073-0000	08/16/02	6Y	
							PROJ.REVW.	FHWA020717A	08/16/02	6Y	
135574		1828 BARRETT AVE		RICHMOND	P		HIST.RES.	DOE-07-02-0072-0000	08/16/02	6Y	

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							PROJ.REVW.	FHWA020717A	08/16/02	6Y	
096117	07-001830	2600 BARRETT AVE	RICHMOND CITY HALL	RICHMOND	M	1949	HIST.RES.	DSA-07-SPS-3116	04/17/95	7K	
							HIST.SURV.	4802-0020-0000		3S	
132187		1341 BATTERY ST		RICHMOND	P	1944	HIST.RES.	DOE-07-02-0021-0000	07/10/02	6Y	
							PROJ.REVW.	HUD020702M	07/10/02	6Y	
184563		1513 BISSEL AVE		RICHMOND	P		PROJ.REVW.	HUD100914K	09/29/10	6Y	
132337		214 BISSELL AVE		RICHMOND	P	1905	HIST.RES.	DOE-07-02-0039-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712L	07/18/02	6Y	
132341		221 BISSELL AVE		RICHMOND	P	1907	HIST.RES.	DOE-07-02-0043-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712P	07/18/02	6Y	
068473	07-001283	229 BISSELL AVE		RICHMOND	U	1918	PROJ.REVW.	HUD900801A	09/11/90	6Y	
069258	07-001288	317 BISSELL AVE		RICHMOND	U	1928	PROJ.REVW.	HUD901023H	11/26/90	6Y	
067492	07-001270	325 BISSELL AVE		RICHMOND	P	1915	PROJ.REVW.	HUD900618F	07/18/90	6Y	
069796	07-001294	409 BISSELL AVE		RICHMOND	U	1915	PROJ.REVW.	HUD901205B	12/27/90	6Y	
129182	07-002524	1608 BISSELL AVE		RICHMOND	P	1905	HIST.RES.	DOE-07-01-0027-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011005E	11/20/01	6Y	
012787	07-001163	BRICKYARD COVE RD	OLD BRICKWORKS	RICHMOND	P		HIST.SURV.	4802-0004-0000		7N	
067463	07-001265	260 BROADWAY		RICHMOND	P	1941	PROJ.REVW.	HUD900525D	06/19/90	6Y	
076229	07-001592	112 BUENA VISTA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0183	11/05/79	1D	C
076000	07-001527	126 BUENA VISTA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0118	11/05/79	1D	A
076430	07-001700	135 BUENA VISTA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0360	11/05/79	1D	C
075952	07-001503	207 BUENA VISTA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0094	11/05/79	1D	A
076441	07-001706	211 BUENA VISTA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0366	11/05/79	1D	C
076018	07-001536	221 BUENA VISTA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0127	11/05/79	1D	A
126471	07-002488	1308 CANAL (POINT POTRERO)	RICHMOND SHIPYARD FIRST AID STATIO	RICHMOND	DM		HIST.RES.	SHL-1032-0011	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0011	04/28/00	1D	AC
076402	07-001686	110 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0346	11/05/79	1D	C
076236	07-001596	111 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0187	11/05/79	1D	C
076404	07-001687	122 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0347	11/05/79	1D	C
076398	07-001684	128 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0344	11/05/79	1D	C
076397	07-001683	134 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0343	11/05/79	1D	C
075929	07-001491	200 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0082	11/05/79	1D	A
076447	07-001709	210 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0369	11/05/79	1D	C
075925	07-001489	218 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0080	11/05/79	1D	A
076010	07-001532	224 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0123	11/05/79	1D	A
076303	07-001636	230 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0296	11/05/79	1D	C
076166	07-001559	236 CASTRO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0150	11/05/79	1D	C
184600		2619 CENTER AVE		RICHMOND	P	1936	PROJ.REVW.	HUD100914I	09/29/10	6Y	
076297	07-001633	218 CHANSLOR AVE		RICHMOND	U	1915	PROJ.REVW.	HUD920325E	04/21/92	6Y	
070282	07-001304	332 CHANSLOR AVE		RICHMOND	U	1920	PROJ.REVW.	HUD910408H	05/09/91	6Y	
070323	07-001305	332 CHANSLOR AVE		RICHMOND	U	1920	PROJ.REVW.	HUD910408H	05/09/91	6Y	
127053	07-002497	1300 CHANSLOR AVE		RICHMOND	P	1919	HIST.RES.	DOE-07-00-0012-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606H	06/09/00	6Y	
141060		425 CHESLEY AVE		RICHMOND	P	1930	HIST.RES.	DOE-07-03-0029-0000	06/23/03	6Y	
							PROJ.REVW.	HUD030522B	06/23/03	6Y	
084842	07-001757	325 CIVIC CENTER PLAZA	RICHMOND PUBLIC LIBRARY; CARNEGIE	RICHMOND	C	1910	PROJ.REVW.	HUD060622A	06/23/06	2S	AC
							HIST.SURV.	4802-0027-0000	11/12/89	3S	
143440		403 CIVIC CENTER PLAZA	RICHMOND CIVIC CENTER AUDITORIUM	RICHMOND	M	1951	HIST.RES.	DOE-07-03-0036-0000	09/08/03	6Y	
							PROJ.REVW.	FCC030731F	09/08/03	6Y	
175034		6430 CLAREMONT AVE		RICHMOND	P	1922	PROJ.REVW.	HUD100323I	04/19/10	6Y	
							PROJ.REVW.	HUD100323I	04/19/10		
							PROJ.REVW.	HUD090225A	03/18/09	6Y	
076024	07-001539	220 CLARENCE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0130	11/05/79	1D	A
075901	07-001477	225 CLARENCE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0068	11/05/79	1D	A
075927	07-001490	421 CLARENCE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0081	11/05/79	1D	A
076440	07-001705	25 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0365	11/05/79	1D	C

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076438	07-001704	35 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0364	11/05/79	1D	C
075976	07-001515	119 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0106	11/05/79	1D	A
076305	07-001637	125 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0297	11/05/79	1D	C
076470	07-001722	223 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0382	11/05/79	1D	C
073913	07-001357	225 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0198	11/05/79	1D	C
073896	07-001352	226 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0264	11/05/79	1D	C
076453	07-001712	458 CONTRA COSTA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0372	11/05/79	1D	C
075935	07-001494	19 COTTAGE AVE		RICHMOND	P	0	PROJ.REVW.	HUD950807D	09/21/95	7K	
							HIST.SURV.	4802-0003-0085	11/05/79	1D	A
076207	07-001581	28 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0172	11/05/79	1D	C
076213	07-001584	36 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0175	11/05/79	1D	C
075986	07-001520	112 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0111	11/05/79	1D	A
074442	07-001380	116 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0208	11/05/79	1D	C
074444	07-001381	120 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0209	11/05/79	1D	C
075931	07-001492	124 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0083	11/05/79	1D	A
076321	07-001645	127 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0305	11/05/79	1D	C
075917	07-001485	130 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0076	11/05/79	1D	A
076420	07-001695	198 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0355	11/05/79	1D	C
075837	07-001444	201 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0035	11/05/79	1D	A
075839	07-001445	206 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0036	11/05/79	1D	A
074498	07-001399	207 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0269	11/05/79	1D	C
073649	07-001327	211 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0284	11/05/79	1D	C
076012	07-001533	217 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0124	11/05/79	1D	A
074397	07-001375	223 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0203	11/05/79	1D	C
075796	07-001423	227 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0013	11/05/79	1D	A
075938	07-001496	231 COTTAGE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0087	11/05/79	1D	A
076478	07-001727	1 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0412	11/05/79	1D	C
073897	07-001353	23 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0194	11/05/79	1D	C
076268	07-001615	27 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0248	11/05/79	1D	C
076246	07-001604	37 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0236	11/05/79	1D	C
075856	07-001454	41 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0045	11/05/79	1D	A
075787	07-001418	43 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0009	11/05/79	1D	A
075795	07-001422	47 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0012	11/05/79	1D	A
075946	07-001500	53 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0091	11/05/79	1D	A
076248	07-001605	55 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0237	11/05/79	1D	C
075874	07-001463	101 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0054	11/05/79	1D	A
075942	07-001498	111 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0089	11/05/79	1D	A
074414	07-001377	117 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0205	11/05/79	1D	C
073672	07-001329	123 CREST AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0286	11/05/79	1D	C
140793		CURRY ST	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0001	05/30/03	1D	A
140797		CURRY ST	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0002	05/30/03	1D	A
159883		1330 CUTTING BLVD	RICHMOND SHIPYARDS FIELD HOSPITAL	RICHMOND	P	1942	NAT.REG.	07-0049	02/10/06	7J	
076359	07-001664	211 DELFINO AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0324	11/05/79	1D	C
075958	07-001506	217 DELFINO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0097	11/05/79	1D	A
125203	07-002471	1500 DORNAN DR	S.S. RED OAK VICTORY	RICHMOND	P	1944	NAT.REG.	07-0039	07/18/00	3S	C
							HIST.RES.	NPS-00001674-0000	01/30/01	1S	C
082736	07-001745	E BROTHER ISLAND	EAST BROTHER LIGHT STATION, LIGHT	RICHMOND	F	1873	ST.HS.LDMK	07-0023	11/15/93	7L	
							HIST.RES.	SHL-0951-0002	11/15/93	1CL	
							HIST.RES.	NPS-71000138-0000	02/12/71	1S	
							FED.FND.PR	629.0-88-LHG-07-01		7L	
							FED.FND.PR	629.0-79-HPF-07-01		7L	
							HIST.SURV.	4802-0002-0000	01/01/71	1S	
075988	07-001521	33 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0112	11/05/79	1D	A
018650	07-001216	35 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0408	11/05/79	1D	C
074516	07-001408	59 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0278	11/05/79	1D	C

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
075911	07-001482	107 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0073	11/05/79	1D	A
076355	07-001662	111 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0322	11/05/79	1D	C
073833	07-001343	117 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0232	11/05/79	1D	C
075814	07-001432	123 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0022	11/05/79	1D	A
073878	07-001348	205 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0263	11/05/79	1D	C
014856	07-001205	209 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0397	11/05/79	1D	C
076416	07-001693	213 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0353	11/05/79	1D	C
076203	07-001579	215 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0170	11/05/79	1D	C
076274	07-001618	219 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0250	11/05/79	1D	C
074506	07-001403	225 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0273	11/05/79	1D	C
014442	07-001200	231 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0392	11/05/79	1D	C
076028	07-001541	301 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0132	11/05/79	1D	A
075781	07-001415	305 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0006	11/05/79	1D	A
076353	07-001661	311 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0321	11/05/79	1D	C
076284	07-001623	315 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0255	11/05/79	1D	C
076327	07-001648	323 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0308	11/05/79	1D	C
014934	07-001206	331 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0398	11/05/79	1D	C
076418	07-001694	339 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0354	11/05/79	1D	C
074514	07-001407	419 E RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0277	11/05/79	1D	C
075895	07-001474	221 E SCENIC AVE		RICHMOND	P	0	TAX.CERT.	537.9-07-0034	09/16/11	2D3	
							HIST.SURV.	4802-0003-0065	11/05/79	1D	A
076215	07-001585	121 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0176	11/05/79	1D	C
076231	07-001593	127 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0184	11/05/79	1D	C
076343	07-001656	129 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0316	11/05/79	1D	C
076345	07-001657	137 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0317	11/05/79	1D	C
076367	07-001668	140 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0328	11/05/79	1D	C
076252	07-001607	144 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0239	11/05/79	1D	C
073901	07-001354	145 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0195	11/05/79	1D	C
075905	07-001479	460 EDDY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0070	11/05/79	1D	A
132327		516 FLORIDA AVE		RICHMOND	P	1971	HIST.RES.	DOE-07-02-0029-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712B	07/18/02	6Y	
083098	07-001746	605 FLORIDA AVE		RICHMOND	P	1915	PROJ.REVW.	HUD930624A	07/26/93	6Y	
130653		724 FLORIDA AVE		RICHMOND	P	1917	HIST.RES.	DOE-07-02-0004-0000	03/20/02	6Y	
							PROJ.REVW.	HUD020314O	03/20/02	6Y	
132329		913 FLORIDA AVE		RICHMOND	P	1913	HIST.RES.	DOE-07-02-0031-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712D	07/18/02	6Y	
159881		1014 FLORIDA AVE	MARITIME CHILD DEVELOPMENT CENTER	RICHMOND	M	1943	PROJ.REVW.	HUD090323A	04/21/09	2S2	AB
							TAX.CERT.	537.9-07-0030	10/28/09	2D3	
							NAT.REG.	07-0048	02/10/06	7J	
066579	07-001240	3414 FLORIDA AVE		RICHMOND	U		PROJ.REVW.	HUD880330G	04/27/88	6Y	
136067		1909 FRANCISCO WY		RICHMOND	P	1950	HIST.RES.	DOE-07-03-0003-0000	01/06/03	6Y	
							PROJ.REVW.	HUD021216H	01/06/03	6Y	
126065	07-002473	5629 FRESNO ST		RICHMOND	U	1947	HIST.RES.	DOE-07-00-0002-0000	07/17/00	6Y	
							PROJ.REVW.	HUD000616D	07/17/00	6Y	
012788	07-001164	GARRARD BLVD	JAPANESE CAMP	RICHMOND	U		HIST.SURV.	4802-0005-0000		7R	
012789	07-001165	GARRARD BLVD	SANTA FE RAILROAD STATION	RICHMOND	P	1901	HIST.SURV.	4802-0006-0000		7R	
140805		GARRARD BLVD	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0006	05/30/03	1D	A
140808		GARRARD BLVD	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0007	05/30/03	1D	A
140804		GARRARD BLVD	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0005	05/30/03	1D	A
140801		GARRARD BLVD	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0004	05/30/03	1D	A
140800		GARRARD BLVD	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-0003	05/30/03	1D	A
130673		GARRARD BLVD	ATCHISON VILLAGE DEFENSE HOUSING P	RICHMOND	P	1941	HIST.RES.	NPS-03000473-9999	05/30/03	1S	A
							NAT.REG.	07-0045	04/03/02	3S	A
133050		2121 GAYNOR AVE		RICHMOND	P	1941	HIST.RES.	DOE-07-02-0063-0000	08/20/02	6Y	

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							PROJ.REVW.	HUD020808O	08/20/02	6Y	
131455		2810 GAYNOR AVE		RICHMOND	P	1938	HIST.RES.	DOE-07-02-0019-0000	06/17/02	6Y	
							PROJ.REVW.	HUD020607C	06/17/02	6Y	
127052	07-002496	334 GERTRUDE AVE		RICHMOND	P	1919	HIST.RES.	DOE-07-00-0011-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606G	06/09/00	6Y	
074394	07-001374	GIANT RD	GIANT POWDER COMPANY SITE; PT PINO	RICHMOND	D	1892	ST.HS.LDMK	07-0016	02/18/92	7L	
							HIST.RES.	SHL-1002-0001	02/18/92	1CL	
							HIST.SURV.	4802-0012-0000		7R	
014837	07-001203	125 GLENN ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0395	11/05/79	1D	C
076482	07-001729	126 GLENN ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0414	11/05/79	1D	C
076455	07-001713	356 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0373	11/05/79	1D	C
074502	07-001401	440 GOLDEN GATE AVE		RICHMOND	P	1932	HIST.RES.	NPS-79000472-0271	11/05/79	1D	C
							HIST.SURV.	4802-0003-0271	11/05/79	1D	C
076369	07-001669	442 GOLDEN GATE AVE		RICHMOND	P	0	HIST.RES.	CR	10/27/06	6C	
							NAT.REG.	07-0052	05/25/06	6W	
							HIST.RES.	NPS-79000472-0329	11/05/79	1D	C
							HIST.SURV.	4802-0003-0329	11/05/79	1D	C
076243	07-001602	454 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0191	11/05/79	1D	C
076480	07-001728	462 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0413	11/05/79	1D	C
076038	07-001546	509 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0137	11/05/79	1D	A
073828	07-001342	518 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0231	11/05/79	1D	C
075923	07-001488	519 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0079	11/05/79	1D	A
076244	07-001603	530 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0235	11/05/79	1D	C
074500	07-001400	533 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0270	11/05/79	1D	C
076307	07-001638	537 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0298	11/05/79	1D	C
014437	07-001198	539 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0390	11/05/79	1D	C
076030	07-001542	610 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0133	11/05/79	1D	A
075876	07-001464	616 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0055	11/05/79	1D	A
017949	07-001214	620 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0406	11/05/79	1D	C
015476	07-001212	626 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0404	11/05/79	1D	C
076217	07-001586	636 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0177	11/05/79	1D	C
075974	07-001514	706 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0105	11/05/79	1D	A
074520	07-001410	714 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0280	11/05/79	1D	C
075840	07-001446	715 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0037	11/05/79	1D	A
076162	07-001557	720 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0148	11/05/79	1D	C
076160	07-001556	724 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0147	11/05/79	1D	C
075893	07-001473	725 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0064	11/05/79	1D	A
076361	07-001665	730 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0325	11/05/79	1D	C
074494	07-001397	733 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0267	11/05/79	1D	C
076194	07-001574	739 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0165	11/05/79	1D	C
075835	07-001443	742 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0033	11/05/79	1D	A
073835	07-001344	743 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0233	11/05/79	1D	C
075998	07-001526	747 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0117	11/05/79	1D	A
075842	07-001447	748 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0038	11/05/79	1D	A
075798	07-001424	751 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0014	11/05/79	1D	A
076363	07-001666	754 GOLDEN GATE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0326	11/05/79	1D	C
129179	07-002521	801 GRIFFEN DR		RICHMOND	P	1950	HIST.RES.	DOE-07-01-0024-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011005B	11/20/01	6Y	
122835	07-002455	1200 HARBOUR WAY S		RICHMOND	U		HIST.RES.	DOE-07-99-0381-0000	03/17/99	6Y	
							PROJ.REVW.	EDA990205A	03/17/99	6Y	
012807	07-001180	1414 HARBOUR WAY S	ASSEMBLY PLANT, RICHMOND FORD MOTO	RICHMOND	P	1930	TAX.CERT.	537.9-07-0028	08/20/09	1S	AC
							TAX.CERT.	537.9-07-0009	11/01/00	7W	
							HIST.RES.	NPS-88000919-9999	06/23/88	1S	AC
							HIST.SURV.	4802-0024-0000	01/01/80	2S2	
							PROJ.REVW.	65000983	06/19/80	2S	
073778	07-001335	410 HARBOUR WY	NEW HOTEL CARQUINEZ, HOTEL DON, CA	RICHMOND	P	1926	TAX.CERT.	537.9-07-0031		7J	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
							PROJ.REVW.	FCC051024D	11/07/05	6Y	
							HIST.RES.	NPS-92000466-0000	05/07/92	1S	AC
							HIST.SURV.	4802-0026-0000	05/07/92	1S	AC
							NAT.REG.	07-0009	05/07/92	1S	AC
							TAX.CERT.	537.9-07-0001	06/16/89	2S3	
076022	07-001538	425 HILLSIDE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0129	11/05/79	1D	A
076006	07-001530	519 HILLSIDE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0121	11/05/79	1D	A
074471	07-001387	3 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0215	11/05/79	1D	C
076148	07-001550	10 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0141	11/05/79	1D	C
074473	07-001388	15 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0216	11/05/79	1D	C
076042	07-001548	16 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0139	11/05/79	1D	A
073759	07-001333	17 IDAHO ST		RICHMOND	P	0	TAX.CERT.	537.9-01-0030	11/16/87	2D3	
							HIST.SURV.	4802-0003-0226	11/05/79	1D	C
075866	07-001459	21 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0050	11/05/79	1D	A
076040	07-001547	22 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0138	11/05/79	1D	A
075828	07-001439	25 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0029	11/05/79	1D	A
076474	07-001725	28 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0410	11/05/79	1D	C
076205	07-001580	31 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0171	11/05/79	1D	C
076408	07-001689	41 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0349	11/05/79	1D	C
075907	07-001480	44 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0071	11/05/79	1D	A
076150	07-001551	45 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0142	11/05/79	1D	C
076026	07-001540	46 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0131	11/05/79	1D	A
074478	07-001390	49 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0218	11/05/79	1D	C
076192	07-001573	54 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0164	11/05/79	1D	C
075870	07-001461	55 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0052	11/05/79	1D	A
076325	07-001647	66 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0307	11/05/79	1D	C
076258	07-001610	68 IDAHO ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0242	11/05/79	1D	C
132332		611 LUCAS AVE		RICHMOND	P	1944	HIST.RES.	DOE-07-02-0034-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712G	07/18/02	6Y	
132334		621 LUCAS AVE		RICHMOND	P	1952	HIST.RES.	DOE-07-02-0036-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712J	07/18/02	6Y	
066631	07-001245	111 MACDONALD AVE		RICHMOND	U		PROJ.REVW.	HUD880502A	05/24/88	6Y	
012790	07-001166	201 MACDONALD AVE	LA HISPANO AMERICANA, LIQUOR STORE	RICHMOND	P	1928	HIST.SURV.	4802-0007-0000		7R	
162608		230 MACDONALD AVE		RICHMOND	P	1922	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162598		300 MACDONALD AVE		RICHMOND	P	1942	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162607		301 MACDONALD AVE		RICHMOND	P	1906	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162599		322 MACDONALD AVE		RICHMOND		1890	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162600		400 MACDONALD AVE		RICHMOND		1911	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162601		406 MACDONALD AVE		RICHMOND		1948	PROJ.REVW.	HUD060622A	06/23/06	6Y	
162604		420 MACDONALD AVE		RICHMOND	P	1950	PROJ.REVW.	HUD060622A	06/23/06	6Y	
184430		1025 MACDONALD AVE		RICHMOND	P	1920	PROJ.REVW.	HUD101210D	01/03/11	6Y	
184603		409 MAINE AVE		RICHMOND	P	1959	PROJ.REVW.	HUD100903C	09/23/10	6Y	
073487	07-001321	801 MAINE AVE		RICHMOND	U	1920	PROJ.REVW.	HUD911002A	10/31/91	6Y	
159884		2730 MAINE AVE	PULLMAN CHILD DEVELOPMENT CENTER/R	RICHMOND	M	1943	NAT.REG.	07-0050	02/10/06	7J	
073329	07-001320	MARIN AVE	ALVARADO, GRAND CANYON PARK; CA-CC	RICHMOND	M	1934	HIST.RES.	NPS-92000313-9999	04/09/92	1S	AC
							NAT.REG.	07-0006	04/09/92	1S	
073825	07-001339	200 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0288	11/05/79	1D	C
076296	07-001632	201 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0293	11/05/79	1D	C
076299	07-001634	203 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0294	11/05/79	1D	C
076301	07-001635	209 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0295	11/05/79	1D	C
076294	07-001630	215 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0292	11/05/79	1D	C
076292	07-001628	217 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0291	11/05/79	1D	C
075996	07-001525	316 MARINE ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0116	11/05/79	1D	A
075816	07-001433	410 MARINE ST		RICHMOND	U	0	HIST.SURV.	4802-0003-0023	11/05/79	1D	A
076443	07-001707	206 MARTINA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0367	11/05/79	1D	C
075960	07-001507	210 MARTINA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0098	11/05/79	1D	A

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
075791	07-001420	212 MARTINA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0011	11/05/79	1D	A
076412	07-001691	222 MARTINA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0351	11/05/79	1D	C
073827	07-001341	306 MARTINA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0289	11/05/79	1D	C
076008	07-001531	316 MARTINA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0122	11/05/79	1D	A
012791	07-001167	MCBRYDE AVE	GRAND CANYON, ALVARADO PARK	RICHMOND	M	1927	HIST.SURV.	4802-0008-0000		5S2	
152165		2135 MCDONALD AVE	PACIFIC BELL BLDG	RICHMOND	P	1923	HIST.RES.	DOE-07-04-0023-0000	11/05/04	6Y	
							PROJ.REVW.	FCC041012C	11/05/04	6Y	
129190	07-002531	4513 MCGLOTHEN WY		RICHMOND	P	1950	HIST.RES.	DOE-07-01-0034-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009N	11/20/01	6Y	
076319	07-001644	7 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0304	11/05/79	1D	C
076462	07-001718	11 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0378	11/05/79	1D	C
075887	07-001470	17 MONTANA ST	PT RICHMOND HOUSE	RICHMOND	P	1903	TAX.CERT.	537.9-07-0014	02/06/01	7J	
							HIST.SURV.	4802-0003-0061	11/05/79	1D	A
076460	07-001717	18 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0377	11/05/79	1D	C
076459	07-001716	24 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0376	11/05/79	1D	C
076458	07-001715	28 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0375	11/05/79	1D	C
076410	07-001690	34 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0350	11/05/79	1D	C
014775	07-001202	44 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0394	11/05/79	1D	C
076276	07-001619	78 MONTANA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0251	11/05/79	1D	C
076201	07-001578	318 MORGAN AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0169	11/05/79	1D	C
075968	07-001511	626 MORGAN AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0102	11/05/79	1D	A
129188	07-002529	215 MURDOCH ST		RICHMOND	P	1941	HIST.RES.	DOE-07-01-0032-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009L	11/20/01	6Y	
076406	07-001688	300 NEVADA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0348	11/05/79	1D	C
076219	07-001587	315 NEVADA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0178	11/05/79	1D	C
076286	07-001624	318 NEVADA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0256	11/05/79	1D	C
075785	07-001417	319 NEVADA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0008	11/05/79	1D	A
076184	07-001569	325 NEVADA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0160	11/05/79	1D	C
076473	07-001724	407 NEVADA AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0409	11/05/79	1D	C
076387	07-001678	219 NEVADA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0338	11/05/79	1D	C
075978	07-001516	233 NEVADA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0107	11/05/79	1D	A
076262	07-001612	239 NEVADA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0244	11/05/79	1D	C
075897	07-001475	243 NEVADA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0066	11/05/79	1D	A
076329	07-001649	330 NEVADA ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0309	11/05/79	1D	C
012792	07-001168	2002 NEVIN AVE	SOCIEDAD CATOLICA REGIONAL GUADALU	RICHMOND	P		HIST.SURV.	4802-0009-0000		7R	
074202	07-001361	3226 NEVIN AVE		RICHMOND	U	1940	PROJ.REVW.	HUD911202M	12/31/91	6Y	
076373	07-001671	1 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0331	11/05/79	1D	C
076250	07-001606	5 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0238	11/05/79	1D	C
076288	07-001625	9 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0257	11/05/79	1D	C
075885	07-001469	23 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0060	11/05/79	1D	A
075880	07-001466	27 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0057	11/05/79	1D	A
076445	07-001708	33 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0368	11/05/79	1D	C
076290	07-001626	39 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0258	11/05/79	1D	C
076180	07-001567	40 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0158	11/05/79	1D	C
076176	07-001565	50 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0156	11/05/79	1D	C
076221	07-001588	56 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0179	11/05/79	1D	C
074504	07-001402	102 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0272	11/05/79	1D	C
076034	07-001544	116 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0135	11/05/79	1D	A
076379	07-001674	117 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0334	11/05/79	1D	C
074496	07-001398	118 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0268	11/05/79	1D	C
014439	07-001199	122 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0391	11/05/79	1D	C
076158	07-001555	123 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0146	11/05/79	1D	C
074489	07-001395	207 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0265	11/05/79	1D	C
015159	07-001207	213 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0399	11/05/79	1D	C
076036	07-001545	219 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0136	11/05/79	1D	A
076152	07-001552	225 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0143	11/05/79	1D	C

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
075822	07-001436	226 NICHOLL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0026	11/05/79	1D	A
075793	07-001421	111 NICHOLL CT		RICHMOND	P	0	HIST.SURV.	4802-0003-0012	11/05/79	1D	A
132326		214 OHIO AVE		RICHMOND	P	1948	HIST.RES.	DOE-07-02-0028-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712A	07/18/02	6Y	
083355	07-001749	1637 OHIO AVE		RICHMOND	P	1941	PROJ.REVW.	HUD930701H	08/03/93	6Y	
083362	07-001753	1815 OHIO AVE		RICHMOND	P	1942	PROJ.REVW.	HUD930701L	08/03/93	6Y	
076295	07-001631	2033 OHIO AVE		RICHMOND	U	1926	PROJ.REVW.	HUD920325D	04/21/92	6Y	
090495	07-001772	2630 OHIO AVE		RICHMOND	P	1920	PROJ.REVW.	HUD940630A	08/02/94	6Y	
129184	07-002526	3954 OHIO AVE		RICHMOND	P	1944	HIST.RES.	DOE-07-01-0029-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009I	11/20/01	6Y	
081703	07-001741	534 OHIO ST	RESIDENCE	RICHMOND	U	1902	PROJ.REVW.	HUD940214C	05/17/94	6Y	
							PROJ.REVW.	HUD930407B	05/19/93	6Y	
075829	07-001440	13 OREGON ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0030	11/05/79	1D	A
076211	07-001583	21 OREGON ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0174	11/05/79	1D	C
076209	07-001582	25 OREGON ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0173	11/05/79	1D	C
075780	07-001414	29 OREGON ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0005	11/05/79	1D	A
075909	07-001481	35 OREGON ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0072	11/05/79	1D	A
073892	07-001350	101 PARK PL	RICHMOND BAKERY	RICHMOND	P	0	TAX.(NPS)	024583CA	02/08/83	2D	
							HIST.SURV.	4802-0003-0192	11/05/79	1D	C
076331	07-001650	105 PARK PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0310	11/05/79	1D	C
076237	07-001597	109 PARK PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0188	11/05/79	1D	C
076266	07-001614	115 PARK PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0246	11/05/79	1D	C
012793	07-001169	135 PARK PL	BALTIC BAR	RICHMOND	P	1900	HIST.SURV.	4802-0003-0260	11/05/79	1D	C
							HIST.SURV.	4802-0010-0000		3S	
012794	07-001170	145 PARK PL	OLD FIRE HOUSE AND JAIL	RICHMOND	P	1900	HIST.SURV.	4802-0003-0384	11/05/79	1D	C
							HIST.SURV.	4802-0011-0000		3S	
075812	07-001431	151 PARK PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0021	11/05/79	1D	A
074508	07-001404	157 PARK PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0274	11/05/79	1D	C
126301	07-002476	705 PAYNE DR		RICHMOND	P	1950	HIST.RES.	DOE-07-00-0004-0000	07/17/00	6Y	
							PROJ.REVW.	HUD000613E	07/17/00	6Y	
132336		515 PENNSYLVANIA AVE		RICHMOND	P	1917	HIST.RES.	DOE-02-07-0038-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712K	07/18/02	6Y	
132340		818 PENNSYLVANIA AVE		RICHMOND	P	1921	HIST.RES.	DOE-07-02-0042-0000	07/18/02	6Y	
							PROJ.REVW.	HUD0207120	07/18/02	6Y	
072794	07-001309	1607 PENNSYLVANIA AVE		RICHMOND	U	1930	PROJ.REVW.	HUD910715J	08/08/91	6Y	
075844	07-001448	208 PIEDMONT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0039	11/05/79	1D	A
076020	07-001537	209 PIEDMONT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0128	11/05/79	1D	A
076186	07-001570	219 PIEDMONT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0161	11/05/79	1D	C
076227	07-001591	220 PIEDMONT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0182	11/05/79	1D	C
076188	07-001571	225 PIEDMONT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0162	11/05/79	1D	C
121804	07-002078	POINT POTRERO	RICHMOND SHIPYARD DISTRICT	RICHMOND	P	1942	HIST.RES.	SHL-1032-9999	09/11/00	1CL	AC
							ST.HS.LDMK	07-0040	04/04/00	7L	AC
							HIST.RES.	NPS-00000364-9999	04/28/00	1S	AC
							NAT.REG.	07-0032	07/09/99	3S	AC
							PROJ.REVW.		06/04/81	2S2	
126469	07-002486	POINT POTRERO	RICHMOND SHIPYARD BASIN #5	RICHMOND	DM		HIST.RES.	SHL-1032-0009	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0009	04/28/00	1D	AC
126470	07-002487	POINT POTRERO	RICHMOND SHIPYARD CAFETERIA	RICHMOND	DM	1943	HIST.RES.	SHL-1032-0010	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0010	04/28/00	1D	AC
126472	07-002489	POINT POTRERO	STEEL FRAME BLDG	RICHMOND	DM	1970	HIST.RES.	SHL-1032-0012	08/11/00	1CL	
							HIST.RES.	NPS-00000364-0012	04/28/00	6X	
126461	07-002478	POINT POTRERO	RICHMOND SHIPYARD MACHINE SHOP	RICHMOND	DM	1942	HIST.RES.	SHL-1032-0001	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0001	04/28/00	1D	AC
126473	07-002490	POINT POTRERO	STEEL-FRAME BLDG/PORT OPERATIONS	RICHMOND	DM	1970	HIST.RES.	SHL-1032-0013	08/11/00	1CL	
							HIST.RES.	NPS-00000364-0013	04/28/00	6X	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
126463	07-002480	POINT POTRERO	RICHMOND SHIPYARD SHEET METAL SHOP	RICHMOND	DM	1942	HIST.RES.	SHL-1032-0003	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0003	04/28/00	1D	AC
126467	07-002484	POINT POTRERO	RICHMOND SHIPYARD BASIN #3	RICHMOND	DM		HIST.RES.	SHL-1032-0007	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0007	04/28/00	1D	AC
							PROJ.REVW.	65000984	06/04/81	2S	
126466	07-002483	POINT POTRERO	RICHMOND SHIPYARD BASIN #2	RICHMOND	D		HIST.RES.	SHL-1032-0006	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0006	04/28/00	1D	AC
126465	07-002482	POINT POTRERO	RICHMOND SHIPYARD BASIN #1	RICHMOND	D		HIST.RES.	SHL-1032-0005	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0005	04/28/00	1D	AC
126462	07-002479	POINT POTRERO	RICHMOND SHIPYARD GENERAL WAREHOUS	RICHMOND	D	1942	HIST.RES.	SHL-1032-0002	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0002	04/28/00	1D	AC
126464	07-002481	POINT POTRERO	RICHMOND SHIPYARD FORGE SHOP	RICHMOND	DM		HIST.RES.	SHL-1032-0004	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0004	04/28/00	1D	AC
126468	07-002485	POINT POTRERO	RICHMOND SHIPYARD BASIN #4	RICHMOND	DM		HIST.RES.	SHL-1032-0008	08/11/00	1CL	AC
							HIST.RES.	NPS-00000364-0008	04/28/00	1D	AC
075972	07-001513	36 RAILROAD AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0104	11/05/79	1D	A
076280	07-001621	40 RAILROAD AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0253	11/05/79	1D	C
076472	07-001723	54 RAILROAD AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0383	11/05/79	1D	C
074475	07-001389	64 RAILROAD AVE		RICHMOND	P		TAX.CERT.	537.9-07-0027	05/16/03	2D3	
							HIST.SURV.	4802-0003-0217	11/05/79	1D	C
073871	07-001346	78 RAILROAD AVE	78 RAILROAD AVENUE	RICHMOND	P	1904	TAX.(NPS)	013381CA810108	01/27/82	2D	
							HIST.SURV.	4802-0003-0261	11/05/79	1D	C
073875	07-001347	82 RAILROAD AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0262	11/05/79	1D	C
076395	07-001682	114 RAILROAD AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0342	11/05/79	1D	C
076002	07-001528	130 RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0119	11/05/79	1D	A
070105	07-001299	516 RIPLEY AVE		RICHMOND	U	1925	PROJ.REVW.	HUD910222H	03/18/91	6Y	
067021	07-001253	910 RIPLEY AVE		RICHMOND	U		PROJ.REVW.	HUD891201A	12/28/89	6Y	
166174		ROOSEVELT		RICHMOND	P	1933	PROJ.REVW.	HUD070525H	05/30/07	6Y	
083099	07-001747	1100 ROOSEVELT AVE		RICHMOND	P	1920	PROJ.REVW.	HUD930624B	07/26/93	6Y	
181872		1300 ROOSEVELT AVE		RICHMOND	P	1967	PROJ.REVW.	HUD110301A	03/07/11	6Y	
131201		2011 ROOSEVELT AVE		RICHMOND	P	1925	HIST.RES.	DOE-07-02-0010-0000	03/28/02	6Y	
							PROJ.REVW.	HUD020214J	03/28/02	6Y	
130655		331 S 13TH ST		RICHMOND	P	1904	HIST.RES.	DOE-07-02-0006-0000	03/20/02	6Y	
							PROJ.REVW.	HUD020314L	03/20/02	6Y	
131296		235 S 18TH ST		RICHMOND	P	1940	HIST.RES.	DOE-07-02-0015-0000	04/11/02	6Y	
							PROJ.REVW.	HUD020405B	04/11/02	6Y	
066900	07-001249	131 S 19TH ST	REHABILITATION BLDG	RICHMOND	U		PROJ.REVW.	HUD890921B	10/19/89	6Y	
184032		240 S 20TH ST		RICHMOND	P	1918	PROJ.REVW.	HUD100915D	10/01/10	6Y	
132466		270 S 22ND ST		RICHMOND	P	1948	HIST.RES.	DOE-07-02-0047-0000	07/19/02	6Y	
							PROJ.REVW.	HUD020628I	07/19/02	6Y	
129185	07-002527	653 S 22ND ST		RICHMOND	P	1941	HIST.RES.	DOE-07-01-0030-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009J	11/20/01	6Y	
179924		425 S 27TH ST		RICHMOND	P	1948	PROJ.REVW.	HUD100825B	09/08/10	6Y	
179925		520 S 28TH ST		RICHMOND	P	1956	PROJ.REVW.	HUD100825C	09/08/10	6Y	
066656	07-001246	529 S 29TH ST		RICHMOND	U		PROJ.REVW.	HUD880509A	06/02/88	6Y	
132782		615 S 29TH ST		RICHMOND	P	1950	HIST.RES.	DOE-07-02-0059-0000	08/05/02	6Y	
							PROJ.REVW.	HUD020731B	08/05/02	6Y	
012804	07-001178	S 33RD ST	CALIFORNIA CAP WORKS	RICHMOND	S	1874	HIST.SURV.	4802-0021-0000		7R	
079373	07-001739	362 S 35TH ST		RICHMOND	U	1942	PROJ.REVW.	HUD921013E	11/17/92	6Y	
065870	07-001226	404 S 36TH ST	HOUSING REHABILITATION	RICHMOND	U		PROJ.REVW.	HUD890504B	06/02/89	6Y	
132328		136 S 3RD ST		RICHMOND	P	1960	HIST.RES.	DOE-07-02-0030-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712C	07/18/02	6Y	
069259	07-001289	247 S 3RD ST		RICHMOND	U	1918	PROJ.REVW.	HUD901023I	11/26/90	6Y	
184566		253 S 3RD ST		RICHMOND	P	1918	PROJ.REVW.	HUD100914J	09/29/10	6Y	
166172		128 S 42ND ST		RICHMOND	P	1943	PROJ.REVW.	HUD070525F	05/30/07	6Y	
132769		136 S 42ND ST		RICHMOND	P	1943	HIST.RES.	DOE-07-02-0050-0000	08/05/02	6Y	

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							PROJ.REVW.	HUD020729J	08/05/02	6Y	
129189	07-002530	929 S 46TH ST		RICHMOND	P	1943	HIST.RES.	DOE-07-01-0033-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009M	11/20/01	6Y	
067016	07-001252	254 S 4TH ST		RICHMOND	U		PROJ.REVW.	HUD891121A	12/26/89	6Y	
076238	07-001598	332 S 4TH ST		RICHMOND	U	1941	PROJ.REVW.	HUD920326B	04/21/92	6Y	
074339	07-001368	358 S 50TH ST		RICHMOND	U	1941	HIST.RES.	DOE-07-92-0008-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
074340	07-001369	366 S 50TH ST		RICHMOND	U	1941	HIST.RES.	DOE-07-92-0007-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
074341	07-001370	374 S 50TH ST		RICHMOND	U	1941	HIST.RES.	DOE-07-92-0005-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
074342	07-001371	380 S 50TH ST		RICHMOND	U	1941	HIST.RES.	DOE-07-92-0004-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
127051	07-002495	300 S 6TH ST		RICHMOND	P	1942	HIST.RES.	DOE-07-00-0010-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606F	06/09/00	6Y	
126302	07-002477	322 S 6TH ST		RICHMOND	P	1923	HIST.RES.	DOE-07-00-0005-0000	07/17/00	6Y	
							PROJ.REVW.	HUD000613F	07/17/00	6Y	
127047	07-002491	328 S 6TH ST		RICHMOND	P	1949	HIST.RES.	DOE-07-00-0006-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606B	06/09/00	6Y	
127048	07-002492	341 S 6TH ST		RICHMOND	P	1926	HIST.RES.	DOE-07-00-0007-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606C	06/09/00	6Y	
127050	07-002494	345 S 6TH ST		RICHMOND	P	1923	HIST.RES.	DOE-07-00-0009-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606E	06/09/00	6Y	
127049	07-002493	300 S 7TH ST		RICHMOND	P	1942	HIST.RES.	DOE-07-00-0008-0000	06/09/00	6Y	
							PROJ.REVW.	HUD000606D	06/09/00	6Y	
076240	07-001600	420 S 7TH ST		RICHMOND	U	1941	PROJ.REVW.	HUD920326C	04/21/92	6Y	
132330		250 S 9TH ST		RICHMOND	P	1942	HIST.RES.	DOE-07-02-0032-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712E	07/18/02	6Y	
076293	07-001629	350 S 9TH ST		RICHMOND	U	1941	PROJ.REVW.	HUD920326D	04/21/92	6Y	
012797	07-001172	SAN FRANCISCO BAY	RED ROCK ISLAND SITE	RICHMOND	P		HIST.SURV.	4802-0014-0000		5S2	
066712	07-001247	1701 SAN JOAQUIN ST	SAN JOAQUIN TRANSITIONAL APARTMENT	RICHMOND	U		PROJ.REVW.	HUD880610A	07/13/88	6Y	
068780	07-001284	2301 SAN MATEO ST		RICHMOND	U	1939	PROJ.REVW.	HUD900905A	10/04/90	6Y	
132768		259 SANFORD AVE		RICHMOND	P	1927	HIST.RES.	DOE-07-02-0049-0000	08/05/02	6Y	
							PROJ.REVW.	HUD020729I	08/05/02	6Y	
076463	07-001719	25 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0379	11/05/79	1D	C
076465	07-001720	34 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0380	11/05/79	1D	C
075804	07-001427	101 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0017	11/05/79	1D	A
075913	07-001483	121 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0074	11/05/79	1D	A
076391	07-001680	125 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0340	11/05/79	1D	C
076347	07-001658	126 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0318	11/05/79	1D	C
076199	07-001577	132 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0168	11/05/79	1D	C
075881	07-001467	140 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0058	11/05/79	1D	A
073705	07-001331	150 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0224	11/05/79	1D	C
076357	07-001663	151 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0323	11/05/79	1D	C
075883	07-001468	162 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0059	11/05/79	1D	A
075783	07-001416	224 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0007	11/05/79	1D	A
076225	07-001590	228 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0181	11/05/79	1D	C
076371	07-001670	302 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0330	11/05/79	1D	C
075864	07-001458	310 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0049	11/05/79	1D	A
075802	07-001426	317 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0016	11/05/79	1D	A
076254	07-001608	401 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0240	11/05/79	1D	C
075889	07-001471	407 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0062	11/05/79	1D	A
075966	07-001510	417 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0101	11/05/79	1D	A
076256	07-001609	421 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0241	11/05/79	1D	C
015474	07-001211	435 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0403	11/05/79	1D	C
075872	07-001462	441 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0053	11/05/79	1D	A

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076487	07-001732	447 SANTA FE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0417	11/05/79	1D	C
076196	07-001575	44 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0166	11/05/79	1D	C
076351	07-001660	54 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0320	11/05/79	1D	C
073895	07-001351	60 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0193	11/05/79	1D	C
076335	07-001652	66 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0312	11/05/79	1D	C
076337	07-001653	70 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0313	11/05/79	1D	C
075915	07-001484	71 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0075	11/05/79	1D	A
073824	07-001338	77 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0229	11/05/79	1D	C
076175	07-001564	78 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0155	11/05/79	1D	C
075899	07-001476	81 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0067	11/05/79	1D	A
075777	07-001412	84 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0003	11/05/79	1D	A
075950	07-001502	85 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0093	11/05/79	1D	A
076383	07-001676	88 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0336	11/05/79	1D	C
076190	07-001572	89 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0163	11/05/79	1D	C
076315	07-001642	150 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0302	11/05/79	1D	C
073911	07-001356	156 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0197	11/05/79	1D	C
073917	07-001358	164 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0199	11/05/79	1D	C
073713	07-001332	169 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0225	11/05/79	1D	C
076476	07-001726	209 SCENIC AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0411	11/05/79	1D	C
075820	07-001435	19 STAIRLEY ST		RICHMOND	P	0	HIST.SURV.	4802-0003-0025	11/05/79	1D	A
075846	07-001449	1 STANDARD AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0040	11/05/79	1D	A
014427	07-001194	108 SUMMIT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0386	11/05/79	1D	C
076264	07-001613	321 SUMMIT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0245	11/05/79	1D	C
013071	07-001193	335 SUMMIT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0385	11/05/79	1D	C
076016	07-001535	343 SUMMIT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0126	11/05/79	1D	A
076154	07-001553	344 SUMMIT PL		RICHMOND	P	0	HIST.SURV.	4802-0003-0144	11/05/79	1D	C
156008		5625 SUTTER AVE	ALVARADO SCHOOL	RICHMOND	D	1948	PROJ.REVW.	FCC050906B	10/14/05	6Y	
073790	07-001336	37 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0227	11/05/79	1D	C
076457	07-001714	46 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0374	11/05/79	1D	C
076389	07-001679	50 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0339	11/05/79	1D	C
076004	07-001529	60 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0120	11/05/79	1D	A
074484	07-001393	66 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0221	11/05/79	1D	C
073667	07-001328	74 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0285	11/05/79	1D	C
014839	07-001204	83 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0396	11/05/79	1D	C
076381	07-001675	84 TERRACE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0335	11/05/79	1D	C
015435	07-001210	29 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0402	11/05/79	1D	C
076234	07-001595	137 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0186	11/05/79	1D	C
076171	07-001562	201 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0153	11/05/79	1D	C
075860	07-001456	221 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0047	11/05/79	1D	A
075962	07-001508	227 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0099	11/05/79	1D	A
075964	07-001509	249 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0100	11/05/79	1D	A
073946	07-001359	325 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0200	11/05/79	1D	C
075891	07-001472	327 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0063	11/05/79	1D	A
075831	07-001441	333 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0031	11/05/79	1D	A
075833	07-001442	335 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0032	11/05/79	1D	A
075848	07-001450	422 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0041	11/05/79	1D	A
076323	07-001646	436 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0306	11/05/79	1D	C
075800	07-001425	448 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0015	11/05/79	1D	A
075954	07-001504	519 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0095	11/05/79	1D	A
076432	07-001701	537 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0361	11/05/79	1D	C
076291	07-001627	601 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0290	11/05/79	1D	C
076198	07-001576	709 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0167	11/05/79	1D	C
075818	07-001434	715 TEWKSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0024	11/05/79	1D	A
075806	07-001428	143 TEWLSBURY AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0018	11/05/79	1D	A
075937	07-001495	210 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0086	11/05/79	1D	A
074369	07-001373	214 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0202	11/05/79	1D	C

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076178	07-001566	215 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0157	11/05/79	1D	C
076032	07-001543	220 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0134	11/05/79	1D	A
076486	07-001731	221 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0416	11/05/79	1D	C
076311	07-001640	222 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0300	11/05/79	1D	C
076426	07-001698	225 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0358	11/05/79	1D	C
076313	07-001641	229 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0301	11/05/79	1D	C
074491	07-001396	235 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0266	11/05/79	1D	C
075944	07-001499	237 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0090	11/05/79	1D	A
015424	07-001209	307 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0401	11/05/79	1D	C
075810	07-001430	308 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0020	11/05/79	1D	A
076278	07-001620	314 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0252	11/05/79	1D	C
074418	07-001379	318 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0207	11/05/79	1D	C
074467	07-001385	319 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0213	11/05/79	1D	C
075779	07-001413	327 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0004	11/05/79	1D	A
074518	07-001409	333 TUNNEL AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0279	11/05/79	1D	C
129187	07-002528	794 VENTURA ST		RICHMOND	P	1947	HIST.RES.	DOE-07-02-0011-0000	03/28/02	6Y	
							PROJ.REVW.	HUD020214K	03/28/02	6Y	
							HIST.RES.	DOE-07-01-0031-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011009K	11/20/01	6Y	
076223	07-001589	53 VINE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0180	11/05/79	1D	C
075982	07-001518	67 VINE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0109	11/05/79	1D	A
076424	07-001697	77 VINE AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0357	11/05/79	1D	C
065543	07-001222	1803 VIRGINIA		RICHMOND	U		PROJ.REVW.	HUD881115A	11/29/88	6Y	
132331		811 VIRGINIA AVE		RICHMOND	P	1960	HIST.RES.	DOE-07-02-0033-0000	07/18/02	6Y	
							PROJ.REVW.	HUD020712F	07/18/02	6Y	
068221	07-001282	1803 VIRGINIA AVE		RICHMOND	U		PROJ.REVW.	HUD88115A	11/29/88	6Y	
129180	07-002522	2111 VISALIA AVE		RICHMOND	P	1941	HIST.RES.	DOE-07-01-0025-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011005C	11/20/01	6Y	
012785	07-001161	W RICHMOND AVE	RICHMOND MUNICIPAL NATATORIUM, THE	RICHMOND	M	1925	ST.FND.PRG	619.0-HP-88-07-003	12/14/88	3	
							HIST.SURV.	4802-0003-0001	01/01/79	1D	
076260	07-001611	0 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0243	11/05/79	1D	C
075826	07-001438	1 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0028	11/05/79	1D	A
075919	07-001486	2 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0077	11/05/79	1D	A
074510	07-001405	24 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0275	11/05/79	1D	C
074512	07-001406	30 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0276	11/05/79	1D	C
075808	07-001429	101 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0019	11/05/79	1D	A
076436	07-001703	117 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0363	11/05/79	1D	C
076428	07-001699	125 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0359	11/05/79	1D	C
076232	07-001594	139 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0185	11/05/79	1D	C
075903	07-001478	145 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0069	11/05/79	1D	A
073615	07-001323	147 W RICHMOND AVE	ANDERSON HOTEL	RICHMOND	P	1910	TAX.CERT.	537.9-07-0002	07/28/83	2D3	
							HIST.SURV.	4802-0003-0281	11/05/79	1D	C
076484	07-001730	151 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0415	11/05/79	1D	C
075862	07-001457	201 W RICHMOND AVE	PT RICHMOND OLD BANK	RICHMOND	P		TAX.CERT.	537.9-07-0022	04/26/02	7J	
							HIST.SURV.	4802-0003-0048	11/05/79	1D	A
073820	07-001337	216 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0228	11/05/79	1D	C
076309	07-001639	222 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0299	11/05/79	1D	C
076349	07-001659	227 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0319	11/05/79	1D	C
075940	07-001497	228 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0088	11/05/79	1D	A
073837	07-001345	301 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0234	11/05/79	1D	C
075824	07-001437	309 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0027	11/05/79	1D	A
076014	07-001534	316 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0125	11/05/79	1D	A
074469	07-001386	322 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0214	11/05/79	1D	C
076173	07-001563	402 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0154	11/05/79	1D	C
017944	07-001213	404 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0405	11/05/79	1D	C
076341	07-001655	405 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0315	11/05/79	1D	C

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
075984	07-001519	408 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0110	11/05/79	1D	A
076317	07-001643	409 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0303	11/05/79	1D	C
076400	07-001685	414 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0345	11/05/79	1D	C
075858	07-001455	415 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0046	11/05/79	1D	A
018305	07-001215	421 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0407	11/05/79	1D	C
075990	07-001522	424 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0113	11/05/79	1D	A
076182	07-001568	429 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0159	11/05/79	1D	C
073826	07-001340	430 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0230	11/05/79	1D	C
076375	07-001672	435 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0332	11/05/79	1D	C
074412	07-001376	449 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0204	11/05/79	1D	C
015237	07-001208	465 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0400	11/05/79	1D	C
073642	07-001325	471 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0282	11/05/79	1D	C
076365	07-001667	527 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0327	11/05/79	1D	C
075956	07-001505	543 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0096	11/05/79	1D	A
076168	07-001560	548 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0151	11/05/79	1D	C
075933	07-001493	554 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0084	11/05/79	1D	A
076170	07-001561	568 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0152	11/05/79	1D	C
076333	07-001651	575 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0311	11/05/79	1D	C
073647	07-001326	576 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0283	11/05/79	1D	C
076449	07-001710	580 W RICHMOND AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0370	11/05/79	1D	C
134212		22 W RUBY ST		RICHMOND	P	1944	HIST.RES.	DOE-07-02-0064-0000	10/03/02	6Y	
							PROJ.REVW.	HUD021001A	10/03/02	6Y	
129181	07-002523	4109 WALL AVE		RICHMOND	P	1925	HIST.RES.	DOE-07-01-0026-0000	11/20/01	6Y	
							PROJ.REVW.	HUD011005D	11/20/01	6Y	
074335	07-001364	5013 WALL AVE	MIYAMOTO FLORIST	RICHMOND	U	1908	HIST.RES.	DOE-07-92-0011-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
074336	07-001365	5114 WALL AVE		RICHMOND	U	1927	HIST.RES.	DOE-07-92-0010-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
074337	07-001366	5120 WALL AVE	RIBINSON HOUSE	RICHMOND	U	1940	HIST.RES.	DOE-07-92-0006-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
074338	07-001367	5124 WALL AVE	WALL APARTMENTS	RICHMOND	U	1940	HIST.RES.	DOE-07-92-0009-0000	01/22/92	6Y	
							PROJ.REVW.	FHWA911216A	01/22/92	6Y	
066580	07-001241	3415 WALLER AVE		RICHMOND	U		PROJ.REVW.	HUD880330H	04/27/88	6Y	
012786	07-001162	WASHINGTON AVE	POINT RICHMOND HISTORIC DISTRICT	RICHMOND	U	1900	HIST.RES.	NPS-79000472-0000	11/05/79	1S	AC
							HIST.SURV.	4802-0003-9999	11/05/79	1S	AC
012798	07-001173	WASHINGTON AVE	HOTEL MAC	RICHMOND	P	1900	HIST.SURV.	4802-0015-0000		3S	
014431	07-001196	WASHINGTON AVE	PARK	RICHMOND	M	0	HIST.SURV.	4802-0003-0388	11/05/79	1D	C
075850	07-001451	18 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0042	11/05/79	1D	A
074482	07-001392	31 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0220	11/05/79	1D	C
074367	07-001372	32 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0201	11/05/79	1D	C
075992	07-001523	38 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0114	11/05/79	1D	A
075970	07-001512	39 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0103	11/05/79	1D	A
073606	07-001322	45 WASHINGTON AVE	CENTRAL POOL HALL BUILDING	RICHMOND	P	1904	TAX.CERT.	537.9-07-0006	12/14/82	2D3	
							HIST.SURV.	4802-0003-0259	11/05/79	1D	C
076239	07-001599	50 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0189	11/05/79	1D	C
073908	07-001355	100 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0196	11/05/79	1D	C
076468	07-001721	112 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0381	11/05/79	1D	C
076241	07-001601	130 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0190	11/05/79	1D	C
014434	07-001197	135 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0389	11/05/79	1D	C
076146	07-001549	136 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0140	11/05/79	1D	C
073681	07-001330	148 WASHINGTON AVE	RICHARDS (FAWN) HALL	RICHMOND	P	1901	TAX.CERT.	537.9-01-0002	04/25/86	2D3	
							HIST.SURV.	4802-0003-0223	11/05/79	1D	C
074487	07-001394	160 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0222	11/05/79	1D	C
074465	07-001384	210 WASHINGTON AVE	POINT RICHMOND OLD CITY HALL	RICHMOND	P	1908	TAX.CERT.	537.9-07-0020	04/03/02	7J	
							HIST.SURV.	4802-0003-0212	11/05/79	1D	C

	PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
	076422	07-001696	214 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0356	11/05/79	1D	C
	076414	07-001692	217 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0352	11/05/79	1D	C
	075980	07-001517	235 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0108	11/05/79	1D	A
	076393	07-001681	303 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0341	11/05/79	1D	C
	074463	07-001383	304 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0211	11/05/79	1D	C
	076489	07-001733	307 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0418	11/05/79	1D	C
	076339	07-001654	318 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0314	11/05/79	1D	C
	076385	07-001677	319 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0337	11/05/79	1D	C
	075878	07-001465	323 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0056	11/05/79	1D	A
	076434	07-001702	324 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0362	11/05/79	1D	C
	076272	07-001617	328 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0249	11/05/79	1D	C
	076156	07-001554	332 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0145	11/05/79	1D	C
	074446	07-001382	400 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0210	11/05/79	1D	C
	074416	07-001378	406 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0206	11/05/79	1D	C
	014429	07-001195	407 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0387	11/05/79	1D	C
	075921	07-001487	410 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0078	11/05/79	1D	A
	075868	07-001460	411 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0051	11/05/79	1D	A
	076282	07-001622	414 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0254	11/05/79	1D	C
	076270	07-001616	421 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0247	11/05/79	1D	C
	073760	07-001334	422 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0287	11/05/79	1D	C
	075948	07-001501	427 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0092	11/05/79	1D	A
	075854	07-001453	428 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0044	11/05/79	1D	A
	076164	07-001558	432 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0149	11/05/79	1D	C
07-000454	012783	~~07-001160~~	WESTERN DR	WINEHAVEN/POINT MOLATE	RICHMOND	F	1908	HIST.RES.	NPS-78000658-0000	10/02/78	1S	
								HIST.SURV.	4802-0001-0000	10/02/78	1S	
								PROJ.REVW.	65001103	05/19/78	2S	
	012800	07-001175	WESTERN DR	U.S. WHALING STATION, INDEPENDENT	RICHMOND	M		HIST.SURV.	4802-0017-0000		5S2	
07-000277	012799	~~07-001174~~	WESTERN DR	CHINESE FISH CAMP	RICHMOND	M	1880	HIST.SURV.	4802-0016-0000		5S2	
	129137	07-002519	53 WILLARD AVE		RICHMOND	P	1945	HIST.RES.	DOE-07-01-0022-0000	12/03/01	6Y	
								PROJ.REVW.	HUD011127G	12/03/01	6Y	
	070107	07-001301	210 WILLARD AVE		RICHMOND	U	1928	PROJ.REVW.	HUD910222J	03/18/91	6Y	
	070106	07-001300	223 WILLARD AVE		RICHMOND	U	1937	PROJ.REVW.	HUD910222I	03/18/91	6Y	
	131199		335 WILLARD AVE		RICHMOND	P	1930	HIST.RES.	DOE-07-02-0008-0000	03/28/02	6Y	
								PROJ.REVW.	HUD020214H	03/28/02	6Y	
	146640		5848 YALE AVE		RICHMOND	P	1942	HIST.RES.	DOE-07-04-0004-0000	05/06/04	6Y	
								PROJ.REVW.	HUD040416B	05/06/04	6Y	
	106755	07-001917		CUMMINGS SKYWAY, BRIDGE #28-0213	RODEO			HIST.RES.	DOE-07-97-0002-0000	01/17/97	6Y	
								PROJ.REVW.	FHWA961211A	01/17/97	6Y	
	106757	07-001918		CHRISTIE ROAD UNDERPASS BRIDGE, BR	RODEO			HIST.RES.	DOE-07-97-0004-0000	01/17/97	6Y	
								PROJ.REVW.	FHWA961211A	01/17/97	6Y	
	155394		534 1ST ST		RODEO	P	1928	PROJ.REVW.	HUD050822B	09/21/05	6Y	
	096095	07-001827	326 3RD ST	RODEO FIRE STATION	RODEO	M	1927	HIST.RES.	DSA-07-SPS-3284	03/16/95	6J	C
	106576	07-001915	100 CLAEYS LANE	CLAEYS RANCH	RODEO	P	1900	HIST.RES.	DOE-07-97-0001-0000	01/17/97	6Y	
								PROJ.REVW.	FHWA961211A	01/17/97	6Y	
	095488	07-001824	239 LAKE AVE		RODEO	P	1925	PROJ.REVW.	HUD950215A	04/11/95	6Y	
	079992	07-001740	154 LAKE ST		RODEO	U	1922	PROJ.REVW.	HUD930106M	02/03/93	6Y	
	140020		532 NAPA AVE		RODEO	P	1943	HIST.RES.	DOE-07-03-0027-0000	05/23/03	6Y	
								PROJ.REVW.	HUD030516A	05/23/03	6Y	
	162949		224 PACIFIC AVE		RODEO	P	1949	PROJ.REVW.	HUD060822G	08/28/06	6Y	
	010624	07-001131	PARKER AVE	SELBY SMELTER SITE	RODEO	U	1885	HIST.SURV.	4572-0001-0000		7R	
	174854		140 PARKER AVE	RODEO RIO THEATER	RODEO	P	1940	PROJ.REVW.	FCC081117A	01/06/08	6Y	
	160477		208 PARKER AVE		RODEO	P	1947	PROJ.REVW.	HUD060207F	02/09/06	6Y	
	072948	07-001315	470 PARKER AVE	LEFTY GOMEZ FIELD	RODEO	U		HIST.RES.	SPHI-CCO-009	05/08/91	7L	
								ST.HS.LDMK	07-0011	05/03/91	7L	
								ST.PT.INT.	07-0013	05/03/91	7L	

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
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SAN MATEO
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SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

1/27/2016 NWIC File No.: 15-0927

Jeremy Hall
NCE
P.O. Box 1760
Zephyr Cove, NV 89448

re: San Francisco Bay Trail at Point Molate (Segment A)

The Northwest Information Center received your record search request for the project area referenced above, located on the San Quentin USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.25 mile radius:

Archaeological resources within project area:	P-07-441 & 277.
Archaeological resources within 0.25 mile radius:	P-07-2645, 2646, & 2556.
Reports within project area:	S-22310, 6880, 40390, 7186, 2431, 30430, 38874, & 12270.
Reports within 0.25 mile radius:	S-2665, 30907, 25146, & 38753.
Other Reports within records search radius:	S-595, 848, 1978, 2458, 9462, 9583, 9795, 15529, 16660, 17835, 18217, 20395, 24840, 32596, & 33600. These reports are classified as Other Reports; reports with little or no field work or missing maps. The electronic maps do not depict study areas for these reports, however a list of these reports has been provided. In addition, you have not been charged any fees associated with these studies.

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed

Report Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: ☐ enclosed ☒ not requested ☐ nothing listed

OHP Historic Properties Directory:	☒ enclosed	☐ not requested	☐ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☒ enclosed	☐ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

*Notes:

-

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel
Researcher

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-000595		1974	Ronald F. King	A Report on the Status of Generally Available Data Regarding Archaeological, Ethnographic, and Historical Resources Within a Five Mile Wide Corridor Through Portions of Colusa, Yolo, Solano, and Contra Costa Counties, California		07-000091, 48-000009, 48-000010, 48-000011, 48-000012, 48-000013, 48-000018, 48-000020, 57-000130, 57-000131
S-000848	Other - Contract AA550-CT6-52	1977	David A. Fredrickson	A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources	The Anthropology Laboratory, Sonoma State College; Winzler & Kelly Consulting Engineers	
S-001978		1960	Anthony V. Aiello	The Islands of Contra Costa		
S-002431	Submitter - ARS 81-06	1981	William Roop	Archaeological reconnaissance of the Red Rock Marina at Castro Point, Richmond (letter report)	Archaeological Resource Service	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-002458		1981	Suzanne Marie Ramiller, Neil Ramiller, Roger Werner, and Suzanne Stewart	Overview of Prehistoric Archaeology for the Northwest Region, California Archaeological Sites Survey: Del Norte, Humboldt, Mendocino, Lake, Sonoma, Napa, Marin, Contra Costa, Alameda	Northwest Regional Office, California Archaeological Sites Survey; Anthropological Studies Center, Sonoma State University	01-000080, 01-000084, 01-000086, 01-000104, 01-000119, 01-000124, 01-000125, 01-000126, 01-000127, 01-000137, 01-000139, 01-002053, 01-002104, 07-000047, 07-000079, 07-000080, 07-000081, 07-000082, 07-000092, 07-000093, 07-000105, 07-000131, 07-000146, 07-000147, 07-000148, 07-000149, 07-000150, 07-000168, 07-000173, 07-000175, 07-000177, 07-000185, 07-000186, 07-000190, 07-000323, 07-000440, 07-000447, 07-000448, 07-000449, 07-000462, 07-000470, 07-000474, 07-000476, 07-000481, 07-000674, 07-000710, 07-000724, 07-004621, 08-000015, 08-000018, 08-000021, 08-000090, 12-000125, 12-000175, 12-000186, 12-000194, 12-000199, 12-000202, 12-000207, 12-000209, 12-000210, 12-000211, 12-000263, 12-000264, 12-000266, 12-000336, 12-000442, 12-000445, 12-000458, 17-000006, 17-000026, 17-000035, 17-000072, 17-000114, 17-000177, 17-000286, 17-000287, 17-000289, 17-000290, 17-000307, 17-000320, 17-000392, 17-000407, 17-000437, 17-000446, 17-000470, 17-000531, 17-000535, 17-000546, 17-000550, 17-000551, 17-000554, 17-000572, 17-000610, 17-000639, 17-000640, 17-000673, 17-000787, 21-000017, 21-000034, 21-000039, 21-000051, 21-000053, 21-000057, 21-000058, 21-000106, 21-000143, 21-000163, 21-000177, 21-000217, 21-000221, 21-000235, 21-000242, 21-000245, 21-000252, 21-000262, 21-000283, 21-000290, 21-000291, 21-000295, 21-000332, 21-000335, 21-000342, 21-000346, 21-000347, 21-000368, 21-000369, 21-000370, 21-000651, 21-000653, 21-002539, 23-000143, 23-000387, 23-000450, 23-000475, 23-000478, 23-000492, 23-000534,

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
						23-000535, 23-000536, 23-000537, 23-000539, 23-000590, 23-000786, 23-000789, 23-000790, 23-000791, 23-000792, 23-000793, 23-000796, 23-000835, 23-001034, 23-001060, 23-001063, 23-001520, 23-002898, 23-002915, 23-002936, 23-002945, 28-000015, 28-000027, 28-000028, 28-000029, 28-000032, 28-000045, 28-000061, 28-000063, 28-000066, 28-000077, 28-000088, 28-000092, 28-000093, 28-000097, 28-000123, 28-000125, 28-000150, 28-000199, 28-000209, 28-000218, 28-000222, 28-000310, 28-000311, 28-000329, 28-000330, 28-000362, 28-000418, 28-000419, 28-000420, 28-000421, 28-000422, 28-000428, 28-000828, 28-000912, 49-000073, 49-000079, 49-000112, 49-000135, 49-000194, 49-000228, 49-000264, 49-000265, 49-000271, 49-000291, 49-000292, 49-000295, 49-000318, 49-000329, 49-000330, 49-000340, 49-000342, 49-000360, 49-000362, 49-000363, 49-000369, 49-000371, 49-000423, 49-000424, 49-000434, 49-000483, 49-000512, 49-000521, 49-000548, 49-000620, 49-000653, 49-000671, 49-000682, 49-000683, 49-000730, 49-000731, 49-000732, 49-000733, 49-000846, 49-000860, 49-000887, 49-000913, 49-000914, 49-000915, 49-000916, 49-000917, 49-000959, 49-000970, 49-000976, 49-000978, 49-000981, 49-000982, 49-000983, 49-000990, 49-000992, 49-001081, 49-001082, 49-001083, 49-001084, 49-001085, 49-001086, 49-001087, 49-001109, 49-001121
S-002665		1981	William Breece	Archaeological Survey for the Richmond Lube Oil Project, Richmond, California.	Environmental Science Associates	
S-006880		1981	David Chavez	Cultural Resources Assessment for Replacement of Water Distribution System, Point Molate, Richmond, California	David Chavez & Associates	07-000161, 07-000162, 07-000454, 07-000455

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-007186	Other - Contract No. N62474-85-M-1179	1985	David Chavez and John Holson	Cultural/Archaeological Resources Investigation at the Naval Supply Center Fuel Department, Point Molate, Contra Costa County, California (Contract No. N62474-85-M-1179)	David Chavez & Associates	07-000161, 07-000162, 07-000277, 07-000454, 07-000455
S-009462		1977	Teresa Ann Miller	Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties	San Francisco State University	07-000323, 21-000087, 21-000376, 21-000378, 21-000379, 21-000380, 21-000381, 21-000382, 21-000383, 21-000384, 21-000386, 21-000387, 21-000388, 21-000389, 21-000390, 21-000391, 21-000392, 21-000393, 21-000394, 21-000395, 21-000396, 21-000397, 21-000398, 21-000399, 21-000400, 21-000401, 21-000402, 21-000546, 23-000789, 23-000790, 49-000629, 49-000785, 49-000787
S-009583		1978	David W. Mayfield	Ecology of the Pre-Spanish San Francisco Bay Area	San Francisco State University	
S-009795		1986	Thomas Lynn Jackson	Late Prehistoric Obsidian Exchange in Central California	Stanford University	06-000025, 07-000047, 07-000080, 07-000188, 07-000440, 17-000320, 17-000601, 21-000163, 21-000218, 21-000235, 21-000242, 21-000283, 21-000290, 21-000368, 21-000423, 21-000628, 23-001589, 23-001659, 23-003068, 23-003119, 28-000015, 28-000068, 28-000199, 28-000205, 28-000828, 49-000135, 49-000360, 49-000423, 49-000424, 49-000518, 49-000521, 49-000533, 49-000536, 49-000558, 49-000801, 57-000114
S-012270	Submitter - LSA Project #FDA001	1990	Beth Padon, Scott Crownover, Jane Rosenthal, Jason Marmor, and Pat Jertberg	Technical Appendix, Cultural Resources Assessment, Chevron Modernization Project	LSA Associates, Inc.	07-000157, 07-000162, 07-000441, 07-004673, 07-004674, 07-004675, 07-004676, 07-004677, 07-004678, 07-004679
S-012270a		1990		Paleontological Resource Assessment, Chevron Richmond Refinery, Pt. Richmond, CA	LSA Associates, Inc.	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-015529		1993	Robert L. Gearhart II, Clell L. Bond, Steven D. Hoyt, James H. Cleland, James Anderson, Pandora Snethcamp, Gary Wesson, Jack Neville, Kim Marcus, Andrew York, and Jerry Wilson	California, Oregon, and Washington: Archaeological Resource Study	Espey, Huston & Associates, Inc.; Dames & Moore	01-000033, 01-000034, 01-000084, 01-000086, 01-000104, 07-000133, 07-000173, 07-000175, 07-000177, 17-000072, 17-000392, 21-000048, 21-001915, 23-001704, 27-000100, 27-000236, 27-000335, 27-000356, 27-000386, 27-000485, 38-000028, 38-000072, 38-000085, 38-000098, 41-000080, 41-000265, 44-000179
S-016660		1992	Jeffrey B. Fentress	Prehistoric Rock Art of Alameda and Contra Costa Counties, California	California State University, Hayward	01-000035, 01-000039, 01-000071, 01-000080, 01-000128, 01-000137, 01-000138, 01-000144, 01-000195, 01-000198, 01-000199, 01-002112, 07-000029, 07-000094, 07-000189, 07-000193, 07-000212, 07-000216, 07-000219, 07-000230, 07-000242, 07-000255, 07-000260, 07-000271, 07-000301, 07-000302, 07-000323, 07-000344, 07-000345, 07-000346, 07-000347, 07-000348, 07-000356, 07-000362, 07-000374, 07-000725, 07-000726, 07-000727, 07-000730, 07-000734, 07-000736, 07-000738, 07-000739
S-017835		1975	Judy Myers Suchey	Biological Distance of Prehistoric Central California Populations Derived from Non-Metric Traits of the Cranium	University of California, Riverside	01-000086, 01-000104, 01-000105, 06-000025, 07-000080, 07-000081, 07-000083, 07-000087, 21-000017, 21-000193, 21-000242, 21-000252, 48-000010, 57-000145
S-018217		1996	Glenn Gmoser	Cultural Resource Evaluations for the Caltrans District 04 Phase 2 Seismic Retrofit Program, Status Report: April 1996	Caltrans	01-000014, 01-000023, 01-000227, 07-000108, 07-000119, 38-000002, 38-000004, 41-000273, 43-000106, 43-000297, 43-000624, 43-001078, 44-000010, 44-000201, 44-000300, 49-000195

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-020395		1998	Donna L. Gillette	PCNs of the Coast Ranges of California: Religious Expression or the Result of Quarrying?	California State University, Hayward	07-000094, 07-000323, 12-000050, 17-000071, 17-001315, 21-000087, 21-000376, 21-000378, 21-000379, 21-000381, 21-000382, 21-000383, 21-000384, 21-000386, 21-000387, 21-000388, 21-000389, 21-000390, 21-000391, 21-000392, 21-000393, 21-000394, 21-000395, 21-000396, 21-000397, 21-000398, 21-000399, 21-000400, 21-000401, 21-000402, 21-000419, 21-000433, 21-000546, 21-000620, 21-000621, 21-000624, 21-000661, 23-000434, 23-000809, 23-000810, 23-001698, 23-001725, 23-001792, 23-001798, 23-001799, 23-001803, 23-001804, 23-001930, 23-001942, 23-001950, 23-001963, 35-000013, 43-000067, 43-000080, 43-000287, 43-000289, 43-000504, 49-000046, 49-000240, 49-000533, 49-000550, 49-000629, 49-000785, 49-000787, 49-000868, 49-000960, 49-000975, 49-001004, 49-001087, 49-001239, 49-002121
S-022310		1999	Randy Wiberg, Suzanne Baker, David G. Bieling, Jerry Doty, Jennifer A. Ferneau, Cristi Assad Hunter, Laurence H. Shoup, Daniel Shoup, Thomas A. Wake, Brian Wickstrom, and Eric Wohlgemuth	Cultural Resources Evaluation and Impact Mitigation Program for the Western Drive Pipeline Replacement Project Near Point Molate, Contra Costa, California	Holman & Associates; Archaeological/Historical Consultants	07-000160, 07-000441
S-024840		2002		Final Environmental Impact Statement - Environmental Impact Report for the Disposal and Reuse of Fleet and Industrial Supply Center, Naval Fuel Depot, Point Molate.	Southwest Division, Naval Facilities Engineering Command; City of Richmond	07-000161, 07-000162, 07-000277, 07-000454, 07-000455
S-025146		2002	Stacie Reutter	Auger Testing at Ferry Point II Cell Tower Site in Richmond, Contra Costa County, California	Garcia & Associates	07-002556
S-030430	Caltrans - EA 0438U3	2004	James M. Allan, Diane Cooper, Adam Marlow, Jenni Price, and Tom Young	Archaeological Survey Report, Richmond - San Rafael Bridge Seismic Retrofit Project, Contra Costa and Marin Counties, CC/MRN 580 PM 6.1-7.8; 0.0/2.6, EA 0438U3	William Self Associates, Inc.	07-000162, 07-000441, 07-002556, 07-002645, 07-002646

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-030907	Caltrans - EA 43-984433	2004	Christopher McMorris	Caltrans Historic Bridge Inventory Update: Metal Truss, Moveable, and Steel Arch Bridges, Contract: 43A0086, Task Order: 01, EA: 43-984433, Volume I: Report and Figures	JRP Historical Consulting	01-003158, 01-003190, 01-010835, 01-011433, 23-004262, 27-001805, 28-001020, 35-000383, 38-001339, 38-002455, 38-004878, 49-002862, 49-002864, 49-002865, 49-002866, 49-002867, 49-002870, 49-004522
S-032596	Caltrans - EA No. 447600; Other - Contract #04A2098	2006	Randall Milliken, Jerome King, and Patricia Mikkelsen	The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways	Consulting in the Past; Far Western Anthropological Research Group, Inc.	
S-033600		2007	Jack Meyer and Jeff Rosenthal	Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4	Far Western Anthropological Research Group, Inc.	01-000001, 01-000002, 01-000014, 01-000063, 01-000064, 01-000067, 01-000080, 01-000124, 01-000139, 01-000140, 01-001795, 01-002110, 01-002160, 01-002162, 01-002245, 07-000019, 07-000024, 07-000037, 07-000047, 07-000075, 07-000079, 07-000088, 07-000089, 07-000108, 07-000182, 07-000185, 07-000186, 07-000217, 07-000239, 07-000401, 07-000721, 21-000010, 21-000048, 21-002615, 28-000009, 28-000028, 28-000301, 28-000967, 38-000006, 38-000028, 38-000101, 38-000102, 38-000119, 41-000080, 41-000284, 43-000016, 43-000189, 43-000296, 43-000308, 43-000310, 43-000423, 43-000424, 43-000448, 43-000451, 43-000485, 43-000561, 43-000604, 43-000608, 43-000614, 43-000623, 43-001015, 43-001058, 43-001080, 43-001163, 43-001194, 43-001576, 48-000007, 48-000157
S-038753	Caltrans - E-FIS Project Number 0400000002	2011	Doulgas Bright	Historical Resources Compliance Report, replacement of the existing Richmond - San Rafael Bridge (RSRB) Maintenance Building (building #1865), 4-CC-580 P.M. 6.0-6.3 E-FIS Project Number 0400000002	Caltrans, District 4	07-003119

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-038874	Caltrans - E-FIS #0400000483 (EA 1A3201)	2012	Leslie Smirnoff Sakowicz	Historic Property Survey Report, Scofield Detour Plan revalidation in the City of Richmond, Contra Costa County, California, 04-CC-580 P.M. 5.8/6.3 E-FIS Project Number: 0400000483 (EA 1A3201)	Caltrans, District 4	07-000441, 07-002556
S-038874a		2012	Leslie Smirnoff Sakowicz	Archaeological Survey Report for the Scofield Detour Plan Revalidation, In the City of Richmond, Contra Costa County, California, 04-CCO-580 PM 5.8/6.3, EA 1A3201, EFIS No. 0400000483	Caltrans, District 04	
S-040390		2009		Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment	Analytical Environmental Services	07-000161, 07-000162, 07-000277, 07-000441, 07-000454, 07-000455, 07-001160, 07-001174, 07-003066, 07-003070, 07-003074, 07-003079, 07-003080, 07-003085, 07-004544, 07-004545, 07-004546, 07-004547, 07-004548, 07-004549, 07-004550, 07-004551, 07-004552, 07-004553, 07-004554, 07-004555, 07-004556, 07-004557, 07-004558, 07-004559, 07-004560, 07-004561, 07-004562, 07-004563, 07-004565, 07-004566, 07-004567, 07-004568, 07-004569, 07-004570, 07-004571, 07-004572, 07-004573, 07-004574, 07-004575, 07-004576, 07-004577, 07-004578, 07-004579, 07-004580, 07-004581, 07-004582, 07-004583, 07-004584, 07-004585, 07-004586, 07-004587, 07-004588, 07-004589, 07-004590, 07-004591, 07-004592, 07-004593
S-040390a		2009	Mike Taggart and Damon Haydu	Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume II: Archaeological Resources	Analytical Environmental Services	

Report Detail: S-000595

Identifiers

Report No.: S-000595
Other IDs:
Cross-refs:

Citation information

Author(s): Ronald F. King
Year: 1974 (Dec)
Title: A Report on the Status of Generally Available Data Regarding Archaeological, Ethnographic, and Historical Resources Within a Five Mile Wide Corridor Through Portions of Colusa, Yolo, Solano, and Contra Costa Counties, California
Affliliation:
No. pages: 9
No. maps: 0
Attributes: Literature search
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Not-mappable report. There are no maps showing the location of the project in this report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000091	CA-CCO-000149	isolate
P-48-000009	CA-SOL-000001	Petersen 1
P-48-000010	CA-SOL-000002	Peterson 2
P-48-000011	CA-SOL-000003	Petersen 3
P-48-000012	CA-SOL-000004	Petersen, Schmeiser
P-48-000013	CA-SOL-000005	Petersen 5
P-48-000018	CA-SOL-000010	SW-10
P-48-000020	CA-SOL-000012	Campbell Site
P-57-000130	CA-YOL-000161	PGE-16
P-57-000131	CA-YOL-000162	PGE-17

No. resources: 10
Has informals: No

Location information

County(ies): Colusa, Contra Costa, Solano, Yolo
USGS quad(s): Antioch North, Dozier, Esparto, Wildwood School, Winters, Woodward Island
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	9/10/2015	hagell

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-000848

Identifiers

Report No.: S-000848

Other IDs:	*Type*	*Name*
	Other	Contract AA550-CT6-52

Cross-refs:

Citation information

Author(s): David A. Fredrickson

Year: 1977

Title: A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources

Affliliation: The Anthropology Laboratory, Sonoma State College; Winzler & Kelly Consulting Engineers

No. pages: 223

No. maps: 0

Attributes: Management/planning, Other research

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

Santa Barbara, San Luis Obispo, and Ventura counties are also within the study area. 9880 prehistoric and historic resources were identified in the 17 counties when the report was written in 1977. There were no location maps in the report.

Associated resources

No. resources: 0

Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, Napa, Other, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Del Norte Co., ~All quads - Humboldt Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - Monterey Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Solano Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	12/9/2015	hagell

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	12/9/2015	hagell	edited database

Record status: Verified

Report Detail: S-001978

Identifiers

Report No.: S-001978
Other IDs:
Cross-refs:

Citation information

Author(s): Anthony V. Aiello
Year: 1960 (Jan)
Title: The Islands of Contra Costa
Affliliation:
No. pages: 12
No. maps: 0
Attributes: Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): Antioch North, Antioch South, Benicia, Bouldin Island, Brentwood, Briones Valley, Byron Hot Springs, Clayton, Clifton Court Forebay, Diablo, Dublin, Hayward, Honker Bay, Jersey Island, Las Trampas Ridge, Livermore, Mare Island, Oakland East, Petaluma Point, Richmond, San Quentin, Tassajara, Vine Hill, Walnut Creek, Woodward Island
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	9/17/2015	mikulikc	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	9/17/2015	mikulikc	corrected quads in location tab
	9/17/2015	mikulikc	database incomplete: no affiliation submitted

Record status: Verified

Report Detail: S-002431

Identifiers

Report No.: S-002431

Other IDs:	*Type*	*Name*
	Submitter	ARS 81-06

Cross-refs:

Citation information

Author(s): William Roop
Year: 1981 (Jan)
Title: Archaeological reconnaissance of the Red Rock Marina at Castro Point, Richmond (letter report)
Affliliation: Archaeological Resource Service
No. pages: 3
No. maps: 1
Attributes: Archaeological, Field study
Inventory size: c 5 ac
Disclosure: Not for publication
Collections: No

General notes

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	1/11/2016	simsa

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-002458

Identifiers

Report No.: S-002458
Other IDs:
Cross-refs:

Citation information

Author(s): Suzanne Marie Ramiller, Neil Ramiller, Roger Werner, and Suzanne Stewart
Year: 1981 (Jan)
Title: Overview of Prehistoric Archaeology for the Northwest Region, California Archaeological Sites Survey: Del Norte, Humboldt, Mendocino, Lake, Sonoma, Napa, Marin, Contra Costa, Alameda
Affliliation: Northwest Regional Office, California Archaeological Sites Survey; Anthropological Studies Center, Sonoma State University
No. pages: 420
No. maps:
Attributes: Archaeological, Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Not-mappable report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000080	CA-ALA-000060	Castro Valley
P-01-000084	CA-ALA-000307	West Berkeley Shell Mound
P-01-000086	CA-ALA-000309	Emeryville Shellmound
P-01-000104	CA-ALA-000328	Nelson's 328
P-01-000119	CA-ALA-000389	Site #1
P-01-000124	CA-ALA-000394	Pleasanton Meadows Site
P-01-000125	CA-ALA-000396	Noble's Rest Stop
P-01-000126	CA-ALA-000398	ICR-WR-4
P-01-000127	CA-ALA-000399	ICR-WR-5
P-01-000137	CA-ALA-000410	ICR-WR-16
P-01-000139	CA-ALA-000413	Santa Rita Village
P-01-002053	CA-ALA-000300	
P-01-002104	CA-ALA-000397	ICR-WR-3
P-07-000047	CA-CCO-000030	
P-07-000079	CA-CCO-000137	Monument
P-07-000080	CA-CCO-000138	Hotchkiss Mound
P-07-000081	CA-CCO-000139/H	Simone Mound
P-07-000082	CA-CCO-000140	Bethel Tract
P-07-000092	CA-CCO-000150	Veale Tract #1
P-07-000093	CA-CCO-000151	
P-07-000105	CA-CCO-000222/H	Keller Ranch House Complex
P-07-000131	CA-CCO-000250	Nelson Survey Map #250a
P-07-000146	CA-CCO-000267	Nelson No. 267
P-07-000147	CA-CCO-000268	Voided, see P-07-000462
P-07-000148	CA-CCO-000269	Nelson No. 269
P-07-000149	CA-CCO-000270	Nelson No. 270
P-07-000150	CA-CCO-000271	Nelson No. 271
P-07-000168	CA-CCO-000290	Nelson No. 290
P-07-000173	CA-CCO-000295	Nelson No. 295
P-07-000175	CA-CCO-000298	Nelson's No. 298, Stege
P-07-000177	CA-CCO-000300	Nelson's Survey 300
P-07-000185	CA-CCO-000308	Stone Valley Site
P-07-000186	CA-CCO-000309	The Rossmoor Site
P-07-000190	CA-CCO-000352	Diablo Road Site
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional

P-07-000440	CA-CCO-000259	Barker's Rodeo
P-07-000447	CA-CCO-000389	492-1-A
P-07-000448	CA-CCO-000390	492-2-A
P-07-000449	CA-CCO-000391	492-3-B
P-07-000462	CA-CCO-000655	Nelson's 268B
P-07-000470	CA-CCO-000372	[none]
P-07-000474	CA-CCO-000392	492-4-B
P-07-000476	CA-CCO-000698	Nelson No. 259
P-07-000481	CA-CCO-000356	
P-07-000674	CA-CCO-000311	
P-07-000710	CA-CCO-000349	Void, see P-07-000323
P-07-000724	CA-CCO-000377	SL-1
P-07-004621		#1 Claeys Ranch
P-08-000015	CA-DNO-000011/H	Ta'gia n te (OHP)
P-08-000018	CA-DNO-000014/H	CInya'tLtci (Waterman 1925)
P-08-000021	CA-DNO-000017/H	MesLteLn
P-08-000090	CA-DNO-000088	Cemetry of Meslteltun
P-12-000125	CA-HUM-000067/H	Loud 67
P-12-000175	CA-HUM-000118	Patrick's Point #4
P-12-000186	CA-HUM-000129/H	Tsa'hpekw
P-12-000194	CA-HUM-000169	Tsurai
P-12-000199	CA-HUM-000174	Cone Rock, Sea Gull Rock
P-12-000202	CA-HUM-000177	MM-1
P-12-000207	CA-HUM-000182	Shelter Cove, X-1
P-12-000209	CA-HUM-000184	Etter Mound, X-3
P-12-000210	CA-HUM-000185	X-4
P-12-000211	CA-HUM-000186	X-5
P-12-000263	CA-HUM-000245	Stormy Saddle Site
P-12-000264	CA-HUM-000246	Pine Ridge Site
P-12-000266	CA-HUM-000248	Humboldt Gully Site
P-12-000336	CA-HUM-000323	Nooning Creek
P-12-000442	CA-HUM-000435	Mud Springs Site
P-12-000445	CA-HUM-000439	RNP-S-4
P-12-000458	CA-HUM-000452	RNP-S-22
P-17-000006	CA-LAK-000261	Fredrickson "A"
P-17-000026	CA-LAK-000510	5A
P-17-000035	CA-LAK-000753	14A
P-17-000072	CA-LAK-000036	Borax Lake Site
P-17-000114	CA-LAK-000089	Rattlesnake Island
P-17-000177	CA-LAK-000153	LAK 307
P-17-000286	CA-LAK-000267	Mauldin 196
P-17-000287	CA-LAK-000268	CA-LAK-785
P-17-000289	CA-LAK-000271	[none]
P-17-000290	CA-LAK-000272	CA-LAK-272/Full Circle Field 2
P-17-000307	CA-LAK-000291	Mauldin 221
P-17-000320	CA-LAK-000305	Sam Alley Site
P-17-000392	CA-LAK-000380	The Mostin Site
P-17-000407	CA-LAK-000395	GR-11
P-17-000437	CA-LAK-000425	LAK-S270
P-17-000446	CA-LAK-000435	Diwi'lem
P-17-000470	CA-LAK-000471	27A
P-17-000531	CA-LAK-000585	2A
P-17-000535	CA-LAK-000589	A161
P-17-000546	CA-LAK-000605	G-99
P-17-000550	CA-LAK-000609/H	G-103
P-17-000551	CA-LAK-000610	G-104
P-17-000554	CA-LAK-000613/H	Ford Flat Site
P-17-000572	CA-LAK-000643	Pirate's Buried Site
P-17-000610	CA-LAK-000711	PBL9

P-17-000639	CA-LAK-000741	[none]
P-17-000640	CA-LAK-000742	[none]
P-17-000673	CA-LAK-000785	Voided: see P-17-000287
P-17-000787	CA-LAK-000944	Middle Creek CCC Camp
P-21-000017	CA-MRN-000266	PB 266
P-21-000034	CA-MRN-000001	Nelson No. 1
P-21-000039	CA-MRN-000008	
P-21-000051	CA-MRN-000020	Nelson No. 20
P-21-000053	CA-MRN-000022	Nelson No. 22
P-21-000057	CA-MRN-000026	Nelson No. 26
P-21-000058	CA-MRN-000027	Nelson No. 27
P-21-000106	CA-MRN-000076	Nelson No. 76
P-21-000143	CA-MRN-000115	Nelson No. 115
P-21-000163	CA-MRN-000138/H	Nelson No. 138
P-21-000177	CA-MRN-000152	Nelson No. 152
P-21-000217	CA-MRN-000192	Nelson No. 192
P-21-000221	CA-MRN-000196	Nelson No. 196
P-21-000235	CA-MRN-000216/H	DNG-1
P-21-000242	CA-MRN-000232/H	PB 232 b
P-21-000245	CA-MRN-000235/H	Beardsley's 301
P-21-000252	CA-MRN-000242/H	PB No. 242 - Cauley
P-21-000262	CA-MRN-000275	PB 275
P-21-000283	CA-MRN-000298/H	DNG-2
P-21-000290	CA-MRN-000307/H	Probably 232 C
P-21-000291	CA-MRN-000308	
P-21-000295	CA-MRN-000315	Nelson No. 86C
P-21-000332	CA-MRN-000357/H	Bayonet Midden
P-21-000335	CA-MRN-000362	
P-21-000342	CA-MRN-000370	S.A. VIII
P-21-000346	CA-MRN-000374	
P-21-000347	CA-MRN-000375	The Palo Marin Site
P-21-000368	CA-MRN-000402	
P-21-000369	CA-MRN-000403	
P-21-000370	CA-MRN-000404	
P-21-000651	CA-MRN-000358	S.A. II (San Antonio II)
P-21-000653	CA-MRN-000391	
P-21-002539	CA-MRN-000682	S.A. VII (Northwestern Archaeol.
P-23-000143	CA-MEN-000069	69
P-23-000387	CA-MEN-000320	Voided; See P-23-000590
P-23-000450	CA-MEN-000455	"Digger Post"
P-23-000475	CA-MEN-000483/H	may be Pomo Village- Kroeber
P-23-000478	CA-MEN-000486	
P-23-000492	CA-MEN-000500	
P-23-000534	CA-MEN-000583	
P-23-000535	CA-MEN-000584	
P-23-000536	CA-MEN-000585	
P-23-000537	CA-MEN-000586	
P-23-000539	CA-MEN-000588	
P-23-000590	CA-MEN-000643	Eel River Work Center
P-23-000786	CA-MEN-000851	
P-23-000789	CA-MEN-000854	Upper Twin Rocks
P-23-000790	CA-MEN-000855	Milling Stone Basin
P-23-000791	CA-MEN-000856	Wagon Trail
P-23-000792	CA-MEN-000857/H	White Hawk Top
P-23-000793	CA-MEN-000858	White Hawk Yoostabe
P-23-000796	CA-MEN-000861	Long Doe Petroglyph/Field Desi
P-23-000835	CA-MEN-000900	Upper Coffee Mill Flat
P-23-001034	CA-MEN-001111	Spring Site
P-23-001060	CA-MEN-001154	NEIYI

P-23-001063	CA-MEN-001157	S-6435
P-23-001520	CA-MEN-001633	Olkat
P-23-002898	CA-MEN-000405	Fenenga 1
P-23-002915	CA-MEN-000482	MEN-482
P-23-002936	CA-MEN-000546	Possibly Barrett's (1908, p. 140)
P-23-002945	CA-MEN-000555	[none]
P-28-000015	CA-NAP-000001	#1; Goddard; Oakville
P-28-000027	CA-NAP-000014	Las Trancas
P-28-000028	CA-NAP-000015/H	#15, Suscol Mound #5
P-28-000029	CA-NAP-000016	#16
P-28-000032	CA-NAP-000021	ACRS-PV-1
P-28-000045	CA-NAP-000039	#39
P-28-000061	CA-NAP-000057	Peripoli
P-28-000063	CA-NAP-000060	UCMA Napa 60-50
P-28-000066	CA-NAP-000063	
P-28-000077	CA-NAP-000074	#4
P-28-000088	CA-NAP-000089	#23
P-28-000092	CA-NAP-000093	Possibly Kroeber's "Topai"
P-28-000093	CA-NAP-000094	# 28
P-28-000097	CA-NAP-000098	#32
P-28-000123	CA-NAP-000129	B-53-GG
P-28-000125	CA-NAP-000131	Genoa Site
P-28-000150	CA-NAP-000158	B-59-Z
P-28-000199	CA-NAP-000234	Roy Pridmore #3
P-28-000209	CA-NAP-000247	ACRS-BD-6
P-28-000218	CA-NAP-000261	D.T.Davis #49; UCAS-B 277
P-28-000222	CA-NAP-000270	CA-NAP-270
P-28-000310	CA-NAP-000410	Querried Quarry Site
P-28-000311	CA-NAP-000411/H	[none]
P-28-000329	CA-NAP-000432	TR-23
P-28-000330	CA-NAP-000433	T-41 (UCD Files)
P-28-000362	CA-NAP-000468	Mudflat Site (2)
P-28-000418	CA-NAP-000535	Tom's Mounds
P-28-000419	CA-NAP-000536	[none]
P-28-000420	CA-NAP-000537	[none]
P-28-000421	CA-NAP-000538	[none]
P-28-000422	CA-NAP-000539	Klaffke's Mound
P-28-000428	CA-NAP-000545	I
P-28-000828	CA-NAP-000032	#32; Kolb; Rutherford; Pistorias
P-28-000912	CA-NAP-000311	
P-49-000073	CA-SON-000004/H	Carrillo Adobe
P-49-000079	CA-SON-000020	Lithic Scatter
P-49-000112	CA-SON-000084	Santa Rosa Creek site
P-49-000135	CA-SON-000159	Stony Glenn Lane
P-49-000194	CA-SON-000222	Nelson No. 222
P-49-000228	CA-SON-000256	P-30
P-49-000264	CA-SON-000292	The Ranch Site
P-49-000265	CA-SON-000293	Probably Kelly's Site "Tiwut-Huy
P-49-000271	CA-SON-000299	"Kili"
P-49-000291	CA-SON-000320/H	"Loken-Huye" (Kelly)
P-49-000292	CA-SON-000321/H	Peter's 321
P-49-000295	CA-SON-000324	Peter's 324
P-49-000318	CA-SON-000347	Gleason Beach 1
P-49-000329	CA-SON-000358	VOIDED - see P-49-000087
P-49-000330	CA-SON-000359	Hidden Valley Ranch
P-49-000340	CA-SON-000369	Atcacinateawalli
P-49-000342	CA-SON-000371	Foster's Ranch
P-49-000360	CA-SON-000389	Carriger Creek site
P-49-000362	CA-SON-000391	S.A.1

P-49-000363	CA-SON-000392	KING #5
P-49-000369	CA-SON-000400	S.A. VII (Northwestern Archaeol.
P-49-000371	CA-SON-000402	TC-1
P-49-000423	CA-SON-000455/H	Gables Site
P-49-000424	CA-SON-000456	
P-49-000434	CA-SON-000466	
P-49-000483	CA-SON-000518	SDA-30
P-49-000512	CA-SON-000547	H-51
P-49-000521	CA-SON-000556	H-41
P-49-000548	CA-SON-000583	SRI-3001
P-49-000620	CA-SON-000670/H	SDA-1
P-49-000653	CA-SON-000710	SDA-61
P-49-000671	CA-SON-000729	SDA-104
P-49-000682	CA-SON-000740	G.E.- 8
P-49-000683	CA-SON-000741/H	G.E.- 9
P-49-000730	CA-SON-000789	Geysers Fourty-Four
P-49-000731	CA-SON-000790	Geysers Fourty-Five
P-49-000732	CA-SON-000791	Geysers Fourty-Six
P-49-000733	CA-SON-000792	Geysers Fourty-Seven
P-49-000846	CA-SON-000906	Miller's Garden Site
P-49-000860	CA-SON-000920	[none]
P-49-000887	CA-SON-000948	
P-49-000913	CA-SON-000976	
P-49-000914	CA-SON-000977	
P-49-000915	CA-SON-000978	
P-49-000916	CA-SON-000979	
P-49-000917	CA-SON-000980	
P-49-000959	CA-SON-001025	Redwood Thompson Site
P-49-000970	CA-SON-001036	Soledad
P-49-000976	CA-SON-001042	
P-49-000978	CA-SON-001044	Walnut Orchard Site
P-49-000981	CA-SON-001047	Rosehip Site
P-49-000982	CA-SON-001048	Laguna Grande
P-49-000983	CA-SON-001049	Willow Marsh Site
P-49-000990	CA-SON-001058	
P-49-000992	CA-SON-001060	Madrone Knoll
P-49-001081	CA-SON-001154	Site No. 1
P-49-001082	CA-SON-001155	Site No. 2
P-49-001083	CA-SON-001156	Site No. 3
P-49-001084	CA-SON-001157	Site No. 4
P-49-001085	CA-SON-001158	Site No. 5
P-49-001086	CA-SON-001159/H	Site No. 6
P-49-001087	CA-SON-001160	Site No. 7
P-49-001109	CA-SON-001182	Doberman Terrace
P-49-001121	CA-SON-001195	Covert Lane Site

No. resources: 257

Has informals: No

Location information

County(ies): Alameda, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Del Norte Co., ~All quads - Humboldt Co., ~All quads - Lake Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - Napa Co., ~All quads - Sonoma Co.

Address:

PLSS:

Report Detail: S-002458

Database record metadata

	Date	User	
Entered:	4/7/2005	nwic-main	
Last modified:	11/10/201	hagell	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
Record status:	Verified		

Report Detail: S-002665

Identifiers

Report No.: S-002665
Other IDs:
Cross-refs:

Citation information

Author(s): William Breece
Year: 1981 (Jul)
Title: Archaeological Survey for the Richmond Lube Oil Project, Richmond, California.
Affliliation: Environmental Science Associates
No. pages: 4
No. maps: 1
Attributes: Archaeological, Field study
Inventory size: c 0.25 ac
Disclosure: Not for publication
Collections: No

General notes

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	1/12/2016	simsa	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-006880

Identifiers

Report No.: S-006880
Other IDs:
Cross-refs:

Citation information

Author(s): David Chavez
Year: 1981 (Mar)
Title: Cultural Resources Assessment for Replacement of Water Distribution System, Point Molate, Richmond, California
Affliliation: David Chavez & Associates
No. pages: 17
No. maps: 4
Attributes: Archaeological, Field study
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000161	CA-CCO-000282	Nelson No. 282
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000454	CA-CCO-000422H	WineHaven Historic District; Win
P-07-000455	CA-CCO-000423	Garden Site

No. resources: 4
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	1/11/2016	simsa

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-007186

Identifiers

Report No.: S-007186

Other IDs:

Type	*Name*
Other	Contract No. N62474-85-M-1179

Cross-refs:

Citation information

Author(s): David Chavez and John Holson

Year: 1985 (Jan)

Title: Cultural/Archaeological Resources Investigation at the Naval Supply Center Fuel Department, Point Molate, Contra Costa County, California (Contract No. N62474-85-M-1179)

Affliliation: David Chavez & Associates

No. pages: 96

No. maps: 15

Attributes: Archaeological, Excavation, Field study

Inventory size: c 170 ac

Disclosure: Not for publication

Collections: Yes

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000161	CA-CCO-000282	Nelson No. 282
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000277	CA-CCO-000506H	Chinese Fish Camp
P-07-000454	CA-CCO-000422H	WineHaven Historic District; Win
P-07-000455	CA-CCO-000423	Garden Site

No. resources: 5

Has informals: No

Location information

County(ies): Contra Costa

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	1/15/2016	hagell

IC actions:

Date	*User*	*Action taken*
4/7/2005	jay	Appended records from NWICmain bibliographic database.
1/12/2016	simsa	Updated GIS shape to better reflect suvey boundary
1/15/2016	hagell	edited report attributes & collections

Record status: Verified

Report Detail: S-009462

Identifiers

Report No.: S-009462
Other IDs:
Cross-refs:

Citation information

Author(s): Teresa Ann Miller
Year: 1977 (Jun)
Title: Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties
Affliliation: San Francisco State University
No. pages: 98
No. maps: 12
Attributes: Archaeological, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional
P-21-000087	CA-MRN-000057	Nelson No. 57
P-21-000376	CA-MRN-000414	DEER ISLAND AREA #1
P-21-000378	CA-MRN-000416	DEER ISLAND AREA #3
P-21-000379	CA-MRN-000417	DEER ISLAND AREA #4
P-21-000380	CA-MRN-000418	DEER ISLAND AREA #5
P-21-000381	CA-MRN-000419	DEER ISLAND AREA #6
P-21-000382	CA-MRN-000420	17 NOVATO
P-21-000383	CA-MRN-000421	NOVATO #18
P-21-000384	CA-MRN-000422	NOVATO #19
P-21-000386	CA-MRN-000425	TIBURON 3 FIELD #3
P-21-000387	CA-MRN-000426	TIBURON #4 FIELD #4
P-21-000388	CA-MRN-000427	TIBURON #5 FIELD #5
P-21-000389	CA-MRN-000428	TIBURON 6
P-21-000390	CA-MRN-000429	TIBURON 7 FIELD #7
P-21-000391	CA-MRN-000430	TIBURON #8 FIELD #8
P-21-000392	CA-MRN-000431	TIBURON #9
P-21-000393	CA-MRN-000432	TIBURON 12
P-21-000394	CA-MRN-000433	TIBURON 13 FIELD #13
P-21-000395	CA-MRN-000434	TIBURON 14 AND 15 FIELD #'
P-21-000396	CA-MRN-000435	TIBURON #16 FIELD #16
P-21-000397	CA-MRN-000436	TIBURON 17 FIELD #17
P-21-000398	CA-MRN-000437	TIBURON 18
P-21-000399	CA-MRN-000438	TIBURON 19 FIELD #19
P-21-000400	CA-MRN-000439	TIBURON 20A
P-21-000401	CA-MRN-000440	TIBURON 21 FIELD #21
P-21-000402	CA-MRN-000442	Tiburon 1
P-21-000546	CA-MRN-000424	Tiburon 2
P-23-000789	CA-MEN-000854	Upper Twin Rocks
P-23-000790	CA-MEN-000855	Milling Stone Basin
P-49-000629	CA-SON-000682	Steward's 9 PT.
P-49-000785	CA-SON-000844	PETALUMA #1
P-49-000787	CA-SON-000846	PETALUMA #3

No. resources: 33
Has informals: Yes

Report Detail: S-009462

Location information

County(ies): Alameda, Contra Costa, Lake, Marin, Mendocino, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Lake Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Solano Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	9/10/2015	simsa	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/5/2010	muchb	updated county list as per thesis content
	7/2/2015	rinerg	marked Verified

Record status: Verified

Report Detail: S-009583

Identifiers

Report No.: S-009583
Other IDs:
Cross-refs:

Citation information

Author(s): David W. Mayfield
Year: 1978 (Dec)
Title: Ecology of the Pre-Spanish San Francisco Bay Area
Affliliation: San Francisco State University
No. pages: 170
No. maps: 8
Attributes: Other research, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Masters Thesis. A study of the ecological setting of part of the San Francisco Bay Area as it existed prior to Spanish colonization. Not-mappable report.

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara, Santa Cruz
USGS quad(s): Altamont, Antioch North, Antioch South, Benicia, Big Basin, Brentwood, Briones Valley, Byron Hot Springs, Calaveras Reservoir, Castle Rock Ridge, Clayton, Cupertino, Diablo, Dublin, Franklin Point, Half Moon Bay, Hayward, Honker Bay, Hunters Point, Jersey Island, La Costa Valley, La Honda, Las Trampas Ridge, Lick Observatory, Livermore, Los Gatos, Mare Island, Mendenhall Springs, Milpitas, Mindego Hill, Montara Mtn, Morgan Hill, Mount Day, Mountain View, Newark, Niles, Oakland East, Oakland West, Palo Alto, Pigeon Point, Point Bonita, Redwood Point, Richmond, San Francisco North, San Francisco South, San Gregorio, San Jose East, San Jose West, San Leandro, San Mateo, San Quentin, Santa Teresa Hills, Tassajara, Vine Hill, Walnut Creek, Woodside
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	7/16/2015	rinerg	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	7/16/2015	rinerg	set Collections=No; set Status=Verified

Record status: Verified

Report Detail: S-009795

Identifiers

Report No.: S-009795
Other IDs:
Cross-refs:

Citation information

Author(s): Thomas Lynn Jackson
Year: 1986 (Jun)
Title: Late Prehistoric Obsidian Exchange in Central California
Affliliation: Stanford University
No. pages: 273
No. maps: 6
Attributes: Other research, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: Yes

General notes

PhD dissertation. Not-mappable report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-06-000025	CA-COL-000001	S-1 Miller
P-07-000047	CA-CCO-000030	
P-07-000080	CA-CCO-000138	Hotchkiss Mound
P-07-000188	CA-CCO-000312	Franks
P-07-000440	CA-CCO-000259	Barker's Rodeo
P-17-000320	CA-LAK-000305	Sam Alley Site
P-17-000601	CA-LAK-000702	1
P-21-000163	CA-MRN-000138/H	Nelson No. 138
P-21-000218	CA-MRN-000193/H	Nelson No. 193
P-21-000235	CA-MRN-000216/H	DNG-1
P-21-000242	CA-MRN-000232/H	PB 232 b
P-21-000283	CA-MRN-000298/H	DNG-2
P-21-000290	CA-MRN-000307/H	Probably 232 C
P-21-000368	CA-MRN-000402	
P-21-000423	CA-MRN-000471	San Jose Village
P-21-000628	CA-MRN-000201	Jesse Peter 201
P-23-001589	CA-MEN-001704	Tciya
P-23-001659	CA-MEN-001844	Men. X
P-23-003068	CA-MEN-001809	Men-1704S
P-23-003119	CA-MEN-001929	[none]
P-28-000015	CA-NAP-000001	#1; Goddard; Oakville
P-28-000068	CA-NAP-000065	#65
P-28-000199	CA-NAP-000234	Roy Pridmore #3
P-28-000205	CA-NAP-000240	Big Basin No. 1
P-28-000828	CA-NAP-000032	#32; Kolb; Rutherford; Pistorias
P-49-000135	CA-SON-000159	Stony Glenn Lane
P-49-000360	CA-SON-000389	Carriger Creek site
P-49-000423	CA-SON-000455/H	Gables Site
P-49-000424	CA-SON-000456	
P-49-000518	CA-SON-000553	
P-49-000521	CA-SON-000556	H-41
P-49-000533	CA-SON-000568	Midden site
P-49-000536	CA-SON-000571	Petroglyph site
P-49-000558	CA-SON-000593/H	Son-3 (SFSC)
P-49-000801	CA-SON-000860/H	82-12
P-57-000114	CA-YOL-000139	Elation Hill

Report Detail: S-009795

No. resources: 36

Has informals: No

Location information

County(ies): Colusa, Contra Costa, Lake, Marin, Mendocino, Napa, Solano, Sonoma, Yolo

USGS quad(s): ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - Solano Co., ~All quads - Sonoma Co., ~All quads - Yolo Co., Albion, Antioch North, Antioch South, Arbuckle, Asti, Bailey Ridge, Bartlett Mtn, Bartlett Springs, Benicia, Benmore Canyon, Big Foot Mtn, Boonville, Brentwood, Briones Valley, Capell Valley, Clayton, Clearlake Highlands, Clearlake Oaks, Cloverdale, Cold Spring, Colusa, Comptche, Cortina Creek, Cotati, Detert Reservoir, Drakes Bay, Dunnigan, Elk, Elk Mountain, Elledge Peak, Eureka Hill, Fouts Springs, Gilmore Peak, Glascock Mtn, Glen Ellen, Greenough Ridge, Grimes, Gualala, Gube Mountain, Highland Springs, Honker Bay, Hopland, Hough Springs, Jericho Valley, Jersey Island, Kelseyville, Kirkville, Knoxville, Lakeport, Laughlin Range, Leesville, Lodoga, Lower Lake, Lucerne, Mallo Pass Creek, Mathison Peak, Maxwell, Mcguire Ridge, Mendocino, Meridian, Middletown, Moulton Weir, Mount St Helena, Mt George, Navarro, Novato, Ornbaun Valley, Petaluma River, Philo, Point Arena, Potato Hill, Potter Valley, Purdys Gardens, Redwood Valley, Richmond, Rumsey, Rutherford, San Geronimo, Sanborn Slough, Santa Rosa, Saunders Reef, Sebastopol, Sites, Tisdale Weir, Tomales, Ukiah, Upper Lake, Vine Hill, Walnut Creek, Warm Springs Dam, Whispering Pines, Wilbur Springs, Wildwood School, Williams, Wilson Valley, Yorkville, Zeni Ridge

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	10/27/201	rinerg	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/21/201	rinerg	add quads: 'all Yolo', 'all Solano', 'all Napa', 'all Sonoma', 'all Marin'; remove quad: Las Trampas Ridge; add about 75 more quads based on GIS portions in Mendocino, Lake, Colusa, ContraCosta counties

Record status: Verified

Report Detail: S-012270

Identifiers

Report No.: S-012270

Other IDs:

Type	*Name*
Submitter	LSA Project #FDA001

Cross-refs:

Citation information

Author(s): Beth Padon, Scott Crownover, Jane Rosenthal, Jason Marmor, and Pat Jertberg
Year: 1990 (Apr)
Title: Technical Appendix, Cultural Resources Assessment, Chevron Modernization Project
Affliliation: LSA Associates, Inc.
No. pages: 62
No. maps: 6
Attributes: Archaeological, Architectural/historical, Field study
Inventory size:
Disclosure: Not for publication
Collections: No

Sub-desig.: a
Author(s):
Year: 1990 (Apr)
Title: Paleontological Resource Assessment, Chevron Richmond Refinery, Pt. Richmond, CA
Affiliation: LSA Associates, Inc.
Report type(s): Other research
Inventory size:
No. pages:
Disclosure: Not for publication
Collections: No
PDF Pages: 42-53

General notes

Seven unrecorded historic properties are within the project area.

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000157	CA-CCO-000278	Nelson No. 278
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000441	CA-CCO-000284	Nelson No. 284
P-07-004673		No. 10 Battery
P-07-004674		LPG Boiler House
P-07-004675		Vapor Recovery Plant
P-07-004676		No. 3 Salt Water Station
P-07-004677		No. 1 Power Plant
P-07-004678		Aromatics Recovery Unit
P-07-004679		No. 11 Battery

No. resources: 10
Has informals: Yes

Location information

County(ies): Contra Costa
USGS quad(s): Richmond, San Quentin
Address:
PLSS:

Report Detail: S-012270

Database record metadata

	Date	User	
Entered:	4/7/2005	nwic-main	
Last modified:	1/12/2016	mikulikc	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	1/12/2016	simsa	database incomplete: No author submitted for additional citation 'a'
Record status:	Verified		

Report Detail: S-015529

Identifiers

Report No.: S-015529
Other IDs:
Cross-refs:

Citation information

Author(s): Robert L. Gearhart II, Clell L. Bond, Steven D. Hoyt, James H. Cleland, James Anderson, Pandora Snethcamp, Gary Wesson, Jack Neville, Kim Marcus, Andrew York, and Jerry Wilson
Year: 1993 (Nov)
Title: California, Oregon, and Washington: Archaeological Resource Study
Affliliation: Espey, Huston & Associates, Inc.; Dames & Moore
No. pages: 394
No. maps: 210
Attributes: Archaeological, Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

The report is in six bound volumes. Approximately 3,850 shipwrecks are within the study area. The documents could not be scanned. This report extends outside of the NWIC service area into San Luis Obispo County and coastal areas in Oregon & Washington.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000033	CA-ALA-000012	
P-01-000034	CA-ALA-000013	SFSC-ALA-1
P-01-000084	CA-ALA-000307	West Berkeley Shell Mound
P-01-000086	CA-ALA-000309	Emeryville Shellmound
P-01-000104	CA-ALA-000328	Nelson's 328
P-07-000133	CA-CCO-000252	Nelson No. 252
P-07-000173	CA-CCO-000295	Nelson No. 295
P-07-000175	CA-CCO-000298	Nelson's No. 298, Stege
P-07-000177	CA-CCO-000300	Nelson's Survey 300
P-17-000072	CA-LAK-000036	Borax Lake Site
P-17-000392	CA-LAK-000380	The Mostin Site
P-21-000048	CA-MRN-000017	Nelson No.17
P-21-001915		Shipwreck Site and Remains, Sa
P-23-001704	CA-MEN-001918	Caspar Fluted Point Site
P-27-000100	CA-MNT-000281	Upper Willow Creek
P-27-000236	CA-MNT-000101/H	Kroeber A
P-27-000335	CA-MNT-000229	Golomshtok #2
P-27-000356	CA-MNT-000250/H	Isabella Meadows Cave
P-27-000386	CA-MNT-000282	Willow Creek Day Use Area
P-27-000485	CA-MNT-000391	MNT-391
P-38-000028	CA-SFR-000028	BART Burial
P-38-000072	CA-SFR-000081H	Niantic Storeship / Hotel
P-38-000085	CA-SFR-000094H	"The Lydia"
P-38-000098	CA-SFR-000107H	Wreck of the "SS Neptune"
P-41-000080	CA-SMA-000077	University Village Site (Gerow)
P-41-000265	CA-SMA-000269	Stanford Man I
P-44-000179	CA-SCR-000177/H	Hiram Scott House

No. resources: 27
Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, Napa, Other, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

Report Detail: S-015529

USGS quad(s): Ah Pah Ridge, Albion, Alder Peak, Ano Nuevo, Antioch North, Arcata North, Arcata South, Arched Rock, Bear Harbor, Benicia, Big Sur, Bodega Head, Bolinas, Burro Mountain, Cannibal Island, Cape Mendocino, Cape San Martin, Capetown, Childs Hill, Cooskie Creek, Crannell, Crescent City, Cuttings Wharf, Davenport, Denverton, Double Point, Drakes Bay, Duncans Mills, Elk, Ettersburg, Eureka, Fairfield South, Farallon Islands, Fern Canyon, Ferndale, Fields Landing, Fort Bragg, Fort Ross, Franklin Point, Gualala, Hales Grove, Half Moon Bay, Honker Bay, Hunters Point, Inglenook, Inverness, Jersey Island, Lopez Point, Mallo Pass Creek, Mare Island, Marina, Mendocino, Milpitas, Mistake Point, Montara Mtn, Monterey, Moss Landing, Mountain View, Newark, Novato, Oakland East, Oakland West, Orick, Palo Alto, Partington Ridge, Petaluma Point, Petaluma River, Petrolia, Pfeiffer Point, Pigeon Point, Plantation, Point Arena, Point Bonita, Point Reyes Ne, Point Sur, Prunedale, Redwood Point, Requa, Richmond, Rodgers Peak, San Francisco North, San Francisco South, San Gregorio, San Leandro, San Mateo, San Quentin, San Rafael, Santa Cruz, Saunders Reef, Sears Point, Seaside, Shelter Cove, Shubrick Peak, Sister Rocks, Smith River, Soberanes Point, Soquel, Stewarts Point, Tomales, Trinidad, Tyee City, Valley Ford, Villa Creek, Vine Hill, Watsonville West, Westport

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	1/8/2016	mikulikc	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/21/201	mikulikc	could not scan document
	12/9/2015	hagell	edited database
	1/8/2016	mikulikc	added quad location
Record status:	Verified		

Report Detail: S-016660

Identifiers

Report No.: S-016660
Other IDs:
Cross-refs:

Citation information

Author(s): Jeffrey B. Fentress
Year: 1992 (Jul)
Title: Prehistoric Rock Art of Alameda and Contra Costa Counties, California
Affliliation: California State University, Hayward
No. pages: 187
No. maps:
Attributes: Other research, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Masters Thesis. Not-mappable report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000035	CA-ALA-000014	Mortar Rock Park
P-01-000039	CA-ALA-000019/H	
P-01-000071	CA-ALA-000051	Vargas Road Petroglyph
P-01-000080	CA-ALA-000060	Castro Valley
P-01-000128	CA-ALA-000400	ICR-WR-6
P-01-000137	CA-ALA-000410	ICR-WR-16
P-01-000138	CA-ALA-000412	DOT-04-92-1
P-01-000144	CA-ALA-000418	
P-01-000195	CA-ALA-000477/H	Drove Right To It Site
P-01-000198	CA-ALA-000480	Site 1
P-01-000199	CA-ALA-000481/H	HBR-1 & 2
P-01-002112	CA-ALA-000505	
P-07-000029	CA-CCO-000009	Los Vaqueros #24 (LV-24)
P-07-000094	CA-CCO-000152	
P-07-000189	CA-CCO-000320	
P-07-000193	CA-CCO-000375/H	CA-CCO-375
P-07-000212	CA-CCO-000417	Locus 11: C1
P-07-000216	CA-CCO-000428	
P-07-000219	CA-CCO-000434/H	Vasco Caves
P-07-000230	CA-CCO-000450/H	Los Vaqueros #16, 21, 22 (LV-1
P-07-000242	CA-CCO-000462	Los Vaqueros #31 (LV-31)
P-07-000255	CA-CCO-000482	YBL-1
P-07-000260	CA-CCO-000487	YBL-6
P-07-000271	CA-CCO-000500	Site 1
P-07-000301	CA-CCO-000530	Fossil Ridge #1
P-07-000302	CA-CCO-000531	Fossil Ridge 2
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional
P-07-000344	CA-CCO-000577	AR Site 2
P-07-000345	CA-CCO-000578	Peter Banks Rock
P-07-000346	CA-CCO-000579	Amos Site
P-07-000347	CA-CCO-000580	Amos Rock
P-07-000348	CA-CCO-000581	Star Rock/Stair Rock
P-07-000356	CA-CCO-000590	Old Stump Site
P-07-000362	CA-CCO-000597	Kellogg Unit #4 (K-4)
P-07-000374	CA-CCO-000609	Site 1 (Keller Landfill)
P-07-000725	CA-CCO-000382	Rock City #1

Report Detail: S-016660

	P-07-000726	CA-CCO-000383	Rock City #2
	P-07-000727	CA-CCO-000384	Rock City #3
	P-07-000730	CA-CCO-000395	Rock City #4
	P-07-000734	CA-CCO-000416	MD-2
	P-07-000736	CA-CCO-000424	[none]
	P-07-000738	CA-CCO-000429	Artist Point
	P-07-000739	CA-CCO-000430	Shotstar

No. resources: 43

Has informals: No

Location information

County(ies): Alameda, Contra Costa

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	9/18/2015	grahams

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/2/2009	muchb	updated county information
	9/18/2015	rinerg	fill out the lists of counties and quads based on map coverage

Record status: Verified

Report Detail: S-017835

Identifiers

Report No.: S-017835
Other IDs:
Cross-refs:

Citation information

Author(s): Judy Myers Suchey
Year: 1975 (Dec)
Title: Biological Distance of Prehistoric Central California Populations Derived from Non-Metric Traits of the Cranium
Affliliation: University of California, Riverside
No. pages: 186
No. maps: 13
Attributes: Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: Yes

General notes

PhD dissertation. Burials from Santa Cruz Island and Sacramento, San Joaquin, & Los Angeles counties were also examined. The GIS contains report polygons from the paper maps.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000086	CA-ALA-000309	Emeryville Shellmound
P-01-000104	CA-ALA-000328	Nelson's 328
P-01-000105	CA-ALA-000329	Nelsons 329
P-06-000025	CA-COL-000001	S-1 Miller
P-07-000080	CA-CCO-000138	Hotchkiss Mound
P-07-000081	CA-CCO-000139/H	Simone Mound
P-07-000083	CA-CCO-000141	C-141
P-07-000087	CA-CCO-000145	Byron Tract
P-21-000017	CA-MRN-000266	PB 266
P-21-000193	CA-MRN-000168	Nelson No. 168
P-21-000242	CA-MRN-000232/H	PB 232 b
P-21-000252	CA-MRN-000242/H	PB No. 242 - Cauley
P-48-000010	CA-SOL-000002	Peterson 2
P-57-000145	CA-YOL-000013	Mustang Site

No. resources: 14
Has informals: No

Location information

County(ies): Alameda, Colusa, Contra Costa, Marin, Napa, Other, Solano, Sonoma, Yolo
USGS quad(s): ~All quads - Alameda Co., ~All quads - Colusa Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - Solano Co., ~All quads - Sonoma Co., ~All quads - Yolo Co.
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	10/15/201	rinerg

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/15/201	rinerg	add county: Sonoma, Napa; this Thesis has GIS mapped components in both 'Other reports' and 'Reports (polygons)' layers.

Record status: Verified

Report Detail: S-018217

Identifiers

Report No.: S-018217
Other IDs:
Cross-refs:

Citation information

Author(s): Glenn Gmoser
Year: 1996 (Apr)
Title: Cultural Resource Evaluations for the Caltrans District 04 Phase 2 Seismic Retrofit Program, Status Report: April 1996
Affliliation: Caltrans
No. pages: 12
No. maps: 0
Attributes: Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Status report of the evaluation of bridge structures. There were no location maps in the report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000014	CA-ALA-000483	Site 2
P-01-000023	CA-ALA-000002/H	Ohlones Cemetery
P-01-000227	CA-ALA-000548/H	Vallejo Mill
P-07-000108	CA-CCO-000225	Anaclario Site
P-07-000119	CA-CCO-000237	Loud's 422
P-38-000002	CA-SFR-000002	Shellmound No. 439
P-38-000004	CA-SFR-000004/H	Yerba Buena Island
P-41-000273	CA-SMA-000321	Hamilton #2
P-43-000106	CA-SCL-000092/H	Sargent Ranch
P-43-000297	CA-SCL-000289	GP-1
P-43-000624	CA-SCL-000677	The 237/880 Site
P-43-001078	CA-SCL-000699/H	Dollhouse Site
P-44-000010	CA-SCR-000002/H	Aptos Creek
P-44-000201	CA-SCR-000199H	Cactus Gardens
P-44-000300	CA-SCR-000313	Granite Ck. Rd./Highway 17 Inte
P-49-000195	CA-SON-000223	Nelson No. 223

No. resources: 16
Has informals: No

Location information

County(ies): Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Sonoma
USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Sonoma Co.
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	7/14/2015	rinerg

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/13/201	hagell	edited database
	7/14/2015	rinerg	set status=Verified

Record status: Verified

Report Detail: S-020395

Identifiers

Report No.: S-020395
Other IDs:
Cross-refs:

Citation information

Author(s): Donna L. Gillette
Year: 1998 (May)
Title: PCNs of the Coast Ranges of California: Religious Expression or the Result of Quarrying?
Affliliation: California State University, Hayward
No. pages: 148
No. maps: 4
Attributes: Archaeological, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Masters Thesis. Recorded sites in Santa Barbara County and in Oregon were also included in the report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000094	CA-CCO-000152	
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional
P-12-000050	CA-HUM-000983	Squaw Rock
P-17-000071	CA-LAK-000034	Bachelor Valley No. 4
P-17-001315	CA-LAK-001577	LAKEPORT PCN BOULDER
P-21-000087	CA-MRN-000057	Nelson No. 57
P-21-000376	CA-MRN-000414	DEER ISLAND AREA #1
P-21-000378	CA-MRN-000416	DEER ISLAND AREA #3
P-21-000379	CA-MRN-000417	DEER ISLAND AREA #4
P-21-000381	CA-MRN-000419	DEER ISLAND AREA #6
P-21-000382	CA-MRN-000420	17 NOVATO
P-21-000383	CA-MRN-000421	NOVATO #18
P-21-000384	CA-MRN-000422	NOVATO #19
P-21-000386	CA-MRN-000425	TIBURON 3 FIELD #3
P-21-000387	CA-MRN-000426	TIBURON #4 FIELD #4
P-21-000388	CA-MRN-000427	TIBURON #5 FIELD #5
P-21-000389	CA-MRN-000428	TIBURON 6
P-21-000390	CA-MRN-000429	TIBURON 7 FIELD #7
P-21-000391	CA-MRN-000430	TIBURON #8 FIELD #8
P-21-000392	CA-MRN-000431	TIBURON #9
P-21-000393	CA-MRN-000432	TIBURON 12
P-21-000394	CA-MRN-000433	TIBURON 13 FIELD #13
P-21-000395	CA-MRN-000434	TIBURON 14 AND 15 FIELD #'
P-21-000396	CA-MRN-000435	TIBURON #16 FIELD #16
P-21-000397	CA-MRN-000436	TIBURON 17 FIELD #17
P-21-000398	CA-MRN-000437	TIBURON 18
P-21-000399	CA-MRN-000438	TIBURON 19 FIELD #19
P-21-000400	CA-MRN-000439	TIBURON 20A
P-21-000401	CA-MRN-000440	TIBURON 21 FIELD #21
P-21-000402	CA-MRN-000442	Tiburon 1
P-21-000419	CA-MRN-000465	WHIT'S ROCK
P-21-000433	CA-MRN-000481	ARS 78-72-ROCK 1
P-21-000546	CA-MRN-000424	Tiburon 2
P-21-000620	CA-MRN-000636	PETROGLYPH SITE SOUTH O
P-21-000621	CA-MRN-000637	PETROGLYPH SITE ON SMAL
P-21-000624	CA-MRN-000640	Petroglyph site near Taylor Road

Report Detail: S-020395

P-21-000661	CA-MRN-000452	Pat's Rock
P-23-000434	CA-MEN-000433	Bell Springs Petroglyph Rock
P-23-000809	CA-MEN-000874	KNIGHT'S VALLEY 2
P-23-000810	CA-MEN-000875	KNIGHT'S VALLEY 1
P-23-001698	CA-MEN-001912	SPYROCK ROAD PETROGLYP
P-23-001725	CA-MEN-001941	GENESIS #4,5,6,7,8
P-23-001792	CA-MEN-002020	POTTER VALLEY PETROGLYP
P-23-001798	CA-MEN-002028	GENESIS #9
P-23-001799	CA-MEN-002029	GENESIS #10
P-23-001803	CA-MEN-002034	GENESIS #16
P-23-001804	CA-MEN-002035	Infinity #1
P-23-001930	CA-MEN-002200	NWIC Restricted File
P-23-001942	CA-MEN-002213	Huntly Peak Petroglyphs
P-23-001950	CA-MEN-002221	Hidden Hill Petroglyph
P-23-001963	CA-MEN-002235	WATERSHED DOWN PETROG
P-35-000013	CA-SBN-000012	
P-43-000067	CA-SCL-000048	RANCHO PASO DEL VERDE O
P-43-000080	CA-SCL-000063	SFSU-SCL-6
P-43-000287	CA-SCL-000279	
P-43-000289	CA-SCL-000281	ARS 77-97-3
P-43-000504	CA-SCL-000503	COE-29
P-49-000046	CA-SON-000929	Jan's Rock
P-49-000240	CA-SON-000268	Steward's 8 Pt.
P-49-000533	CA-SON-000568	Midden site
P-49-000550	CA-SON-000585	Yorty Cupule Rock
P-49-000629	CA-SON-000682	Steward's 9 PT.
P-49-000785	CA-SON-000844	PETALUMA #1
P-49-000787	CA-SON-000846	PETALUMA #3
P-49-000868	CA-SON-000928	MIKE WHITSON ROCK I
P-49-000960	CA-SON-001026	NANA'S ROCKS
P-49-000975	CA-SON-001041	LEE'S ROCK
P-49-001004	CA-SON-001075	Kellies Rock
P-49-001087	CA-SON-001160	Site No. 7
P-49-001239	CA-SON-001319	KATHLEEN'S ROCK
P-49-002121	CA-SON-001383	

No. resources: 71

Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Humboldt, Lake, Marin, Mendocino, Other, San Benito, Santa Clara, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Humboldt Co., ~All quads - Lake Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - San Benito Co., ~All quads - Santa Clara Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	9/10/2015	simsa

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-022310

Identifiers

Report No.: S-022310
Other IDs:
Cross-refs:

Citation information

Author(s): Randy Wiberg, Suzanne Baker, David G. Bieling, Jerry Doty, Jennifer A. Ferneau, Cristi Assad Hunter, Laurence H. Shoup, Daniel Shoup, Thomas A. Wake, Brian Wickstrom, and Eric Wohlgemuth
Year: 1999 (Nov)
Title: Cultural Resources Evaluation and Impact Mitigation Program for the Western Drive Pipeline Replacement Project Near Point Molate, Contra Costa, California
Affliliation: Holman & Associates; Archaeological/Historical Consultants
No. pages: 218
No. maps: 13
Attributes: Archaeological, Excavation, Monitoring
Inventory size:
Disclosure: Not for publication
Collections: Yes

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000160	CA-CCO-000281	Nelson No. 281
P-07-000441	CA-CCO-000284	Nelson No. 284

No. resources: 2
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	1/15/2016	hagell	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	1/15/2016	hagell	edited collections

Record status: Verified

Report Detail: S-024840

Identifiers

Report No.: S-024840
Other IDs:
Cross-refs:

Citation information

Author(s):
Year: 2002 (Feb)
Title: Final Environmental Impact Statement - Environmental Impact Report for the Disposal and Reuse of Fleet and Industrial Supply Center, Naval Fuel Depot, Point Molate.
Affliliation: Southwest Division, Naval Facilities Engineering Command; City of Richmond
No. pages: 58
No. maps: 3
Attributes: Archaeological, Architectural/historical, Management/planning, Other research
Inventory size: c 313 ac
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000161	CA-CCO-000282	Nelson No. 282
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000277	CA-CCO-000506H	Chinese Fish Camp
P-07-000454	CA-CCO-000422H	WineHaven Historic District; Win
P-07-000455	CA-CCO-000423	Garden Site

No. resources: 5
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/25/2005	leigh
Last modified:	1/12/2016	mikulikc

IC actions:	*Date*	*User*	*Action taken*
	1/4/2016	hagell	data incomplete: no authors submitted
	1/12/2016	simsa	Updated GIS shape: moved to other report layer

Record status: Verified

Report Detail: S-025146

Identifiers

Report No.: S-025146
Other IDs:
Cross-refs:

Citation information

Author(s): Stacie Reutter
Year: 2002 (Apr)
Title: Auger Testing at Ferry Point II Cell Tower Site in Richmond, Contra Costa County, California
Affliliation: Garcia & Associates
No. pages: 28
No. maps: 3
Attributes: Archaeological, Excavation, Field study
Inventory size: c 0.25 ac
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-002556		Ferry Point II 307-31e

No. resources: 1
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin

Address: *Address*	*City*	*Assessor's parcel no.*	*Zip code*
295 Western Drive	Richmond		

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	1/12/2016	simsa

IC actions: *Date*	*User*	*Action taken*
4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-030430

Identifiers

Report No.: S-030430

Other IDs:	*Type*	*Name*
	Caltrans	EA 0438U3

Cross-refs:

Citation information

Author(s): James M. Allan, Diane Cooper, Adam Marlow, Jenni Price, and Tom Young

Year: 2004 (Jun)

Title: Archaeological Survey Report, Richmond - San Rafael Bridge Seismic Retrofit Project, Contra Costa and Marin Counties, CC/MRN 580 PM 6.1-7.8; 0.0/2.6, EA 0438U3

Affliliation: William Self Associates, Inc.

No. pages: 137

No. maps: 18

Attributes: Archaeological, Architectural/historical, Field study, Other research

Inventory size: c 4 li mi

Disclosure: Not for publication

Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000441	CA-CCO-000284	Nelson No. 284
P-07-002556		Ferry Point II 307-31e
P-07-002645	CA-CCO-000765H	Wreck 1
P-07-002646	CA-CCO-000766H	Wreck 2

No. resources: 5

Has informals: No

Location information

County(ies): Contra Costa, Marin

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	9/13/2005	kellyn
Last modified:	1/15/2016	hagell

IC actions:

Record status: Verified

Report Detail: S-030907

Identifiers

Report No.: S-030907

Other IDs:

Type	*Name*
Caltrans	EA 43-984433

Cross-refs: See also S-043181

Citation information

Author(s): Christopher McMorris

Year: 2004 (Sep)

Title: Caltrans Historic Bridge Inventory Update: Metal Truss, Moveable, and Steel Arch Bridges, Contract: 43A0086, Task Order: 01, EA: 43-984433, Volume I: Report and Figures

Affliliation: JRP Historical Consulting

No. pages: 380

No. maps:

Attributes: Architectural/historical, Evaluation, Field study

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

262 bridges were studied for the report. 74 bridges are either listed or appear eligible for listing in the National Register. Some of the bridges do not appear to have been recorded.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-003158		High Street Bridge (#33C-0027)
P-01-003190		Park Street Bridge (#33C-0027)
P-01-010835		San Francisco-Oakland Bay Brid
P-01-011433		San Leandro Bay Bridge, Bridge
P-23-004262		Burger Creek Bridge (10C-0109)
P-27-001805		CR-JSA-15
P-28-001020		Bridge 21-75 / Maxwell Bridge
P-35-000383		Bridge No. 43C-006
P-38-001339		Francis "Lefty" O'Doul Bridge - B
P-38-002455		San Francisco-Oakland Bay Brid
P-38-004878		Fourth Street Bridge
P-49-002862		Sonoma Creek Bridge
P-49-002864		Big Sulpher Creek Bridge
P-49-002865		Guerneville Bridge
P-49-002866		Wohler Bridge
P-49-002867		Watmaugh Road Bridge
P-49-002870		Lambert Bridge
P-49-004522		Healdsburg Memorial Bridge

No. resources: 18

Has informals: Yes

Location information

County(ies): Alameda, Colusa, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, Napa, Other, San Benito, San Francisco, Santa Clara, Santa Cruz, Solano, Sonoma, Yolo

USGS quad(s): Albion, Annapolis, Asti, Benicia, Big Basin, Big Sur, Bradley, Calistoga, Camp Meeker, Cazadero, Cholame Hills, Cloverdale, Dublin, Duncans Mills, Esparto, Espinosa Canyon, Felton, Fort Bragg, Fort Ross, Foster Mountain, Garberville, Geyserville, Gilroy Hot Springs, Glen Ellen, Guerneville, Guinda, Healdsburg, Hopland, Inverness, Jamison Ridge, Jimtown, Knights Landing, Laytonville, Leggett, Liberty Island, Lonoak, Mcguire Ridge, Napa, Oakland East, Oakland West, Paraiso Springs, Parkfield, Petaluma, Plantation, Point Arena, Rio Vista, Sacramento West, San Ardo, San Francisco North, San Leandro, San Quentin, Sonoma, St Helena, Tres Pinos, Walnut Creek, Wilbur Springs, Willits

Address:

PLSS:

Report Detail: S-030907

Database record metadata

	Date	*User*
Entered:	1/13/2006	kellyn
Last modified:	6/11/2015	hagell
IC actions:		
Record status:	Verified	

Report Detail: S-032596

Identifiers

Report No.: S-032596

Other IDs:	*Type*	*Name*
	Other	Contract #04A2098
	Caltrans	EA No. 447600

Cross-refs:

Citation information

Author(s): Randall Milliken, Jerome King, and Patricia Mikkelsen

Year: 2006 (Dec)

Title: The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways

Affliliation: Consulting in the Past; Far Western Anthropological Research Group, Inc.

No. pages: 63

No. maps: 6

Attributes: Other research

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

The study extends outside the NWIC service area (Calaveras, Amador, Tuolomne, Mariposa, Madera, & Tulare counties).

Associated resources

No. resources: 0

Has informals: No

Location information

County(ies): Alameda, Contra Costa, Lake, Marin, Monterey, Napa, Other, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Yolo

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Monterey Co., ~All quads - Napa Co., ~All quads - San Benito Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Solano Co., Aetna Springs, Allendale, Annapolis, Arched Rock, Asti, Bird Valley, Bodega Head, Brooks, Calistoga, Camp Meeker, Cazadero, Clarksburg, Clearlake Highlands, Cloverdale, Cotati, Courtland, Cuttings Wharf, Davis, Detert Reservoir, Duncans Mills, Eldorado Bend, Esparto, Fort Ross, Geyserville, Glascock Mtn, Glen Ellen, Grays Bend, Guerneville, Guinda, Healdsburg, Jericho Valley, Jimtown, Kelseyville, Kenwood, Knights Landing, Knoxville, Lake Berryessa, Liberty Island, Madison, Mare Island, Mark West Springs, Merritt, Middletown, Monticello Dam, Mount St Helena, Mt Vaca, Novato, Petaluma, Petaluma Point, Petaluma River, Point Reyes Ne, Rutherford, Sacramento West, Santa Rosa, Saxon, Sears Point, Sebastopol, Sonoma, Taylor Monument, The Geysers, Tombs Creek, Two Rock, Valley Ford, Warm Springs Dam, Whispering Pines, Wilson Valley, Winters, Woodland, Zamora

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	3/1/2007	hagell
Last modified:	1/5/2016	hagell

IC actions:	*Date*	*User*	*Action taken*
	3/30/2015	neala	data review; added Lake county quads
	6/12/2015	mikulikc	corrected Yolo County quad locations from "all quads" to quads intersecting the GIS feature for S-032596
	10/20/201	rinerg	remove '~All quads - Sonoma', replace with Sonoma quads intersecting report feature
	1/5/2016	hagell	edited notes field

Record status: Verified

Report Detail: S-033600

Identifiers

Report No.: S-033600
Other IDs:
Cross-refs:

Citation information

Author(s): Jack Meyer and Jeff Rosenthal
Year: 2007 (Jun)
Title: Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4
Affliliation: Far Western Anthropological Research Group, Inc.
No. pages: 42
No. maps: 7
Attributes: Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Nine unrecorded prehistoric resources.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000001	CA-ALA-000554	Castlewood Site
P-01-000002	CA-ALA-000555	Meadowlark Dairy Site
P-01-000014	CA-ALA-000483	Site 2
P-01-000063	CA-ALA-000043	De Avillo
P-01-000064	CA-ALA-000044	Kaiser
P-01-000067	CA-ALA-000047	
P-01-000080	CA-ALA-000060	Castro Valley
P-01-000124	CA-ALA-000394	Pleasanton Meadows Site
P-01-000139	CA-ALA-000413	Santa Rita Village
P-01-000140	CA-ALA-000414	Iverson Site
P-01-001795	CA-ALA-000566	Hayward Bypass Site
P-01-002110	CA-ALA-000467	H&A-HEP-1
P-01-002160	CA-ALA-000574	Bernal
P-01-002162	CA-ALA-000576	Curtner Site
P-01-002245	CA-ALA-000586	Hwy 238-1
P-07-000019	CA-CCO-000696	Burial Site
P-07-000024	CA-CCO-000004	Slater site
P-07-000037	CA-CCO-000018/H	Marsh Site
P-07-000047	CA-CCO-000030	
P-07-000075	CA-CCO-000133	Ader site
P-07-000079	CA-CCO-000137	Monument
P-07-000088	CA-CCO-000146	Holland Tract
P-07-000089	CA-CCO-000147	
P-07-000108	CA-CCO-000225	Anaclario Site
P-07-000182	CA-CCO-000305	[none]
P-07-000185	CA-CCO-000308	Stone Valley Site
P-07-000186	CA-CCO-000309	The Rossmoor Site
P-07-000217	CA-CCO-000431	Murwood School
P-07-000239	CA-CCO-000459	Los Vaqueros #15 (LV-15)
P-07-000401	CA-CCO-000637	Dam Site
P-07-000721	CA-CCO-000368	Dutra 1
P-21-000010	CA-MRN-000249	4-MRN-249
P-21-000048	CA-MRN-000017	Nelson No.17
P-21-002615	CA-MRN-000674	Pelican site
P-28-000009	CA-NAP-000863	Adams Street Site
P-28-000028	CA-NAP-000015/H	#15, Suscol Mound #5

Report Detail: S-033600

P-28-000301	CA-NAP-000399	B- 55- V V
P-28-000967	CA-NAP-000916	Double Whoa!
P-38-000006	CA-SFR-000006	Loud's Presidio Mount
P-38-000028	CA-SFR-000028	BART Burial
P-38-000101	CA-SFR-000112	49 Stevenson
P-38-000102	CA-SFR-000113	5th & Market
P-38-000119	CA-SFR-000114	
P-41-000080	CA-SMA-000077	University Village Site (Gerow)
P-41-000284	CA-SMA-000273	Coyote Pt. Marina
P-43-000016	CA-SCL-000755	SCU/Old Alameda Burial site
P-43-000189	CA-SCL-000178	MH-22
P-43-000296	CA-SCL-000288	
P-43-000308	CA-SCL-000300	[none]
P-43-000310	CA-SCL-000302	
P-43-000423	CA-SCL-000418/H	
P-43-000424	CA-SCL-000419/H	441 N. 1st
P-43-000448	CA-SCL-000447/H	formerly known as CA-SCL-6E
P-43-000451	CA-SCL-000450	Rosendin 1
P-43-000485	CA-SCL-000484	
P-43-000561	CA-SCL-000566	
P-43-000604	CA-SCL-000609	Ronald McDonald House
P-43-000608	CA-SCL-000613	Stanford Man II
P-43-000614	CA-SCL-000619	Elk Site
P-43-000623	CA-SCL-000675	"Coyote Creek Site"
P-43-001015	CA-SCL-000553	Orchard 1001-1
P-43-001058	CA-SCL-000674	DC-1
P-43-001080	CA-SCL-000702	Waste Management Site
P-43-001163	CA-SCL-000828	Fuel Farm Site
P-43-001194	CA-SCL-000832	Iowa Avenue and Sunnyvale Ave
P-43-001576	CA-SCL-000849	152/156-5
P-48-000007	CA-SOL-000391	Fairfield PEC-1
P-48-000157	CA-SOL-000324	

No. resources: 68

Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Solano Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	9/24/2007	guldenj
Last modified:	7/16/2015	rinerg

IC actions:	*Date*	*User*	*Action taken*
	7/16/2015	rinerg	set Status=verified

Record status: Verified

Report Detail: S-038753

Identifiers

Report No.: S-038753

Other IDs:	*Type*	*Name*
	Caltrans	E-FIS Project Number 0400000002

Cross-refs:

Citation information

Author(s): Doulgas Bright
Year: 2011 (May)
Title: Historical Resources Compliance Report, replacement of the existing Richmond - San Rafael Bridge (RSRB) Maintenance Building (building #1865), 4-CC-580 P.M. 6.0-6.3 E-FIS Project Number 0400000002
Affliliation: Caltrans, District 4
No. pages: 13
No. maps:
Attributes: Architectural/historical, Evaluation, Field study
Inventory size:
Disclosure: Unrestricted
Collections: No

General notes

Associated resources

	Primary No.	*Trinomial*	*Name*
	P-07-003119		Richmond-San Rafael Maintena

No. resources: 1
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/17/2012	guldenj	
Last modified:	1/26/2016	hagell	
IC actions:	*Date*	*User*	*Action taken*
	1/15/2016	hagell	edited title

Record status: Verified

Report Detail: S-038874

Identifiers

Report No.: S-038874

Other IDs:	*Type*	*Name*
	Caltrans	E-FIS #0400000483 (EA 1A3201)

Cross-refs:

Citation information

Author(s): Leslie Smirnoff Sakowicz
Year: 2012 (Apr)
Title: Historic Property Survey Report, Scofield Detour Plan revalidation in the City of Richmond, Contra Costa County, California, 04-CC-580 P.M. 5.8/6.3 E-FIS Project Number: 0400000483 (EA 1A3201)
Affliliation: Caltrans, District 4
No. pages: 47
No. maps:
Attributes: Archaeological, Field study
Inventory size: c 0.5 li mi
Disclosure: Not for publication
Collections: No

Sub-desig.: a
Author(s): Leslie Smirnoff Sakowicz
Year: 2012 (Apr)
Title: Archaeological Survey Report for the Scofield Detour Plan Revalidation, In the City of Richmond, Contra Costa County, California, 04-CCO-580 PM 5.8/6.3, EA 1A3201, EFIS No. 0400000483
Affiliation: Caltrans, District 04
Report type(s): Archaeological, Field study
Inventory size:
No. pages:
Disclosure: Not for publication
Collections: No
PDF Pages: 48-99

General notes

Associated resources

	Primary No.	*Trinomial*	*Name*
	P-07-000441	CA-CCO-000284	Nelson No. 284
	P-07-002556		Ferry Point II 307-31e

No. resources: 2
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): Richmond

Address:	*Address*	*City*	*Assessor's parcel no.*	*Zip code*
	Interstate 580	Richmond		

PLSS:

Database record metadata

	Date	*User*
Entered:	5/24/2012	guldenj
Last modified:	1/26/2016	hagell

IC actions:	*Date*	*User*	*Action taken*
	1/4/2016	hagell	edited 'Other Identifiers'
	1/14/2016	hagell	added affiliation

	1/26/2016	hagell	added additional citation

Record status: Verified

Report Detail: S-040390

Identifiers

Report No.: S-040390
Other IDs:
Cross-refs:

Citation information

Author(s):
Year: 2009 (Mar)
Title: Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment
Affliliation: Analytical Environmental Services
No. pages: 376
No. maps:
Attributes: Architectural/historical, Field study
Inventory size:
Disclosure: Not for publication
Collections: No

Sub-desig.: a
Author(s): Mike Taggart and Damon Haydu
Year: 2009 (Apr)
Title: Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume II: Archaeological Resources
Affiliation: Analytical Environmental Services
Report type(s): Archaeological, Excavation, Field study
Inventory size:
No. pages:
Disclosure: Not for publication
Collections: Yes
PDF Pages: 377-824

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000161	CA-CCO-000282	Nelson No. 282
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000277	CA-CCO-000506H	Chinese Fish Camp
P-07-000441	CA-CCO-000284	Nelson No. 284
P-07-000454	CA-CCO-000422H	WineHaven Historic District; Win
P-07-000455	CA-CCO-000423	Garden Site
P-07-001160		Voided: see P-07-000454
P-07-001174		Voided: see P-07-000277
P-07-003066		Winehaven Building #1
P-07-003070		Winehaven Building #6
P-07-003074		Winehaven Building #10
P-07-003079		Winehaven Building #13
P-07-003080		Winehaven Building #17
P-07-003085		Building #18 within Winehaven H
P-07-004544		Building #21 within Winehaven H
P-07-004545		Winehaven Building #31
P-07-004546		Winehaven Building #32
P-07-004547		Winehaven Building #33
P-07-004548		Winehaven Building #34
P-07-004549		Winehaven Building #35
P-07-004550		Winehaven Building #36
P-07-004551		Winehaven Building #37

Report Detail: S-040390

P-07-004552	Winehaven Building #38
P-07-004553	Winehaven Building #39
P-07-004554	Winehaven Building #40
P-07-004555	Winehaven Building #41
P-07-004556	Winehaven Building #42
P-07-004557	Winehaven Building #43
P-07-004558	Winehaven Building #44
P-07-004559	Winehaven Building #45
P-07-004560	Winehaven Building #46
P-07-004561	Winehaven Building #47
P-07-004562	Winehaven Building #48
P-07-004563	Winehaven Building #49
P-07-004565	Winehaven Building #50
P-07-004566	Winehaven Building #51
P-07-004567	Winehaven Building #52
P-07-004568	Winehaven Building #53
P-07-004569	Winehaven Building #54
P-07-004570	Building #55 within Winehaven H
P-07-004571	Winehaven Building #56
P-07-004572	Winehaven Building #57
P-07-004573	Winehaven Building #58
P-07-004574	Winehaven Building #59
P-07-004575	Winehaven Building #60
P-07-004576	Winehaven Building #63
P-07-004577	Building #65 within Winehaven H
P-07-004578	Building #67 within Winehaven H
P-07-004579	Building #68 within Winehaven H
P-07-004580	Building #80 within Winehaven H
P-07-004581	Building #81 within Winehaven H
P-07-004582	Building #83 within Winehaven H
P-07-004583	Building #85 within Winehaven H
P-07-004584	Building #86 within Winehaven H
P-07-004585	Building #88 within Winehaven H
P-07-004586	Building #102 within Winehaven
P-07-004587	Building #103 within Winehaven
P-07-004588	Building #111 within Winehaven
P-07-004589	Building #116 within Winehaven
P-07-004590	Building #123 within Winehaven
P-07-004591	Building #125 within Winehaven
P-07-004592	Winehaven Internal Railroad
P-07-004593	Segment of Richmond Belt Line

No. resources: 63

Has informals: No

Location information

County(ies): Contra Costa

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/29/2013	baileyl	
Last modified:	1/14/2016	hagell	
IC actions:	*Date*	*User*	*Action taken*
	8/17/2015	changc	Database Incomplete: no author submitted.
	1/4/2016	hagell	edited title

Record status: Verified

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-07-000277	CA-CCO-000506H	Other - PM-1; OHP PRN - 4802-0016-0000; Other - The Chinese Shrimp Camp; OHP PRN - USN960916A; Voided - P-07-001174; OHP Property Number - 012799; Resource Name - Chinese Fish Camp	Site	Historic	AH02 (Foundations/structure pads); AH04 (Privies/dumps/trash scatters); AH16 (Other)	1975 (Charles A. Farren, Contra Costa Planning Dept.); 1984 ([none], D. Chavez & Associates); 1996 (Cherilyn Widell, OHP); 2008 (M. Taggart, D. Haydu, AES)	S-007186, S-024840, S-035289, S-040390
P-07-000441	CA-CCO-000284	Resource Name - Nelson No. 284	Site	Prehistoric	AP09 (Burials); AP15 (Habitation debris)	1907 (N.C. Nelson, University of California); 2008 (M. Taggart, AES); 2012 (L. Sakowicz, Holman & Associates)	S-012270, S-022310, S-030430, S-038874, S-040390
P-07-002556		Resource Name - Ferry Point II 307-31e	Other	Prehistoric, Historic	AH16 (Other) - ashy soil; AP16 (Other) - ashy soil	2001 (S. Reutter, Garcia and Associates)	S-025146, S-030430, S-038874
P-07-002645	CA-CCO-000765H	Resource Name - Wreck 1	Object, Site	Historic	AH14 (Ships/barges)	2001 (James M. Allan, William Self Associates, Inc.)	S-030430
P-07-002646	CA-CCO-000766H	Resource Name - Wreck 2	Object, Site	Historic	AH14 (Ships/barges)	2001 (James M. Allan, William Self Associates, Inc.)	S-030430

Resource Detail: P-07-000277

Identifying information

Primary No.: P-07-000277
Trinomial: CA-CCO-000506H
Name: Chinese Fish Camp
Other IDs:

Type	*Name*
Other	PM-1
OHP PRN	4802-0016-0000
Other	The Chinese Shrimp Camp
OHP PRN	USN960916A
Voided	P-07-001174
OHP Property Numb	012799
Resource Name	Chinese Fish Camp

Cross-refs: Subsumes 07-001174
Physically overlaps or intersects 07-000162

Attributes

Resource type: Site
Age: Historic
Information base: Survey, Surface collection, Excavation
Attribute codes: AH02 (Foundations/structure pads); AH04 (Privies/dumps/trash scatters); AH16 (Other)
Disclosure: Not for publication
Collections: Yes
Accession no(s): 283
Facility: Richmond Museum

General notes

Recording events

	Date	*Recorder(s)*	*Affiliation*	*Notes*
b	11/1/1984	[none]	D. Chavez & Associates	
d	12/30/2008	M. Taggart, D. Haydu	AES	
a	9/16/1975	Charles A. Farren	Contra Costa Planning Dept.	
c	9/27/1996	Cherilyn Widell	OHP	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-007186	1985	Cultural/Archaeological Resources Investigation at the Naval Supply Center Fuel Department, Point Molate, Contra Costa County, California (Contract No. N62474-85-M-1179)	David Chavez & Associates
S-024840	2002	Final Environmental Impact Statement - Environmental Impact Report for the Disposal and Reuse of Fleet and Industrial Supply Center, Naval Fuel Depot, Point Molate.	Southwest Division, Naval Facilities Engineering Command; City of Richmond
S-035289	2008	A Geoarchaeological Investigation for CA-CCO-506H, Point Molate, Contra Costa County, California	Anthropological Studies Center, Sonoma State University
S-040390	2009	Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment	Analytical Environmental Services

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Resource Detail: P-07-000277

UTMs: Zone 10 551720mE 4199640mN NAD27
Zone 10 551920mE 4199180mN NAD27
Zone 10 551940mE 4199550mN NAD27
Zone 10 552020mE 4199360mN NAD27

Management status

Database record metadata

	Date	*User*	
Entered:	4/1/2005	icrds	
Last modified:	12/23/201	simsa	
IC actions:	*Date*	*User*	*Action taken*
	6/9/2015	guldenbrein	Added supplemental record and associated report
	6/11/2015	guldenbrein	Subsumed OHP Primary number P-07-001174, added HRI record to this file.
	4/1/2005	jay	Appended records from discontinued ICRDS.
Record status:	Verified		

Resource Detail: P-07-000441

Identifying information

Primary No.: P-07-000441
Trinomial: CA-CCO-000284
Name: Nelson No. 284
Other IDs:

Type	*Name*
Resource Name	Nelson No. 284

Cross-refs:

Attributes

Resource type: Site
Age: Prehistoric
Information base: Other
Attribute codes: AP09 (Burials); AP15 (Habitation debris)
Disclosure: Not for publication
Collections: Unknown
Accession no(s):
Facility:

General notes

Recording events

	Date	*Recorder(s)*	*Affiliation*	*Notes*
a	9/1/1907	N.C. Nelson	University of California	
c	3/20/2012	L. Sakowicz	Holman & Associates	
b	12/30/2008	M. Taggart	AES	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-012270	1990	Technical Appendix, Cultural Resources Assessment, Chevron Modernization Project	LSA Associates, Inc.
S-022310	1999	Cultural Resources Evaluation and Impact Mitigation Program for the Western Drive Pipeline Replacement Project Near Point Molate, Contra Costa, California	Holman & Associates; Archaeological/Historical Consultants
S-030430	2004	Archaeological Survey Report, Richmond - San Rafael Bridge Seismic Retrofit Project, Contra Costa and Marin Counties, CC/MRN 580 PM 6.1-7.8; 0.0/2.6, EA 0438U3	William Self Associates, Inc.
S-038874	2012	Historic Property Survey Report, Scofield Detour Plan revalidation in the City of Richmond, Contra Costa County, California, 04-CC-580 P.M. 5.8/6.3 E-FIS Project Number: 0400000483 (EA 1A3201)	Caltrans, District 4
S-040390	2009	Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment	Analytical Environmental Services

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:
UTMs:

Management status

Resource Detail: P-07-000441

Database record metadata

	Date	User	
Entered:	4/1/2005	icrds	
Last modified:	1/11/2016	simsa	
IC actions:	*Date*	*User*	*Action taken*
	6/9/2015	guldenbrein	added supplement to file and associated report
	1/7/1998	AOApp1	Primary Number Autofill
	4/1/2005	jay	Appended records from discontinued ICRDS.
Record status:	Verified		

Resource Detail: P-07-002556

Identifying information

Primary No.: P-07-002556
Trinomial:
Name: Ferry Point II 307-31e
Other IDs:

Type	*Name*
Resource Name	Ferry Point II 307-31e

Cross-refs:

Attributes

Resource type: Other
Age: Prehistoric, Historic
Information base: Survey
Attribute codes: AH16 (Other) - ashy soil; AP16 (Other) - ashy soil
Disclosure: Not for publication
Collections: No
Accession no(s):
Facility:

General notes

Recording events

Date	*Recorder(s)*	*Affiliation*	*Notes*
10/26/2001	S. Reutter	Garcia and Associates	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-025146	2002	Auger Testing at Ferry Point II Cell Tower Site in Richmond, Contra Costa County, California	Garcia & Associates
S-030430	2004	Archaeological Survey Report, Richmond - San Rafael Bridge Seismic Retrofit Project, Contra Costa and Marin Counties, CC/MRN 580 PM 6.1-7.8; 0.0/2.6, EA 0438U3	William Self Associates, Inc.
S-038874	2012	Historic Property Survey Report, Scofield Detour Plan revalidation in the City of Richmond, Contra Costa County, California, 04-CC-580 P.M. 5.8/6.3 E-FIS Project Number: 0400000483 (EA 1A3201)	Caltrans, District 4

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:

Address	*City*	*Assessor's parcel no.*	*Zip code*
295 Western Drive	Richmond		94801

PLSS:
UTMs: Zone 10 552570mE 4198395mN NAD83 (2001)

Management status

Database record metadata

	Date	*User*
Entered:	4/6/2005	jay
Last modified:	1/26/2016	hagell

IC actions:

Date	*User*	*Action taken*
4/6/2005	jay	Entered minimal information from hard copy list provided by Leigh.
1/12/2016	simsa	Moved GIS shape to resources approx loc

Record status: Verified

Resource Detail: P-07-002645

Identifying information

Primary No.: P-07-002645
Trinomial: CA-CCO-000765H
Name: Wreck 1
Other IDs:

Type	*Name*
Resource Name	Wreck 1

Cross-refs:

Attributes

Resource type: Object, Site
Age: Historic
Information base: Other
Attribute codes: AH14 (Ships/barges)
Disclosure: Not for publication
Collections: Yes
Accession no(s):
Facility: St. Mary's College of California Archaeology Lab

General notes

Recording events

Date	*Recorder(s)*	*Affiliation*	*Notes*
12/18/2001	James M. Allan	William Self Associates, Inc.	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-030430	2004	Archaeological Survey Report, Richmond - San Rafael Bridge Seismic Retrofit Project, Contra Costa and Marin Counties, CC/MRN 580 PM 6.1-7.8; 0.0/2.6, EA 0438U3	William Self Associates, Inc.

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:
UTMs:

Management status

Database record metadata

	Date	*User*	
Entered:	4/6/2005	jay	
Last modified:	1/11/2016	simsa	
IC actions:	*Date*	*User*	*Action taken*
	4/6/2005	jay	Entered minimal information from hard copy list provided by Leigh.

Record status: Verified

Resource Detail: P-07-002646

Identifying information

Primary No.: P-07-002646
Trinomial: CA-CCO-000766H
Name: Wreck 2
Other IDs:

Type	*Name*
Resource Name	Wreck 2

Cross-refs:

Attributes

Resource type: Object, Site
Age: Historic
Information base: Other
Attribute codes: AH14 (Ships/barges)
Disclosure: Not for publication
Collections: No
Accession no(s):
Facility:

General notes

Recording events

Date	*Recorder(s)*	*Affiliation*	*Notes*
12/18/2001	James M. Allan	William Self Associates, Inc.	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-030430	2004	Archaeological Survey Report, Richmond - San Rafael Bridge Seismic Retrofit Project, Contra Costa and Marin Counties, CC/MRN 580 PM 6.1-7.8; 0.0/2.6, EA 0438U3	William Self Associates, Inc.

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:
UTMs: Zone 10 551557mE 4198672mN NAD83 (2004)

Management status

Database record metadata

	Date	*User*	
Entered:	4/6/2005	jay	
Last modified:	1/11/2016	simsa	
IC actions:	*Date*	*User*	*Action taken*
	4/6/2005	jay	Entered minimal information from hard copy list provided by Leigh.

Record status: Verified

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

1/27/2016 NWIC File No.: 15-0928

Jeremy Hall
NCE
P.O. Box 1760
Zephyr Cove, NV 89448

re: San Francisco Bay Trail at Point Molate (Segment B)

The Northwest Information Center received your record search request for the project area referenced above, located on the San Quentin USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.25 mile radius:

Archaeological resources within project area (in addition to those in the 2009 inventory – S-40390):	None
Archaeological resources within 0.25 mile radius (in addition to those in the 2009 inventory – S-40390):	None
Reports within project area (in addition to those in the 2009 inventory – S-40390):	S-35289 & 40390.
Reports within 0.25 mile radius (in addition to those in the 2009 inventory – S-40390):	S-39952 & 39953.
Other Reports within records search radius:	(These did not appear in NWIC File #06-1553) S-595, 848, 1978, 2458, 9462, 9583, 9795, 15529, 16660, 17835, 18217, 20395, 24840, 32596, 33600, & 43267. These reports are classified as Other Reports; reports with little or no field work or missing maps. The electronic maps do not depict study areas for these reports, however a list of these reports has been provided. In addition, you have not been charged any fees associated with these studies.

Resource Database Printout (list): ☐ enclosed ☐ not requested ☒ nothing listed

Resource Database Printout (details): ☐ enclosed ☐ not requested ☒ nothing listed

Resource Digital Database Records: ☐ enclosed ☐ not requested ☒ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Report Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	☐ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	☐ not requested	☐ nothing listed
OHP Historic Properties Directory:	☒ enclosed	☐ not requested	☐ nothing listed
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

*Notes:

- Our copy of S-40390 (the 2009 inventory) includes copies of resource records and updates for the records. Let us know if you need copies of any resource record forms or reports. The invoice will be kept open until 2/3/16.

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or

paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel
Researcher

SITE-NUMBER.	PRIMARY-NUM	NRS	EVL-DATE	PROGRAM REF.....	EVAL	OTHER NAMES AND NUMBERS.....
CCO-000006	07-000026	2B	07/21/92	ADOE-07-92-001-001	GRPR	LOS VAQUEROS #28
		2B	07/21/92	BUR910227A	GRPR	(LV-28)
CCO-000009	07-000029	2B	07/21/92	ADOE-07-92-001-002	GRPR	LOS VAQUEROS #24 (LV-24)
		2B	07/21/92	BUR910227A	GRPR	
CCO-000018	07-000037	7J	08/24/11	07-0058	JCRG	THE PEARL SITE / LOST MEGANOS RANCHO PROPERTY, MARSH SITE
CCO-000020	07-000039	6Y	04/09/02	COE020213C	AMPR	
CCO-000026	07-000044	6Y	04/09/02	COE020213C	AMPR	
CCO-000129	07-000071	7J	01/14/92	FERC890526A	GRPR	
CCO-000134	07-000076	6Y	04/09/02	COE020213C	AMPR	HOTCHKISS TRACT
CCO-000138	07-000080	2S2	04/09/02	COE020213C	AMPR	HOTCHKISS MOUND
						HOTCHKISS, C-138
CCO-000139	07-000081	2S2	04/09/02	COE020213C	AMPR	SIMONE MOUND
CCO-000147	07-000089	2S2	05/20/08	COE080430E	WEPR	CCO-1477, 07-000089
		2S2	04/06/94	ADOE-07-94-002-000	SGPR	
		2S2	04/06/94	COE891003A	SGPR	
CCO-000212H	07-000100	2D2	11/02/94	ADOE-07-94-005-002	SGPR	CAMP 2 BACON ISLAND RURAL HISTORIC DISTRICT
		2D2	11/02/94	COE891003A	SGPR	
CCO-000213H	07-000101	2D2	11/02/94	ADOE-07-94-005-003	SGPR	CAMP 3 BACON ISLAND RURAL HISTORIC DISTRICT
		2D2	11/02/94	COE891003A	SGPR	
CCO-000214H	07-000102	2D2	11/02/94	ADOE-07-94-005-004	SGPR	CAMP 4 BACON ISLAND RURAL HISTORIC DISTRICT
		2D2	11/02/94	COE891003A	SGPR	
CCO-000215H	07-000103	2D2	11/02/94	ADOE-07-94-005-005	SGPR	CAMP 5 BACON ISLAND RURAL HISTORIC DISTRICT
		2D2	11/02/94	COE891003A	SGPR	
CCO-000223H	07-000106	7J	11/02/94	COE891003A	SGPR	CAMP 6 BACON ISLAND RURAL HISTORIC DISTRICT
CCO-000236	07-000118	6Y	11/30/87	HUD871002B		BUCHAN
						JONES MOUND
						LOUD #422
CCO-000248	07-000129	2S	06/16/81	65000498	KPNP	NELSON SURVEY MAP
						259A
CCO-000269	07-000148	2D2	04/06/84	COE840214A	GWPR	NELSON NO. 269
						L. SAN PABLO ARCH DIST
CCO-000270	07-000149	2D2	04/06/84	COE840214A	GWPR	NELSON NO. 270
						L. SAN PABLO ARCH DIST
CCO-000271	07-000150	2D2	04/06/84	COE840214A	GWPR	NELSON NO. 271
						L. SAN PABLO ARCH DIST
						BATHA SITE
CCO-000282	07-000161	6Y	09/27/96	USN960916A	HKPR	NELSON NO. 282
CCO-000283	07-000162	6Y	09/27/96	USN960916A	HKPR	NELSON NO. 283, 07-000162
CCO-000295	07-000173	2S	11/20/80	65000745	KPNP	NELSON'S NO. 295, ELLIS LANDING SHELLMOUND
						ELLIS LANDING SHELLMOUND
CCO-000297	07-000174	2S	11/20/80			NELSONS'S NO. 297/STEAGE MOUNDS ARCH DIST
CCO-000298	07-000175	2S	11/20/80			NELSON'S NO. 298/STEAGE MOUND ARCH DIST
						LOUD'S NO. 298
CCO-000300	07-000177	2S	11/20/80			NELSON'S NO. 300/STEAGE MOUNDS ARCH DIST CONTRIB
						LOUD'S NO. 300
CCO-000310	07-000187	2B	07/21/92	ADOE-07-92-001-003	GRPR	LOS VAQUEROS #10 (LV-10)
		2B	07/21/92	BUR910227A	GRPR	
CCO-000320	07-000189	2B	11/02/00	ADOE-07-00-002-000	CWPR	
		2B	11/02/00	BUR910227A	CWPR	
CCO-000397	07-000197	2B	07/21/92	ADOE-07-92-001-004	GRPR	CCO 1(SFSC)
		2B	07/21/92	BUR910227A	GRPR	P-8 (COLES 1966)
						LOS VAQUEROS #2 (LV-2)
CCO-000398	07-000198	2B	07/21/92	ADOE-07-92-001-026	GRPR	
		2B	07/21/92	BUR910227A	GRPR	
CCO-000399	07-000199	2B	07/21/92	ADOE-07-92-001-027	GRPR	
		2B	07/21/92	BUR910227A	GRPR	
CCO-000417	07-000212	2B	07/21/92	ADOE-07-92-001-005	GRPR	LOCUS 11: C1, C2, C3, C4, C5, C6, RS1
		2B	07/21/92	BUR910227A	GRPR	
CCO-000423	07-000455	6Y	09/27/96	USN960916A	HKPR	
CCO-000426H	07-000214	2D2	07/21/92	ADOE-07-92-001-028	GRPR	RIGHTERS/BORDES RANCH, 07-00214
		2D2	07/21/92	BUR910227A	GRPR	
		2D2	06/16/11	COE110608A	SSPR	
CCO-000427	07-000215	2D2	07/21/92	ADOE-07-92-001-029	GRPR	
		2D2	07/21/92	BUR910227A	GRPR	
CCO-000428	07-000216	2B	07/21/92	ADOE-07-92-001-030	GRPR	
		2B	07/21/92	BUR910227A	GRPR	
CCO-000434/H	07-000219	2B	07/21/92	ADOE-07-92-001-006	GRPR	LOCUS 6, 7, 8, 9, 10
		2B	07/21/92	BUR910227A	GRPR	
CCO-000443	07-000223	6Y	07/21/92	ADOE-07-92-001-031	GRPR	
		6Y	07/21/92	BUR910227A	GRPR	
CCO-000444	07-000224	2D2	07/21/92	ADOE-07-92-001-032	GRPR	
		2D2	07/21/92	BUR910227A	GRPR	
CCO-000445	07-000225	2D2	07/21/92	ADOE-07-92-001-033	GRPR	
		2D2	07/21/92	BUR910227A	GRPR	
CCO-000446	07-000226	2D2	07/21/92	ADOE-07-92-001-034	GRPR	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
010068	07-000962	SANKO RD	SANKO MUSEUM	PLEASANT HILL	C		HIST.SURV.	4523-0010-0000		7R	
156325		901 TAYLOR BLVD		PLEASANT HILL			PROJ.REVW.	FCC051006F	10/17/05	6Y	
010069	07-000963	315 TWIN VIEW DR	THE ENCLOSURE, ROGERS HOUSE	PLEASANT HILL	P	1867	HIST.SURV.	4523-0011-0000		7R	
010070	07-000964	3000 VESSING RD	HENRY VESSING HOUSE	PLEASANT HILL	P		HIST.SURV.	4523-0012-0000		7R	
010071	07-000965	3025 VESSING RD	BERWICK VESSING HOUSE	PLEASANT HILL	P		HIST.SURV.	4523-0013-0000		7R	
010620	07-001127	CANYON LAKE DR	PORT COSTA MERCANTILE	PORT COSTA	C	1912	HIST.SURV.	4569-0001-0005		3D	
010621	07-001128	CANYON LAKE DR	WHEAT DOCK	PORT COSTA	C	1880	HIST.SURV.	4569-0001-0006		3D	
010617	07-001124	CANYON LAKE DR	BULL VALLEY INN	PORT COSTA	C	1897	HIST.SURV.	4569-0001-0002		3D	
010619	07-001126	CANYON LAKE DR	CONCRETE WAREHOUSE	PORT COSTA	C	1886	HIST.SURV.	4569-0001-0004		3D	
010618	07-001125	CANYON LAKE DR	BURLINGTON HOTEL	PORT COSTA	C	1909	HIST.SURV.	4569-0001-0003		3D	
010616	07-001123	CARQUINEZ STRAIT	PORT COSTA GRAIN WAREHOUSE STE	PORT COSTA	C	1876	HIST.SURV.	4569-0001-0001		5D2	
010623	07-001130	CARQUINEZ STRAIT	PORT COSTA, TOWN OF PORT COSTA	PORT COSTA	C	1876	HIST.SURV.	4569-0001-9999		3S	
090696	07-001774	CARQUINEZ STRAIT	TOWN OF PORT COSTA	PORT COSTA	U		HIST.RES.	SPHI-CCO-002	08/15/68	7L	
010622	07-001129	1 PLAZA EL HAMBRE	PORT COSTA SCHOOL	PORT COSTA	C	1912	ST.FND.PRG	619.0-HP-88-07-008	12/14/88	3	
							HIST.RES.	NPS-88000563-0000	05/25/88	1S	
							HIST.SURV.	4569-0001-0007	01/01/88	1S	
							TAX.CERT.	537.9-07-0005	10/20/86	2D3	
006551	38-000972		WAPAMA (STEAM SCHOONER)/ TONGASS	RICHMOND	F	1915	HIST.RES.	NHL-73000228-0000	04/20/84	1S	AC
							HIST.RES.	NPS-73000228-0000	04/24/73	1S	AC
							HIST.SURV.	4101-0504-0000	01/01/73	1S	
100627	07-001836		FERRY POINT PIER,POINT RICHMOND	RICHMOND	C	1899	HIST.RES.	DOE-07-96-0131-0000	01/25/96	2S2	A
							PROJ.REVW.	FHWA960117A	01/25/96	2S2	A
103990	07-001905		BUILDING #69 / NAVAL FUEL DEPOT /	RICHMOND		1942	HIST.RES.	DOE-07-96-0121-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103991	07-001906		BUILDING #73 / POINT MOLATE NAVAL	RICHMOND		1943	HIST.RES.	DOE-07-96-0128-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103992	07-001907		BUILDING #76 / POINT MOLATE NAVAL	RICHMOND		1942	HIST.RES.	DOE-07-96-0127-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103993	07-001908		BUILDING #77 / POINT MOLATE NAVAL	RICHMOND		1946	HIST.RES.	DOE-07-96-0123-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103994	07-001909		BUILDING #82 NAVAL FUEL DEPOT POIN	RICHMOND		1944	HIST.RES.	DOE-07-96-0122-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103995	07-001910		BUILDING #83 NAVAL FUEL DEPOT POIN	RICHMOND		1944	PROJ.REVW.	USN960916A	09/27/96	6Y	
103996	07-001911		BUILDING 101 NAVAL FUEL DEPOT POIN	RICHMOND		1943	HIST.RES.	DOE-07-96-0120-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103997	07-001912		BUILDING 115 NAVAL FUEL DEPOT POIN	RICHMOND		1943	HIST.RES.	DOE-07-96-0125-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103998	07-001913		BUILDING 121 NAVAL FUEL DEPOT POIN	RICHMOND		1942	HIST.RES.	DOE-07-96-0124-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103999	07-001914		TANK #24 NAVAL FUEL DEPOT POINT MO	RICHMOND		1942	HIST.RES.	DOE-07-96-0130-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
103989	07-001904		BUILDING 24 NAVAL FUEL DEPOT POINT	RICHMOND		1945	HIST.RES.	DOE-07-96-0129-0000	09/27/96	6Y	
							PROJ.REVW.	USN960916A	09/27/96	6Y	
148468			GARRARD BOULEVARD TUNNEL/DORNAN DR	RICHMOND	M	1913	HIST.RES.	DOE-07-04-0014-0000	06/17/04	2S2	A
							PROJ.REVW.	FHWA040526A	06/17/04	2S2	A
012802	07-001177	10TH ST	ELLIS LANDING SITE	RICHMOND	S	1869	HIST.SURV.	4802-0019-0000	01/01/80	2S2	
012796	07-001171	10TH ST	BROOKS ISLAND	RICHMOND	C		HIST.SURV.	4802-0013-0000		5S2	
083101	07-001748	127 11TH ST		RICHMOND	P	1915	PROJ.REVW.	HUD930624C	07/26/93	6Y	
066115	07-001233	539 11TH ST		RICHMOND	U		PROJ.REVW.	HUD890818B	09/14/89	6Y	
131200		129 12TH ST		RICHMOND	P	1925	HIST.RES.	DOE-07-02-0009-0000	03/28/02	6Y	
							PROJ.REVW.	HUD020214I	03/28/02	6Y	
066056	07-001231	136 12TH ST		RICHMOND	U		PROJ.REVW.	HUD890728A	08/25/89	6Y	
065389	07-001220	561 12TH ST		RICHMOND	U		PROJ.REVW.	HUD880901A	10/04/88	6Y	

PROPERTY-NUMBER	PRIMARY-#	STREET.ADDRESS.....	NAMES.....	CITY.NAME.....	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
076422	07-001696	214 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0356	11/05/79	1D	C
076414	07-001692	217 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0352	11/05/79	1D	C
075980	07-001517	235 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0108	11/05/79	1D	A
076393	07-001681	303 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0341	11/05/79	1D	C
074463	07-001383	304 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0211	11/05/79	1D	C
076489	07-001733	307 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0418	11/05/79	1D	C
076339	07-001654	318 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0314	11/05/79	1D	C
076385	07-001677	319 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0337	11/05/79	1D	C
075878	07-001465	323 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0056	11/05/79	1D	A
076434	07-001702	324 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0362	11/05/79	1D	C
076272	07-001617	328 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0249	11/05/79	1D	C
076156	07-001554	332 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0145	11/05/79	1D	C
074446	07-001382	400 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0210	11/05/79	1D	C
074416	07-001378	406 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0206	11/05/79	1D	C
014429	07-001195	407 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0387	11/05/79	1D	C
075921	07-001487	410 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0078	11/05/79	1D	A
075868	07-001460	411 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0051	11/05/79	1D	A
076282	07-001622	414 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0254	11/05/79	1D	C
076270	07-001616	421 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0247	11/05/79	1D	C
073760	07-001334	422 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0287	11/05/79	1D	C
075948	07-001501	427 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0092	11/05/79	1D	A
075854	07-001453	428 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0044	11/05/79	1D	A
076164	07-001558	432 WASHINGTON AVE		RICHMOND	P	0	HIST.SURV.	4802-0003-0149	11/05/79	1D	C
07-000454 012783	~~07-001160~~	WESTERN DR	WINEHAVEN/POINT MOLATE	RICHMOND	F	1908	HIST.RES.	NPS-78000658-0000	10/02/78	1S	
							HIST.SURV.	4802-0001-0000	10/02/78	1S	
							PROJ.REVW.	65001103	05/19/78	2S	
012800	07-001175	WESTERN DR	U.S. WHALING STATION, INDEPENDENT	RICHMOND	M		HIST.SURV.	4802-0017-0000		5S2	
07-000277 012799	~~07-001174~~	WESTERN DR	CHINESE FISH CAMP	RICHMOND	M	1880	HIST.SURV.	4802-0016-0000		5S2	
129137	07-002519	53 WILLARD AVE		RICHMOND	P	1945	HIST.RES.	DOE-07-01-0022-0000	12/03/01	6Y	
							PROJ.REVW.	HUD011127G	12/03/01	6Y	
070107	07-001301	210 WILLARD AVE		RICHMOND	U	1928	PROJ.REVW.	HUD910222J	03/18/91	6Y	
070106	07-001300	223 WILLARD AVE		RICHMOND	U	1937	PROJ.REVW.	HUD910222I	03/18/91	6Y	
131199		335 WILLARD AVE		RICHMOND	P	1930	HIST.RES.	DOE-07-02-0008-0000	03/28/02	6Y	
							PROJ.REVW.	HUD020214H	03/28/02	6Y	
146640		5848 YALE AVE		RICHMOND	P	1942	HIST.RES.	DOE-07-04-0004-0000	05/06/04	6Y	
							PROJ.REVW.	HUD040416B	05/06/04	6Y	
106755	07-001917		CUMMINGS SKYWAY, BRIDGE #28-0213	RODEO			HIST.RES.	DOE-07-97-0002-0000	01/17/97	6Y	
							PROJ.REVW.	FHWA961211A	01/17/97	6Y	
106757	07-001918		CHRISTIE ROAD UNDERPASS BRIDGE, BR	RODEO			HIST.RES.	DOE-07-97-0004-0000	01/17/97	6Y	
							PROJ.REVW.	FHWA961211A	01/17/97	6Y	
155394		534 1ST ST		RODEO	P	1928	PROJ.REVW.	HUD050822B	09/21/05	6Y	
096095	07-001827	326 3RD ST	RODEO FIRE STATION	RODEO	M	1927	HIST.RES.	DSA-07-SPS-3284	03/16/95	6J	C
106576	07-001915	100 CLAEYS LANE	CLAEYS RANCH	RODEO	P	1900	HIST.RES.	DOE-07-97-0001-0000	01/17/97	6Y	
							PROJ.REVW.	FHWA961211A	01/17/97	6Y	
095488	07-001824	239 LAKE AVE		RODEO	P	1925	PROJ.REVW.	HUD950215A	04/11/95	6Y	
079992	07-001740	154 LAKE ST		RODEO	U	1922	PROJ.REVW.	HUD930106M	02/03/93	6Y	
140020		532 NAPA AVE		RODEO	P	1943	HIST.RES.	DOE-07-03-0027-0000	05/23/03	6Y	
							PROJ.REVW.	HUD030516A	05/23/03	6Y	
162949		224 PACIFIC AVE		RODEO	P	1949	PROJ.REVW.	HUD060822G	08/28/06	6Y	
010624	07-001131	PARKER AVE	SELBY SMELTER SITE	RODEO	U	1885	HIST.SURV.	4572-0001-0000		7R	
174854		140 PARKER AVE	RODEO RIO THEATER	RODEO	P	1940	PROJ.REVW.	FCC081117A	01/06/08	6Y	
160477		208 PARKER AVE		RODEO	P	1947	PROJ.REVW.	HUD060207F	02/09/06	6Y	
072948	07-001315	470 PARKER AVE	LEFTY GOMEZ FIELD	RODEO	U		HIST.RES.	SPHI-CCO-009	05/08/91	7L	
							ST.HS.LDMK	07-0011	05/03/91	7L	
							ST.PT.INT.	07-0013	05/03/91	7L	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-000595		1974	Ronald F. King	A Report on the Status of Generally Available Data Regarding Archaeological, Ethnographic, and Historical Resources Within a Five Mile Wide Corridor Through Portions of Colusa, Yolo, Solano, and Contra Costa Counties, California		07-000091, 48-000009, 48-000010, 48-000011, 48-000012, 48-000013, 48-000018, 48-000020, 57-000130, 57-000131
S-000848	Other - Contract AA550-CT6-52	1977	David A. Fredrickson	A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources	The Anthropology Laboratory, Sonoma State College; Winzler & Kelly Consulting Engineers	
S-001978		1960	Anthony V. Aiello	The Islands of Contra Costa		

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-002458		1981	Suzanne Marie Ramiller, Neil Ramiller, Roger Werner, and Suzanne Stewart	Overview of Prehistoric Archaeology for the Northwest Region, California Archaeological Sites Survey: Del Norte, Humboldt, Mendocino, Lake, Sonoma, Napa, Marin, Contra Costa, Alameda	Northwest Regional Office, California Archaeological Sites Survey; Anthropological Studies Center, Sonoma State University	01-000080, 01-000084, 01-000086, 01-000104, 01-000119, 01-000124, 01-000125, 01-000126, 01-000127, 01-000137, 01-000139, 01-002053, 01-002104, 07-000047, 07-000079, 07-000080, 07-000081, 07-000082, 07-000092, 07-000093, 07-000105, 07-000131, 07-000146, 07-000147, 07-000148, 07-000149, 07-000150, 07-000168, 07-000173, 07-000175, 07-000177, 07-000185, 07-000186, 07-000190, 07-000323, 07-000440, 07-000447, 07-000448, 07-000449, 07-000462, 07-000470, 07-000474, 07-000476, 07-000481, 07-000674, 07-000710, 07-000724, 07-004621, 08-000015, 08-000018, 08-000021, 08-000090, 12-000125, 12-000175, 12-000186, 12-000194, 12-000199, 12-000202, 12-000207, 12-000209, 12-000210, 12-000211, 12-000263, 12-000264, 12-000266, 12-000336, 12-000442, 12-000445, 12-000458, 17-000006, 17-000026, 17-000035, 17-000072, 17-000114, 17-000177, 17-000286, 17-000287, 17-000289, 17-000290, 17-000307, 17-000320, 17-000392, 17-000407, 17-000437, 17-000446, 17-000470, 17-000531, 17-000535, 17-000546, 17-000550, 17-000551, 17-000554, 17-000572, 17-000610, 17-000639, 17-000640, 17-000673, 17-000787, 21-000017, 21-000034, 21-000039, 21-000051, 21-000053, 21-000057, 21-000058, 21-000106, 21-000143, 21-000163, 21-000177, 21-000217, 21-000221, 21-000235, 21-000242, 21-000245, 21-000252, 21-000262, 21-000283, 21-000290, 21-000291, 21-000295, 21-000332, 21-000335, 21-000342, 21-000346, 21-000347, 21-000368, 21-000369, 21-000370, 21-000651, 21-000653, 21-002539, 23-000143, 23-000387, 23-000450, 23-000475, 23-000478, 23-000492, 23-000534,

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						23-000535, 23-000536, 23-000537, 23-000539, 23-000590, 23-000786, 23-000789, 23-000790, 23-000791, 23-000792, 23-000793, 23-000796, 23-000835, 23-001034, 23-001060, 23-001063, 23-001520, 23-002898, 23-002915, 23-002936, 23-002945, 28-000015, 28-000027, 28-000028, 28-000029, 28-000032, 28-000045, 28-000061, 28-000063, 28-000066, 28-000077, 28-000088, 28-000092, 28-000093, 28-000097, 28-000123, 28-000125, 28-000150, 28-000199, 28-000209, 28-000218, 28-000222, 28-000310, 28-000311, 28-000329, 28-000330, 28-000362, 28-000418, 28-000419, 28-000420, 28-000421, 28-000422, 28-000428, 28-000828, 28-000912, 49-000073, 49-000079, 49-000112, 49-000135, 49-000194, 49-000228, 49-000264, 49-000265, 49-000271, 49-000291, 49-000292, 49-000295, 49-000318, 49-000329, 49-000330, 49-000340, 49-000342, 49-000360, 49-000362, 49-000363, 49-000369, 49-000371, 49-000423, 49-000424, 49-000434, 49-000483, 49-000512, 49-000521, 49-000548, 49-000620, 49-000653, 49-000671, 49-000682, 49-000683, 49-000730, 49-000731, 49-000732, 49-000733, 49-000846, 49-000860, 49-000887, 49-000913, 49-000914, 49-000915, 49-000916, 49-000917, 49-000959, 49-000970, 49-000976, 49-000978, 49-000981, 49-000982, 49-000983, 49-000990, 49-000992, 49-001081, 49-001082, 49-001083, 49-001084, 49-001085, 49-001086, 49-001087, 49-001109, 49-001121

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-009462		1977	Teresa Ann Miller	Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties	San Francisco State University	07-000323, 21-000087, 21-000376, 21-000378, 21-000379, 21-000380, 21-000381, 21-000382, 21-000383, 21-000384, 21-000386, 21-000387, 21-000388, 21-000389, 21-000390, 21-000391, 21-000392, 21-000393, 21-000394, 21-000395, 21-000396, 21-000397, 21-000398, 21-000399, 21-000400, 21-000401, 21-000402, 21-000546, 23-000789, 23-000790, 49-000629, 49-000785, 49-000787
S-009583		1978	David W. Mayfield	Ecology of the Pre-Spanish San Francisco Bay Area	San Francisco State University	
S-009795		1986	Thomas Lynn Jackson	Late Prehistoric Obsidian Exchange in Central California	Stanford University	06-000025, 07-000047, 07-000080, 07-000188, 07-000440, 17-000320, 17-000601, 21-000163, 21-000218, 21-000235, 21-000242, 21-000283, 21-000290, 21-000368, 21-000423, 21-000628, 23-001589, 23-001659, 23-003068, 23-003119, 28-000015, 28-000068, 28-000199, 28-000205, 28-000828, 49-000135, 49-000360, 49-000423, 49-000424, 49-000518, 49-000521, 49-000533, 49-000536, 49-000558, 49-000801, 57-000114
S-015529		1993	Robert L. Gearhart II, Clell L. Bond, Steven D. Hoyt, James H. Cleland, James Anderson, Pandora Snethcamp, Gary Wesson, Jack Neville, Kim Marcus, Andrew York, and Jerry Wilson	California, Oregon, and Washington: Archaeological Resource Study	Espey, Huston & Associates, Inc.; Dames & Moore	01-000033, 01-000034, 01-000084, 01-000086, 01-000104, 07-000133, 07-000173, 07-000175, 07-000177, 17-000072, 17-000392, 21-000048, 21-001915, 23-001704, 27-000100, 27-000236, 27-000335, 27-000356, 27-000386, 27-000485, 38-000028, 38-000072, 38-000085, 38-000098, 41-000080, 41-000265, 44-000179

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-016660		1992	Jeffrey B. Fentress	Prehistoric Rock Art of Alameda and Contra Costa Counties, California	California State University, Hayward	01-000035, 01-000039, 01-000071, 01-000080, 01-000128, 01-000137, 01-000138, 01-000144, 01-000195, 01-000198, 01-000199, 01-002112, 07-000029, 07-000094, 07-000189, 07-000193, 07-000212, 07-000216, 07-000219, 07-000230, 07-000242, 07-000255, 07-000260, 07-000271, 07-000301, 07-000302, 07-000323, 07-000344, 07-000345, 07-000346, 07-000347, 07-000348, 07-000356, 07-000362, 07-000374, 07-000725, 07-000726, 07-000727, 07-000730, 07-000734, 07-000736, 07-000738, 07-000739
S-017835		1975	Judy Myers Suchey	Biological Distance of Prehistoric Central California Populations Derived from Non-Metric Traits of the Cranium	University of California, Riverside	01-000086, 01-000104, 01-000105, 06-000025, 07-000080, 07-000081, 07-000083, 07-000087, 21-000017, 21-000193, 21-000242, 21-000252, 48-000010, 57-000145
S-018217		1996	Glenn Gmoser	Cultural Resource Evaluations for the Caltrans District 04 Phase 2 Seismic Retrofit Program, Status Report: April 1996	Caltrans	01-000014, 01-000023, 01-000227, 07-000108, 07-000119, 38-000002, 38-000004, 41-000273, 43-000106, 43-000297, 43-000624, 43-001078, 44-000010, 44-000201, 44-000300, 49-000195

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-020395		1998	Donna L. Gillette	PCNs of the Coast Ranges of California: Religious Expression or the Result of Quarrying?	California State University, Hayward	07-000094, 07-000323, 12-000050, 17-000071, 17-001315, 21-000087, 21-000376, 21-000378, 21-000379, 21-000381, 21-000382, 21-000383, 21-000384, 21-000386, 21-000387, 21-000388, 21-000389, 21-000390, 21-000391, 21-000392, 21-000393, 21-000394, 21-000395, 21-000396, 21-000397, 21-000398, 21-000399, 21-000400, 21-000401, 21-000402, 21-000419, 21-000433, 21-000546, 21-000620, 21-000621, 21-000624, 21-000661, 23-000434, 23-000809, 23-000810, 23-001698, 23-001725, 23-001792, 23-001798, 23-001799, 23-001803, 23-001804, 23-001930, 23-001942, 23-001950, 23-001963, 35-000013, 43-000067, 43-000080, 43-000287, 43-000289, 43-000504, 49-000046, 49-000240, 49-000533, 49-000550, 49-000629, 49-000785, 49-000787, 49-000868, 49-000960, 49-000975, 49-001004, 49-001087, 49-001239, 49-002121
S-024840		2002		Final Environmental Impact Statement - Environmental Impact Report for the Disposal and Reuse of Fleet and Industrial Supply Center, Naval Fuel Depot, Point Molate.	Southwest Division, Naval Facilities Engineering Command; City of Richmond	07-000161, 07-000162, 07-000277, 07-000454, 07-000455
S-032596	Caltrans - EA No. 447600; Other - Contract #04A2098	2006	Randall Milliken, Jerome King, and Patricia Mikkelsen	The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways	Consulting in the Past; Far Western Anthropological Research Group, Inc.	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-033600		2007	Jack Meyer and Jeff Rosenthal	Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4	Far Western Anthropological Research Group, Inc.	01-000001, 01-000002, 01-000014, 01-000063, 01-000064, 01-000067, 01-000080, 01-000124, 01-000139, 01-000140, 01-001795, 01-002110, 01-002160, 01-002162, 01-002245, 07-000019, 07-000024, 07-000037, 07-000047, 07-000075, 07-000079, 07-000088, 07-000089, 07-000108, 07-000182, 07-000185, 07-000186, 07-000217, 07-000239, 07-000401, 07-000721, 21-000010, 21-000048, 21-002615, 28-000009, 28-000028, 28-000301, 28-000967, 38-000006, 38-000028, 38-000101, 38-000102, 38-000119, 41-000080, 41-000284, 43-000016, 43-000189, 43-000296, 43-000308, 43-000310, 43-000423, 43-000424, 43-000448, 43-000451, 43-000485, 43-000561, 43-000604, 43-000608, 43-000614, 43-000623, 43-001015, 43-001058, 43-001080, 43-001163, 43-001194, 43-001576, 48-000007, 48-000157
S-035289		2008	Phil Kaijankoski	A Geoarchaeological Investigation for CA-CCO-506H, Point Molate, Contra Costa County, California	Anthropological Studies Center, Sonoma State University	07-000277
S-039952	Submitter - LSA Project #TER1202	2012	Neal Kaptain	Results of Soil and Groundwater Investigation Borings Archaeological Monitoring for the Point Molate – IR Site 3 Project, City of Richmond, Contra Costa County, California. LSA Project #TER1202 (letter report)	LSA Associates, Inc.	
S-039953	Submitter - LSA Project #TER1202	2012	E. Timothy Jones	Archaeological Monitoring Results of Injection Borings for the Point Molate Soil and Groundwater Management Plan, Building 87 Area, Richmond, Contra Costa County. LSA Project #TER1202 (letter report)	LSA Associates, Inc.	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-040390		2009		Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment	Analytical Environmental Services	07-000161, 07-000162, 07-000277, 07-000441, 07-000454, 07-000455, 07-001160, 07-001174, 07-003066, 07-003070, 07-003074, 07-003079, 07-003080, 07-003085, 07-004544, 07-004545, 07-004546, 07-004547, 07-004548, 07-004549, 07-004550, 07-004551, 07-004552, 07-004553, 07-004554, 07-004555, 07-004556, 07-004557, 07-004558, 07-004559, 07-004560, 07-004561, 07-004562, 07-004563, 07-004565, 07-004566, 07-004567, 07-004568, 07-004569, 07-004570, 07-004571, 07-004572, 07-004573, 07-004574, 07-004575, 07-004576, 07-004577, 07-004578, 07-004579, 07-004580, 07-004581, 07-004582, 07-004583, 07-004584, 07-004585, 07-004586, 07-004587, 07-004588, 07-004589, 07-004590, 07-004591, 07-004592, 07-004593
S-040390a		2009	Mike Taggart and Damon Haydu	Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume II: Archaeological Resources	Analytical Environmental Services	
S-043267	OHP PRN - USN960916A	2001	Christopher Dore, Daniel Glennon, and James Jenks	Draft Work Plan for a National Register of Historic Places Eligibility Re-Evaluation of CA-CCO-283, Naval Fuel Depot Point Molate, Richmond, Contra Costa County, California	Garcia and Associates	07-000162

Report Detail: S-000595

Identifiers

Report No.: S-000595
Other IDs:
Cross-refs:

Citation information

Author(s): Ronald F. King
Year: 1974 (Dec)
Title: A Report on the Status of Generally Available Data Regarding Archaeological, Ethnographic, and Historical Resources Within a Five Mile Wide Corridor Through Portions of Colusa, Yolo, Solano, and Contra Costa Counties, California
Affliliation:
No. pages: 9
No. maps: 0
Attributes: Literature search
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Not-mappable report. There are no maps showing the location of the project in this report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000091	CA-CCO-000149	isolate
P-48-000009	CA-SOL-000001	Petersen 1
P-48-000010	CA-SOL-000002	Peterson 2
P-48-000011	CA-SOL-000003	Petersen 3
P-48-000012	CA-SOL-000004	Petersen, Schmeiser
P-48-000013	CA-SOL-000005	Petersen 5
P-48-000018	CA-SOL-000010	SW-10
P-48-000020	CA-SOL-000012	Campbell Site
P-57-000130	CA-YOL-000161	PGE-16
P-57-000131	CA-YOL-000162	PGE-17

No. resources: 10
Has informals: No

Location information

County(ies): Colusa, Contra Costa, Solano, Yolo
USGS quad(s): Antioch North, Dozier, Esparto, Wildwood School, Winters, Woodward Island
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	9/10/2015	hagell

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-000848

Identifiers

Report No.: S-000848

Other IDs:	*Type*	*Name*
	Other	Contract AA550-CT6-52

Cross-refs:

Citation information

Author(s): David A. Fredrickson

Year: 1977

Title: A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical & Archaeological Resources

Affliliation: The Anthropology Laboratory, Sonoma State College; Winzler & Kelly Consulting Engineers

No. pages: 223

No. maps: 0

Attributes: Management/planning, Other research

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

Santa Barbara, San Luis Obispo, and Ventura counties are also within the study area. 9880 prehistoric and historic resources were identified in the 17 counties when the report was written in 1977. There were no location maps in the report.

Associated resources

No. resources: 0

Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, Napa, Other, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Del Norte Co., ~All quads - Humboldt Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - Monterey Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Solano Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	12/9/2015	hagell

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	12/9/2015	hagell	edited database

Record status: Verified

Report Detail: S-001978

Identifiers

Report No.: S-001978
Other IDs:
Cross-refs:

Citation information

Author(s): Anthony V. Aiello
Year: 1960 (Jan)
Title: The Islands of Contra Costa
Affliliation:
No. pages: 12
No. maps: 0
Attributes: Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): Antioch North, Antioch South, Benicia, Bouldin Island, Brentwood, Briones Valley, Byron Hot Springs, Clayton, Clifton Court Forebay, Diablo, Dublin, Hayward, Honker Bay, Jersey Island, Las Trampas Ridge, Livermore, Mare Island, Oakland East, Petaluma Point, Richmond, San Quentin, Tassajara, Vine Hill, Walnut Creek, Woodward Island
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	9/17/2015	mikulikc	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	9/17/2015	mikulikc	corrected quads in location tab
	9/17/2015	mikulikc	database incomplete: no affiliation submitted

Record status: Verified

Report Detail: S-002458

Identifiers

Report No.: S-002458
Other IDs:
Cross-refs:

Citation information

Author(s): Suzanne Marie Ramiller, Neil Ramiller, Roger Werner, and Suzanne Stewart
Year: 1981 (Jan)
Title: Overview of Prehistoric Archaeology for the Northwest Region, California Archaeological Sites Survey: Del Norte, Humboldt, Mendocino, Lake, Sonoma, Napa, Marin, Contra Costa, Alameda
Affliliation: Northwest Regional Office, California Archaeological Sites Survey; Anthropological Studies Center, Sonoma State University
No. pages: 420
No. maps:
Attributes: Archaeological, Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Not-mappable report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000080	CA-ALA-000060	Castro Valley
P-01-000084	CA-ALA-000307	West Berkeley Shell Mound
P-01-000086	CA-ALA-000309	Emeryville Shellmound
P-01-000104	CA-ALA-000328	Nelson's 328
P-01-000119	CA-ALA-000389	Site #1
P-01-000124	CA-ALA-000394	Pleasanton Meadows Site
P-01-000125	CA-ALA-000396	Noble's Rest Stop
P-01-000126	CA-ALA-000398	ICR-WR-4
P-01-000127	CA-ALA-000399	ICR-WR-5
P-01-000137	CA-ALA-000410	ICR-WR-16
P-01-000139	CA-ALA-000413	Santa Rita Village
P-01-002053	CA-ALA-000300	
P-01-002104	CA-ALA-000397	ICR-WR-3
P-07-000047	CA-CCO-000030	
P-07-000079	CA-CCO-000137	Monument
P-07-000080	CA-CCO-000138	Hotchkiss Mound
P-07-000081	CA-CCO-000139/H	Simone Mound
P-07-000082	CA-CCO-000140	Bethel Tract
P-07-000092	CA-CCO-000150	Veale Tract #1
P-07-000093	CA-CCO-000151	
P-07-000105	CA-CCO-000222/H	Keller Ranch House Complex
P-07-000131	CA-CCO-000250	Nelson Survey Map #250a
P-07-000146	CA-CCO-000267	Nelson No. 267
P-07-000147	CA-CCO-000268	Voided, see P-07-000462
P-07-000148	CA-CCO-000269	Nelson No. 269
P-07-000149	CA-CCO-000270	Nelson No. 270
P-07-000150	CA-CCO-000271	Nelson No. 271
P-07-000168	CA-CCO-000290	Nelson No. 290
P-07-000173	CA-CCO-000295	Nelson No. 295
P-07-000175	CA-CCO-000298	Nelson's No. 298, Stege
P-07-000177	CA-CCO-000300	Nelson's Survey 300
P-07-000185	CA-CCO-000308	Stone Valley Site
P-07-000186	CA-CCO-000309	The Rossmoor Site
P-07-000190	CA-CCO-000352	Diablo Road Site
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional

P-07-000440	CA-CCO-000259	Barker's Rodeo
P-07-000447	CA-CCO-000389	492-1-A
P-07-000448	CA-CCO-000390	492-2-A
P-07-000449	CA-CCO-000391	492-3-B
P-07-000462	CA-CCO-000655	Nelson's 268B
P-07-000470	CA-CCO-000372	[none]
P-07-000474	CA-CCO-000392	492-4-B
P-07-000476	CA-CCO-000698	Nelson No. 259
P-07-000481	CA-CCO-000356	
P-07-000674	CA-CCO-000311	
P-07-000710	CA-CCO-000349	Void, see P-07-000323
P-07-000724	CA-CCO-000377	SL-1
P-07-004621		#1 Claeys Ranch
P-08-000015	CA-DNO-000011/H	Ta'gia n te (OHP)
P-08-000018	CA-DNO-000014/H	CInya'tLtci (Waterman 1925)
P-08-000021	CA-DNO-000017/H	MesLteLn
P-08-000090	CA-DNO-000088	Cemetry of Meslteltun
P-12-000125	CA-HUM-000067/H	Loud 67
P-12-000175	CA-HUM-000118	Patrick's Point #4
P-12-000186	CA-HUM-000129/H	Tsa'hpekw
P-12-000194	CA-HUM-000169	Tsurai
P-12-000199	CA-HUM-000174	Cone Rock, Sea Gull Rock
P-12-000202	CA-HUM-000177	MM-1
P-12-000207	CA-HUM-000182	Shelter Cove, X-1
P-12-000209	CA-HUM-000184	Etter Mound, X-3
P-12-000210	CA-HUM-000185	X-4
P-12-000211	CA-HUM-000186	X-5
P-12-000263	CA-HUM-000245	Stormy Saddle Site
P-12-000264	CA-HUM-000246	Pine Ridge Site
P-12-000266	CA-HUM-000248	Humboldt Gully Site
P-12-000336	CA-HUM-000323	Nooning Creek
P-12-000442	CA-HUM-000435	Mud Springs Site
P-12-000445	CA-HUM-000439	RNP-S-4
P-12-000458	CA-HUM-000452	RNP-S-22
P-17-000006	CA-LAK-000261	Fredrickson "A"
P-17-000026	CA-LAK-000510	5A
P-17-000035	CA-LAK-000753	14A
P-17-000072	CA-LAK-000036	Borax Lake Site
P-17-000114	CA-LAK-000089	Rattlesnake Island
P-17-000177	CA-LAK-000153	LAK 307
P-17-000286	CA-LAK-000267	Mauldin 196
P-17-000287	CA-LAK-000268	CA-LAK-785
P-17-000289	CA-LAK-000271	[none]
P-17-000290	CA-LAK-000272	CA-LAK-272/Full Circle Field 2
P-17-000307	CA-LAK-000291	Mauldin 221
P-17-000320	CA-LAK-000305	Sam Alley Site
P-17-000392	CA-LAK-000380	The Mostin Site
P-17-000407	CA-LAK-000395	GR-11
P-17-000437	CA-LAK-000425	LAK-S270
P-17-000446	CA-LAK-000435	Diwi'lem
P-17-000470	CA-LAK-000471	27A
P-17-000531	CA-LAK-000585	2A
P-17-000535	CA-LAK-000589	A161
P-17-000546	CA-LAK-000605	G-99
P-17-000550	CA-LAK-000609/H	G-103
P-17-000551	CA-LAK-000610	G-104
P-17-000554	CA-LAK-000613/H	Ford Flat Site
P-17-000572	CA-LAK-000643	Pirate's Buried Site
P-17-000610	CA-LAK-000711	PBL9

P-17-000639	CA-LAK-000741	[none]
P-17-000640	CA-LAK-000742	[none]
P-17-000673	CA-LAK-000785	Voided: see P-17-000287
P-17-000787	CA-LAK-000944	Middle Creek CCC Camp
P-21-000017	CA-MRN-000266	PB 266
P-21-000034	CA-MRN-000001	Nelson No. 1
P-21-000039	CA-MRN-000008	
P-21-000051	CA-MRN-000020	Nelson No. 20
P-21-000053	CA-MRN-000022	Nelson No. 22
P-21-000057	CA-MRN-000026	Nelson No. 26
P-21-000058	CA-MRN-000027	Nelson No. 27
P-21-000106	CA-MRN-000076	Nelson No. 76
P-21-000143	CA-MRN-000115	Nelson No. 115
P-21-000163	CA-MRN-000138/H	Nelson No. 138
P-21-000177	CA-MRN-000152	Nelson No. 152
P-21-000217	CA-MRN-000192	Nelson No. 192
P-21-000221	CA-MRN-000196	Nelson No. 196
P-21-000235	CA-MRN-000216/H	DNG-1
P-21-000242	CA-MRN-000232/H	PB 232 b
P-21-000245	CA-MRN-000235/H	Beardsley's 301
P-21-000252	CA-MRN-000242/H	PB No. 242 - Cauley
P-21-000262	CA-MRN-000275	PB 275
P-21-000283	CA-MRN-000298/H	DNG-2
P-21-000290	CA-MRN-000307/H	Probably 232 C
P-21-000291	CA-MRN-000308	
P-21-000295	CA-MRN-000315	Nelson No. 86C
P-21-000332	CA-MRN-000357/H	Bayonet Midden
P-21-000335	CA-MRN-000362	
P-21-000342	CA-MRN-000370	S.A. VIII
P-21-000346	CA-MRN-000374	
P-21-000347	CA-MRN-000375	The Palo Marin Site
P-21-000368	CA-MRN-000402	
P-21-000369	CA-MRN-000403	
P-21-000370	CA-MRN-000404	
P-21-000651	CA-MRN-000358	S.A. II (San Antonio II)
P-21-000653	CA-MRN-000391	
P-21-002539	CA-MRN-000682	S.A. VII (Northwestern Archaeol.
P-23-000143	CA-MEN-000069	69
P-23-000387	CA-MEN-000320	Voided; See P-23-000590
P-23-000450	CA-MEN-000455	"Digger Post"
P-23-000475	CA-MEN-000483/H	may be Pomo Village- Kroeber
P-23-000478	CA-MEN-000486	
P-23-000492	CA-MEN-000500	
P-23-000534	CA-MEN-000583	
P-23-000535	CA-MEN-000584	
P-23-000536	CA-MEN-000585	
P-23-000537	CA-MEN-000586	
P-23-000539	CA-MEN-000588	
P-23-000590	CA-MEN-000643	Eel River Work Center
P-23-000786	CA-MEN-000851	
P-23-000789	CA-MEN-000854	Upper Twin Rocks
P-23-000790	CA-MEN-000855	Milling Stone Basin
P-23-000791	CA-MEN-000856	Wagon Trail
P-23-000792	CA-MEN-000857/H	White Hawk Top
P-23-000793	CA-MEN-000858	White Hawk Yoostabe
P-23-000796	CA-MEN-000861	Long Doe Petroglyph/Field Desi
P-23-000835	CA-MEN-000900	Upper Coffee Mill Flat
P-23-001034	CA-MEN-001111	Spring Site
P-23-001060	CA-MEN-001154	NEIYI

P-23-001063	CA-MEN-001157	S-6435
P-23-001520	CA-MEN-001633	Olkat
P-23-002898	CA-MEN-000405	Fenenga 1
P-23-002915	CA-MEN-000482	MEN-482
P-23-002936	CA-MEN-000546	Possibly Barrett's (1908, p. 140)
P-23-002945	CA-MEN-000555	[none]
P-28-000015	CA-NAP-000001	#1; Goddard; Oakville
P-28-000027	CA-NAP-000014	Las Trancas
P-28-000028	CA-NAP-000015/H	#15, Suscol Mound #5
P-28-000029	CA-NAP-000016	#16
P-28-000032	CA-NAP-000021	ACRS-PV-1
P-28-000045	CA-NAP-000039	#39
P-28-000061	CA-NAP-000057	Peripoli
P-28-000063	CA-NAP-000060	UCMA Napa 60-50
P-28-000066	CA-NAP-000063	
P-28-000077	CA-NAP-000074	#4
P-28-000088	CA-NAP-000089	#23
P-28-000092	CA-NAP-000093	Possibly Kroeber's "Topai"
P-28-000093	CA-NAP-000094	# 28
P-28-000097	CA-NAP-000098	#32
P-28-000123	CA-NAP-000129	B-53-GG
P-28-000125	CA-NAP-000131	Genoa Site
P-28-000150	CA-NAP-000158	B-59-Z
P-28-000199	CA-NAP-000234	Roy Pridmore #3
P-28-000209	CA-NAP-000247	ACRS-BD-6
P-28-000218	CA-NAP-000261	D.T.Davis #49; UCAS-B 277
P-28-000222	CA-NAP-000270	CA-NAP-270
P-28-000310	CA-NAP-000410	Querried Quarry Site
P-28-000311	CA-NAP-000411/H	[none]
P-28-000329	CA-NAP-000432	TR-23
P-28-000330	CA-NAP-000433	T-41 (UCD Files)
P-28-000362	CA-NAP-000468	Mudflat Site (2)
P-28-000418	CA-NAP-000535	Tom's Mounds
P-28-000419	CA-NAP-000536	[none]
P-28-000420	CA-NAP-000537	[none]
P-28-000421	CA-NAP-000538	[none]
P-28-000422	CA-NAP-000539	Klaffke's Mound
P-28-000428	CA-NAP-000545	I
P-28-000828	CA-NAP-000032	#32; Kolb; Rutherford; Pistorias
P-28-000912	CA-NAP-000311	
P-49-000073	CA-SON-000004/H	Carrillo Adobe
P-49-000079	CA-SON-000020	Lithic Scatter
P-49-000112	CA-SON-000084	Santa Rosa Creek site
P-49-000135	CA-SON-000159	Stony Glenn Lane
P-49-000194	CA-SON-000222	Nelson No. 222
P-49-000228	CA-SON-000256	P-30
P-49-000264	CA-SON-000292	The Ranch Site
P-49-000265	CA-SON-000293	Probably Kelly's Site "Tiwut-Huy
P-49-000271	CA-SON-000299	"Kili"
P-49-000291	CA-SON-000320/H	"Loken-Huye" (Kelly)
P-49-000292	CA-SON-000321/H	Peter's 321
P-49-000295	CA-SON-000324	Peter's 324
P-49-000318	CA-SON-000347	Gleason Beach 1
P-49-000329	CA-SON-000358	VOIDED - see P-49-000087
P-49-000330	CA-SON-000359	Hidden Valley Ranch
P-49-000340	CA-SON-000369	Atcacinateawalli
P-49-000342	CA-SON-000371	Foster's Ranch
P-49-000360	CA-SON-000389	Carriger Creek site
P-49-000362	CA-SON-000391	S.A.1

P-49-000363	CA-SON-000392	KING #5
P-49-000369	CA-SON-000400	S.A. VII (Northwestern Archaeol.
P-49-000371	CA-SON-000402	TC-1
P-49-000423	CA-SON-000455/H	Gables Site
P-49-000424	CA-SON-000456	
P-49-000434	CA-SON-000466	
P-49-000483	CA-SON-000518	SDA-30
P-49-000512	CA-SON-000547	H-51
P-49-000521	CA-SON-000556	H-41
P-49-000548	CA-SON-000583	SRI-3001
P-49-000620	CA-SON-000670/H	SDA-1
P-49-000653	CA-SON-000710	SDA-61
P-49-000671	CA-SON-000729	SDA-104
P-49-000682	CA-SON-000740	G.E.- 8
P-49-000683	CA-SON-000741/H	G.E.- 9
P-49-000730	CA-SON-000789	Geysers Fourty-Four
P-49-000731	CA-SON-000790	Geysers Fourty-Five
P-49-000732	CA-SON-000791	Geysers Fourty-Six
P-49-000733	CA-SON-000792	Geysers Fourty-Seven
P-49-000846	CA-SON-000906	Miller's Garden Site
P-49-000860	CA-SON-000920	[none]
P-49-000887	CA-SON-000948	
P-49-000913	CA-SON-000976	
P-49-000914	CA-SON-000977	
P-49-000915	CA-SON-000978	
P-49-000916	CA-SON-000979	
P-49-000917	CA-SON-000980	
P-49-000959	CA-SON-001025	Redwood Thompson Site
P-49-000970	CA-SON-001036	Soledad
P-49-000976	CA-SON-001042	
P-49-000978	CA-SON-001044	Walnut Orchard Site
P-49-000981	CA-SON-001047	Rosehip Site
P-49-000982	CA-SON-001048	Laguna Grande
P-49-000983	CA-SON-001049	Willow Marsh Site
P-49-000990	CA-SON-001058	
P-49-000992	CA-SON-001060	Madrone Knoll
P-49-001081	CA-SON-001154	Site No. 1
P-49-001082	CA-SON-001155	Site No. 2
P-49-001083	CA-SON-001156	Site No. 3
P-49-001084	CA-SON-001157	Site No. 4
P-49-001085	CA-SON-001158	Site No. 5
P-49-001086	CA-SON-001159/H	Site No. 6
P-49-001087	CA-SON-001160	Site No. 7
P-49-001109	CA-SON-001182	Doberman Terrace
P-49-001121	CA-SON-001195	Covert Lane Site

No. resources: 257

Has informals: No

Location information

County(ies): Alameda, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Del Norte Co., ~All quads - Humboldt Co., ~All quads - Lake Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - Napa Co., ~All quads - Sonoma Co.

Address:

PLSS:

Report Detail: S-002458

Database record metadata

	Date	User	
Entered:	4/7/2005	nwic-main	
Last modified:	11/10/201	hagell	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
Record status:	Verified		

Report Detail: S-009462

Identifiers

Report No.: S-009462
Other IDs:
Cross-refs:

Citation information

Author(s): Teresa Ann Miller
Year: 1977 (Jun)
Title: Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties
Affliliation: San Francisco State University
No. pages: 98
No. maps: 12
Attributes: Archaeological, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional
P-21-000087	CA-MRN-000057	Nelson No. 57
P-21-000376	CA-MRN-000414	DEER ISLAND AREA #1
P-21-000378	CA-MRN-000416	DEER ISLAND AREA #3
P-21-000379	CA-MRN-000417	DEER ISLAND AREA #4
P-21-000380	CA-MRN-000418	DEER ISLAND AREA #5
P-21-000381	CA-MRN-000419	DEER ISLAND AREA #6
P-21-000382	CA-MRN-000420	17 NOVATO
P-21-000383	CA-MRN-000421	NOVATO #18
P-21-000384	CA-MRN-000422	NOVATO #19
P-21-000386	CA-MRN-000425	TIBURON 3 FIELD #3
P-21-000387	CA-MRN-000426	TIBURON #4 FIELD #4
P-21-000388	CA-MRN-000427	TIBURON #5 FIELD #5
P-21-000389	CA-MRN-000428	TIBURON 6
P-21-000390	CA-MRN-000429	TIBURON 7 FIELD #7
P-21-000391	CA-MRN-000430	TIBURON #8 FIELD #8
P-21-000392	CA-MRN-000431	TIBURON #9
P-21-000393	CA-MRN-000432	TIBURON 12
P-21-000394	CA-MRN-000433	TIBURON 13 FIELD #13
P-21-000395	CA-MRN-000434	TIBURON 14 AND 15 FIELD #'
P-21-000396	CA-MRN-000435	TIBURON #16 FIELD #16
P-21-000397	CA-MRN-000436	TIBURON 17 FIELD #17
P-21-000398	CA-MRN-000437	TIBURON 18
P-21-000399	CA-MRN-000438	TIBURON 19 FIELD #19
P-21-000400	CA-MRN-000439	TIBURON 20A
P-21-000401	CA-MRN-000440	TIBURON 21 FIELD #21
P-21-000402	CA-MRN-000442	Tiburon 1
P-21-000546	CA-MRN-000424	Tiburon 2
P-23-000789	CA-MEN-000854	Upper Twin Rocks
P-23-000790	CA-MEN-000855	Milling Stone Basin
P-49-000629	CA-SON-000682	Steward's 9 PT.
P-49-000785	CA-SON-000844	PETALUMA #1
P-49-000787	CA-SON-000846	PETALUMA #3

No. resources: 33
Has informals: Yes

Report Detail: S-009462

Location information

County(ies): Alameda, Contra Costa, Lake, Marin, Mendocino, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Lake Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Solano Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	9/10/2015	simsa	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/5/2010	muchb	updated county list as per thesis content
	7/2/2015	rinerg	marked Verified

Record status: Verified

Report Detail: S-009583

Identifiers

Report No.: S-009583
Other IDs:
Cross-refs:

Citation information

Author(s): David W. Mayfield
Year: 1978 (Dec)
Title: Ecology of the Pre-Spanish San Francisco Bay Area
Affliliation: San Francisco State University
No. pages: 170
No. maps: 8
Attributes: Other research, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Masters Thesis. A study of the ecological setting of part of the San Francisco Bay Area as it existed prior to Spanish colonization. Not-mappable report.

Associated resources

No. resources: 0
Has informals: No

Location information

County(ies): Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara, Santa Cruz
USGS quad(s): Altamont, Antioch North, Antioch South, Benicia, Big Basin, Brentwood, Briones Valley, Byron Hot Springs, Calaveras Reservoir, Castle Rock Ridge, Clayton, Cupertino, Diablo, Dublin, Franklin Point, Half Moon Bay, Hayward, Honker Bay, Hunters Point, Jersey Island, La Costa Valley, La Honda, Las Trampas Ridge, Lick Observatory, Livermore, Los Gatos, Mare Island, Mendenhall Springs, Milpitas, Mindego Hill, Montara Mtn, Morgan Hill, Mount Day, Mountain View, Newark, Niles, Oakland East, Oakland West, Palo Alto, Pigeon Point, Point Bonita, Redwood Point, Richmond, San Francisco North, San Francisco South, San Gregorio, San Jose East, San Jose West, San Leandro, San Mateo, San Quentin, Santa Teresa Hills, Tassajara, Vine Hill, Walnut Creek, Woodside
Address:
PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	7/16/2015	rinerg	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	7/16/2015	rinerg	set Collections=No; set Status=Verified

Record status: Verified

Report Detail: S-009795

Identifiers

Report No.: S-009795
Other IDs:
Cross-refs:

Citation information

Author(s): Thomas Lynn Jackson
Year: 1986 (Jun)
Title: Late Prehistoric Obsidian Exchange in Central California
Affliliation: Stanford University
No. pages: 273
No. maps: 6
Attributes: Other research, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: Yes

General notes

PhD dissertation. Not-mappable report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-06-000025	CA-COL-000001	S-1 Miller
P-07-000047	CA-CCO-000030	
P-07-000080	CA-CCO-000138	Hotchkiss Mound
P-07-000188	CA-CCO-000312	Franks
P-07-000440	CA-CCO-000259	Barker's Rodeo
P-17-000320	CA-LAK-000305	Sam Alley Site
P-17-000601	CA-LAK-000702	1
P-21-000163	CA-MRN-000138/H	Nelson No. 138
P-21-000218	CA-MRN-000193/H	Nelson No. 193
P-21-000235	CA-MRN-000216/H	DNG-1
P-21-000242	CA-MRN-000232/H	PB 232 b
P-21-000283	CA-MRN-000298/H	DNG-2
P-21-000290	CA-MRN-000307/H	Probably 232 C
P-21-000368	CA-MRN-000402	
P-21-000423	CA-MRN-000471	San Jose Village
P-21-000628	CA-MRN-000201	Jesse Peter 201
P-23-001589	CA-MEN-001704	Tciya
P-23-001659	CA-MEN-001844	Men. X
P-23-003068	CA-MEN-001809	Men-1704S
P-23-003119	CA-MEN-001929	[none]
P-28-000015	CA-NAP-000001	#1; Goddard; Oakville
P-28-000068	CA-NAP-000065	#65
P-28-000199	CA-NAP-000234	Roy Pridmore #3
P-28-000205	CA-NAP-000240	Big Basin No. 1
P-28-000828	CA-NAP-000032	#32; Kolb; Rutherford; Pistorias
P-49-000135	CA-SON-000159	Stony Glenn Lane
P-49-000360	CA-SON-000389	Carriger Creek site
P-49-000423	CA-SON-000455/H	Gables Site
P-49-000424	CA-SON-000456	
P-49-000518	CA-SON-000553	
P-49-000521	CA-SON-000556	H-41
P-49-000533	CA-SON-000568	Midden site
P-49-000536	CA-SON-000571	Petroglyph site
P-49-000558	CA-SON-000593/H	Son-3 (SFSC)
P-49-000801	CA-SON-000860/H	82-12
P-57-000114	CA-YOL-000139	Elation Hill

Report Detail: S-009795

No. resources: 36

Has informals: No

Location information

County(ies): Colusa, Contra Costa, Lake, Marin, Mendocino, Napa, Solano, Sonoma, Yolo

USGS quad(s): ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - Solano Co., ~All quads - Sonoma Co., ~All quads - Yolo Co., Albion, Antioch North, Antioch South, Arbuckle, Asti, Bailey Ridge, Bartlett Mtn, Bartlett Springs, Benicia, Benmore Canyon, Big Foot Mtn, Boonville, Brentwood, Briones Valley, Capell Valley, Clayton, Clearlake Highlands, Clearlake Oaks, Cloverdale, Cold Spring, Colusa, Comptche, Cortina Creek, Cotati, Detert Reservoir, Drakes Bay, Dunnigan, Elk, Elk Mountain, Elledge Peak, Eureka Hill, Fouts Springs, Gilmore Peak, Glascock Mtn, Glen Ellen, Greenough Ridge, Grimes, Gualala, Gube Mountain, Highland Springs, Honker Bay, Hopland, Hough Springs, Jericho Valley, Jersey Island, Kelseyville, Kirkville, Knoxville, Lakeport, Laughlin Range, Leesville, Lodoga, Lower Lake, Lucerne, Mallo Pass Creek, Mathison Peak, Maxwell, Mcguire Ridge, Mendocino, Meridian, Middletown, Moulton Weir, Mount St Helena, Mt George, Navarro, Novato, Ornbaun Valley, Petaluma River, Philo, Point Arena, Potato Hill, Potter Valley, Purdys Gardens, Redwood Valley, Richmond, Rumsey, Rutherford, San Geronimo, Sanborn Slough, Santa Rosa, Saunders Reef, Sebastopol, Sites, Tisdale Weir, Tomales, Ukiah, Upper Lake, Vine Hill, Walnut Creek, Warm Springs Dam, Whispering Pines, Wilbur Springs, Wildwood School, Williams, Wilson Valley, Yorkville, Zeni Ridge

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	10/27/201	rinerg	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/21/201	rinerg	add quads: 'all Yolo', 'all Solano', 'all Napa', 'all Sonoma', 'all Marin'; remove quad: Las Trampas Ridge; add about 75 more quads based on GIS portions in Mendocino, Lake, Colusa, ContraCosta counties

Record status: Verified

Report Detail: S-015529

Identifiers

Report No.: S-015529
Other IDs:
Cross-refs:

Citation information

Author(s): Robert L. Gearhart II, Clell L. Bond, Steven D. Hoyt, James H. Cleland, James Anderson, Pandora Snethcamp, Gary Wesson, Jack Neville, Kim Marcus, Andrew York, and Jerry Wilson
Year: 1993 (Nov)
Title: California, Oregon, and Washington: Archaeological Resource Study
Affliliation: Espey, Huston & Associates, Inc.; Dames & Moore
No. pages: 394
No. maps: 210
Attributes: Archaeological, Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

The report is in six bound volumes. Approximately 3,850 shipwrecks are within the study area. The documents could not be scanned. This report extends outside of the NWIC service area into San Luis Obispo County and coastal areas in Oregon & Washington.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000033	CA-ALA-000012	
P-01-000034	CA-ALA-000013	SFSC-ALA-1
P-01-000084	CA-ALA-000307	West Berkeley Shell Mound
P-01-000086	CA-ALA-000309	Emeryville Shellmound
P-01-000104	CA-ALA-000328	Nelson's 328
P-07-000133	CA-CCO-000252	Nelson No. 252
P-07-000173	CA-CCO-000295	Nelson No. 295
P-07-000175	CA-CCO-000298	Nelson's No. 298, Stege
P-07-000177	CA-CCO-000300	Nelson's Survey 300
P-17-000072	CA-LAK-000036	Borax Lake Site
P-17-000392	CA-LAK-000380	The Mostin Site
P-21-000048	CA-MRN-000017	Nelson No.17
P-21-001915		Shipwreck Site and Remains, Sa
P-23-001704	CA-MEN-001918	Caspar Fluted Point Site
P-27-000100	CA-MNT-000281	Upper Willow Creek
P-27-000236	CA-MNT-000101/H	Kroeber A
P-27-000335	CA-MNT-000229	Golomshtok #2
P-27-000356	CA-MNT-000250/H	Isabella Meadows Cave
P-27-000386	CA-MNT-000282	Willow Creek Day Use Area
P-27-000485	CA-MNT-000391	MNT-391
P-38-000028	CA-SFR-000028	BART Burial
P-38-000072	CA-SFR-000081H	Niantic Storeship / Hotel
P-38-000085	CA-SFR-000094H	"The Lydia"
P-38-000098	CA-SFR-000107H	Wreck of the "SS Neptune"
P-41-000080	CA-SMA-000077	University Village Site (Gerow)
P-41-000265	CA-SMA-000269	Stanford Man I
P-44-000179	CA-SCR-000177/H	Hiram Scott House

No. resources: 27
Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, Napa, Other, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma

Report Detail: S-015529

USGS quad(s): Ah Pah Ridge, Albion, Alder Peak, Ano Nuevo, Antioch North, Arcata North, Arcata South, Arched Rock, Bear Harbor, Benicia, Big Sur, Bodega Head, Bolinas, Burro Mountain, Cannibal Island, Cape Mendocino, Cape San Martin, Capetown, Childs Hill, Cooskie Creek, Crannell, Crescent City, Cuttings Wharf, Davenport, Denverton, Double Point, Drakes Bay, Duncans Mills, Elk, Ettersburg, Eureka, Fairfield South, Farallon Islands, Fern Canyon, Ferndale, Fields Landing, Fort Bragg, Fort Ross, Franklin Point, Gualala, Hales Grove, Half Moon Bay, Honker Bay, Hunters Point, Inglenook, Inverness, Jersey Island, Lopez Point, Mallo Pass Creek, Mare Island, Marina, Mendocino, Milpitas, Mistake Point, Montara Mtn, Monterey, Moss Landing, Mountain View, Newark, Novato, Oakland East, Oakland West, Orick, Palo Alto, Partington Ridge, Petaluma Point, Petaluma River, Petrolia, Pfeiffer Point, Pigeon Point, Plantation, Point Arena, Point Bonita, Point Reyes Ne, Point Sur, Prunedale, Redwood Point, Requa, Richmond, Rodgers Peak, San Francisco North, San Francisco South, San Gregorio, San Leandro, San Mateo, San Quentin, San Rafael, Santa Cruz, Saunders Reef, Sears Point, Seaside, Shelter Cove, Shubrick Peak, Sister Rocks, Smith River, Soberanes Point, Soquel, Stewarts Point, Tomales, Trinidad, Tyee City, Valley Ford, Villa Creek, Vine Hill, Watsonville West, Westport

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/7/2005	nwic-main	
Last modified:	1/8/2016	mikulikc	
IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/21/201	mikulikc	could not scan document
	12/9/2015	hagell	edited database
	1/8/2016	mikulikc	added quad location
Record status:	Verified		

Report Detail: S-016660

Identifiers

Report No.: S-016660
Other IDs:
Cross-refs:

Citation information

Author(s): Jeffrey B. Fentress
Year: 1992 (Jul)
Title: Prehistoric Rock Art of Alameda and Contra Costa Counties, California
Affliliation: California State University, Hayward
No. pages: 187
No. maps:
Attributes: Other research, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Masters Thesis. Not-mappable report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000035	CA-ALA-000014	Mortar Rock Park
P-01-000039	CA-ALA-000019/H	
P-01-000071	CA-ALA-000051	Vargas Road Petroglyph
P-01-000080	CA-ALA-000060	Castro Valley
P-01-000128	CA-ALA-000400	ICR-WR-6
P-01-000137	CA-ALA-000410	ICR-WR-16
P-01-000138	CA-ALA-000412	DOT-04-92-1
P-01-000144	CA-ALA-000418	
P-01-000195	CA-ALA-000477/H	Drove Right To It Site
P-01-000198	CA-ALA-000480	Site 1
P-01-000199	CA-ALA-000481/H	HBR-1 & 2
P-01-002112	CA-ALA-000505	
P-07-000029	CA-CCO-000009	Los Vaqueros #24 (LV-24)
P-07-000094	CA-CCO-000152	
P-07-000189	CA-CCO-000320	
P-07-000193	CA-CCO-000375/H	CA-CCO-375
P-07-000212	CA-CCO-000417	Locus 11: C1
P-07-000216	CA-CCO-000428	
P-07-000219	CA-CCO-000434/H	Vasco Caves
P-07-000230	CA-CCO-000450/H	Los Vaqueros #16, 21, 22 (LV-1
P-07-000242	CA-CCO-000462	Los Vaqueros #31 (LV-31)
P-07-000255	CA-CCO-000482	YBL-1
P-07-000260	CA-CCO-000487	YBL-6
P-07-000271	CA-CCO-000500	Site 1
P-07-000301	CA-CCO-000530	Fossil Ridge #1
P-07-000302	CA-CCO-000531	Fossil Ridge 2
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional
P-07-000344	CA-CCO-000577	AR Site 2
P-07-000345	CA-CCO-000578	Peter Banks Rock
P-07-000346	CA-CCO-000579	Amos Site
P-07-000347	CA-CCO-000580	Amos Rock
P-07-000348	CA-CCO-000581	Star Rock/Stair Rock
P-07-000356	CA-CCO-000590	Old Stump Site
P-07-000362	CA-CCO-000597	Kellogg Unit #4 (K-4)
P-07-000374	CA-CCO-000609	Site 1 (Keller Landfill)
P-07-000725	CA-CCO-000382	Rock City #1

Report Detail: S-016660

	P-07-000726	CA-CCO-000383	Rock City #2
	P-07-000727	CA-CCO-000384	Rock City #3
	P-07-000730	CA-CCO-000395	Rock City #4
	P-07-000734	CA-CCO-000416	MD-2
	P-07-000736	CA-CCO-000424	[none]
	P-07-000738	CA-CCO-000429	Artist Point
	P-07-000739	CA-CCO-000430	Shotstar

No. resources: 43

Has informals: No

Location information

County(ies): Alameda, Contra Costa

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	9/18/2015	grahams

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/2/2009	muchb	updated county information
	9/18/2015	rinerg	fill out the lists of counties and quads based on map coverage

Record status: Verified

Report Detail: S-017835

Identifiers

Report No.: S-017835
Other IDs:
Cross-refs:

Citation information

Author(s): Judy Myers Suchey
Year: 1975 (Dec)
Title: Biological Distance of Prehistoric Central California Populations Derived from Non-Metric Traits of the Cranium
Affliliation: University of California, Riverside
No. pages: 186
No. maps: 13
Attributes: Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: Yes

General notes

PhD dissertation. Burials from Santa Cruz Island and Sacramento, San Joaquin, & Los Angeles counties were also examined. The GIS contains report polygons from the paper maps.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000086	CA-ALA-000309	Emeryville Shellmound
P-01-000104	CA-ALA-000328	Nelson's 328
P-01-000105	CA-ALA-000329	Nelsons 329
P-06-000025	CA-COL-000001	S-1 Miller
P-07-000080	CA-CCO-000138	Hotchkiss Mound
P-07-000081	CA-CCO-000139/H	Simone Mound
P-07-000083	CA-CCO-000141	C-141
P-07-000087	CA-CCO-000145	Byron Tract
P-21-000017	CA-MRN-000266	PB 266
P-21-000193	CA-MRN-000168	Nelson No. 168
P-21-000242	CA-MRN-000232/H	PB 232 b
P-21-000252	CA-MRN-000242/H	PB No. 242 - Cauley
P-48-000010	CA-SOL-000002	Peterson 2
P-57-000145	CA-YOL-000013	Mustang Site

No. resources: 14
Has informals: No

Location information

County(ies): Alameda, Colusa, Contra Costa, Marin, Napa, Other, Solano, Sonoma, Yolo
USGS quad(s): ~All quads - Alameda Co., ~All quads - Colusa Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - Solano Co., ~All quads - Sonoma Co., ~All quads - Yolo Co.
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	10/15/201	rinerg

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/15/201	rinerg	add county: Sonoma, Napa; this Thesis has GIS mapped components in both 'Other reports' and 'Reports (polygons)' layers.

Record status: Verified

Report Detail: S-018217

Identifiers

Report No.: S-018217
Other IDs:
Cross-refs:

Citation information

Author(s): Glenn Gmoser
Year: 1996 (Apr)
Title: Cultural Resource Evaluations for the Caltrans District 04 Phase 2 Seismic Retrofit Program, Status Report: April 1996
Affliliation: Caltrans
No. pages: 12
No. maps: 0
Attributes: Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Status report of the evaluation of bridge structures. There were no location maps in the report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000014	CA-ALA-000483	Site 2
P-01-000023	CA-ALA-000002/H	Ohlones Cemetery
P-01-000227	CA-ALA-000548/H	Vallejo Mill
P-07-000108	CA-CCO-000225	Anaclario Site
P-07-000119	CA-CCO-000237	Loud's 422
P-38-000002	CA-SFR-000002	Shellmound No. 439
P-38-000004	CA-SFR-000004/H	Yerba Buena Island
P-41-000273	CA-SMA-000321	Hamilton #2
P-43-000106	CA-SCL-000092/H	Sargent Ranch
P-43-000297	CA-SCL-000289	GP-1
P-43-000624	CA-SCL-000677	The 237/880 Site
P-43-001078	CA-SCL-000699/H	Dollhouse Site
P-44-000010	CA-SCR-000002/H	Aptos Creek
P-44-000201	CA-SCR-000199H	Cactus Gardens
P-44-000300	CA-SCR-000313	Granite Ck. Rd./Highway 17 Inte
P-49-000195	CA-SON-000223	Nelson No. 223

No. resources: 16
Has informals: No

Location information

County(ies): Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Sonoma
USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Sonoma Co.
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	7/14/2015	rinerg

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.
	10/13/201	hagell	edited database
	7/14/2015	rinerg	set status=Verified

Record status: Verified

Report Detail: S-020395

Identifiers

Report No.: S-020395
Other IDs:
Cross-refs:

Citation information

Author(s): Donna L. Gillette
Year: 1998 (May)
Title: PCNs of the Coast Ranges of California: Religious Expression or the Result of Quarrying?
Affliliation: California State University, Hayward
No. pages: 148
No. maps: 4
Attributes: Archaeological, Thesis/dissertation
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Masters Thesis. Recorded sites in Santa Barbara County and in Oregon were also included in the report.

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000094	CA-CCO-000152	
P-07-000323	CA-CCO-000553/H	Alvarado Park, Wildcat Regional
P-12-000050	CA-HUM-000983	Squaw Rock
P-17-000071	CA-LAK-000034	Bachelor Valley No. 4
P-17-001315	CA-LAK-001577	LAKEPORT PCN BOULDER
P-21-000087	CA-MRN-000057	Nelson No. 57
P-21-000376	CA-MRN-000414	DEER ISLAND AREA #1
P-21-000378	CA-MRN-000416	DEER ISLAND AREA #3
P-21-000379	CA-MRN-000417	DEER ISLAND AREA #4
P-21-000381	CA-MRN-000419	DEER ISLAND AREA #6
P-21-000382	CA-MRN-000420	17 NOVATO
P-21-000383	CA-MRN-000421	NOVATO #18
P-21-000384	CA-MRN-000422	NOVATO #19
P-21-000386	CA-MRN-000425	TIBURON 3 FIELD #3
P-21-000387	CA-MRN-000426	TIBURON #4 FIELD #4
P-21-000388	CA-MRN-000427	TIBURON #5 FIELD #5
P-21-000389	CA-MRN-000428	TIBURON 6
P-21-000390	CA-MRN-000429	TIBURON 7 FIELD #7
P-21-000391	CA-MRN-000430	TIBURON #8 FIELD #8
P-21-000392	CA-MRN-000431	TIBURON #9
P-21-000393	CA-MRN-000432	TIBURON 12
P-21-000394	CA-MRN-000433	TIBURON 13 FIELD #13
P-21-000395	CA-MRN-000434	TIBURON 14 AND 15 FIELD #'
P-21-000396	CA-MRN-000435	TIBURON #16 FIELD #16
P-21-000397	CA-MRN-000436	TIBURON 17 FIELD #17
P-21-000398	CA-MRN-000437	TIBURON 18
P-21-000399	CA-MRN-000438	TIBURON 19 FIELD #19
P-21-000400	CA-MRN-000439	TIBURON 20A
P-21-000401	CA-MRN-000440	TIBURON 21 FIELD #21
P-21-000402	CA-MRN-000442	Tiburon 1
P-21-000419	CA-MRN-000465	WHIT'S ROCK
P-21-000433	CA-MRN-000481	ARS 78-72-ROCK 1
P-21-000546	CA-MRN-000424	Tiburon 2
P-21-000620	CA-MRN-000636	PETROGLYPH SITE SOUTH O
P-21-000621	CA-MRN-000637	PETROGLYPH SITE ON SMAL
P-21-000624	CA-MRN-000640	Petroglyph site near Taylor Road

Report Detail: S-020395

P-21-000661	CA-MRN-000452	Pat's Rock
P-23-000434	CA-MEN-000433	Bell Springs Petroglyph Rock
P-23-000809	CA-MEN-000874	KNIGHT'S VALLEY 2
P-23-000810	CA-MEN-000875	KNIGHT'S VALLEY 1
P-23-001698	CA-MEN-001912	SPYROCK ROAD PETROGLYP
P-23-001725	CA-MEN-001941	GENESIS #4,5,6,7,8
P-23-001792	CA-MEN-002020	POTTER VALLEY PETROGLYP
P-23-001798	CA-MEN-002028	GENESIS #9
P-23-001799	CA-MEN-002029	GENESIS #10
P-23-001803	CA-MEN-002034	GENESIS #16
P-23-001804	CA-MEN-002035	Infinity #1
P-23-001930	CA-MEN-002200	NWIC Restricted File
P-23-001942	CA-MEN-002213	Huntly Peak Petroglyphs
P-23-001950	CA-MEN-002221	Hidden Hill Petroglyph
P-23-001963	CA-MEN-002235	WATERSHED DOWN PETROG
P-35-000013	CA-SBN-000012	
P-43-000067	CA-SCL-000048	RANCHO PASO DEL VERDE O
P-43-000080	CA-SCL-000063	SFSU-SCL-6
P-43-000287	CA-SCL-000279	
P-43-000289	CA-SCL-000281	ARS 77-97-3
P-43-000504	CA-SCL-000503	COE-29
P-49-000046	CA-SON-000929	Jan's Rock
P-49-000240	CA-SON-000268	Steward's 8 Pt.
P-49-000533	CA-SON-000568	Midden site
P-49-000550	CA-SON-000585	Yorty Cupule Rock
P-49-000629	CA-SON-000682	Steward's 9 PT.
P-49-000785	CA-SON-000844	PETALUMA #1
P-49-000787	CA-SON-000846	PETALUMA #3
P-49-000868	CA-SON-000928	MIKE WHITSON ROCK I
P-49-000960	CA-SON-001026	NANA'S ROCKS
P-49-000975	CA-SON-001041	LEE'S ROCK
P-49-001004	CA-SON-001075	Kellies Rock
P-49-001087	CA-SON-001160	Site No. 7
P-49-001239	CA-SON-001319	KATHLEEN'S ROCK
P-49-002121	CA-SON-001383	

No. resources: 71

Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Humboldt, Lake, Marin, Mendocino, Other, San Benito, Santa Clara, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Humboldt Co., ~All quads - Lake Co., ~All quads - Marin Co., ~All quads - Mendocino Co., ~All quads - San Benito Co., ~All quads - Santa Clara Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	4/7/2005	nwic-main
Last modified:	9/10/2015	simsa

IC actions:	*Date*	*User*	*Action taken*
	4/7/2005	jay	Appended records from NWICmain bibliographic database.

Record status: Verified

Report Detail: S-024840

Identifiers

Report No.: S-024840
Other IDs:
Cross-refs:

Citation information

Author(s):
Year: 2002 (Feb)
Title: Final Environmental Impact Statement - Environmental Impact Report for the Disposal and Reuse of Fleet and Industrial Supply Center, Naval Fuel Depot, Point Molate.
Affliliation: Southwest Division, Naval Facilities Engineering Command; City of Richmond
No. pages: 58
No. maps: 3
Attributes: Archaeological, Architectural/historical, Management/planning, Other research
Inventory size: c 313 ac
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000161	CA-CCO-000282	Nelson No. 282
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000277	CA-CCO-000506H	Chinese Fish Camp
P-07-000454	CA-CCO-000422H	WineHaven Historic District; Win
P-07-000455	CA-CCO-000423	Garden Site

No. resources: 5
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/25/2005	leigh
Last modified:	1/12/2016	mikulikc

IC actions:	*Date*	*User*	*Action taken*
	1/4/2016	hagell	data incomplete: no authors submitted
	1/12/2016	simsa	Updated GIS shape: moved to other report layer

Record status: Verified

Report Detail: S-032596

Identifiers

Report No.: S-032596

Other IDs:

Type	*Name*
Other	Contract #04A2098
Caltrans	EA No. 447600

Cross-refs:

Citation information

Author(s): Randall Milliken, Jerome King, and Patricia Mikkelsen

Year: 2006 (Dec)

Title: The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways

Affliliation: Consulting in the Past; Far Western Anthropological Research Group, Inc.

No. pages: 63

No. maps: 6

Attributes: Other research

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

The study extends outside the NWIC service area (Calaveras, Amador, Tuolomne, Mariposa, Madera, & Tulare counties).

Associated resources

No. resources: 0

Has informals: No

Location information

County(ies): Alameda, Contra Costa, Lake, Marin, Monterey, Napa, Other, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Yolo

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Monterey Co., ~All quads - Napa Co., ~All quads - San Benito Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Santa Cruz Co., ~All quads - Solano Co., Aetna Springs, Allendale, Annapolis, Arched Rock, Asti, Bird Valley, Bodega Head, Brooks, Calistoga, Camp Meeker, Cazadero, Clarksburg, Clearlake Highlands, Cloverdale, Cotati, Courtland, Cuttings Wharf, Davis, Detert Reservoir, Duncans Mills, Eldorado Bend, Esparto, Fort Ross, Geyserville, Glascock Mtn, Glen Ellen, Grays Bend, Guerneville, Guinda, Healdsburg, Jericho Valley, Jimtown, Kelseyville, Kenwood, Knights Landing, Knoxville, Lake Berryessa, Liberty Island, Madison, Mare Island, Mark West Springs, Merritt, Middletown, Monticello Dam, Mount St Helena, Mt Vaca, Novato, Petaluma, Petaluma Point, Petaluma River, Point Reyes Ne, Rutherford, Sacramento West, Santa Rosa, Saxon, Sears Point, Sebastopol, Sonoma, Taylor Monument, The Geysers, Tombs Creek, Two Rock, Valley Ford, Warm Springs Dam, Whispering Pines, Wilson Valley, Winters, Woodland, Zamora

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	3/1/2007	hagell
Last modified:	1/5/2016	hagell

IC actions:

Date	*User*	*Action taken*
3/30/2015	neala	data review; added Lake county quads
6/12/2015	mikulikc	corrected Yolo County quad locations from "all quads" to quads intersecting the GIS feature for S-032596
10/20/201	rinerg	remove '~All quads - Sonoma', replace with Sonoma quads intersecting report feature
1/5/2016	hagell	edited notes field

Record status: Verified

Report Detail: S-033600

Identifiers

Report No.: S-033600
Other IDs:
Cross-refs:

Citation information

Author(s): Jack Meyer and Jeff Rosenthal
Year: 2007 (Jun)
Title: Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4
Affliliation: Far Western Anthropological Research Group, Inc.
No. pages: 42
No. maps: 7
Attributes: Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Nine unrecorded prehistoric resources.

Associated resources

Primary No.	*Trinomial*	*Name*
P-01-000001	CA-ALA-000554	Castlewood Site
P-01-000002	CA-ALA-000555	Meadowlark Dairy Site
P-01-000014	CA-ALA-000483	Site 2
P-01-000063	CA-ALA-000043	De Avillo
P-01-000064	CA-ALA-000044	Kaiser
P-01-000067	CA-ALA-000047	
P-01-000080	CA-ALA-000060	Castro Valley
P-01-000124	CA-ALA-000394	Pleasanton Meadows Site
P-01-000139	CA-ALA-000413	Santa Rita Village
P-01-000140	CA-ALA-000414	Iverson Site
P-01-001795	CA-ALA-000566	Hayward Bypass Site
P-01-002110	CA-ALA-000467	H&A-HEP-1
P-01-002160	CA-ALA-000574	Bernal
P-01-002162	CA-ALA-000576	Curtner Site
P-01-002245	CA-ALA-000586	Hwy 238-1
P-07-000019	CA-CCO-000696	Burial Site
P-07-000024	CA-CCO-000004	Slater site
P-07-000037	CA-CCO-000018/H	Marsh Site
P-07-000047	CA-CCO-000030	
P-07-000075	CA-CCO-000133	Ader site
P-07-000079	CA-CCO-000137	Monument
P-07-000088	CA-CCO-000146	Holland Tract
P-07-000089	CA-CCO-000147	
P-07-000108	CA-CCO-000225	Anaclario Site
P-07-000182	CA-CCO-000305	[none]
P-07-000185	CA-CCO-000308	Stone Valley Site
P-07-000186	CA-CCO-000309	The Rossmoor Site
P-07-000217	CA-CCO-000431	Murwood School
P-07-000239	CA-CCO-000459	Los Vaqueros #15 (LV-15)
P-07-000401	CA-CCO-000637	Dam Site
P-07-000721	CA-CCO-000368	Dutra 1
P-21-000010	CA-MRN-000249	4-MRN-249
P-21-000048	CA-MRN-000017	Nelson No.17
P-21-002615	CA-MRN-000674	Pelican site
P-28-000009	CA-NAP-000863	Adams Street Site
P-28-000028	CA-NAP-000015/H	#15, Suscol Mound #5

Report Detail: S-033600

P-28-000301	CA-NAP-000399	B- 55- V V
P-28-000967	CA-NAP-000916	Double Whoa!
P-38-000006	CA-SFR-000006	Loud's Presidio Mount
P-38-000028	CA-SFR-000028	BART Burial
P-38-000101	CA-SFR-000112	49 Stevenson
P-38-000102	CA-SFR-000113	5th & Market
P-38-000119	CA-SFR-000114	
P-41-000080	CA-SMA-000077	University Village Site (Gerow)
P-41-000284	CA-SMA-000273	Coyote Pt. Marina
P-43-000016	CA-SCL-000755	SCU/Old Alameda Burial site
P-43-000189	CA-SCL-000178	MH-22
P-43-000296	CA-SCL-000288	
P-43-000308	CA-SCL-000300	[none]
P-43-000310	CA-SCL-000302	
P-43-000423	CA-SCL-000418/H	
P-43-000424	CA-SCL-000419/H	441 N. 1st
P-43-000448	CA-SCL-000447/H	formerly known as CA-SCL-6E
P-43-000451	CA-SCL-000450	Rosendin 1
P-43-000485	CA-SCL-000484	
P-43-000561	CA-SCL-000566	
P-43-000604	CA-SCL-000609	Ronald McDonald House
P-43-000608	CA-SCL-000613	Stanford Man II
P-43-000614	CA-SCL-000619	Elk Site
P-43-000623	CA-SCL-000675	"Coyote Creek Site"
P-43-001015	CA-SCL-000553	Orchard 1001-1
P-43-001058	CA-SCL-000674	DC-1
P-43-001080	CA-SCL-000702	Waste Management Site
P-43-001163	CA-SCL-000828	Fuel Farm Site
P-43-001194	CA-SCL-000832	Iowa Avenue and Sunnyvale Ave
P-43-001576	CA-SCL-000849	152/156-5
P-48-000007	CA-SOL-000391	Fairfield PEC-1
P-48-000157	CA-SOL-000324	

No. resources: 68

Has informals: Yes

Location information

County(ies): Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma

USGS quad(s): ~All quads - Alameda Co., ~All quads - Contra Costa Co., ~All quads - Marin Co., ~All quads - Napa Co., ~All quads - San Francisco Co., ~All quads - San Mateo Co., ~All quads - Santa Clara Co., ~All quads - Solano Co., ~All quads - Sonoma Co.

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	9/24/2007	guldenj
Last modified:	7/16/2015	rinerg

IC actions:	*Date*	*User*	*Action taken*
	7/16/2015	rinerg	set Status=verified

Record status: Verified

Report Detail: S-035289

Identifiers

Report No.: S-035289
Other IDs:
Cross-refs:

Citation information

Author(s): Phil Kaijankoski
Year: 2008 (Sep)
Title: A Geoarchaeological Investigation for CA-CCO-506H, Point Molate, Contra Costa County, California
Affliliation: Anthropological Studies Center, Sonoma State University
No. pages: 33
No. maps:
Attributes: Archaeological, Field study, Other research
Inventory size:
Disclosure: Not for publication
Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000277	CA-CCO-000506H	Chinese Fish Camp

No. resources: 1
Has informals: No

Location information

County(ies): Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	4/13/2009	guldenj
Last modified:	1/27/2016	hagell

IC actions:

Date	*User*	*Action taken*
1/12/2016	simsa	Updated GIS shape to fit map of study area

Record status: Verified

Report Detail: S-039952

Identifiers

Report No.: S-039952

Other IDs:	*Type*	*Name*
	Submitter	LSA Project #TER1202

Cross-refs:

Citation information

Author(s): Neal Kaptain

Year: 2012 (Oct)

Title: Results of Soil and Groundwater Investigation Borings Archaeological Monitoring for the Point Molate – IR Site 3 Project, City of Richmond, Contra Costa County, California. LSA Project #TER1202 (letter report)

Affliliation: LSA Associates, Inc.

No. pages: 1

No. maps: 1

Attributes: Archaeological, Monitoring

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

Associated resources

No. resources: 0

Has informals: No

Location information

County(ies): Contra Costa

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	2/6/2013	baileyl
Last modified:	1/15/2016	hagell

IC actions:	*Date*	*User*	*Action taken*
	1/4/2016	hagell	edited title & report attributes
	1/15/2016	hagell	added Other Identifier

Record status: Verified

Report Detail: S-039953

Identifiers

Report No.: S-039953

Other IDs:	*Type*	*Name*
	Submitter	LSA Project #TER1202

Cross-refs:

Citation information

Author(s): E. Timothy Jones

Year: 2012 (Jan)

Title: Archaeological Monitoring Results of Injection Borings for the Point Molate Soil and Groundwater Management Plan, Building 87 Area, Richmond, Contra Costa County. LSA Project #TER1202 (letter report)

Affliliation: LSA Associates, Inc.

No. pages: 1

No. maps: 1

Attributes: Archaeological, Monitoring

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

Associated resources

No. resources: 0

Has informals: No

Location information

County(ies): Contra Costa

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	2/6/2013	baileyl
Last modified:	1/15/2016	hagell

IC actions:	*Date*	*User*	*Action taken*
	1/4/2016	hagell	edited title & report attributes
	1/15/2016	hagell	added Other Identifier

Record status: Verified

Report Detail: S-040390

Identifiers

Report No.: S-040390
Other IDs:
Cross-refs:

Citation information

Author(s):
Year: 2009 (Mar)
Title: Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume I: Historic Built Environment
Affliliation: Analytical Environmental Services
No. pages: 376
No. maps:
Attributes: Architectural/historical, Field study
Inventory size:
Disclosure: Not for publication
Collections: No

Sub-desig.: a
Author(s): Mike Taggart and Damon Haydu
Year: 2009 (Apr)
Title: Cultural Resources Study, Point Molate Tribal Destination Resort and Casino Project, Volume II: Archaeological Resources
Affiliation: Analytical Environmental Services
Report type(s): Archaeological, Excavation, Field study
Inventory size:
No. pages:
Disclosure: Not for publication
Collections: Yes
PDF Pages: 377-824

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000161	CA-CCO-000282	Nelson No. 282
P-07-000162	CA-CCO-000283	Nelson No. 283
P-07-000277	CA-CCO-000506H	Chinese Fish Camp
P-07-000441	CA-CCO-000284	Nelson No. 284
P-07-000454	CA-CCO-000422H	WineHaven Historic District; Win
P-07-000455	CA-CCO-000423	Garden Site
P-07-001160		Voided: see P-07-000454
P-07-001174		Voided: see P-07-000277
P-07-003066		Winehaven Building #1
P-07-003070		Winehaven Building #6
P-07-003074		Winehaven Building #10
P-07-003079		Winehaven Building #13
P-07-003080		Winehaven Building #17
P-07-003085		Building #18 within Winehaven H
P-07-004544		Building #21 within Winehaven H
P-07-004545		Winehaven Building #31
P-07-004546		Winehaven Building #32
P-07-004547		Winehaven Building #33
P-07-004548		Winehaven Building #34
P-07-004549		Winehaven Building #35
P-07-004550		Winehaven Building #36
P-07-004551		Winehaven Building #37

Report Detail: S-040390

P-07-004552	Winehaven Building #38
P-07-004553	Winehaven Building #39
P-07-004554	Winehaven Building #40
P-07-004555	Winehaven Building #41
P-07-004556	Winehaven Building #42
P-07-004557	Winehaven Building #43
P-07-004558	Winehaven Building #44
P-07-004559	Winehaven Building #45
P-07-004560	Winehaven Building #46
P-07-004561	Winehaven Building #47
P-07-004562	Winehaven Building #48
P-07-004563	Winehaven Building #49
P-07-004565	Winehaven Building #50
P-07-004566	Winehaven Building #51
P-07-004567	Winehaven Building #52
P-07-004568	Winehaven Building #53
P-07-004569	Winehaven Building #54
P-07-004570	Building #55 within Winehaven H
P-07-004571	Winehaven Building #56
P-07-004572	Winehaven Building #57
P-07-004573	Winehaven Building #58
P-07-004574	Winehaven Building #59
P-07-004575	Winehaven Building #60
P-07-004576	Winehaven Building #63
P-07-004577	Building #65 within Winehaven H
P-07-004578	Building #67 within Winehaven H
P-07-004579	Building #68 within Winehaven H
P-07-004580	Building #80 within Winehaven H
P-07-004581	Building #81 within Winehaven H
P-07-004582	Building #83 within Winehaven H
P-07-004583	Building #85 within Winehaven H
P-07-004584	Building #86 within Winehaven H
P-07-004585	Building #88 within Winehaven H
P-07-004586	Building #102 within Winehaven
P-07-004587	Building #103 within Winehaven
P-07-004588	Building #111 within Winehaven
P-07-004589	Building #116 within Winehaven
P-07-004590	Building #123 within Winehaven
P-07-004591	Building #125 within Winehaven
P-07-004592	Winehaven Internal Railroad
P-07-004593	Segment of Richmond Belt Line

No. resources: 63

Has informals: No

Location information

County(ies): Contra Costa

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*	
Entered:	4/29/2013	baileyl	
Last modified:	1/14/2016	hagell	
IC actions:	*Date*	*User*	*Action taken*
	8/17/2015	changc	Database Incomplete: no author submitted.
	1/4/2016	hagell	edited title

Record status: Verified

Report Detail: S-043267

Identifiers

Report No.: S-043267

Other IDs:	*Type*	*Name*
	OHP PRN	USN960916A

Cross-refs: See also S-030028

Citation information

Author(s): Christopher Dore, Daniel Glennon, and James Jenks

Year: 2001 (Mar)

Title: Draft Work Plan for a National Register of Historic Places Eligibility Re-Evaluation of CA-CCO-283, Naval Fuel Depot Point Molate, Richmond, Contra Costa County, California

Affliliation: Garcia and Associates

No. pages: 55

No. maps:

Attributes: Management/planning, Other research

Inventory size:

Disclosure: Not for publication

Collections: No

General notes

Associated resources

	Primary No.	*Trinomial*	*Name*
	P-07-000162	CA-CCO-000283	Nelson No. 283

No. resources: 1

Has informals: No

Location information

County(ies): Contra Costa

USGS quad(s): San Quentin

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	3/4/2014	levyd
Last modified:	1/12/2016	simsa

IC actions:	*Date*	*User*	*Action taken*
	1/4/2016	hagell	edited report attributes & cross-references

Record status: Verified

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

9/18/2017 NWIC File No.: 17-0545

Jeremy Hall
NCE
P.O. Box 1760
Zephyr Cove, NV 89448

Re: Point Molate Shoreline Restoration Project

The Northwest Information Center received your record search request for the project area referenced above, located on the San Quentin USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.25 mile radius:

Resources within project area (in addition to those from two previous searches):	None
Resources within 0.25 mile radius (in addition to those from two previous searches):	None
Reports within project area (in addition to those from two previous searches):	None
Reports within 0.25 mile radius (in addition to those from two previous searches):	None
Other Reports within records search radius (in addition to those from two previous searches):	None. These reports are classified as Other Reports; reports with little or no field work or missing maps. The electronic maps do not depict study areas for these reports, however a list of these reports has been provided. In addition, you have not been charged any fees associated with these studies.

Resource Database Printout (list): ☐ enclosed ☐ not requested ☒ nothing listed

Resource Database Printout (details): ☐ enclosed ☐ not requested ☒ nothing listed

Resource Digital Database Records: ☐ enclosed ☐ not requested ☒ nothing listed

Report Database Printout (list): ☐ enclosed ☐ not requested ☒ nothing listed

Report Database Printout (details): ☐ enclosed ☐ not requested ☒ nothing listed

Report Digital Database Records: ☐ enclosed ☐ not requested ☒ nothing listed

Resource Record Copies: ☐ enclosed ☐ not requested ☒ nothing listed

Report Copies: ☐ enclosed ☒ not requested ☐ nothing listed

OHP Historic Properties Directory:	☐ enclosed	☐ not requested	☐ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☐ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

*Notes:

** Current versions of these resources are available on-line:

Caltrans Bridge Survey: http://www.dot.ca.gov/hq/structur/strmaint/historic.htm

Soil Survey: http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA

Shipwreck Inventory: http://www.slc.ca.gov/Info/Shipwrecks.html

There are no historic inventory updates since the previous searches.

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,
Lisa C. Hagel
Researcher

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

12/6/2019 NWIC File No.: 19-0837

Molly Laitinen
NCE
P.O. Box 1760
Zephyr Cove, NV 89448

re: San Francisco Bay Trail at Point Molate (15-0927, -0928, -1486 UPDATE)

The Northwest Information Center received your record search request for the project area referenced above, located on the San Quentin USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.25 mile radius:

Additional resources within project area:	None
Additional resources within 0.25 mile radius:	P-07-003119, 004719, & 004745.
Additional reports within project area:	S-48942.
Additional reports within 0.25 mile radius:	None

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Report Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☐ enclosed	☒ not requested	☐ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☒ not requested	☐ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☒ not requested	☐ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☒ not requested	☐ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☒ not requested	☐ nothing listed

GLO and/or Rancho Plat Maps: ☐ enclosed ☐ not requested ☐ nothing listed

Shipwreck Inventory: ☐ enclosed ☐ not requested ☐ nothing listed

*Notes:

** Current versions of these resources are available on-line:

Caltrans Bridge Survey: http://www.dot.ca.gov/hq/structur/strmaint/historic.htm

Soil Survey: http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA

Shipwreck Inventory: http://www.slc.ca.gov/Info/Shipwrecks.html

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel
Researcher

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-048942	Caltrans - 0414000552; Caltrans - EA 04-2J6800; OTIS Report Number - FHWA_2016_0210_001	2016	Adrian R. Whitaker	Historic Property Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California; 04-MRN-580-PM 0.0/3.16, 04-CCO-580-PM 4.98/7.79, ID 0414000552; EA 04-2J6800	Far Western Anthropological Research Group, Inc.	07-000441, 07-002556, 07-004719, 07-004745, 21-002865, 21-002920
S-048942a		2015	Chandra Miller	Historical Resources Evaluation Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California, 04-MRN-580-PM 0.03/3.16, 04-CC-580-PM-4.98/7.79, ID 0414000552; EA 04-2J6800	JRP Historical Consulting, LLC	
S-048942b		2016	Adrian R. Whitaker, Michelle Rich, and Chandra Miller	Archaeological Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California 04-MRN-580-PM 0.03/3.16, 04-CC-580-PM-4.98/7.79, ID 0414000552; EA 04-2J6800	Far Western Anthropological Research Group, Inc.; JRP Historical Consulting	
S-048942c		2016	Laura R. Murphy	Extended Phase I Archaeological Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California 04-MRN-580-PM 0.03/3.16, 04-CC-580-PM-4.98/7.79, ID 0414000552; EA 04-2J6800	Far Western Anthropological Research Group, Inc.	
S-048942d		2016	Brett Rushing and Julianne Polanco	FHWA_2016_0210_001 Determinations of Eligibility for the Proposed Richmond-San Rafael Bridge (28 0100) Access Improvement Project, Contra Costa and Marin Counties, CA	Office of Historic Preservation, California Department of Transportation	

Report Detail: S-048942

Identifiers

Report No.: S-048942

Other IDs:

Type	*Name*
Caltrans	0414000552
Caltrans	EA 04-2J6800
OTIS Report Number	FHWA_2016_0210_001

Cross-refs:

Citation information

Author(s): Adrian R. Whitaker

Year: 2016 (Jan)

Title: Historic Property Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California; 04-MRN-580-PM 0.0/3.16, 04-CCO-580-PM 4.98/7.79, ID 0414000552; EA 04-2J6800

Affliliation: Far Western Anthropological Research Group, Inc.

No. pages:

No. maps:

Attributes: Archaeological, Management/planning

Inventory size:

Disclosure: Not for publication

Collections: No

Sub-desig.: a

Author(s): Chandra Miller

Year: 2015 (Dec)

Title: Historical Resources Evaluation Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California, 04-MRN-580-PM 0.03/3.16, 04-CC-580-PM-4.98/7.79, ID 0414000552; EA 04-2J6800

Affiliation: JRP Historical Consulting, LLC

Report type(s): Architectural/historical, Management/planning, Other research

Inventory size:

No. pages:

Disclosure: Not for publication

Collections: No

PDF Pages: 13-191

Sub-desig.: b

Author(s): Adrian R. Whitaker, Michelle Rich, and Chandra Miller

Year: 2016 (Jan)

Title: Archaeological Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California 04-MRN-580-PM 0.03/3.16, 04-CC-580-PM-4.98/7.79, ID 0414000552; EA 04-2J6800

Affiliation: Far Western Anthropological Research Group, Inc.; JRP Historical Consulting

Report type(s): Archaeological, Field study

Inventory size:

No. pages:

Disclosure: Not for publication

Collections: No

PDF Pages: 191-459

Report Detail: S-048942

Sub-desig.: c
Author(s): Laura R. Murphy
Year: 2016 (Jan)
Title: Extended Phase I Archaeological Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California 04-MRN-580-PM 0.03/3.16, 04-CC-580-PM-4.98/7.79, ID 0414000552; EA 04-2J6800
Affiliation: Far Western Anthropological Research Group, Inc.
Report type(s): Archaeological, Excavation
Inventory size:
No. pages:
Disclosure: Not for publication
Collections: No
PDF Pages: 459-552

Sub-desig.: d
Author(s): Brett Rushing and Julianne Polanco
Year: 2016 (Mar)
Title: FHWA_2016_0210_001 Determinations of Eligibility for the Proposed Richmond-San Rafael Bridge (28 0100) Access Improvement Project, Contra Costa and Marin Counties, CA
Affiliation: Office of Historic Preservation, California Department of Transportation
Report type(s): OHP Correspondence
Inventory size:
No. pages:
Disclosure: Unrestricted
Collections: No
PDF Pages: 553-554

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-07-000441	CA-CCO-000284	Nelson No. 284
P-07-002556		Ferry Point II 307-31e
P-07-004719		AW-580-02
P-07-004745		Richmond-San Rafael Bridge
P-21-002865	CA-MRN-000719	AW-580-01
P-21-002920		Richmond-San Rafael Bridge

No. resources: 6
Has informals: No

Location information

County(ies): Contra Costa, Marin
USGS quad(s): San Quentin
Address:
PLSS:

Database record metadata

	Date	*User*
Entered:	6/6/2017	VickeryN
Last modified:	12/5/2019	hagell

IC actions:	*Date*	*User*	*Action taken*
	6/6/2017	VickeryN	Added additional citation a, b, c & d. partial print-out. Unprocessed resources
	4/13/2018	yanagig	Resources processed by Grahams 6/27/2017, S-48942 was also updated at that time.
	12/4/2019	hagell	edited title

Record status: Verified

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-07-003119		Resource Name - Richmond-San Rafael Maintenance Building; Other - Richmond-San Rafael Bridge Maintenance Station (Facility 1236); Building Number 1236	Building	Historic	HP08	2011 (Douglas Bright, Caltrans)	S-038753
P-07-004719		Resource Name - AW-580-02	Structure	Historic	AH02	2015 (Adrian Whitaker, FWARG)	S-048942
P-07-004745		Resource Name - Richmond-San Rafael Bridge; Other - Bridge # 28 0100	Structure	Historic	HP19	2015 (Chandra Miller, Matthew Walker, JRP Historical Consulting); 2015 (Helen Blackmore, Caltrans)	S-048942

Resource Detail: P-07-003119

Identifying information

Primary No.: P-07-003119
Trinomial:
Name: Richmond-San Rafael Maintenance Building
Other IDs:

Type	*Name*
Resource Name	Richmond-San Rafael Maintenance Building
Other	Richmond-San Rafael Bridge Maintenance Station (Facility 1236); Building Number 1236

Cross-refs: Physically overlaps or intersects 07-004745

Attributes

Resource type: Building
Age: Historic
Information base: Survey, Analysis, Other
Attribute codes: HP08 (Industrial building)
Disclosure: Unrestricted
Collections: No
Accession no(s):
Facility:

General notes

Recording events

Date	*Recorder(s)*	*Affiliation*	*Notes*
4/1/2011	Douglas Bright	Caltrans	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-038753	2011	Historical Resources Compliance Report, replacement of the existing Richmond - San Rafael Bridge (RSRB) Maintenance Building (building #1865), 4-CC-580 P.M. 6.0-6.3 E-FIS Project Number 0400000002	Caltrans, District 4

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:

Address	*City*	*Assessor's parcel no.*	*Zip code*
north of Richmond-San Rafael Bridge Toll Plaza	Richmond	561040	94801

PLSS:
UTMs: Zone 10 552424mE 4198544mN NAD83 (2011)

Management status

Database record metadata

	Date	*User*
Entered:	5/18/2012	grahams
Last modified:	12/5/2019	hagell
IC actions:		
Record status:	Verified	

Resource Detail: P-07-004719

Identifying information

Primary No.: P-07-004719
Trinomial:
Name: AW-580-02
Other IDs:

Type	*Name*
Resource Name	AW-580-02

Cross-refs: Physically overlaps or intersects 07-000441

Attributes

Resource type: Structure
Age: Historic
Information base: Survey
Attribute codes: AH02 (Foundations/structure pads)
Disclosure: Not for publication
Collections: No
Accession no(s):
Facility:

General notes

Recording events

	Date	*Recorder(s)*	*Affiliation*	*Notes*
a	9/9/2015	Adrian Whitaker	FWARG	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-048942	2016	Historic Property Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California; 04-MRN-580-PM 0.0/3.16, 04-CCO-580-PM 4.98/7.79, ID 0414000552; EA 04-2J6800	Far Western Anthropological Research Group, Inc.

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:

Address	*City*	*Assessor's parcel no.*	*Zip code*
2186 Stenmark Drive	Richmond		94802

PLSS:
UTMs: Zone 10 552312mE 4198599mN NAD83 (larger slab 2015)
Zone 10 552353mE 4198609mN NAD83 (smaller slab 2015)

Management status

Database record metadata

	Date	*User*	
Entered:	11/18/2016	grahams	
Last modified:	6/27/2017	grahams	
IC actions:	*Date*	*User*	*Action taken*
	11/18/2016	grahams	notificartion letter sent 11/18/16

Record status: Verified

Resource Detail: P-07-004745

Identifying information

Primary No.: P-07-004745
Trinomial:
Name: Richmond-San Rafael Bridge
Other IDs:

Type	*Name*
Resource Name	Richmond-San Rafael Bridge
Other	Bridge # 28 0100

Cross-refs: Physically overlaps or intersects 07-002556
Physically overlaps or intersects 07-003119
Extends into another county as 21-002920

Attributes

Resource type: Structure
Age: Historic
Information base: Survey, Other
Attribute codes: HP19 (Bridge)
Disclosure: Unrestricted
Collections: No
Accession no(s):
Facility:

General notes

Recording events

	Date	*Recorder(s)*	*Affiliation*	*Notes*
b	12/9/2015	Helen Blackmore	Caltrans	
a	5/20/2015	Chandra Miller, Matthew Walker	JRP Historical Consulting	

Associated reports

Report No.	*Year*	*Title*	*Affiliation*
S-048942	2016	Historic Property Survey Report for the Richmond-San Rafael Bridge Access Improvement Project, Contra Costa and Marin Counties, California; 04-MRN-580-PM 0.0/3.16, 04-CCO-580-PM 4.98/7.79, ID 0414000552; EA 04-2J6800	Far Western Anthropological Research Group, Inc.

Location information

County: Contra Costa
USGS quad(s): San Quentin
Address:
PLSS:
UTMs:

Management status

Database record metadata

	Date	*User*
Entered:	6/27/2017	grahams
Last modified:	6/28/2017	surgeonj
IC actions:		
Record status:	Verified	

Appendix C

Native American and Other Interested Party Coordination

Date:	September 17, 2019
To:	California Native American Heritage Commission
From:	NCE
Subject:	Request for Native American Contact List and Sacred File Search for the Point Molate Beach Park Shoreline Restoration Project

Ms. Cynthia Gomez, Executive Secretary
California Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, California 95691

Dear Ms. Gomez:

The City of Richmond is proposing to restore actively eroding portions of the shoreline at the Point Molate Beach Park (Beach Park). The bluff along the north end of the park from the existing revetment at Burma Road to approximately 300 feet south has receded and undercut the road due to a combination of storm drain outfall and natural shoreline processes resulting from the action of tides, waves, wind, seepage and rain. The proposed Project would address erosion along an approximately 350-foot section of the Beach Park starting at Burma Road by restoring beach bluff erosion with an approximately 300-foot rock slope protection, called a rock revetment, along the northern portion of the beach bluff, and repairing the storm drain outfall at Burma Road and subsequent storm drain pipe replacement.

The rock revetment would construct a buttress of rock fill in front of the eroded bluff by means of dumping and grading out with a dozer and excavator. The buttress would be built up to the height of the existing grade and, after placing the armor rock, the very top of the buttress would be removed and the rock fill material replaced with stone. A rock revetment design requires limited materials, provides better wave energy reduction, and minimal impact to existing bank material.

The legal description of the project area is T.01N., R.05W., Section 9. Two maps are enclosed for your review. Figure 1 is a location map of the project area at a 1:24,000 scale with a USGS 7.5' quadrangle background (San Quentin). Figure 2 provides more detail of the project area depicting the proposed design components of the project on an aerial basemap.

We request that you provide us a contact list for the portion of Contra Costa County in the vicinity of the project area. We also request that you conduct a search of your Sacred Lands database for any places of concern that may be located within or adjacent to the proposed project area.

If you have any questions, please feel free to contact me via email at mlaitinen@ncenet.com or by telephone (775-588-2505). I appreciate your assistance and look forward to hearing from you soon.

Sincerely,

Molly Laitinen
NCE | Cultural Resource Specialist
PO Box 1760
Zephyr Cove, NV 89448
(775) 588-2505
mlaitinen@ncenet.com

Enclosed: Tribal Consultation List Request Form; Figure 1 – Location Map; Figure 2 – Detail Map

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

☑ **CEQA Tribal Consultation List (AB 52)** – ***Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

☑ **General Plan (SB 18)** - ***Per Government Code § 65352.3.***

Local Action Type:

___ General Plan ___ General Plan Element ___ General Plan Amendment

___ Specific Plan ___ Specific Plan Amendment ☑ Pre-planning Outreach Activity

Required Information

Project Title: Point Molate Beach Park Shoreline Restoration Project

Local Government/Lead Agency: City of Richmond

Contact Person: Molly Laitinen, Cultural Resources Specialist, NCE

Street Address: P.O. Box 1760

City: Zephyr Cove, NV **Zip:** 89448

Phone: 775-588-2505 **Fax:**

Email: mlaitinen@ncenet.com

Specific Area Subject to Proposed Action

County: Contra Costa **City/Community:** Richmond

Project Description:

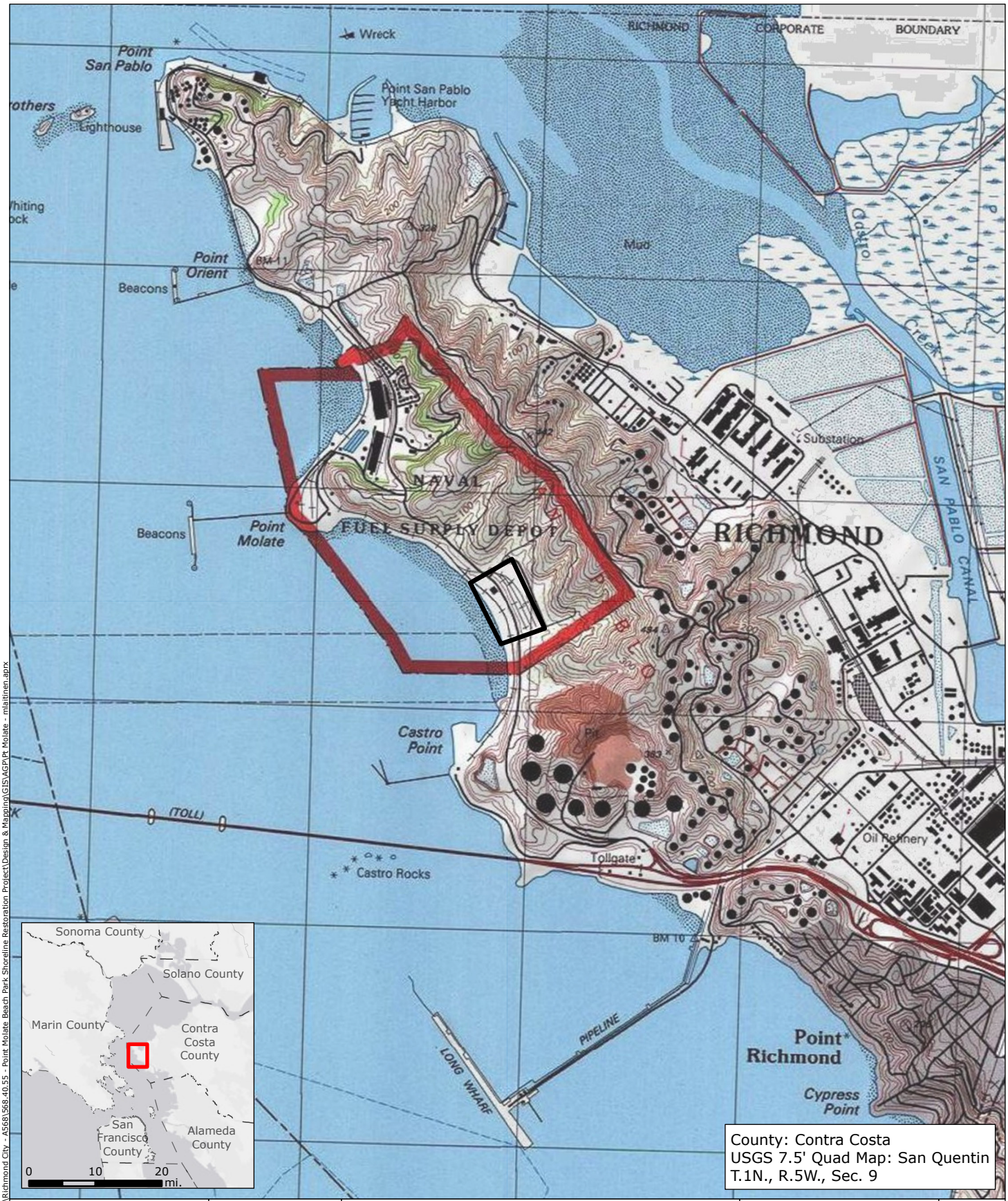
See attached letter.

Additional Request

☑ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): San Quentin 7.5'

Township: 1.N **Range:** 5.W **Section(s):** 9



Document Path: P:\Active Projects\Richmond City - A568\568.40.55 - Point Molate Beach Park Shoreline Restoration Project\Design & Mapping\GIS\AGP\Pt Molate - mlaitinen.aprx

Legend

Project Area

Point Molate Shoreline Restoration Project

Project Area Location Map

N

1:24,000

0 1,000 2,000 ft.

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
ESRI USA Topo Basemap	568.40.55	jhall/mlaitinen	8/23/2017	9/17/2019	jhall



Legend

- Project Area
- Area of Direct Impact (Shoreline Restoration)
- Staging Area

Point Molate Shoreline Restoration Project

Project Area Detail Map

N

1 in. = 200 ft.

0 100 200 ft.

FIGURE 2

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Hybrid Basemap	568.40.55	jhall/mlaitinen	8/23/2017	9/17/2019	jhall

Document Path: P:\Active Projects\Richmond City - A568\568.40.55 - Point Molate Beach Park Shoreline Restoration Project\Design & Mapping\GIS\AGP\Pt Molate - mlaitinen.aprx

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

September 20, 2019

Molly Laitinen
NCE

VIA Email to: mlaitinen@ncenet.com

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Point Molate Beach Park Shoreline Restoration Project, Contra Costa County.

Dear Ms. Laitinen:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;

   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;

   - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.
4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Staff Services Analyst

Attatchment

Native American Heritage Commission
Tribal Consultation List
September 20, 2019

Amah MutsunTribal Band of Mission San Juan Bautista
Irene Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office
Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238
Ohlone/Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 2
Castro Valley , CA 94546
cnihmeh@muwekma.org
(408) 464-2892
Ohlone / Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden , CA 95236
canutes@verizon.net
(209) 887-3415
Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue
Oakland , CA 94603
corrinagould@gmail.com
(510) 575-8408
Ohlone/Costanoan

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3388
Fremont , CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell
Ohlone
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65362.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed: Point Molate Beach Park Shoreline Restoration Project, Contra Costa County.

Public Works Department

May 27, 2020

Andrew Galvan
Tribe Representative
The Ohlone Indian Tribe
P.O. Box 3388
Fremont, CA 94539

Re: Invitation to Provide Consultation for the Point Molate Beach Park Shoreline Restoration Project, City of Richmond, Contra Costa County, California

Dear Mr. Galvan:

The City of Richmond (City) has identified the need to restore actively eroding portions of the shoreline at the Point Molate Beach Park (Beach Park). The bluff along the north end of the park from the south end of the existing revetment near Stenmark Drive to approximately 300 feet south has receded due to a combination of a broken storm drain outfall pipe and natural shoreline processes resulting from the action of tides, waves, wind, seepage, and rain. Left unchecked, this erosion will continue to encroach upon park facilities, trees and open space. In particular, the coastal erosion has undercut the shoreline and the planned alignment for the San Francisco Bay Trail at Point Molate (Bay Trail Project, a Class I bike trail currently being designed by NCE for the East Bay Regional Park District (EBRPD) and the City and planned for construction this summer

The proposed project would address erosion along this approximately 300-foot section near Stenmark Drive by restoring the beach bluff erosion and replacing the storm drain outfall pipe. Restoration of the beach bluff erosion will include rock revetment along the beach bluff. The rock revetment will be an approximately 300-foot long rock structure comprised of various layers of rock and geotextile placed on the shoreline. Sand will be removed up to approximately 4 feet depth in the rock revetment area of the project to allow the placement of the various layers of rock revetment and will be stockpiled. The sand that is removed and stockpiled will be placed and spread out over the sand beach at the toe of the rock revetment after it is constructed.

NCE Staff Archaeologist, Molly Laitinen, is a consultant representing the City and is seeking any information you may have regarding tribal cultural resources (as defined under PRC § 21074) within the project area. This information is needed so that all concerns may be incorporated into the environmental review documentation. Information provided to the consulting archaeologist will remain confidential and exempt from public disclosure pursuant to PRC §5097.9 and §5097.993. Two maps are enclosed for your review. Figure 1 is a location map of the project area at a 1:24,000 scale with a USGS 7.5' quadrangle background (San Quentin). Figure 2 provides more detail of the project area using an aerial basemap.

The Native American Heritage Commission (NAHC) Sacred Lands File (SLF) results were negative. A records search request using a quarter mile buffer was submitted to the Northwest Information Center (NWIC) to gather information pertaining to previous cultural resource

inventories and previously recorded archaeological and/or architectural resources within the project area. In consultation with the City, a field visit was conducted to survey and photo document the project area. Resources associated with the historic Chinese Shrimp Camp that encompasses the entire Beach Park and historic refuse from the Navy Fuel Depot were identified during the survey. It should be noted that approximately 400 feet to the north along Burma Road human remains have been identified within a prehistoric archaeological site. At this time, it is anticipated that results of the preliminary cultural resources assessment will be drafted in a cultural resources inventory report in support of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental documents.

Presently, three of the six tribes identified by the NAHC responded to a follow up discussion regarding the project: the Amah Mutsun Tribal Band of Mission San Juan Bautista, the Indian Canyon Mutsun Band of Costanoan, and The Ohlone Indian Tribe. The Ohlone Indian and the Indian Canyon Mutsun Band of Costanoan recommend tribal and archaeological monitors be on site during Project construction. This request will be required for future Project construction and contracts will occur government to government.

Please consider this letter and preliminary project information as the initiation of Section 106 consultation pursuant to the National Historic Preservation Act (NHPA) and formal notification of a proposed project as required under the CEQA, specifically Public Resources Code (PRC) 21080.3.1 and Chapter 532 Statutes of 2014 (i.e., AB 52). Please respond within 30 days, pursuant to PRC 21080.3.1(d) if you would like to consult on this project and provide a designated lead contact person if you have not provided that information to us already.

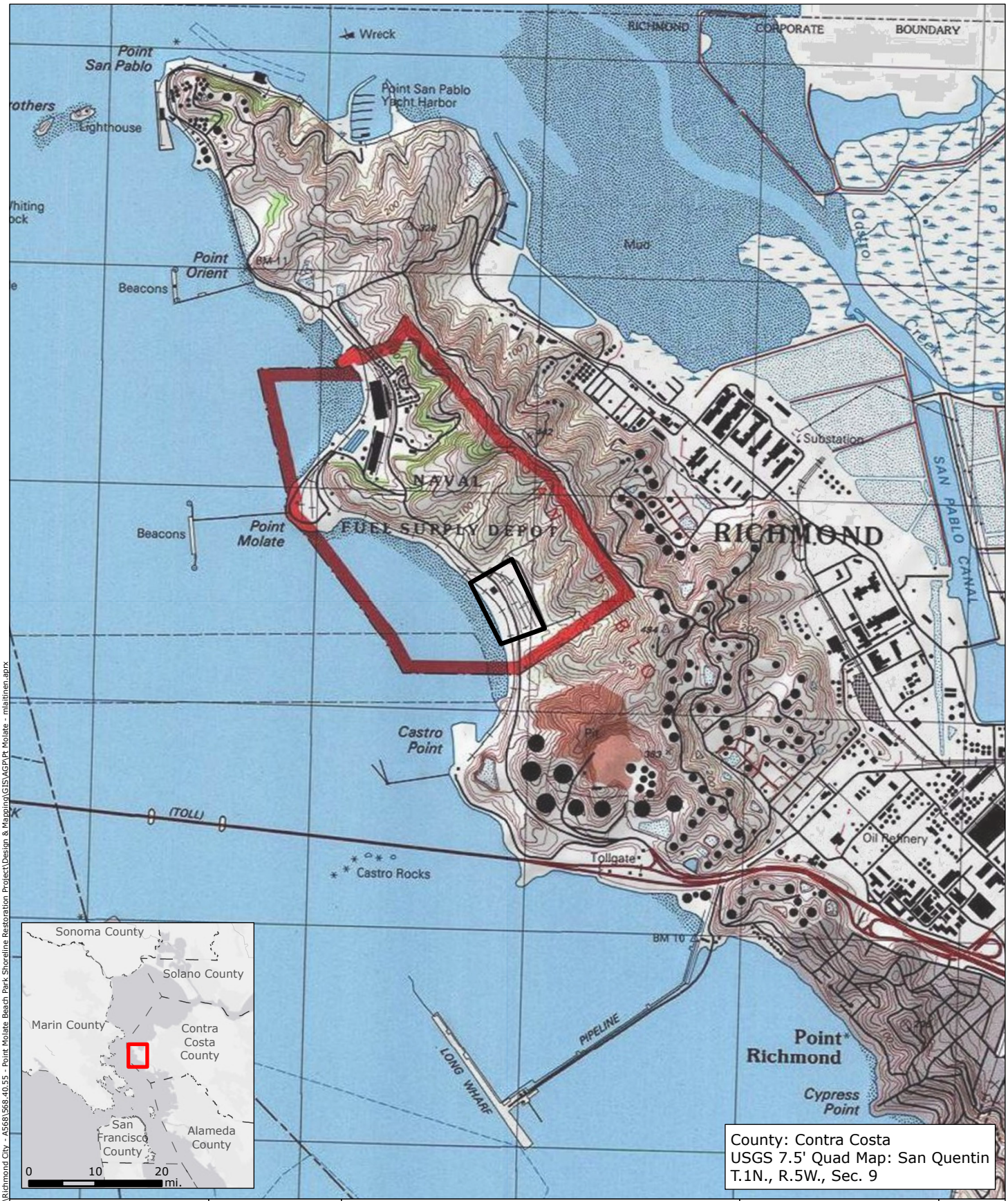
If you have any questions, please feel free to contact me via email at tawfic_halaby@ci.richmond.ca.us or by telephone, 510-621-1612, and Ms. Laitinen at mlaitinen@ncenet.com or 408-823-4570. I appreciate your assistance and look forward to hearing from you soon.

Sincerely,



Tawfic N. Halaby, P.E.
Senior Civil Engineer, City of Richmond
450 Civic Center Plaza
Richmond, CA 94801
510-621-1612

Enclosed: Figure 1 – Location Map; Figure 2 – Detail Map



Document Path: P:\Active Projects\Richmond City - A568\568.40.55 - Point Molate Beach Park Shoreline Restoration Project\Design & Mapping\GIS\AGP\Pt Molate - mlaitinen.aprx

Legend

Project Area

Point Molate Shoreline Restoration Project

Project Area Location Map

N

1:24,000

0 1,000 2,000 ft.

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
ESRI USA Topo Basemap	568.40.55	jhall/mlaitinen	8/23/2017	9/17/2019	jhall



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Direct APE

NCE

Richmond

Ponte Molate Beach Park Shoreline Restoration Project

Area of Potential Effect (APE) Map

N

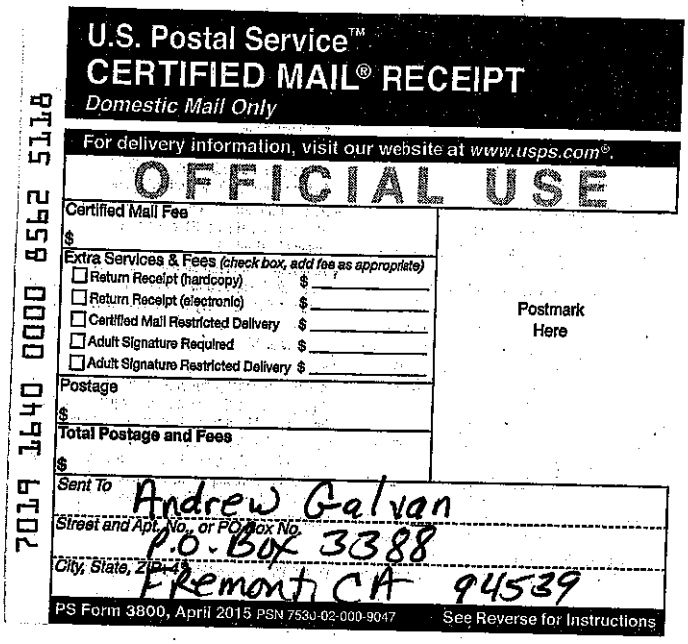
1 in. = 200 ft.

0 100 200 ft.

FIGURE 2

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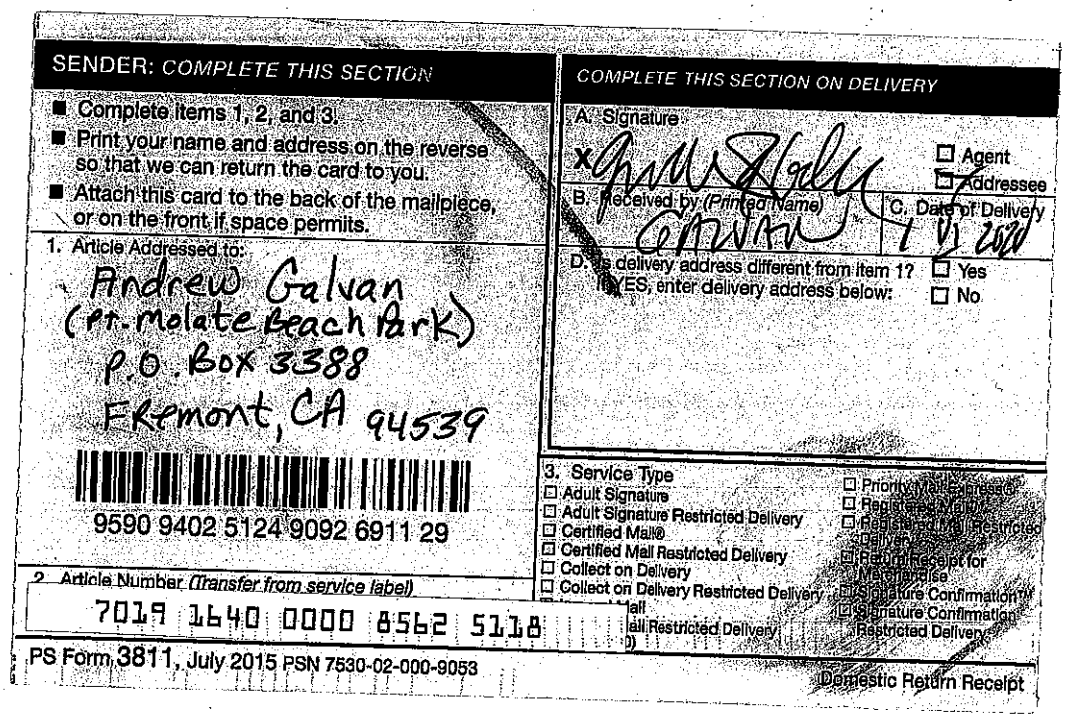
Total Postage and Fees
$

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Sent To Andrew Galvan
Street and Apt. No., or PO Box No. P.O. Box 3388
City, State, ZIP+4 Fremont, CA 94539

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Andrew Galvan
(Pt. Molate Beach Park)
P.O. Box 3388
Fremont, CA 94539

9590 9402 5124 9092 6911 29

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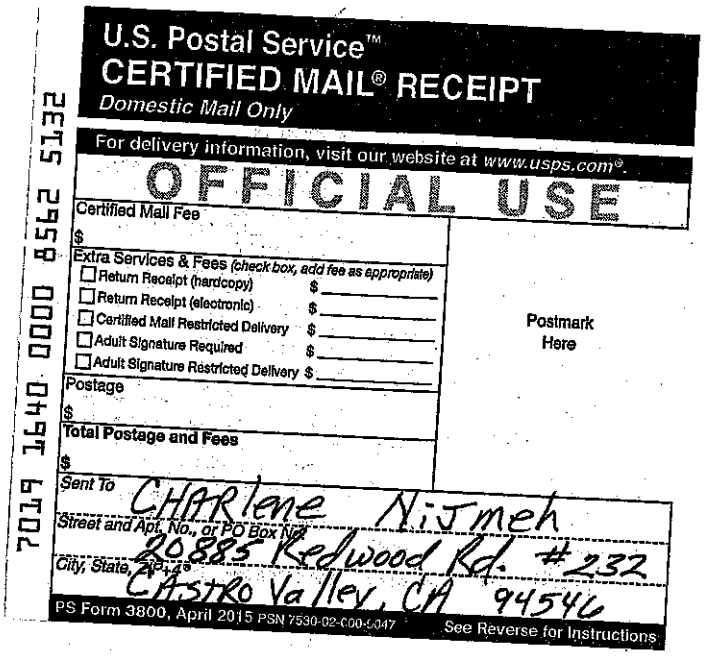
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Street and Apt. No., or PO Box No.: 20885 Redwood Rd. #232
City, State, ZIP+4®: Castro Valley, CA 94546

7019 1640 0000 8562 5132

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Charlene Nijmeh
(Point Molate Beach Park)
20885 Redwood Rd. #232
Castro Valley CA 94546

9590 9402 5566 9249 1515 08

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Delivered, Left with Individual
CASTRO VALLEY, CA 94546

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Tracking History ∧

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CASTRO VALLEY, CA 94546
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CASTRO VALLEY, CA 94546

May 29, 2020, 8:20 am
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CASTRO VALLEY, CA 94546

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Departed USPS Regional Facility
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May 28, 2020, 10:41 am
Arrived at USPS Regional Facility
OAKLAND CA DISTRIBUTION CENTER

May 28, 2020, 9:29 am
Departed USPS Regional Facility
RENO NV DISTRIBUTION CENTER

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Total Postage and Fees
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Sent To KATHERINE Erolinda Perez
Street and Apt. No., or PO Box No. P.O. BOX 717
City, State, ZIP+4® Linden, CA 95236

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Katherine E. Perez
CPoint Molate Beach Park
P.O. BOX 717
Linden, CA 95236

9590 9402 5566 9249 1514 92

2. Article Number *(Transfer from service label)*
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PS Form 3811, July 2015 PSN 7530-02-000-9053

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☐ Addressee

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C. Date of Delivery 5-30-20

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If YES, enter delivery address below: ☐ No

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Your item was picked up at a postal facility at 10:36 am on May 30, 2020 in LINDEN, CA 95236.

Feedback

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May 29, 2020, 8:10 am
Arrived at Unit
LINDEN, CA 95236

May 28, 2020, 8:45 pm
Departed USPS Regional Facility
SACRAMENTO CA DISTRIBUTION CENTER

May 28, 2020, 9:04 am
Arrived at USPS Regional Facility
SACRAMENTO CA DISTRIBUTION CENTER

May 27, 2020, 8:44 pm
Arrived at USPS Regional Facility
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Feedback

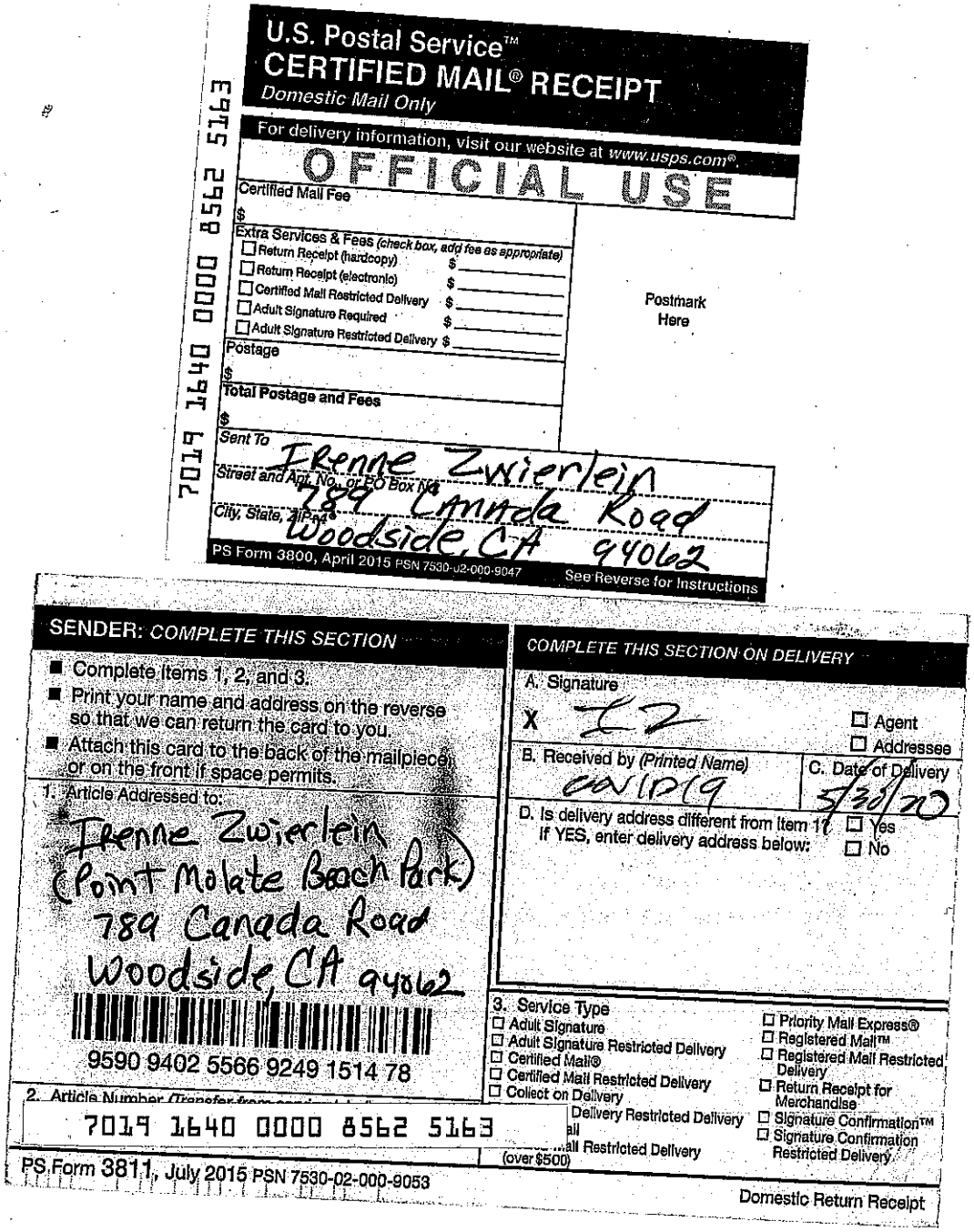
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FAQs



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Sent To: Irenne Zwierlein
Street and Apt. No., or PO Box No.: 789 Canada Road
City, State, ZIP+4®: Woodside, CA 94062

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 1640 0000 8562 5163

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
Irenne Zwierlein
(Point Molate Beach Park)
789 Canada Road
Woodside, CA 94062

9590 9402 5566 9249 1514 78

2. Article Number (Transfer from service label)
7019 1640 0000 8562 5163

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name): CONDIG C. Date of Delivery: 5/30/20

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
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- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Delivery Restricted Delivery
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- ☐ ail Restricted Delivery (over $500)
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Remove ×

Tracking Number: 70191640000085625163

Your item has been delivered to an agent for final delivery in REDWOOD CITY, CA 94062 on May 30, 2020 at 10:48 am.

Feedback

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May 30, 2020 at 10:48 am
Delivered to Agent for Final Delivery
REDWOOD CITY, CA 94062

Get Updates ∨

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Tracking History ∧

May 30, 2020, 10:48 am
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REDWOOD CITY, CA 94062
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May 29, 2020, 12:43 pm
Arrived at USPS Regional Facility
SAN FRANCISCO CA DISTRIBUTION CENTER

May 29, 2020
In Transit to Next Facility

May 28, 2020, 9:29 am
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RENO NV DISTRIBUTION CENTER

May 27, 2020, 10:34 pm
Arrived at USPS Regional Facility
RENO NV DISTRIBUTION CENTER

Product Information

Feedback

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FAQs

From: Molly Laitinen
To: Andrew Galvan
Subject: Point Molate Beach Park Shoreline Restoration Consultation
Date: Tuesday, June 16, 2020 4:07:00 PM
Attachments: Galvan.pdf

Hi Andrew,

I hope you are doing well. On behalf of the City of Richmond, the consultation initiation letter was revised and sent out to the Tribes identified by the NAHC to include the up to-date project description and APE. I have attached this revised letter to this email per your request on May 19. The City has been notified of your recommendation to have a Native American monitor on site during construction efforts. At this time, we are completing the technical studies to be sent with the USACE permits and we don't have a construction date. We will be sure to inform you should we receive any project updates and please let me know if you have any questions.

Thank you,

Molly Laitinen, RPA
Staff Archaeologist

NCE

p (775) 588-2505 **c** (408) 823-4570
f (775) 588-2607 **e** mlaitinen@ncenet.com

NCE
P.O. Box 1760, Zephyr Cove, NV 89448
www.ncenet.com

Collaboration. Commitment. Confidence.SM

From: Molly Laitinen
To: pwong@chsa.org
Cc: Jeremy Hall; Charles Zeier; Gail Ervin; Tawfic Halaby
Subject: Point Molate Beach Park Shoreline Restoration Project Consultation
Date: Monday, June 29, 2020 11:41:00 AM
Attachments: Fig1 - Vicinity Map.pdf
Figure 2 APE Map.pdf

Dear Ms. Wong,

The City of Richmond (City) has identified the need to restore actively eroding portions of the shoreline at the Point Molate Beach Park (Beach Park). The bluff along the north end of the park from the south end of the existing revetment near Stenmark Drive to approximately 300 feet south has receded due to a combination of a broken storm drain outfall pipe and natural shoreline processes resulting from the action of tides, waves, wind, seepage, and rain. Left unchecked, this erosion will continue to encroach upon park facilities, trees and open space. In particular, the coastal erosion has undercut the shoreline and the planned alignment for the San Francisco Bay Trail at Point Molate (Bay Trail Project, a Class I bike trail currently being designed by NCE for the East Bay Regional Park District (EBRPD) and the City and planned for construction this summer

The proposed project would address erosion along this approximately 300-foot section near Stenmark Drive by restoring the beach bluff erosion and replacing the storm drain outfall pipe. Restoration of the beach bluff erosion will include rock revetment along the beach bluff. The rock revetment will be an approximately 300-foot long rock structure comprised of various layers of rock and geotextile placed on the shoreline. Sand will be removed up to approximately 4 feet depth in the rock revetment area of the project to allow the placement of the various layers of rock revetment and will be stockpiled. The sand that is removed and stockpiled will be placed and spread out over the sand beach at the toe of the rock revetment after it is constructed.

On behalf of the City, NCE is conducting consultation efforts regarding the project. Two maps are attached for your review. Figure 1 is a location map of the project area at a 1:24,000 scale with a USGS 7.5' quadrangle background (San Quentin). Figure 2 provides more detail of the project area using an aerial basemap.

A records search request using a quarter mile buffer was submitted to the Northwest Information Center (NWIC) to gather information pertaining to previous cultural resource inventories and previously recorded archaeological and/or architectural resources within the project area. In consultation with the City, a field visit was conducted to survey and photo document the project area. Resources associated with the historic Chinese Shrimp Camp that encompasses the entire Beach Park were identified during the survey. At this time, it is anticipated that results of the preliminary cultural resources assessment will be drafted in a cultural resources inventory report in support of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) environmental documents.

If you have any questions and would like to discuss the project further, please contact me via email at mlaitinen@ncenet.com or 408-823-4570. I appreciate your assistance and look forward to hearing from you soon.

Thank you,

Molly Laitinen, RPA
Staff Archaeologist

p (775) 588-2505 **c** (408) 823-4570
f (775) 588-2607 **e** mlaitinen@ncenet.com

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Legend

Project Area

NCE

Richmond

Point Molate Shoreline Restoration Project

Project Area Vicinity Map

N

1:24,000

0 1,000 2,000 ft.

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
ESRI USA Topo Basemap	568.40.55	jhall	6/26/2020	-	mlaitinen

Document Path: C:_Working_GIS Projects\Richmond - Pt Molate\GIS\AGP\Pt Molate - jhall.aprx



Legend

Direct APE

NCE

Richmond

Ponte Molate Beach Park Shoreline Restoration Project

Area of Potential Effect (APE) Map

N

1 in. = 200 ft.

0 100 200 ft.

FIGURE 2

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Hybrid Basemap; NCE 2020	568.40.55	cvaz	5/15/2020		

Document Path: P:\Active Projects\Richmond City - A568\568.40.55 - Point Molate Beach Park Shoreline Restoration Project\Design & Mapping\GIS\AGP\Pt Molate - cvaz.aprx

Appendix D

INVENTORY PHOTO LOG

CULTURAL RESOURCES PHOTOGRAPH RECORD

Project Name: Point Molate Beach Park Shoreline Restoration Project
Project Number: 568.40.55

Date	Frame Number	Site/Iso Number	Feature Number	Description	View
6/8/2020	IMG_0726	P-07-004593	F-01	Richmond Belt Line Railroad about 100 meters south of APE	NW
6/8/2020	IMG_0728	P-07-004593	F-01	Richmond Belt Line Railroad at APE boundary	NW
6/8/2020	IMG_0729	P-07-004593	F-01	Richmond Belt Line Railroad at APE boundary	SE
6/8/2020	IMG_0730	-	-	Southeast portion of APE near modern Quonset building	NW
6/8/2020	IMG_0733	-	-	Northeast portion of APE near modern Quonset building	N
6/8/2020	IMG_0734	-	-	Northeast portion of APE near modern Quonset building	NE
6/8/2020	IMG_0735	-	-	Northeast portion of APE near modern Quonset building	W
6/8/2020	IMG_0736	-	-	Northeast portion of APE near modern Quonset building	W
6/8/2020	IMG_0737	P-07-004593	F-01	Richmond Belt Line Railroad at APE boundary	SE
6/8/2020	IMG_0738	P-07-004593	F-01	Richmond Belt Line Railroad at APE boundary	NW
6/8/2020	IMG_0739	-	-	Northernmost APE boundary along a removed portion of the Richmond Belt Line Railroad	NW
6/8/2020	IMG_0740	-	-	Northernmost APE boundary along a removed portion of the Richmond Belt Line Railroad	SE
6/8/2020	IMG_0741	P-07-004593	F-01	Richmond Belt Line Railroad about 100 meters north of APE	SE
6/8/2020	IMG_0742	-	-	Overview of eroding bluff face from northwest end of APE	SE
6/8/2020	IMG_0745	-	-	Overview of eroding bluff face from southwest end of APE	NW
6/9/2020	IMG_0412	P-07-000162	P-01	Soil profile at north end of bluff face within the APE; located below paved area and dome buildings	NE
6/9/2020	IMG_0414	P-07-000277	F-01	Overview of Chinese Shrimp Camp two jetties at low tide	W
6/9/2020	IMG_0415	P-07-000277	F-01	Overview of Chinese Shrimp Camp two jetties at low tide	SW
6/9/2020	IMG_0416	P-07-000277	F-01	Overview of Chinese Shrimp Camp two jetties at low tide	SW
6/9/2020	IMG_0417	P-07-000277	F-01	Overview of Chinese Shrimp Camp two jetties at low tide	SW
6/9/2020	IMG_0418	P-07-000277	F-01	Overview of Chinese Shrimp Camp two jetties at low tide	S
6/9/2020	IMG_0419	P-07-000277	F-01	Overview of Chinese Shrimp Camp two jetties at low tide	S
6/9/2020	IMG_0420	P-07-000162	P-01	Soil profile at north end of bluff face within the APE; located below paved area and modern Quonset building	NE
6/9/2020	IMG_0421	P-07-000162	P-01	Soil profile at north end of bluff face within the APE; located below paved area and modern Quonset building	NE
6/9/2020	IMG_0424	P-07-000162	P-01	Soil profile at north end of bluff face within the APE; located below paved area and modern Quonset building	NE
6/9/2020	IMG_0425	P-07-000277	A-01 A-02	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	NW
6/9/2020	IMG_0426	P-07-000277	A-01	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0427	P-07-000277	A-01	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0428	P-07-000277	A-01	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0429	P-07-000277	A-02	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0430	P-07-000277	A-02	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0431	P-07-000277	A-02	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0432	P-07-000277	A-02	4”x4”x2.5” bricks on beach at low tide most likely associated with the Chinese Shrimp Camp	Aerial
6/9/2020	IMG_0435	P-07-000162	P-01	Closeup of soil profile from top to bottom: asphalt, rock fill (modern and/or Navy Depot era), shell midden (prehistoric), rock fill (modern and/or Navy Depot era), buried soil (natural well-developed alluvium above siltstone colluvium)	NE
6/9/2020	IMG_0438	P-07-000162	P-01	Closeup of secondary shell lens smear graded out from primary prehistoric midden	NE
6/9/2020	IMG_0439	P-07-000162	P-01	Closeup of secondary shell lens smear graded out from primary prehistoric midden	NE

CULTURAL RESOURCES PHOTOGRAPH RECORD

Project Name: Point Molate Beach Park Shoreline Restoration Project
Project Number: 568.40.55

Date	Frame Number	Site/Iso Number	Feature Number	Description	View
6/9/2020	IMG_0442	-	-	Grading and compacting of soils showing unnatural levelling between soil horizons	NE
6/9/2020	IMG_0443	P-07-000162	P-01	Closeup of secondary shell lens smear graded out from primary prehistoric midden	NE
6/9/2020	IMG_0445	P-07-000162	P-01	Closeup of secondary shell lens smear graded out from primary prehistoric midden	NE
6/23/2020	IMG_0510	P-07-000162; P-07-000277	P-01; A-03 & 4	Damaged culvert eroding out of bluff face within APE. Shell lens terminates on north side of the culvert and mixed/truncated shrimp camp horizon located to south of culvert along with three bricks and one metal bar	NE
6/23/2020	IMG_0512	P-07-000162; P-07-000277	P-01; A-03 & 4	Damaged culvert eroding out of bluff face within APE. Shell lens terminates on north side of the culvert and mixed/truncated shrimp camp horizon located to south of culvert along with three bricks and one metal bar	E
6/23/2020	IMG_0513	P-07-000162; P-07-000277	P-01; A-03 & 4	Damaged culvert eroding out of bluff face within APE. Shell lens terminates on north side of the culvert and mixed/truncated shrimp camp horizon located to south of culvert along with three bricks and one metal bar	N
6/23/2020	IMG_0515	P-07-000277	A-03	Three bricks measuring 6"x4"x2.5" within bluff above historic fill horizon	N
6/23/2020	IMG_0516	P-07-000277	A-04	6" thin metal bar 12" exposed from bluff above historic fill horizon	E
6/23/2020	IMG_0517	-	-	Mixed modern, historic, and natural horizons	NE
6/23/2020	IMG_0519	-	-	Mixed modern, historic, and natural horizons	NE
6/23/2020	IMG_0520	-	-	Mixed modern, historic, and natural horizons	E
6/23/2020	IMG_0521	P-07-000277	P-01	Thicker organic horizon from tree roots and start of intact historic shrimp camp fill horizon to south of tree	NE
6/23/2020	IMG_0522	P-07-000277	P-01	Start of intact historic shrimp camp fill horizon to south of tree	E
6/23/2020	IMG_0525	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0526	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0528	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0533	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	E
6/23/2020	IMG_0535	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0537	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0540	P-07-000277	P-01	Intact historic shrimp camp fill horizon below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	E
6/23/2020	IMG_0541	P-07-000277	P-02	Intact historic shrimp camp fill horizon with ash lenes and charcoal fragments below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0542	P-07-000277	P-02	Intact historic shrimp camp fill horizon with ash lenes and charcoal fragments below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	N

CULTURAL RESOURCES PHOTOGRAPH RECORD

Project Name: Point Molate Beach Park Shoreline Restoration Project
Project Number: 568.40.55

Date	Frame Number	Site/Iso Number	Feature Number	Description	View
6/23/2020	IMG_0543	P-07-000277	P-02	Intact historic shrimp camp fill horizon with ash lenes and charcoal fragments below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0544	P-07-000277	P-02	Intact historic shrimp camp fill horizon with ash lenes and charcoal fragments below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0546	P-07-000277	P-02	Intact historic shrimp camp fill horizon with ash lenes and charcoal fragments below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	NE
6/23/2020	IMG_0547	P-07-000277	P-02	Intact historic shrimp camp fill horizon with ash lenes and charcoal fragments below modern fill horizons and above natural well-developed alluvium and siltstone colluvium	SE
6/23/2020	IMG_0558	P-07-000277	F-01	Truncated historic shrimp camp fill horizon south of old pipe placement that is presently a ground squirrel burrow	NE
6/23/2020	IMG_0561	P-07-000277	A-05	6"x4"x2.5" brick within bluff above historic fill horizon	NE
6/23/2020	IMG_0562	P-07-000277	P-02	Closeup of charcoal surrounding black gravels and ash lens above	NE
6/23/2020	IMG_0563	P-07-000277	P-02	Closeup of charcoal surrounding black gravels and ash lens above	NE



IMG_0726



IMG_0728



IMG_0729



IMG_0730



IMG_0733



IMG_0734



IMG_0735



IMG_0736



IMG_0737



IMG_0738



IMG_0739



IMG_0740



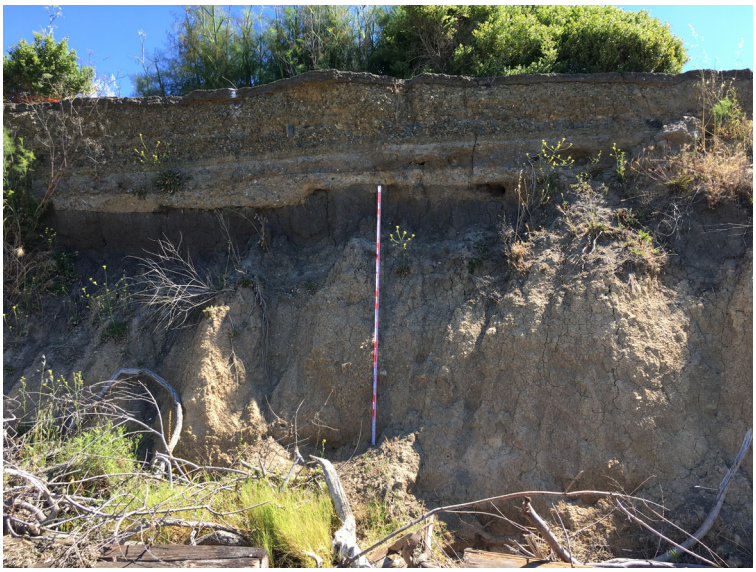
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IMG_0417



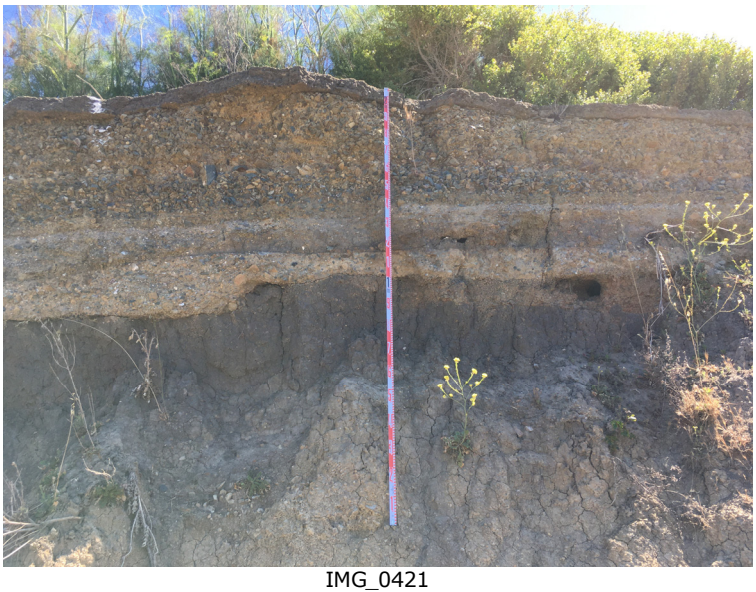
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IMG_0431



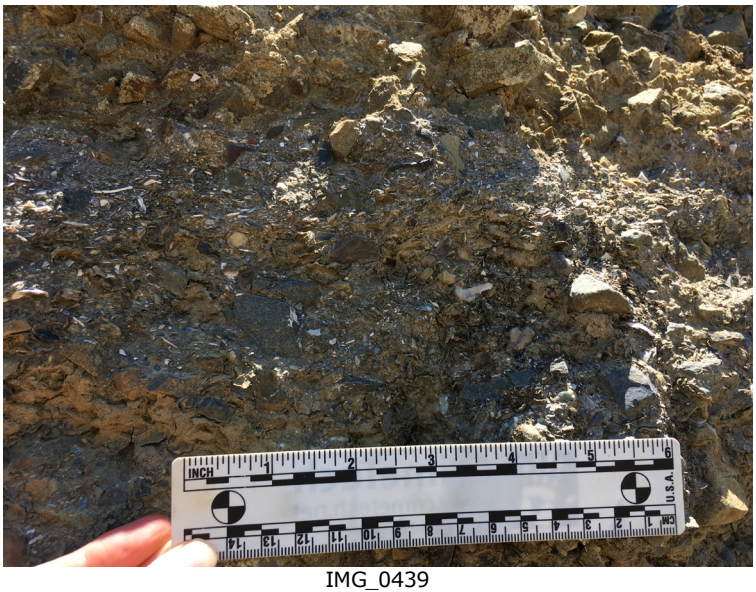
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IMG_0443



IMG_0445



IMG_0510



IMG_0512



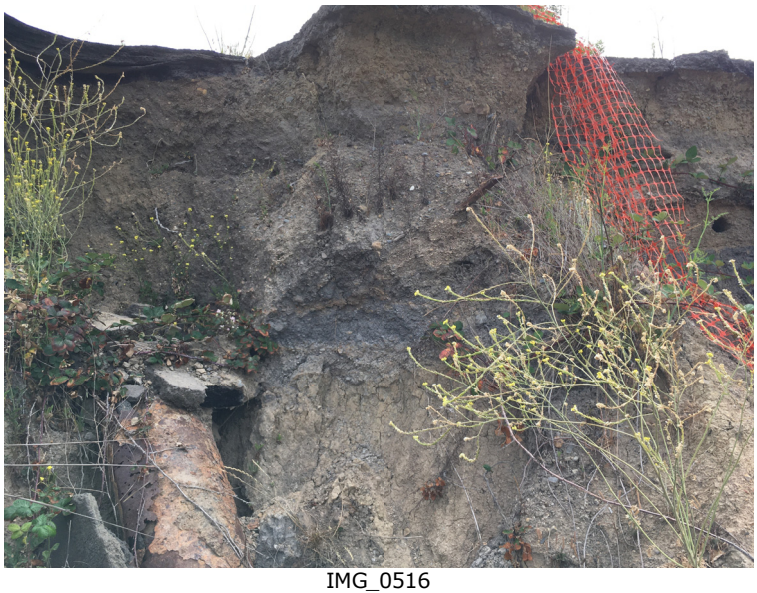
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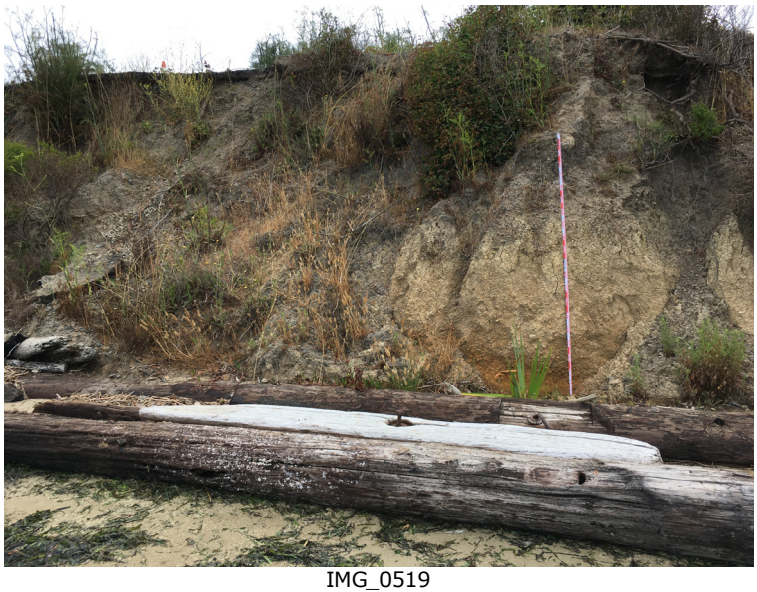
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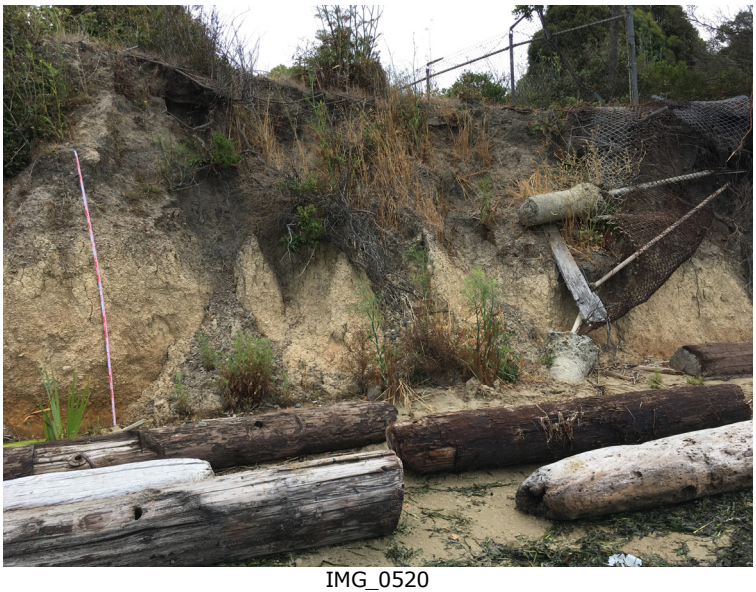
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IMG_0517



IMG_0519



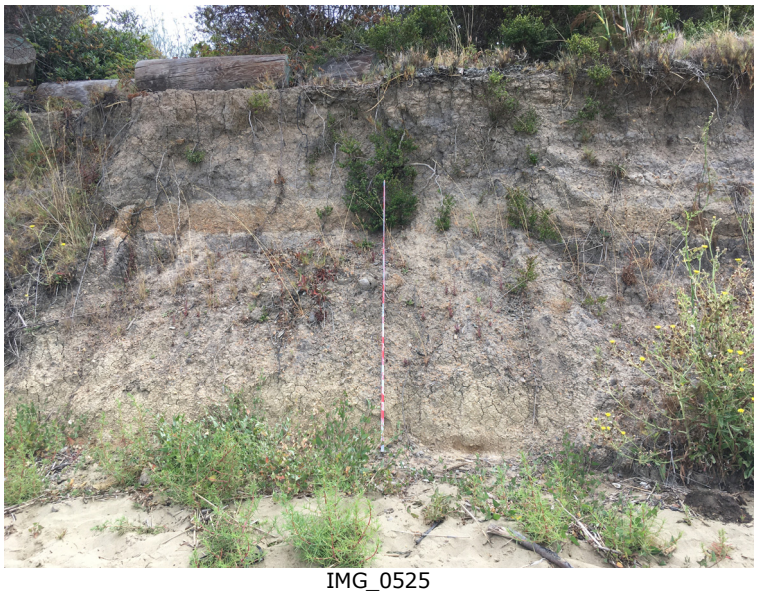
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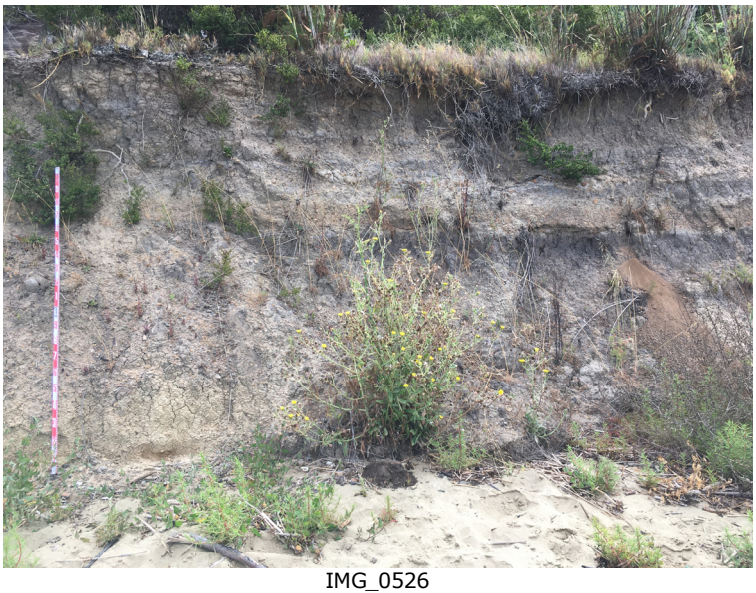
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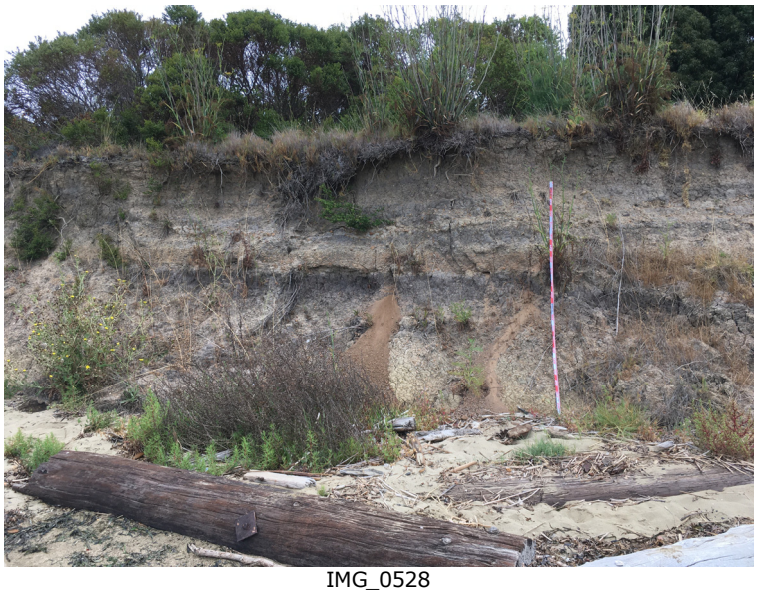
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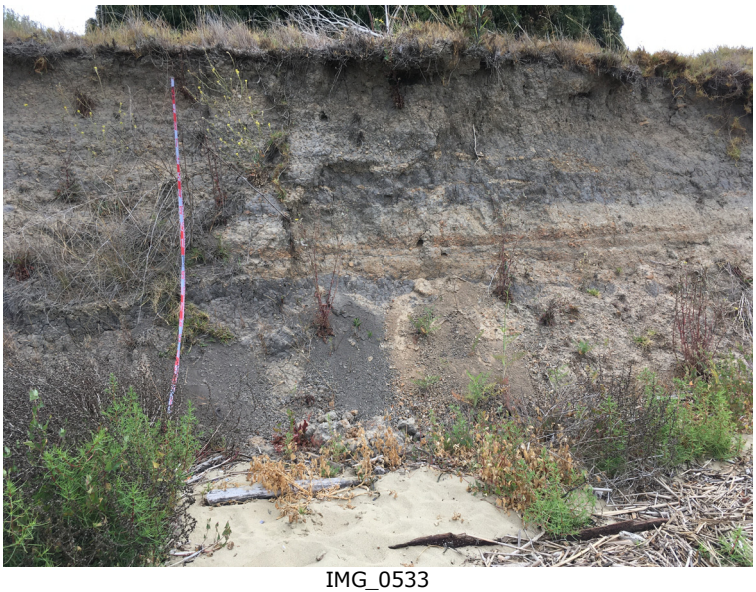
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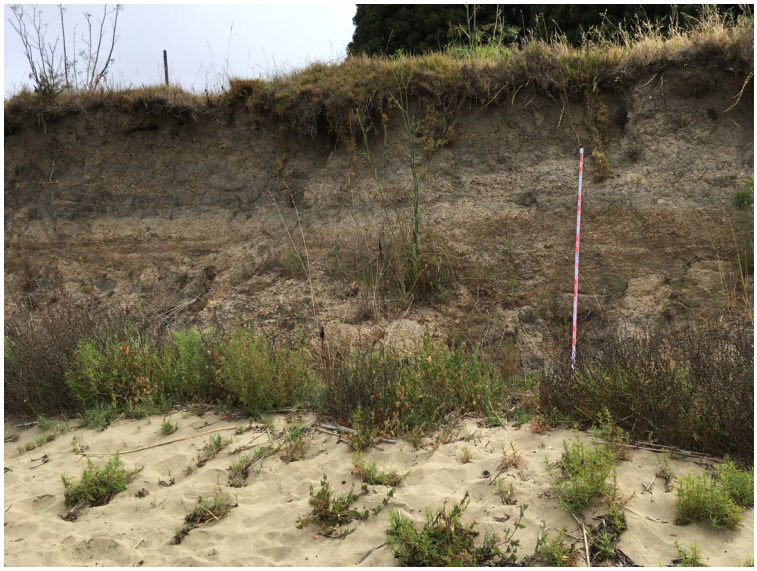
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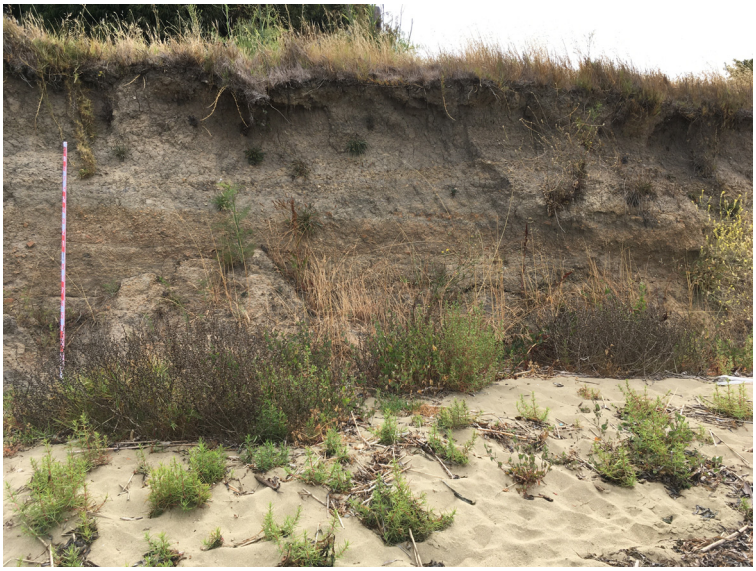
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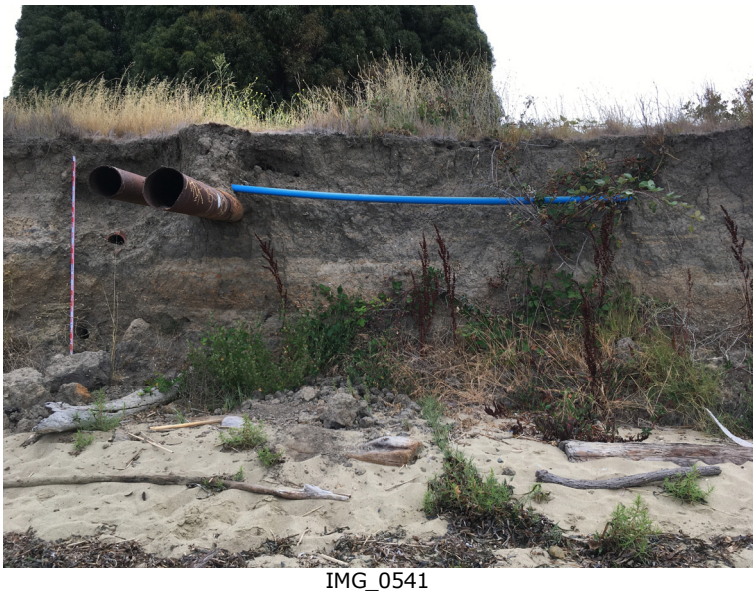
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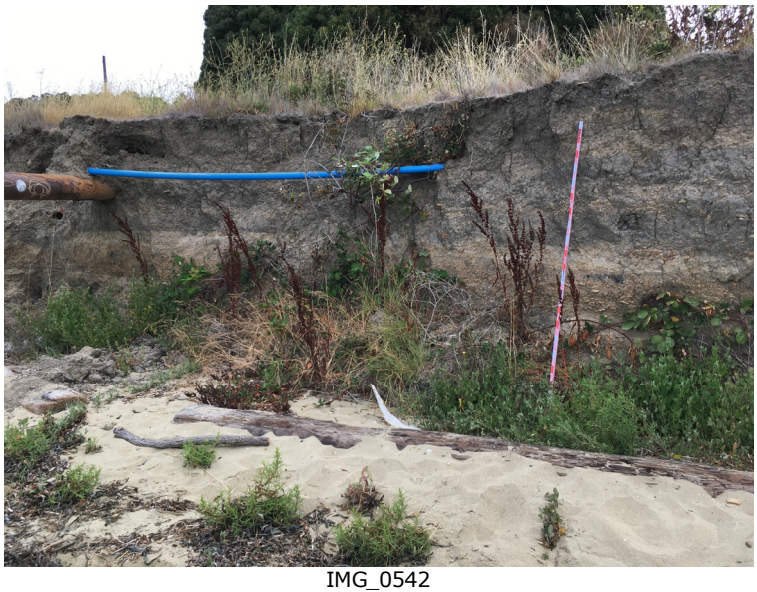
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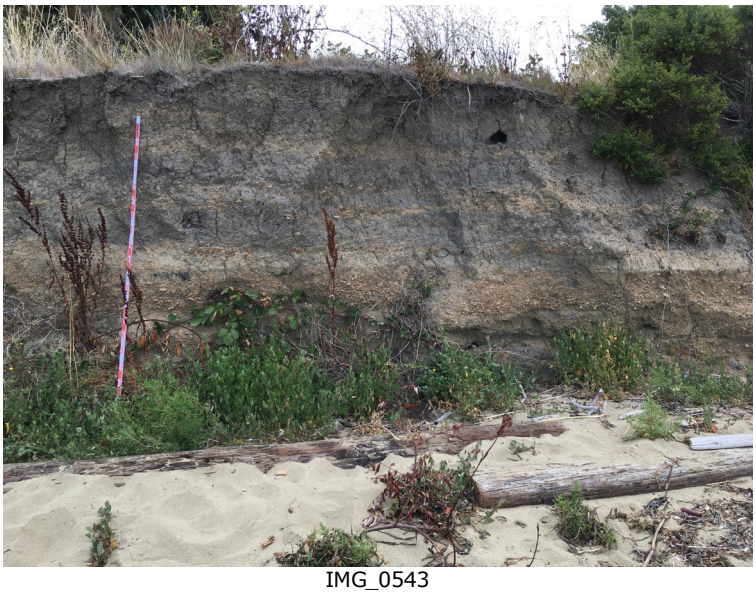
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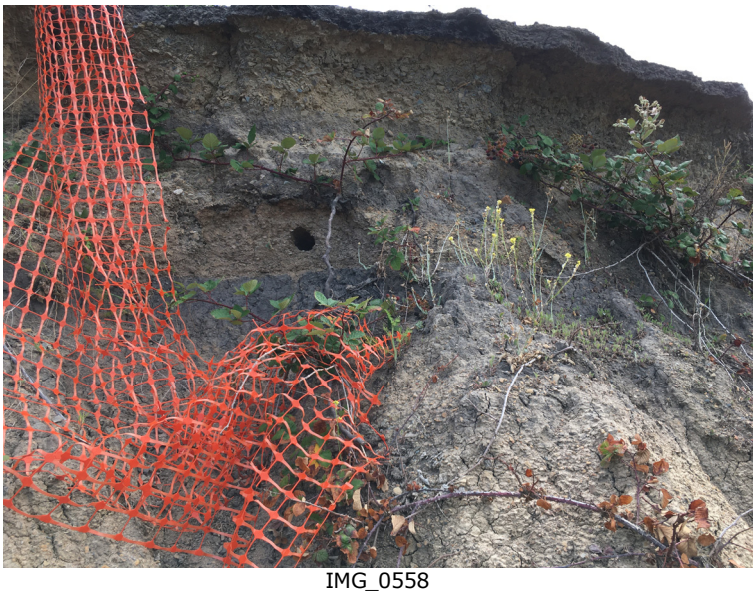
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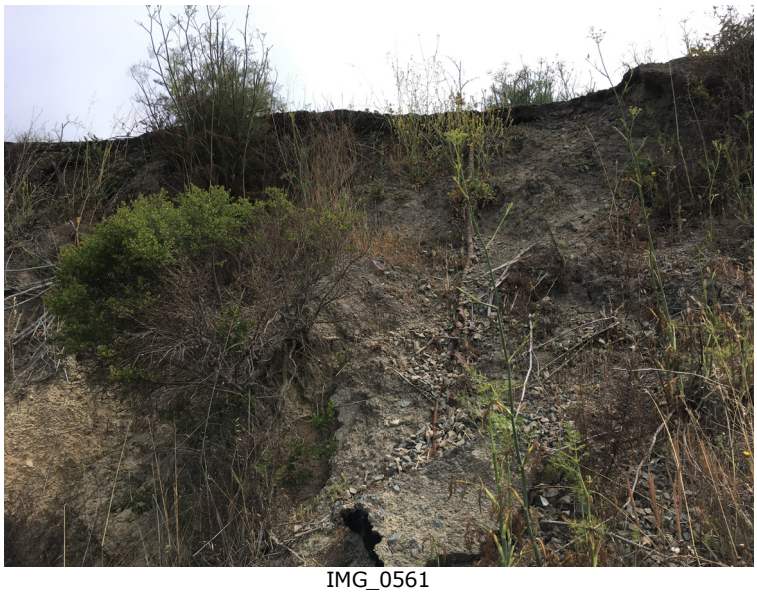
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Appendix E

SITE RECORDS
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Appendix E

GEOTECHNICAL REPORT

ADVANCED GEOLOGICAL SERVICES

1605 School Street, #4
Moraga CA 94556
(925) 808-8965

December 1, 2017

Jenny Van Dyke, P.E.
NCE
501 Canal Blvd., Suite I
Pt. Richmond, CA 94804

Subject: Report
Seismic Refraction/MASW Survey
Point Molate Beach Park
Richmond, California

Dear Ms Van Dyke:

1.0 INTRODUCTION

This letter presents the results of Advanced Geological Services, Inc. (AGS) seismic refraction and seismic surface-wave (MASW) survey at Point Molate Beach Park in Richmond, California (Figure 1).

The survey objective was to assess the depth and configuration of bedrock and, if possible, provide information about the nature of the sediment (if any) above bedrock. The survey was performed on November 13, 2017 by AGS senior geophysicist Roark W. Smith; it consisted of two parallel seismic lines located on the beach (Figure 2).

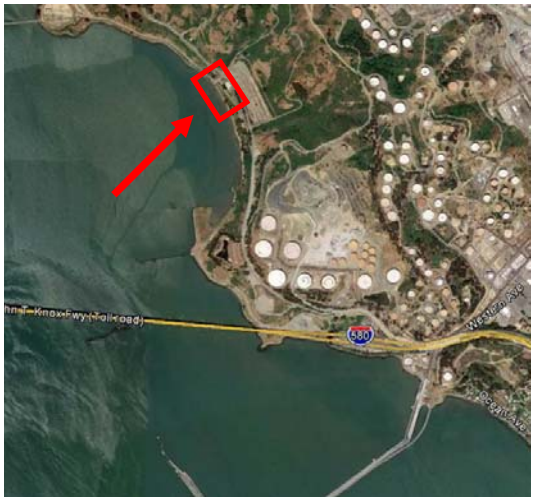


Figure 1- Site Location, Richmond, CA

2.0 SUMMARY OF FINDINGS

- The depth to bedrock ranges two to four feet below ground surface (bgs), and bedrock exhibits P-wave velocities ranging from 5,800 to 7,000 feet per second (fps).

- Aside from a 2- to 4-foot thick layer of beach sand, there does not appear to be any sediment above bedrock.

3.0 SITE DESCRIPTION

The survey was performed on the northern portion of the beach at Point Molate Beach Park (Figure 2). Seismic data were obtained along two parallel, 460-foot long lines spaced about 20 feet apart. One line was located along the toe of an approximately 8-foot tall bluff and the

second line was about 20 feet west, in the middle of the beach. Both lines were located on beach sand. It is worth noting that the survey had to be performed at low tide, when enough of the beach was exposed to allow placement of the second seismic line. It is also worth noting that the survey was interrupted by rain a few times.

4.0 SEISMIC REFRACTION METHOD OVERVIEW

The seismic refraction method uses compressional (P-) wave energy to delineate seismic velocity layers within the subsurface. Interpretation entails correlating the velocity layers to geologic features such as soil and various types of bedrock. To perform a refraction survey, an elastic wave (compressional, or P-wave) is generated at certain locations (shotpoints) along a survey line. The P-wave energy is usually produced with a small explosion or by striking the ground with a sledgehammer. As the P-wave propagates through the ground it is refracted along boundaries between geologic layers with different seismic velocities.

Part of the refracted P-wave energy returns to the ground surface where it is detected by vibration-sensitive devices called geophones, which are placed in a co-linear array along the seismic survey line. The geophone data are fed to a seismograph, where they are recorded, and then to a computer, where they are analyzed to determine the depth and velocities of subsurface seismic layers. Key data for refraction analysis are the positions of the geophones and shotpoints along a seismic line, and the amount of time it takes for the refracted wave to travel from the shotpoint to each geophone location. Because the P-wave is the fastest traveling of all types of seismic waves, it can be readily identified as the first deflection ("first break") on a seismic trace.

Additional discussion of the refraction method, its limitations, and the relationship between seismic velocity and geologic materials is presented in Appendix A.

5.0 SEISMIC SURFACE-WAVE (MASW) METHOD OVERVIEW

The Seismic Surface-Wave method entails use of the data processing technique known as Spectral Analysis of Surface Waves (SASW), or Multi-Channel Analysis of Surface Waves (MASW). Seismic surface-wave surveys use essentially the same field set-up as a conventional seismic refraction survey, but a different part of the recorded seismic signal— the Rayleigh (surface) wave— is analyzed instead of the P-wave. Briefly, a surface-wave survey entails measuring the velocity of surface waves using a series of motion detectors (geophones) placed in a linear array on the ground surface. Because surface-wave velocity closely follows shear-wave velocity (90 to 95% of V_S), surface-wave velocity data can be used to estimate shear wave velocity (V_S).

Surface-Waves are seismic waves that travel along or near the surface of the earth; they can be "active-source" waves generated by human activities (e.g., hammer blow, traffic noise, factory vibrations) or "passive-source" waves generated by natural phenomena (e.g., wind, ocean waves). In general, active-source waves are of higher frequency and provide information about the shallower subsurface, while passive-source waves are of lower frequency and can provide

deeper subsurface information, albeit with lower resolution. Surface-Waves travel in assemblages of frequencies, with each frequency having a corresponding wavelength. Because surface-waves are influenced by subsurface material to a depth approximately equal to the surface-wave's wavelength, a velocity vs. depth profile can be generated by measuring the velocity of surface-waves of varying wavelengths. Surface waves with shorter wavelengths (higher frequencies) respond to the material properties (e.g., stiffness) of shallower materials while waves with longer wavelengths (lower frequency) respond to deeper materials.

Specialized computer software is used to identify surface-waves in the recorded data and prepare a 'velocity spectrum' image, which the geophysical analyst interprets to produce a 'dispersion curve' that depicts how surface-wave velocity varies with frequency (hence, depth). The dispersion curve is then used to prepare a model depicting subsurface velocity layering at a point that is taken to be at the center of the geophone array.

6.0 FIELD PROCEDURES

Guided by a NCE-provided map showing the preferred seismic line locations, AGS laid out a fiberglass tape measure along the first line (SL-1). For the seismic refraction survey, AGS placed an array of 24 geophones on the ground at 10-foot intervals to form 230-foot long seismic spread (line). The geophones were coupled to the ground by means of 3-inch metal spikes attached to the geophone base, and they were connected to the seismograph by means of a geophone cable laid along the line. Three shotpoints were used along each line, with shotpoints located 5 feet beyond each end of the geophone array and at the array midpoint. AGS produced P-waves through multiple impacts with a 16-lb sledge hammer against a metal plate placed on the ground surface at each shotpoint location. In general, 15 hammer blows were used ("stacked") for end shots and 10 blows were used at the center shotpoint. The P-waves produced by the hammer impacts were detected using Mark Products 10-Hz geophones.

The detected seismic signals were recorded using a DAQLink II seismic system connected to a laptop computer and, for each shotpoint, seismic data were recorded for 2 seconds using a 0.125 millisecond (ms) sample rate. For the MASW survey, AGS replaced the 10-Hz geophones with 4.5-Hz geophones and used a single shotpoint located 20 feet away from the geophone array.

After the seismic data were obtained along SL-1, AGS laid out another tape measure to establish the second seismic line (SL-2) and moved the geophones and cable to SL-2 and repeated the process. AGS repeated the process again for SL-3 and SL-4. Seismic lines SL-1 and SL-4 were laid end-to-end to form as single 460-foot long line along the toe of the bluff; similarly, SL-2 and SL-3 formed a 460-foot long line down the center of the beach. After the seismic data were collected AGS plotted the line locations on the provided basemap by using distinctive site features (e.g., toe of bluff, trees) for reference.

7.0 DATA PROCESSING AND ANALYSIS

Seismic Refraction

The seismic refraction data quality for this project was excellent and "first break" picks were made easily and with high confidence. Data quality was enhanced by "stacking," which entailed using multiple hammer blows at each shotpoint location to improve the signal-to-noise ratio. The additive affect of stacking of multiple hammer blows at the same location enhances or increases the amplitude of the signal (i.e., the refracted wave arrival) while amplitude of the background noise, which, being random in nature, tends to cancel itself on successive hammer blows and remains largely unchanged.

Refraction data were transferred from the seismograph to a desktop computer where they were processed using the *SeisImager* software package by Geometrics, Inc. Briefly, *SeisImager* is a computer inversion program that generates an initial velocity layer model, produces synthetic data from the model, and then adjusts the model so that the synthetic data better matches the observed field data. The agreement between the synthetic and observed data provides an indication of how well the model represents the true subsurface conditions.

First, AGS used the *SeisImager* module *PickWin* to combine the SL-1 and SL-4, and SL-2 and SL-3 datasets into two 460-foot long lines and then interpret ("pick") the P-wave arrivals ("first breaks") for each of the six shotpoint data sets ("shot gathers") per line. *PickWin* was also used to check (against the geophysicist's field log) that the proper locations were assigned to the geophones and shotpoints. Next, the first break files were fed to the SeisImager module *PlotRefra*, which was used review time-distance (TD) plots for the seismic lines and assign a seismic layer to each arrival time. For the refraction analysis, each P-wave arrival is considered to have refracted from a distinct seismic layer. The number of layers resolved by the seismic survey, and their thickness and average velocity, is indicated by straight line segments on the TD plot; because these straight-line segments represent a constant velocity condition within the subsurface, the tend to represent a distinct geologic layer. Because the survey was performed on the beach, AGS assumed a level ground surface and no topographic correction was performed. Next, a time-term inversion was performed to produce layered velocity models presented on Figure 3. Time-term inversion is a linear least-squares technique that uses the layer assignments and the distances and travel times between the shotpoints and the geophones to develop a velocity layer model that best fits the observed data.

Seismic Surface-Wave

Surface-wave data were transferred from the seismograph to a desktop computer where they were processed using the *SeisImager/SW* software package by Geometrics, Inc. In general, surface wave data processing entails first producing a velocity spectrum image, which shows the phase velocity for the various frequencies of surface waves detected. This image is used as the basis for interpreting ("picking") a dispersion curve, which is a graph that depicts how surface-wave velocity varies with frequency (hence, with depth). The dispersion curve is then used to prepare an initial 1-D model of surface-wave velocity versus depth using a one-third wavelength approximation (i.e., a given phase velocity is assigned to a depth that is one-third of the

wavelength of the corresponding surface-wave). The initial velocity layer model is then adjusted using an inversion process until the corresponding synthetic dispersion curve achieves a "best-fit" match to the original dispersion curve (the one that was interpreted from the observed data—i.e., the velocity spectrum image). The degree or closeness of the fit between the interpreted and synthetic curves (expressed as a RMS percentage error) provides an indication of how well the model represents actual subsurface conditions.

8.0 RESULTS

The results of the seismic refraction survey are summarized on Table 1, below, and presented on Figures 2 and 3, which show the seismic line locations and the subsurface velocity layer models that were calculated from the refraction data. Figure 4 shows the results from the MASW survey data collected along SL-4.

Overall, the refraction survey results indicate the depth to bedrock ranges two to four feet below ground surface (bgs), and bedrock exhibits P-wave velocities ranging from 5,800 to 7,000 feet per second (fps). Three velocity layers were detected— Layer V_1 is a thin low-velocity (1,150 to 1,700 fps) layer representing beach sand. Layer V_2 is a medium-velocity (from 5,800 to 6,200 fps) layer that is interpreted to represent bedrock, which occurs at depth ranging from two to four feet below ground surface (bgs). Layer V_3 exhibits a slightly higher P-wave velocity of 6,700 to 7,000 fps and is interpreted to represent less-weathered bedrock, or bedrock with different composition or bedding characteristics than that of layer V_2.

In general, the surface-wave (MASW) survey results do not indicate the presence of any sediment (aside from beach sand) above bedrock. AGS examined and prepared S-wave models for all four seismic lines and found that the much of the data were noisy (possibly due to rain) and that the resulting velocity spectrum images were ambiguous; hence, dispersion curve picks were made with low confidence. As an example, the velocity spectrum image and resulting S-wave model from SL-4, which had the best-quality data, are presented on Figure 4. The SL-4 layer model shows an approximately 4-foot thick surface layer exhibiting an S-wave velocity of about 750 fps that roughly corresponds to the layer of beach sand, although it is worth noting that, with a 10-foot geophone spacing, the MASW survey probably lacked the resolution to delineate thin layers within in the upper 10 feet. The model show that the upper layer is underlain by a 30-foot thick 950 fps layer, the base of which marks a transition to higher-velocity (1,200 to 1,800 fps) material at a depth of about 37 feet bgs. Velocity information from the seismic survey is summarized in Table 1, below.

Table 1 P-wave Velocity Summary (fps) from Refraction Layer Models

Seismic Line	Survey Area	Layer V_1 (beach sand)	Layer V_2 (bedrock-a)	Layer V_3 (bedrock-b)	Approx depth to bedrock (ft)
SL-1+4	Toe of Bluff	1,150	6,200	7,000	2 – 4
SL-2+3	Middle of beach	1,750	5,800	6,700	2 – 4

9.0 CLOSING

All geophysical data and field notes collected as a part of this investigation will be archived at the AGS office. The data collection and interpretation methods used in this investigation are consistent with standard practices applied to similar geophysical investigations. The correlation of geophysical responses with probable subsurface features is based on the past results of similar surveys although it is possible that some variation could exist at this site. Due to the nature of geophysical data, no guarantees can be made or implied regarding the targets identified or the presence or absence of additional objects or targets.

AGS appreciates working for you. We enjoyed this project and we look forward to working with you again.

Sincerely,



Roark W. Smith
Senior Geophysicist
Advanced Geological Services, Inc.

Figures:	Figure 1	Seismic Refraction Survey Area (imbedded in Report text, above)
	Figure 2	Seismic Refraction Line Locations
	Figure 3	P-wave Velocity Layer Models from Seismic Refraction Survey
	Figure 4	S-wave Velocity Layer Model from SL-4 MASW Survey

Attachments: Appendix A: Seismic Velocity and Limitations of the Refraction Method



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1605 School Street
Suite 4
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(925) 808-8965

Seismic Line Locations
Point Molate Beach Park

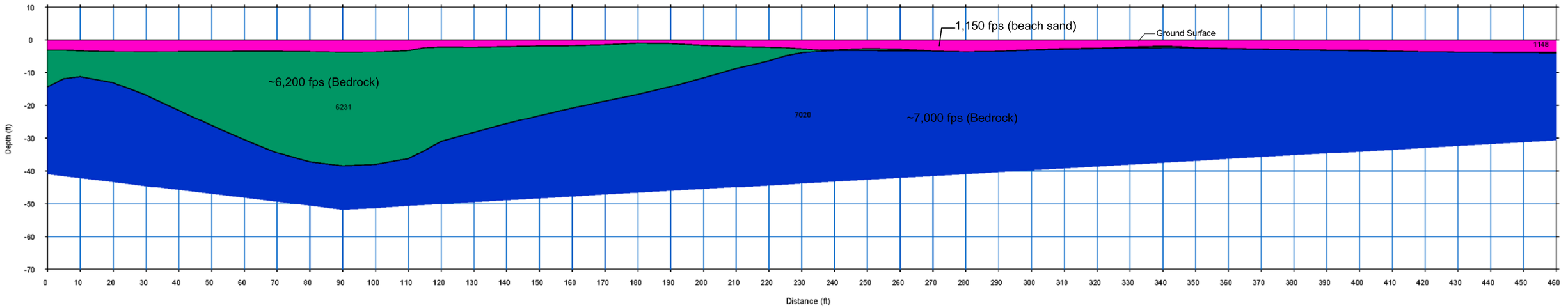
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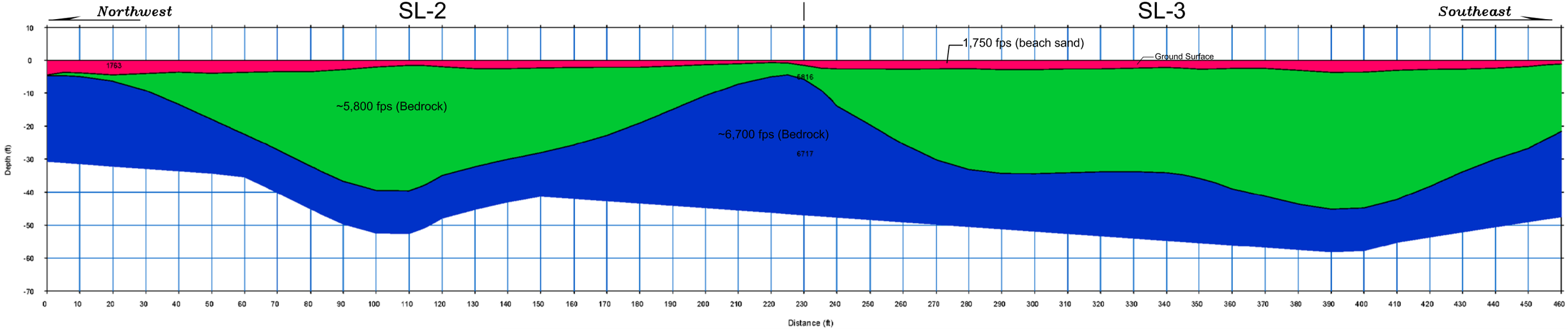
CLIENT: Nichols Consulting Engineers, Chtd.

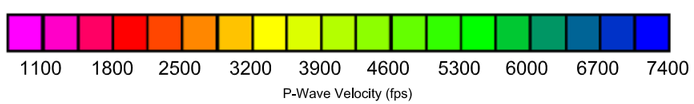
PROJECT #: 17-137-1CA

DATE: Nov 23, 2017 DRAWN BY: R. SMITH

FIGURE 2









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P-wave Velocity Layer Models from Seismic Refraction Data
Point Molate Beach Park

LOCATION: Richmond, California

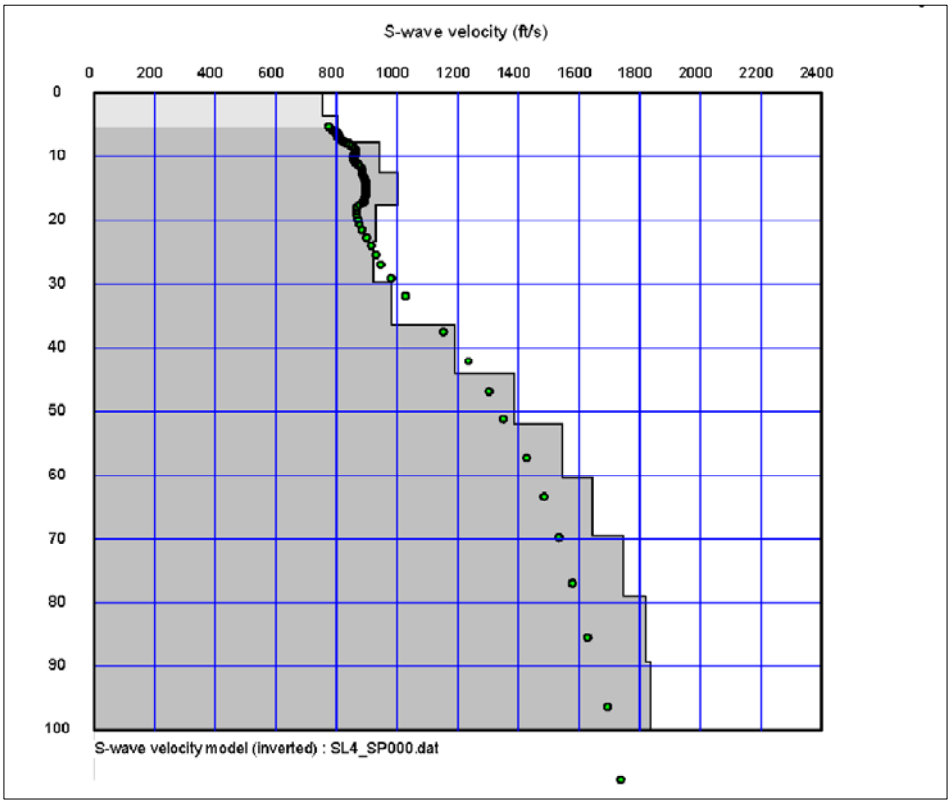
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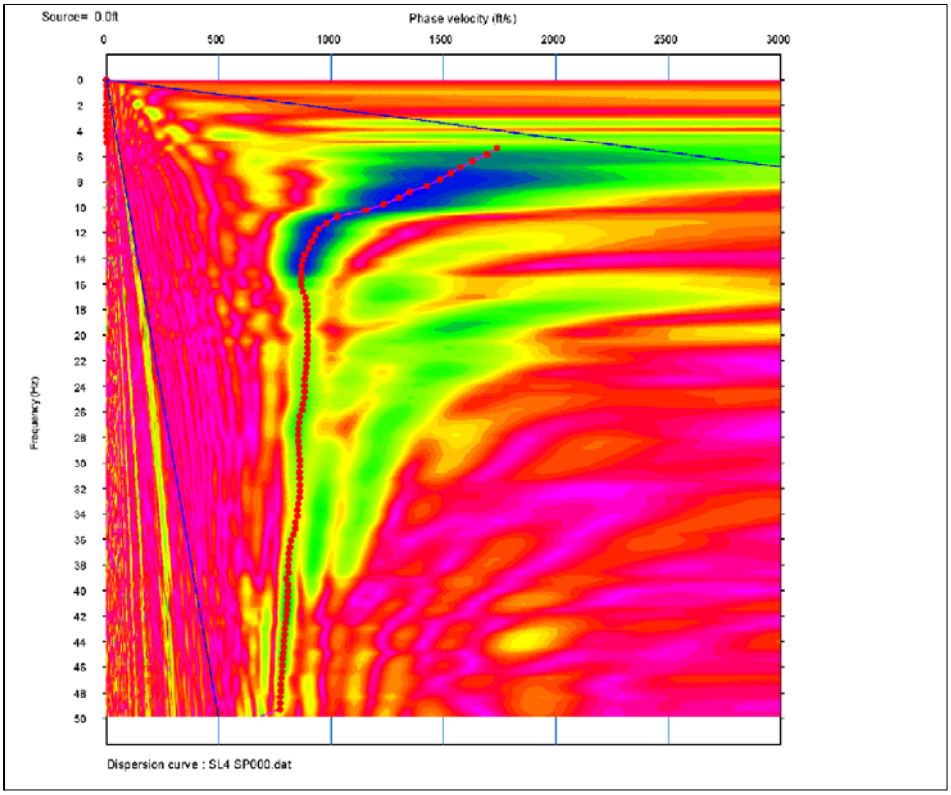
PROJECT #: 17-137-1CA

DATE: Nov 23, 2017

DRAWN BY: R. SMITH

FIGURE 3





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1605 School Street
Suite 4
Moraga, CA 94556
(925) 808-8965

MASW Survey Results, SL-4
Point Molate Beach Park

LOCATION: Richmond, California

CLIENT: Nichols Consulting Engineers, Chtd.

PROJECT #: 17-137-1CA

DATE: Dec 2, 2017

DRAWN BY: R. SMITH

FIGURE
4

APPENDIX A

SEISMIC VELOCITY AND LIMITATIONS OF THE REFRACTION METHOD

The physical properties of earth materials (fill, sediment, rock) such as compaction, density, hardness, and induration dictate the corresponding seismic velocity of the material. Additionally, other factors such as bedding, fracturing, weathering, and saturation can also affect seismic velocity. In general, low velocities indicate loose soil, poorly compacted fill material, poorly to semi-consolidated sediments, deeply weathered, and highly fractured rock. Conversely, high velocities are indicative of competent rock or dense and highly compacted sediments and fill. The highest velocities are measured in unweathered and little fractured rock.

There are certain limitations associated with the seismic refraction method as applied for this investigation. These limitations are primarily based on assumptions that are made by the data analysis routine. The data analysis routine assumes that the velocities along the length of each spread are uniform. If there are localized zones within each layer where the velocities are higher or lower than indicated, the analysis routine will interpret these zones as changes in the surface topography of the underlying layer. A zone of higher velocity material would be interpreted as a low in the surface of the underlying layer. Zones of lower velocity material would be interpreted as a high in the underlying layer. The data analysis routine also assumes that the velocity of subsurface materials increase with depth. Therefore, if a layer exhibits velocities that are slower than those of the material above it, the slower layer will not be resolved. Also, a velocity layer may simply be too thin to be detected.

The quality of the field data is critical to the construction of an accurate depth and velocity profile. Strong, clear “first-break” information from refracted interfaces will make the data processing, analysis, and interpretation much more accurate and meaningful. Vibrational noise or poor subsurface conditions can decrease the ability to accurately locate and pick seismic waves from the interfaces.

Due to these and other limitations inherent to the seismic refraction method, resultant velocity cross-sections should be considered only as approximations of the subsurface conditions. The actual conditions may vary locally.

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Appendix F

Aquatic Resource Delineation Report

Final Aquatic Resources Delineation Report

Point Molate Beach Park Shoreline Restoration Project

June 2020

NCE

Richmond, CA
501 Canal Blvd., Suite I
Richmond, CA 94804



City of Richmond, Engineering and Capital Improvements

Mr. Yader Bermudez
450 Civic Center Plaza
Richmond, CA 94804

Collaboration. Commitment. Confidence.SM

FINAL AQUATIC RESOURCES DELINEATION REPORT

Point Molate Beach Park Shoreline Restoration Project

Prepared for:

City of Richmond, Engineering and Capital Improvements
Mr. Yader Bermudez
450 Civic Center Plaza
Richmond, CA 94804

Prepared by:



Debra Lemke, PWS, CPESC
Senior Scientist

NCE
501 Canal Boulevard, Suite I
Richmond, CA 94804

Executive Summary

NCE performed a field investigation on December 18, 2017, evaluating the potential jurisdictional status of waters of the United States for the Point Molate Beach Shoreline Restoration Project in Contra Costa County, California.

Within the survey area, the National Hydrography Dataset did not recognize any flow-line features. The United States Geological Survey also did not recognize any drainages within the survey area. The United States Fish and Wildlife Service National Wetland Inventory identified an estuarine marine wetland along the coastline of the survey area and one riverine feature within the survey area, both are recognized as waters of the United States.

NCE surveyed a total of 1.07 acres; the High Tide Line and Mean High Water are presented on each of the maps in **Appendices A** and **B**. Within the survey area, NCE delineated two aquatic resources that are potentially jurisdictional waters of the United States due to a connection to the San Francisco Bay, a traditional navigable waterway.

NCE delineated two potentially jurisdictional features within the survey area (**Appendix A, Figure 1**).

- Unnamed Drainage: This unnamed drainage is a relatively non-permanent water, Cowardin classified as Riverine, Ephemeral and is approximately 0.0011 acres in size within the survey area.
- San Pablo Bay: This is a permanent water, Cowardin classified as Sand, Unconsolidated Shore, Intertidal, Estuarine and is approximately 0.017 acres in size within the survey area.

No potentially non-jurisdictional features were identified within the survey area. These findings should be considered preliminary until the United States Army Corps of Engineers makes a final preliminary jurisdictional determination. The delineation was conducted in accordance with the following:

- 1987 Corps of Engineers Wetland Delineation Manual;
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), May 2010; and,
- A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States, August 2008.

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ACRONYMS AND ABBREVIATIONS

CEQA	California Environmental Quality Act
CWHR	California Wildlife Habitat Relationships
MSL	Mean Sea Level
NHD	National Hydrography Dataset
NWI	National Wetlands Inventory
NRCS	Natural Resource Conservation Service
OHWM	Ordinary High-Water Mark
Project	Point Molate Beach Shoreline Restoration Project
RPW	Relatively Permanent Water
TNW	Traditional Navigable Waterway
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WETS Table	Climate Analysis for Wetlands Table
WOUS	Waters of the United States

1.0 INTRODUCTION

1.1 CONTACT AND PROJECT INFORMATION

The City of Richmond contracted NCE to conduct a formal United States Army Corps of Engineers (USACE) aquatic resources delineation within the survey area for the Point Molate Beach Shoreline Restoration Project (project). The City of Richmond contact is Mr. Yader Bermudez:

Mr. Yader Bermudez, Engineering and CIP Director
City of Richmond, Engineering and Capital Improvements
450 Civic Center Plaza
Richmond, CA 94804
(510) 620-5478
Yader_Bermudez@ci.richmond.ca.us

Ms. Debra Lemke and Ms. Marcy Kamerath of NCE conducted the aquatic resources delineation on December 18, 2017. Ms. Debra Lemke will act as the agent for the City of Richmond.

The project is located in Contra Costa County, California within the 11-acre Point Molate Beach Park and stretches along an approximately 330-foot section of the shoreline of the San Pablo Bay. The project is along the west side of Stenmark Drive and within the City of Richmond (**Appendix B, Figure 1**). The purpose of the project is to restore actively eroding portions of the shoreline that have been continually eroded by coastal wave and tidal action. The project proposes to replace a culvert and install revetments to support coastal-dependent uses (public beaches, the bike/pedestrian trail, and parks).

The survey area consists of 1.07 acres and includes a portion of the San Pablo Bay, as well as an unnamed drainage flowing east to west that is carried through a damaged 12-inch culvert (**Appendix B, Figure 2**). Surrounding the survey area is primarily urban land and a City of Richmond owned park.

The survey area may be found on United States Geological Survey (USGS) 7.5-minute series topographic San Quentin quadrangle map (**Appendix B, Figure 3**).

1.2 PURPOSE

The purpose of this report is to identify and describe aquatic resources and to identify possible sensitive plant, fish, wildlife species, and cultural/historic resources in the survey area. This report facilitates efforts to:

- Avoid or minimize impacts to aquatic resources during the project development process
- Document aquatic resource boundary determinations for review by the USACE
- Provide early indications of known sensitive species and historic/cultural properties within the survey area
- Provide background information

2.0 BACKGROUND

2.1 SITE DESCRIPTION

2.1.1 Location

The survey area is located in Contra Costa, California, along Stenmark Drive in Richmond, California (**Appendix B, Figures 1** and **2**). San Pablo Bay is located along the western boundary of the survey area. The survey area is located within Township 1 North, Range 5 East, Section 9 (Mount Diablo Meridian baseline) and is within the USGS San Quentin, California 7.5-minute quadrangle map (**Appendix B, Figure 3**). At the southwestern corner of the survey area, the latitude is 37.9434152 N and the longitude is -122.4116860W. The survey area is located within Assessor's Parcel Number 561-100-008.

2.1.2 Site Access

To access the survey area from Highway 580, head west toward Stenmark Drive, continue straight onto Stenmark Drive, turn left into Point Molate Beach Park and the destination is on the left, approximately 1-mile down Stenmark Drive.

2.1.3 Land Use

The City of Richmond designated land use as Open Space, Parks and Recreation, and Low Density Residential (City of Richmond General Plan 2030). Current and surrounding land uses include Parks and Recreation, Open Space, and Industrial. The project will occur within a portion of Point Molate Beach Park, a city-owned park in Richmond, California (**Appendix B, Figure 2**). The project location has been identified in numerous stakeholder master plan documents, policies, and goals as a beneficial location for a portion of the San Francisco Bay Trail. The San Francisco Bay Trail is a planned 500-mile walking and cycling path around the entire San Francisco Bay running through all nine Bay Area counties, 47 cities, and across seven toll bridges.

2.1.4 Vegetation

Based on the California Wildlife Habitat Relationships dataset that presents broad scale vegetation communities within the State of California (CDFW 2014), the survey area habitat includes predominantly urban with a small portion of saline emergent wetland (**Appendix B, Figure 4)**.

2.1.5 Soils

The soil at the survey area has been mapped by the Department of Agriculture, Natural Resource Conservation Service (NRCS), and was downloaded from the Web Soil Survey (NRCS 2020b). NRCS identified one soil type within the survey area (**Appendix B, Figure 5**). The soil type and its hydric status is presented below and in **Table 1**.

<u>Urban Land</u>

Most of the survey area contains "urban land" soil and this soil type represents areas of non-native fill and development within Point Molate Beach Park. The components of this soil type are 100% Urban Land. Urban Land is not classified as hydric (NRCS, 2020b).

Table 1. Soils within the Survey Area

Map Unit Symbol	Name	Acres in Survey	Percent of Survey Area	National Hydric
UB	Urban Land	1.04	97.4%	No
W	Water	0.03	2.6%	No

The custom NRCS soil report and NRCS Climate Analysis for Wetlands Tables (WETS Table) (NRCS, 2018a) is in **Appendix C**. The WETS Table reflects data from the period of record of 1995-2017 from the station that is the closest to the survey area (Richmond).

2.1.6 Hydrology

Direct precipitation and storm events are the primary surface water sources for the unnamed drainage. It is assumed that during storm events, stormwater is discharged from the culvert outfall. This stormwater is then conveyed through the damaged 12-inch culvert via the unnamed drainage to San Pablo Bay.

2.1.7 National Hydrography Dataset (NHD) and National Wetland Inventory (NWI)

Within the survey area, the unnamed drainage is not recognized by the USGS National Hydrography Dataset (NHD). The unnamed drainage is identified by the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) as riverine (**Appendix B, Figure 6**). The riverine segment appears to be culverted underneath the project area. The culvert outfall is located at the approximate location of the NWI riverine segment western endpoint. The outfall of the culvert is adjacent to the San Pablo Bay. The USFWS NWI also recognized the shoreline of San Pablo Bay as saline emergent wetland (**Appendix B, Figure 6**).

3.0 METHODS

3.1 LITERATURE REVIEW

NCE reviewed available natural resource information for the region. References reviewed for this delineation are listed in **Section 6.0**. Pertinent site-specific reports and general references utilized for the delineation include the following:

- California Department of Fish and Wildlife (CDFW). 2014. *California Wildlife Habitat Relationships* (CWHR) GIS Data – Species Ranges and Habitat Data. https://wildlife.ca.gov/Data/CWHR
- Cowardin, *et al*. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, Washington D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.
- Google Earth
- Gretag, Macbeth. 2000. *Munsell Soil Color Charts*. New Windsor, NY
- USACE. 2008. *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States*
- USACE. 2016. *National Wetland Plant List, version 3.3.* Accessed online at: http://wetland_plants.usace.army.mil/
- USACE. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West* Region (Version 2.0)
- USACE U.S. Environmental Protection Agency. 2007. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States*
- United States Department of Agriculture (USDA), NRCS. 2010. *Field Indicators of Hydric Soils in the United States*, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds). USDA, NRCS in cooperation with the National Committee for Hydric Soils
- USDA, NRCS. 2020a. National hydric soils for the project study area accessed online at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/
- USDA, NRCS. 2020b. Soils survey data for the survey area accessed online at: http://websoilsurvey.nrcs.usda.gov/app/
- United States Department of the Interior, USGS. San Quentin, California 7.5-minute series topographic quadrangle
- USFWS NWI mapping. https://www.fws.gov/wetlands/data/mapper.html
- USGS National Hydrography Data. *https://nhd.usgs.gov/tools.html#MDTool*

RESEARCH AND FIELD METHODOLOGY

Prior to conducting the field investigation, USGS topographic maps and NHD mapping, aerial photographs, USFWS NWI mapping, and a NRCS custom soil report of the survey area were reviewed for indications of ephemeral, intermittent, and perennial drainages as well as mapped wetlands and spring locations.

Wetlands

The survey area was investigated for the presence of wetlands utilizing the USACE 1987 three-parameter (vegetation, hydrology, and soils) methodology. This methodology was refined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), May 2010 and requires the collection of data on soils, vegetation, and hydrology at several locations to establish the potential jurisdictional boundary of wetlands.

Unnamed Drainage

The survey area was delineated for drainages utilizing the presence of Ordinary High-Water Mark (OHWM) indicators, evidence of frequent surface water flows, and a connection to a

traditional navigable waterway (TNW). These characteristics are indicative of a jurisdictional waters of the United States (WOUS). Arid West Ephemeral and Intermittent Stream OHWM Data Sheets were completed for each drainage with the presence of OHWM indicators. If the drainage had OHWM indicators present, the drainage was followed to determine if the drainage flowed into another drainage with OHWM indicators or if these indicators terminated. Where the drainage exhibited OHWM indicators, width measurements were taken to be used in determining an average width of the drainage and height measurements from the OHWM to the drainage bottom were taken. When drainages with OHWM indicators left the survey area, an attempt was made to follow the drainage to determine if OHWM indicators terminated or a connection to a TNW.

Tidal Datum

Tidal datums that delineate USACE jurisdiction were gathered from Richmond tidal gauge Station ID 9414863, which is nearest to the project study area. The Richmond station datum is related to North American Vertical Datum (NAVD) 88 using National Geodetic Survey data. The Mean High Water in the project area is 5.45 feet above sea level based on NAVD 88. The High Tide Line is 7.59 feet based on the highest astronomical tide recorded at the Richmond tidal gauge.

3.2 SURVEY DATA INTEGRATION

Boundaries of the potential aquatic resources and OHWM indicator locations as well as representative photographs were captured within the survey area and mapped using a Trimble Geo7x GPS unit and digitized in ESRI ArcGIS Pro 2.4.0 software. The horizontal datum is NAD 1983 and no vertical data was collected.

3.3 PROPERTY OWNER ACCESS

A signed letter from the property owner allowing the USACE to access the property is not needed as the survey area is located within a City owned park.

4.0 RESULTS

4.1 LANDSCAPE SETTING

The survey area is approximately 1.07 acres. The entire survey area was delineated by NCE on December 18, 2017. The survey area encompasses a portion of Point Molate Beach Park and the survey area generally slopes from 22 feet to 1 foot above mean sea level (MSL), with the eastern portion of the survey area higher than the west side.

4.2 AQUATIC RESOURCES

Two aquatic resources were delineated and are presented below. A representative photograph is presented in **Appendix D** and the Photograph Point (PP) and photo direction are indicated on **Appendix B, Figure 7.** A plant list of the entire survey area is in **Appendix E**.

4.2.1 Unnamed Drainage with Culvert

A culverted unnamed drainage runs through the survey area and one culvert outfall was identified. Culvert outfall 1 (CUL01) is near the northern boundary. The culvert outfall did not present OHWM indicators, wetland hydrology, hydric soils, or hydrophytic vegetation, so USACE datasheet's were not completed. The observed culvert outfall was dry and did not show evidence of frequent and regular surface water flows.

CUL01 appears to be a cast iron pipe with a diameter of 12-inches; CUL01 was crushed and was suspended about five feet above the ground surface. NCE understands that CUL01 may be hydrologically connected to a mitigation wetland north of the project survey area.

A total of 0.0011 acres of buried underground potential aquatic resources (Culvert 1) were delineated at the survey area. CUL01 is adjacent to the San Pablo Bay. No OHWM or wetland features were present at the outfall.

This unnamed drainage is identified on NWI (**Appendix B, Figure 6**), and USGS (**Appendix B, Figure 3**). It is assumed that during storm events, stormwater is discharged from the culvert outfall. Stormwater has the potential to affect the integrity of the water quality of San Francisco Bay, a TNW. Therefore, the buried underground culvert is proposed as jurisdictional and subject to regulation under the Clean Water Act. Due to the connectivity to San Francisco Bay, a TNW, NCE believes that the unnamed drainage is a potentially jurisdictional waterway. This drainage is Cowardin classified as Ephemeral, Riverine, and is approximately 0.0011 acres in size (**Appendix A, Figure 1**).

4.2.2 San Pablo Bay

The survey area includes a portion of the coastline of the San Pablo Bay. No USACE datasheets were completed for this portion of the survey area.

The USFWS NWI recognized the shoreline of San Pablo Bay as saline emergent wetland (**Appendix B, Figure 6**). As the San Pablo Bay is hydrologically connected to the San Francisco Bay, a TNW, NCE believes that this portion of the San Pablo Bay is a potentially jurisdictional waterway. This is Cowardin classified as Sand, Unconsolidated Shore, Intertidal, Estuarine and is approximately 0.017 acres in size (**Appendix A, Figure 1**).

4.3 AQUATIC RESOURCES TYPES AND AMOUNTS

Below is **Table 2** of the aquatic resources identified within the survey area.

Table 2. Aquatic Resources within the Survey Area

Aquatic Resource Name	Aquatic Resources Classification		Aquatic Resource Size (acre) Required for all resources	Aquatic Resource Size (linear feet) Required only for stream channels
	Cowardin	Location (lat/long)		
Unnamed Drainage	R6, Riverine, Ephemeral	37.9440889 N -122.4123004 W	0.0011	46.5
San Pablo Bay	E2US2, Sand, Unconsolidated Shore, Intertidal, Estuarine	37.9440199 N -122.4122978 W	0.017	
Total			0.0181	46.5

Table 3 presents the proposed jurisdictional status of the aquatic resources within the survey area.

Table 3. Waters of the U.S. Proposed Jurisdictional Status

Class	Total Acres	Jurisdictional	Non-Jurisdictional
Unnamed Drainage – Relatively Non-Permanent Water	0.0011	0.0011	0.0
San Pablo Bay–Relatively Permanent Water	0.017	0.017	0.0
TOTAL	0.0181	0.0181	0.0

Appendix A, Figure 1 depicts the proposed delineation map; **Appendix B, Figure 8** depicts the proposed jurisdictional determination analysis map.

4.4 SIGNIFICANT NEXUS

The U.S Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (USACE 2007) was consulted to aid the preliminary determination whether an area would be subject to USACE jurisdiction under Section 404 of the Clean Water Act. The significant nexus test, outlined in a memorandum jointly authored by the U.S. Environmental Protection Agency and USACE, was applied to each potentially jurisdictional habitat type (Grumbles and Woodley 2008). To facilitate potentially jurisdictional determination consistent with the guidance, each water body delineated was evaluated as a TNW, Relatively Permanent Water (RPW), or non-RPW, based on the following definitions:

- TNWs include all waters subject to the ebb and flow the tide, or waters that are presently used, have been used in the past, or may be used in the future to transport interstate or foreign commerce, and all waters that are navigable in fact under federal law for any purpose.
- RPWs are waters that flow continuously at least seasonally (typically at least 3 months of the year) and are not TNWs.
- Non-RPWs are waters that do not have continuous flow at least seasonally.

The following types of water bodies are subject to Clean Water Act jurisdiction:

- All TNWs and adjacent wetlands;
- Relatively permanent tributaries of TNWs and wetlands with a continuous surface connection to such tributaries; and
- Non-relatively permanent tributaries of TNWs and adjacent wetlands if they have a significant nexus to a TNW. Non-RPWs and adjacent wetlands are determined to have a significant nexus to a TNW if they significantly affect the chemical, physical, or biological integrity of a downstream TNW.

NCE's professional opinion is that during storm events the culverted Unnamed Drainage will discharge stormwater that has the potential to affect the integrity of the water quality of San Francisco Bay, a TNW. Therefore, the culverted Unnamed Drainage can affect the chemical, physical, and/or biological integrity of San Francisco Bay, resulting in a significant nexus to the San Francisco Bay.

NCE's professional opinion is that San Pablo Bay is hydrologically connected to the San Francisco Bay is a traditional navigable waterway and any portion of the San Pablo Bay has the ability to affect the chemical, physical, and/or biological integrity of the greater San Francisco Bay, resulting in a significant nexus to the San Francisco Bay.

Appendix F contains the Aquatic Resource Excel Sheet and the GIS metadata.

The above findings should be considered preliminary until the USACE makes a preliminary approved jurisdictional determination. Areas deemed jurisdictional will then be subject to the regulatory requirements of the federal Clean Water Act.

5.0 OTHER STUDIES

In the spring of 2020, NCE prepared a Biological Resources Assessment (NCE 2020a). The Biological Resources Assessment describes the biological resources found in the area and the potential for impacts to those biological resources that must be considered under the California Environmental Quality Act (CEQA). The report concludes with an analysis of those potential impacts and how they may be reduced to less than significant with appropriate mitigation measures. Several special status species have the potential to use these habitats, and the potential exists to adversely affect these species and their habitats. However, the project has been designed to avoid sensitive species with timing and pre-construction surveys, implementation of BMPs for avoiding impacts to water quality, and restoration of areas where vegetation is unavoidably impacted. These mitigation measures supplemented by permit conditions will allow this public infrastructure to be constructed and utilized, while avoiding significant impacts to the natural resources of the site.

In the spring of 2020, NCE prepared a Section 7 No Effect Memo (NCE 2020b). The U.S. Fish and Wildlife Service Information for Planning and Conservation website was queried to identify threatened and endangered species managed by the Service and documented to occur in the County. The California Natural Diversity Database and California Native Plant Society Inventory of Rare and Endangered Plants database were also queried to identify listed species and habitats recorded within 5 miles of the Action Area and/or within the USGS topographic quadrangle. The Action Area was examined to determine the potential for indirect impacts to protected habitats, flora, and fauna. Swaim Biological Inc. biologists conducted a site assessment for a separate project, the Point Molate Trail Project Biological Assessment on March 3, 2017. The survey assessed all areas within the proposed trail footprint, which includes a majority of the Action Area for this project. NCE built from this previous analysis by conducting two additional site assessments to make an effect determination specifically for this project. On April 20, 2018 NCE biologist Mack Casterman conducted a reconnaissance-level plant community and habitat survey throughout the Action Area. Transects were traversed on foot. On June 14, 2018 NCE staff Marcy Kamerath and John Hardy conducted a site assessment. Shoreline habitat was assessed for the potential to support special status species. In all cases, NCE concluded that the proposed action will have No Effect on listed species.

The City of Richmond prepared a Draft Initial Study and Mitigated Negative Declaration pursuant to CEQA.

6.0 REFERENCES

City of Richmond General Plan 2030. Adopted April 25, 2012. Circulation Element. http://www.ci.richmond.ca.us/2608/General-Plan-2030.

Cowardin, et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Washington D.C.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.

Gretag, Macbeth. 2000. *Munsell Soil Color Charts.* New Windsor, NY.

Grumbles, B. H., and J. P. Woodley, Jr. 2008 (December 2). *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in* Rapanos v. United States *and* Carabell v. United States. Memorandum to U.S. Environmental Protection Agency regions and U.S. Army Corps of Engineers districts. Washington, DC.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List*: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X. http://www.phytoneuron.net/

NCE. 2020a. Point Molate Beach Park Shoreline Restoration Project Biological Resources Assessment.

NCE. 2020b. Point Molate Beach Park Shoreline Restoration Project No Effect Memo.

United States Army Corps of Engineers. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.*

United States Army Corps of Engineers. 2007. *Jurisdictional Determination Form Instructional Guidebook*, Washington, DC.

United States Army Corps of Engineers. 2016. *National Wetland Plant List, version 3.3*. http://wetland_plants.usace.army.mil/

United States Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).*

United States Army Corps of Engineers and U.S. Environmental Protection Agency. 2007. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States.*

United States Department of Agriculture. NRCS. 2010. *Field Indicators of Hydric Soils in the United States*, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds). USDA, NRCS in cooperation with the National Committee for Hydric Soils.

United States Department of Agriculture. NRCS. 2020a. National hydric soils for the survey area. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/

United States Department of Agriculture, NRCS. 2020b. Soils survey data for the survey area. http://websoilsurvey.nrcs.usda.gov/app/

U.S. Department of Agriculture. NRCS. 2018a. Wetlands Climate Table for the survey area accessed online at: http:// https://efotg.sc.egov.usda.gov/efotg_locator.aspx/

United States Fish and Wildlife Service. National Wetlands Inventory (NWI) mapping. https://www.fws.gov/wetlands/data/mapper.html

United States Geological Survey. San Quentin, California 7.5-minute series topographic quadrangle. U.S. Department of the Interior.

United States Geological Survey. National Hydrography Dataset. https://nhd.usgs.gov/tools.html#MDTool

Appendix A

AQUATIC RESOURCES DELINEATION MAP

Table 3. Waters of the U.S. Proposed Jurisdictional Status

Class	Total Acres	Jurisdictional	Non-Jurisdictional
Unnamed Drainage–Relatively Non-Permanent Water	0.0011	0.0011	0.0
San Pablo Bay–Relatively Permanent Water	0.017	0.017	0.0
TOTAL	0.0181	0.0181	0.0



Legend

- Survey Area
- Data Point
- Mean High Water 5.45 ft
- High Tide Line 7.59 ft

Proposed Jurisdictional Features

- Culvert 1 (CUL01)
- Unnamed Drainage
- San Pablo Bay

Point Molate Shoreline Restoration

Proposed Delineation Map

N

1 in. = 100 ft.

0 50 100 ft.

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Contra Costa County Orthoimagery (Oct 2014), NCE 2020	568.40.55	danderson/sbryan	1/3/2018	6/19/2020	drios

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Appendix B

SUPPORTING MAPS



Legend

- Survey Area
- Mean High Water 5.45 ft
- High Tide Line 7.59 ft

NCE

Richmond

Point Molate Shoreline Restoration

Project Vicinity Map

N

1 in. =1,000 ft.

0 500 1,000 Feet

FIGURE 1

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap; NCE 2020	568.40.55	sbrown/sbryan	10/10/18	6/19/2020	drios

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Legend

- Survey Area
- Mean High Water 5.45 ft
- High Tide Line 7.59 ft

NCE

Richmond

Point Molate Shoreline Restoration

Project Survey Area

N

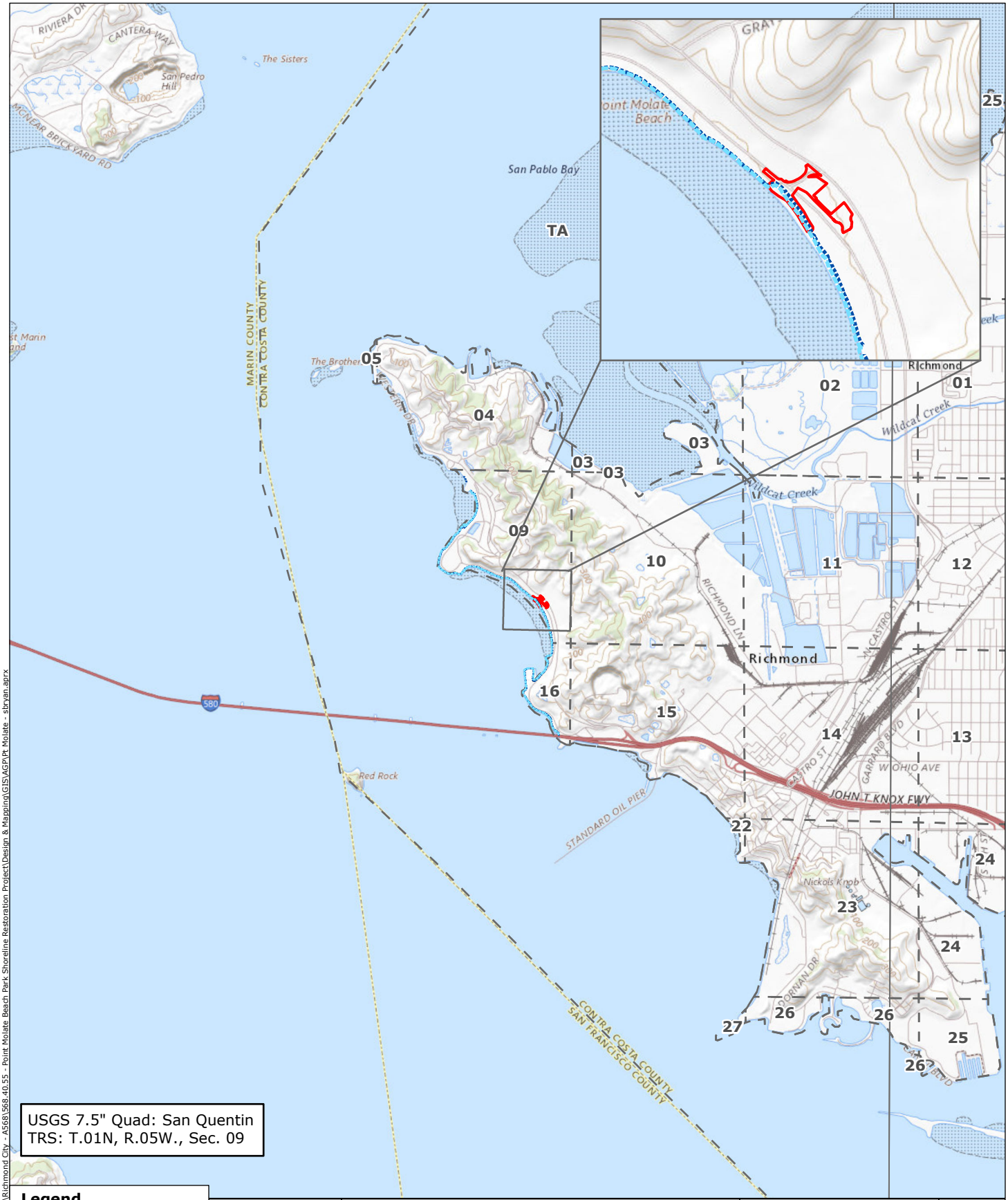
1 in. =100 ft.

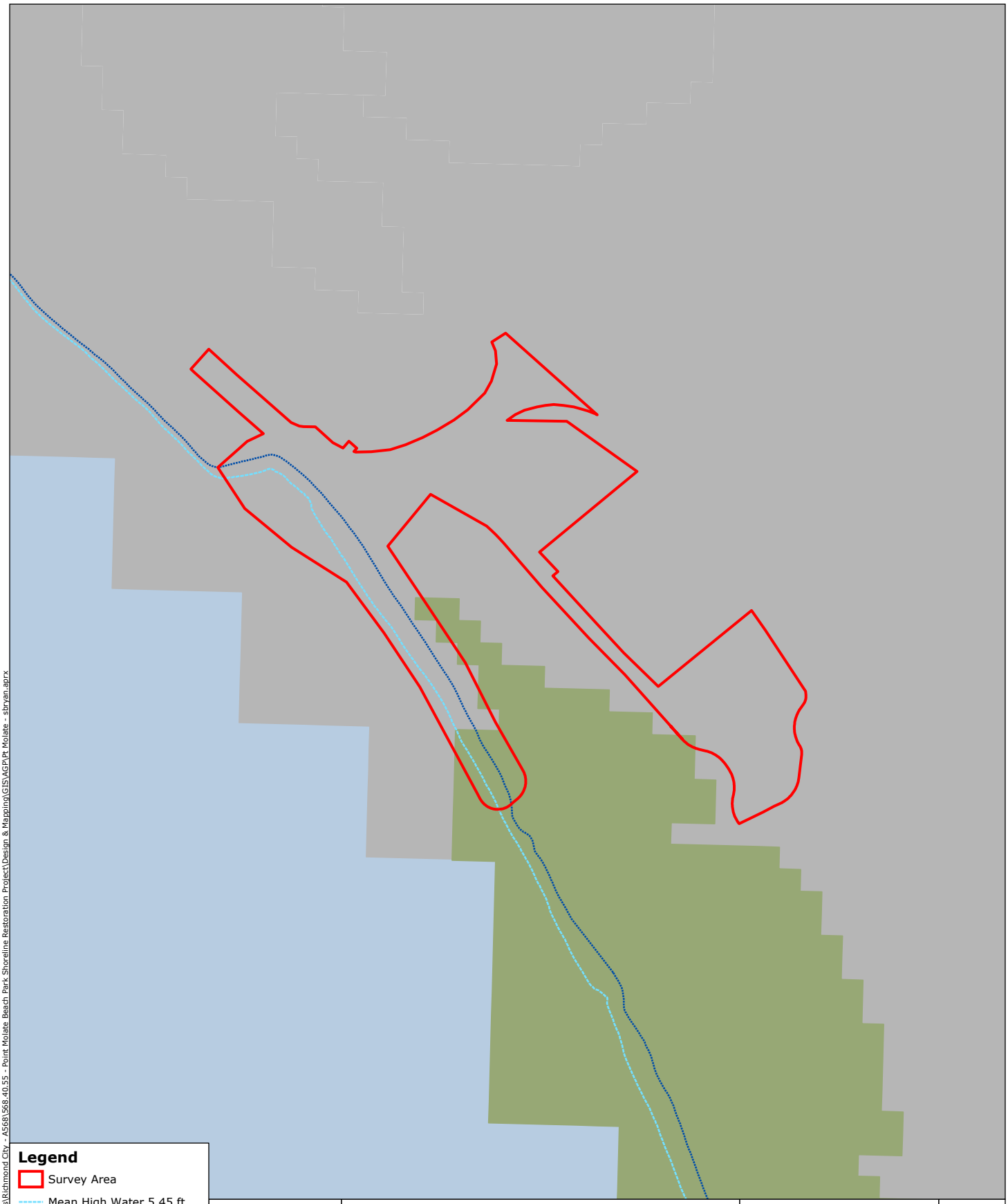
0 50 100 ft.

FIGURE 2

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap; NCE 2020	568.40.55	sbrown/sbryan	10/10/18	6/19/2020	dlemke

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RIVIERA DR
CANTERA WAY
San Pedro Hill
MCNEAR BRICKYARD RD
The Sisters
San Pablo Bay
TA
Point Molate Beach
25
MARIN COUNTY
CONTRA COSTA COUNTY
The Brothers
05
04
03
03
03
09
10
11
12
02
01
Richmond
Wildcat Creek
Wildcat Creek
RICHMOND LN
Richmond
16
15
14
13
CASTRO ST
GARRARD BLVD
W OHIO AVE
JOHN T KNOX FWY
580
Red Rock
STANDARD OIL PIER
22
24
Nickols Knob
23
24
GOODRICK AVE
GOMAN DR
26
27
26
26
25
CONTRA COSTA COUNTY
SAN FRANCISCO COUNTY
USGS 7.5" Quad: San Quentin
TRS: T.01N, R.05W., Sec. 09
Legend
Survey Area
Quadrangle
Section
Mean High Water 5.45 ft
High Tide Line 7.59 ft
NCE
Point Molate Shoreline Restoration
Topographic Quadrangle Map
N
1 in. = 4,000 ft.
0 2,000 4,000 ft.
FIGURE
3
SOURCE
USGS Topographic Map; NCE 2020
JOB NUMBER
833.04.25
DRAWN
cvaz/sbryan
DATE
5/26/2020
REVISED
6/19/2020
APPROVED
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Point Molate Shoreline Restoration

CWHR Type (Vegetation Communities)

N

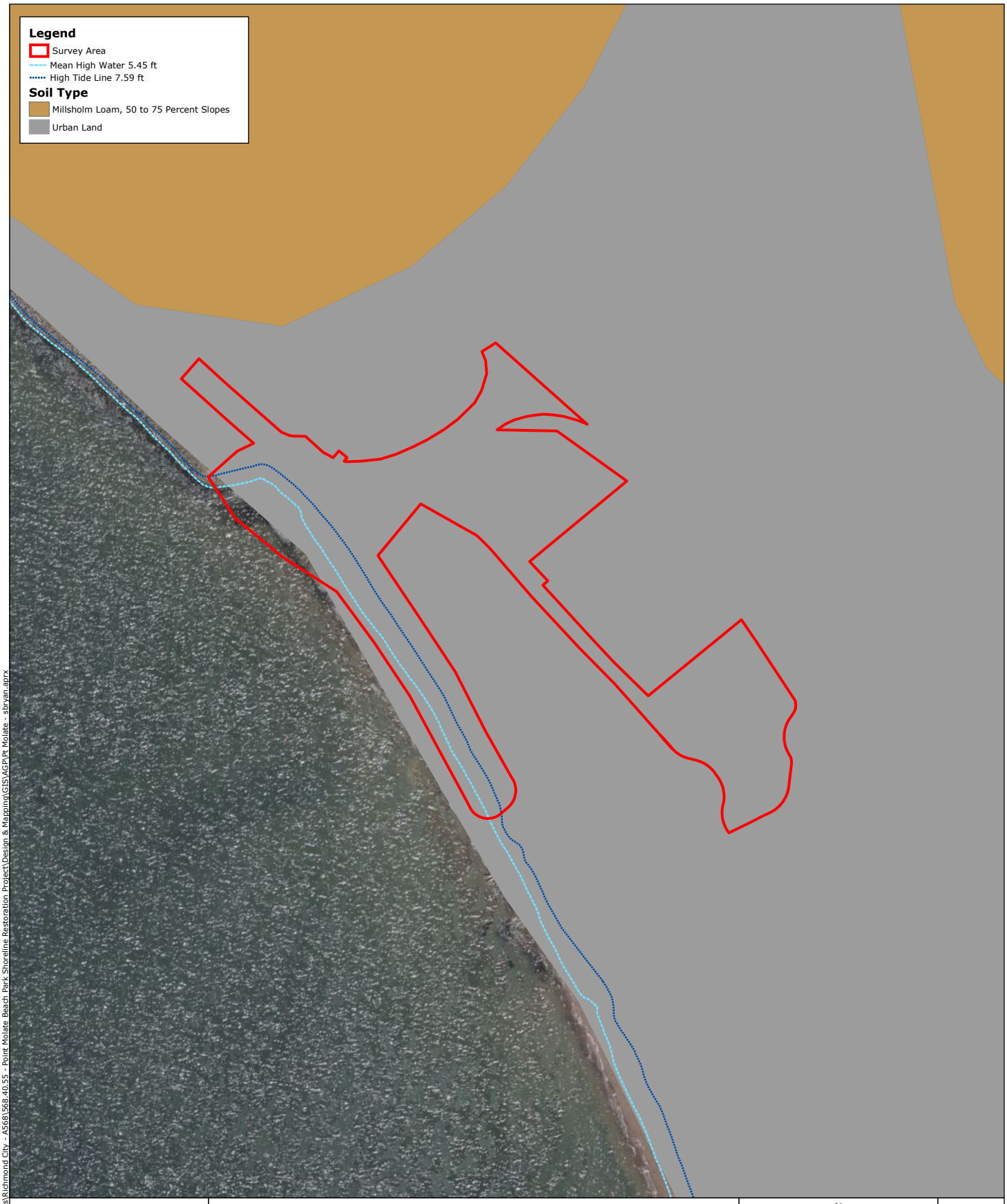
1 in. = 100 ft.

0 50 100 ft.

FIGURE 4

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
CWHR; NCE 2020	568.40.55	cvaz/sbryan	5/26/2020	6/19/2020	drios

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Point Molate Shoreline Restoration

NRCS Soils Map

N

1 in. =100 ft.

0 50 100 ft.

FIGURE 5

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap; NRCS Soils; NCE 2020	568.40.55	cvaz/sbryan	1/3/2018	6/19/2020	drios

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Legend

- Survey Area
- Mean High Water 5.45 ft
- High Tide Line 7.59 ft

Wetland Type

- Estuarine and Marine Wetland
- Riverine

Point Molate Shoreline Restoration

National Wetlands Inventory (NWI) Map

N

1 in. = 100 ft.

0 50 100 ft.

FIGURE 6

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Basemap; NWI; NCE 2020	568.40.55	sbrown/sbryan	10/10/18	6/19/2020	drios

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Location	Data Sheet Point	Photo-graph Point (PP)	Coordinates (Latitude and Longitude)	Photo Direction/Description
Culvert 1	CUL01	PP 1	37.9441106, -122.4122720	Looking east toward Culvert 1; see Appendix D



Legend

- Survey Area
- Photograph Point
- Photo Direction
- Mean High Water 5.45 ft
- High Tide Line 7.59 ft

Proposed Jurisdictional Features

- CUL01 - 0.0011 ac

Point Molate Shoreline Restoration

Ground Level Photograph Locations and Directions

N

1 in. = 100 ft.

0 50 100 ft.

FIGURE 7

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Contra Costa County Orthoimagery (Oct 2014); NCE 2020	568.40.55	sbrown/sbryan	10/10/18	6/19/2020	drios

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These findings should be considered preliminary until the United States Army Corps of Engineers issues a preliminary jurisdictional determination.

Legend

- Survey Area
- Mean High Water 5.45 ft
- High Tide Line 7.59 ft

Proposed Jurisdictional Features

- Culvert 1 (0.0011 acres)
- Unnamed Drainage (Trib1 W1, NRPW)
- San Pablo Bay (TNW)

NCE

City of Richmond

Point Molate Shoreline Restoration

Proposed Jurisdictional Determination Analysis

N

1 in. =100 ft.

0 50 100 ft.

FIGURE 8

SOURCE	JOB NUMBER	DRAWN	DATE	REVISED	APPROVED
Bing Aerial Map, NCE 2020, USGS WBD, LSA 2009	568.40.55	sbrown\sbryan	10/10/18	6/19/2020	drios

Document Path: P:\Active Projects\Richmond City - A568\568.40.55 - Point Molate Beach Park Shoreline Restoration Project\Design & Mapping\GIS\AGP\Pt Molate - sbryan.aprx

Appendix C

NRCS SOILS REPORT AND WETLANDS CLIMATE TABLE

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Contra Costa County, California



June 10, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

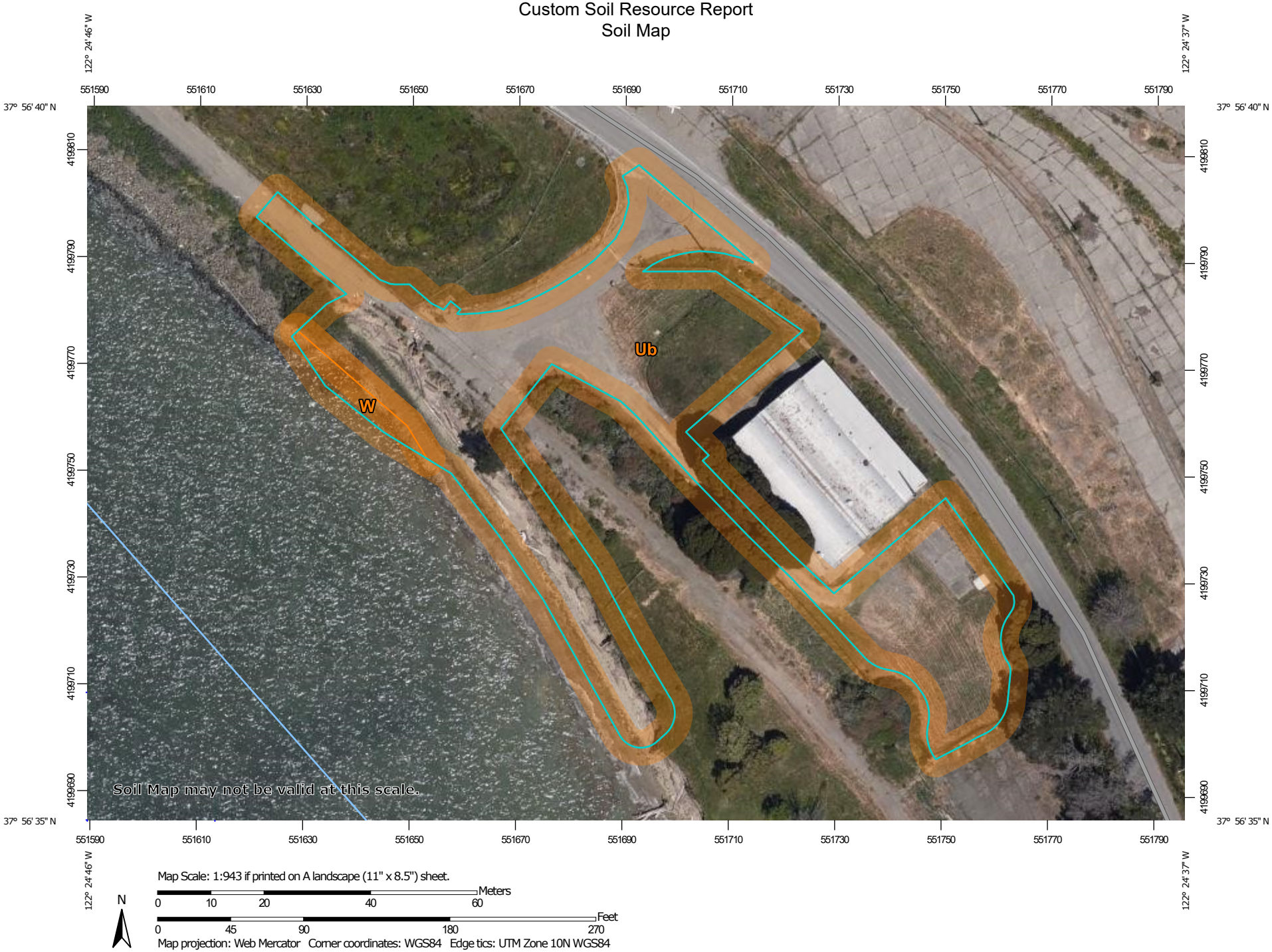
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


122° 24' 46" W
122° 24' 37" W
37° 56' 40" N
37° 56' 35" N
551590
551610
551630
551650
551670
551690
551710
551730
551750
551770
551790
4199810
4199790
4199770
4199750
4199730
4199710
4199690
Ub
W
Soil Map may not be valid at this scale.
Map Scale: 1:943 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 10 20 40 60
Feet
0 45 90 180 270
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Contra Costa County, California
Survey Area Data: Version 16, Sep 17, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 1, 2019—May 31, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ub	Urban land	1.0	97.4%
W	Water	0.0	2.6%
Totals for Area of Interest		**1.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Contra Costa County, California

Ub—Urban land

Map Unit Composition

Urban land: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): 8

Land capability classification (nonirrigated): 8

Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

WETS Table

WETS Station: RICHMOND, CA								
Requested years: 1995 - 2017								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	58.1	44.4	51.3	5.37	2.58	6.40	8	-
Feb	61.3	46.7	54.0	-	-	-	-	-
Mar	64.4	47.7	56.0	3.27	1.37	3.86	6	-
Apr	67.0	49.5	58.2	1.86	0.89	2.27	4	-
May	69.1	52.2	60.6	0.81	0.25	0.79	2	-
Jun	71.8	54.2	63.0	0.24	0.00	0.14	1	-
Jul	-	-	-	0.00	0.00	0.00	0	-
Aug	71.8	56.3	64.1	0.05	0.00	0.00	0	-
Sep	-	-	-	0.02	0.00	0.00	0	-
Oct	72.3	54.0	63.2	1.33	0.54	1.45	2	-
Nov	-	-	-	2.48	1.12	3.02	4	-
Dec	-	-	-	-	-	-	-	-
Annual:					-	-		
Average	-	-	-	-	-	-	-	-
Total	-	-	-	-			-	-

GROWING SEASON DATES			
Years with missing data:	24 deg = 12	28 deg = 12	32 deg = 12
Years with no occurrence:	24 deg = 11	28 deg = 11	32 deg = 11
Data years used:	24 deg = 11	28 deg = 11	32 deg = 11
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	Insufficient data	Insufficient data	Insufficient data
70 percent *	Insufficient data	Insufficient data	Insufficient data
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1950												M7.53	7.53
1951	M4.56	2.53	1.08	0.86	0.90	0.00	0.00	0.10	T	0.95	M3.34	8.80	23.12
1952	9.79	2.22	3.77	0.96	0.18	0.63	0.00	0.00	T	0.06	2.68	10.35	30.64
1953	4.60	T	2.32	3.62	0.30	0.00	0.00	0.12	0.00	0.45	M2.08	0.39	13.88
1954	4.57	2.60	4.58	1.46	0.07	0.16	T	0.15	0.00	0.07	2.81	5.86	22.33
1955	4.19	1.29	0.42	1.96	0.07	0.00	0.00	0.00	T	0.02	2.18	14.25	24.38
1956	M7.45	2.77	M0.04	1.42	0.69	0.02	0.00	0.00	0.54	M1.88	0.09	0.18	15.08
1957	2.87	4.73	M2.02	1.87	3.16	0.02	M0.00	M0.00	M1.71	3.32	0.33	3.72	23.75
1958	6.19	10.39	6.89	5.54	0.81	0.40	0.03	0.00	0.04	0.16	0.03	1.74	32.22
1959	4.15	5.39	0.77	M0.51	MT	0.00	0.00	T	2.74	0.00	0.00	1.93	15.49

1960	4.32	4.14	2.55	1.29	0.37	0.00	T	0.00	0.00	0.26	3.43	2.61	18.97
1961	1.91	1.51	2.79	1.14	0.35	T	0.00	0.05	0.29	0.05	4.20	2.32	14.61
1962	1.39	7.18	3.76	0.24	T	0.00	0.00	0.10	0.08	7.38	0.99	3.48	24.60
1963	4.20	3.47	4.20	5.14	0.50	0.00	0.00	0.03	0.13	1.82	3.81	0.49	23.79
1964	3.90	0.23	1.40	0.37	0.22	0.79	T	0.01	0.00	1.60	4.10	6.93	19.55
1965	4.53	1.24	1.61	3.47	0.00	0.00	0.00	0.36	0.00	0.10	4.99	3.70	20.00
1966	4.76	3.01	0.51	0.37	0.17	0.06	0.05	0.08	0.14	0.00	5.93	4.64	19.72
1967	8.21	0.38	5.32	5.14	0.07	1.15	0.00	0.00	0.02	0.38	1.02	2.40	24.09
1968	5.20	3.21	3.60	0.46	0.18	0.00	T	0.13	0.00	1.07	3.05	5.69	22.59
1969	8.19	6.53	1.50	2.05	T	T	0.00	0.00	0.00	2.44	0.67	7.63	29.01
1970	10.72	1.75	1.89	0.29	0.01	0.44	0.00	0.00	0.00	1.00	7.01	6.29	29.40
1971	2.19	0.23	2.26	0.88	0.08	0.00	0.00	0.00	0.15	0.03	1.83	4.41	12.06
1972	1.18	1.79	0.26	1.38	0.00	0.18	0.00	0.00	0.66	4.57	6.48	3.37	19.87
1973	11.68	6.58	2.53	0.14	0.02	T	0.00	0.00	0.30	1.79	10.55	3.92	37.51
1974	3.75	2.01	4.67	2.62	0.00	0.04	1.41	0.00	0.00	1.11	0.67	2.06	18.34
1975	1.71	5.27	6.49	2.00	0.01	0.01	0.18	0.04	T	3.09	0.56	0.71	20.07
1976	0.31	2.04	1.07	1.05	0.00	0.00	0.00	0.94	0.57	0.55	0.92	2.43	9.88
1977	1.50	0.94	2.03	0.35	0.59	0.00	0.00	0.00	1.27	0.30	3.66	5.26	15.90
1978	8.23	4.42	6.01	3.39	0.01	0.00	0.00	0.00	0.50	0.00	1.82	0.74	25.12
1979	7.00	5.49	2.30	0.87	0.30	0.00	0.20	0.00	0.01	2.07	4.53	6.33	29.10
1980	5.69	7.40	1.20	1.51	0.11	0.03	0.18	0.00	0.00	0.12	0.23	2.43	18.90
1981	5.75	1.68	4.04	0.18	0.31	0.00	0.00	0.00	0.15	2.08	8.38	6.32	28.89
1982	11.23	3.57	6.60	4.98	0.00	0.11	T	0.00	0.63	3.52	7.17	3.11	40.92
1983	6.42	8.81	12.24	3.41	0.46	0.00	0.00	0.22	0.83	0.45	7.16	7.49	47.49
1984	0.30	1.65	2.29	1.18	0.01	0.12	0.00	0.16	0.05	1.81	7.26	1.97	16.80
1985	0.80	2.29	4.37	0.20	0.02	0.10	0.08	0.00	0.35	1.23	4.85	3.49	17.78
1986	5.56	10.17	5.84	1.25	0.16	0.00	0.04	0.00	0.59	0.11	0.12	1.07	24.91
1987	3.01	4.56	2.37	0.10	0.00	0.00	0.00	0.00	0.00	1.28	2.41	3.25	16.98
1988	3.89	0.36	0.01	1.61	0.42	0.71	0.00	0.00	0.00	0.28	2.42	3.32	13.02
1989	1.04	0.70	5.17	0.48	0.03	0.04	0.00	0.00	1.65	1.42	2.24	0.00	12.77
1990	3.65	3.14	1.05	0.15	2.70	0.00	0.00	0.00	0.12	0.16	0.44	1.68	13.09
1991	0.47	4.05	7.77	0.46	0.10	0.16	0.00	0.24	0.03	1.41	0.86	1.91	17.46
1992	1.75	6.50		0.67	0.00	0.56	0.00		0.00	1.97	0.22	5.92	17.59
1993	9.47	4.33	0.97	0.85	0.68	1.46	0.00	0.00	0.00	0.42	1.81	2.82	22.81

1994	1.79	M4.13	0.24	1.10	1.21	0.00	0.00	0.00	0.00	0.50	7.98	1.73	18.68
1995	10.67	0.17	11.31	M0.91	0.28	1.03	0.00		0.00	0.00	0.12	8.02	32.51
1996	7.76	6.90	2.12	2.19	3.38	0.00	0.00	0.00	0.00	2.07	3.25	9.71	37.38
1997	9.39	0.29	0.42	0.26	0.42	0.38	0.00	1.10	0.00	1.92	7.48	2.78	24.44
1998	11.26	16.40	2.52	2.14	3.74	0.02	0.00	0.00	0.10	0.75	4.97	1.03	42.93
1999	3.76	7.30	2.56	2.60	0.00	0.02	0.00	0.00	0.09	0.56	2.84	M0.95	20.68
2000	M6.13	M10.96	2.34	1.58	1.27	0.20	0.00	0.00	0.04	6.29	0.77	0.78	30.36
2001	7.10	8.27	1.43	1.10	0.00	0.26	0.00	0.00	0.00	0.60	6.70	11.86	37.32
2002	2.51	M1.33	M1.30	0.33	0.91	0.00	0.00	0.00	0.00	M0.00	2.94	15.40	24.72
2003	1.98	1.28	1.93	3.04	1.41	M0.00	0.00	M0.00	0.00	0.00	2.08	9.82	21.54
2004	3.20	6.17	0.73	0.26	M0.00	0.00	0.00	0.00	0.00	2.68	0.90	3.90	17.84
2005	4.14	M4.09	M3.79	M2.33	M1.51	M0.89	0.00	0.00	M0.00	0.93	M0.27	8.33	26.28
2006	M4.14	1.69	M8.47	M6.78	0.28	0.00	0.00	0.00	0.00	0.40	M2.30	M2.27	26.33
2007	0.53	M3.78	0.41	M1.57	0.51	0.00	0.00	0.00	M0.00	M1.31	0.91	4.04	13.06
2008	8.80	3.00	M0.00	0.27	0.00	0.00	0.00	0.00	0.00	M0.23	3.20	M0.81	16.31
2009	M0.28	M5.68	3.37	0.55	1.24	M0.00	0.00	0.00	M0.00	M3.38	M0.12	M0.33	14.95
2010	M6.40	3.95	2.79	3.83	1.18	0.00	0.00	M0.00	0.00	M1.76	M2.09	M5.50	27.50
2011	M0.99	M5.08	M8.75	M0.52	M0.67	M2.09	M0.00	M0.00		M1.66	M1.18	M0.08	21.02
2012	M3.31	M1.21	M9.68	M2.34	M0.03		0.00	M0.00	M0.00	M1.88	M4.20	M8.51	31.16
2013	M0.64	0.60	M0.71	M1.60	M0.03	M0.70	M0.00	M0.00	M0.53	M0.00	M1.66	M0.00	6.47
2014	M0.33	M5.79	M3.73	M1.36	M0.00	M0.00	M0.00	M0.00	0.14	M0.55	M2.43	M11.36	25.69
2015	M0.00	M2.28	M0.29	M1.37	M0.00	M0.16	0.00	0.00	M0.04	0.03	M1.59	5.03	10.79
2016	M9.07	1.14	M8.35	M1.45	M0.22	M0.00	M0.00	M0.00	M0.00	M2.31	M2.06	M5.90	30.50
2017	M11.65	10.47	M3.49	M3.80	M0.00	M0.06	M0.00	M0.00	M0.00	M0.10	2.92	M0.05	32.54

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22

Appendix D

REPRESENTATIVE PHOTOGRAPHS



Photograph Point 1: Culvert 1; CUL01, looking east toward Culvert 1.

Appendix E

PLANT LIST

Plants Identified Within the Survey Area December 2017 Delineation

Scientific Name	Common Name	Native: Y/N	Wetland Indicator Status*
Acacia sp.	Wattle Tree	N	NL
Brassica rapa	Field mustard	N	FACU
Bromus diandrus	Ripgut Brome	N	NL
Carduus pyncnocephalus	Italian thistle	N	NL
Carpobrotus edulis x *chilensi*	Ice plant	N	NL
Cortaderia jubata	Pampas grass	N	FACU
Cynara cardunculus	Artichoke thistle	N	NL
Eucalyptus sp.	Gum Tree	N	FAC
Foeniculum vulgare	Fennel	N	NL
Genista monspesulana	French Broom	N	NL
Holocarpha virgata	Sticky tarweed	Y	NL
Picris echioides	Bristly ox-tongue	N	NL
Pinus radiata	Monterey Pine	Y	NL
Raphanus sativus	Wild radish	N	NL
Rubus discolor	Himalayan blackberry	N	NL
Stipa pulchra	Purple needle grass	Y	NL
Vicia villosa	Winter vetch	N	NL

*Western Mountains, Valley and Coast Region Wetland Indicator Status:

OBL = occurs in aquatic resources > 99% of time
FACW = occurs in aquatic resources 67-99% of time
FAC = occurs in aquatic resources 34-66% of time
FACU = occurs in aquatic resources 1-33% of time
NI = indicator status not known in this region
NL = no wetland status

Appendix F

AQUATIC RESOURCES SPREADSHEET AND GIS METADATA

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Appendix G

Coastal Erosion Assessment

Point Molate Beach Park

Beach Erosion Assessment

February 3, 2017

Prepared for

Nichols Consulting Engineers



2-3-2017

By

A-N West, Inc.

Consulting Civil and Structural Engineers

Scope of Beach Erosion Assessment

The beach erosion assessment covers Point Molate Beach Park and the portion of bluff just to the north of the Beach Park, as shown on Exhibit 1. This length of shoreline is undergoing noticeable erosion.

The beach erosion assessment included visiting the site, assessing the recession of the bluff, considering wave run-up, future sea level conditions, the effects of regulatory constraints, and the extent of possible restoration efforts.

General Description

The length of shoreline under investigation is part of a beach between rock headlands. Exhibit 1 shows the shoreline and topography in 1939 and 2016. Various watersheds along the shoreline have fed outfalls that discharge at the beach. One such outfall is located at the shoreline near the end of the existing revetment, at the north end of the assessment area, where erosion has been greatest.

The beach foreshore rises from mud at a slope of about 10 horizontal to 1 vertical and appears to comprise compacted material with some rock fragments and debris. The foreshore is about 50-foot wide in general and is backed by the eroded bluff without shore protection.

The bluff material comprises predominantly fill materials of weathered sandstone and siltstone, possibly from past hillside grading.[1] The eroded bluff is steep and can be eroded by combinations of heating and cooling of the surface, wind and rain, drainage, wave and tidal action.

Historical recession has been investigated to provide the necessary information for the design of beach restoration and protection for the proposed trail. Google Earth has been used to assess the extent of recession. This data comprises an aerial photograph from 1939 and a later series of photographs from 1987 to the present.

Exhibit 2 shows the man-made changes that have occurred along this shoreline. The 1939 aerial shows the former Richmond landing for the Richmond/San Rafael ferry to the south, at the extreme left, and the shoreline before revetment construction to the north of the assessment area. The 1987 aerial show the extension to the ferry area and the now revetted shoreline.[2] The 2016 aerial shows the abandoned area at the old ferry site to the extreme left.

Bluff Recession

Major bluff recession has occurred at the northerly portion of the park and beyond the park.

Old aerial mapping from 1939 onwards is available at Google Earth. A 1939 aerial is available with a gap until 1987 onwards. The 1939 aerial does not register well with later mapping. An indication only of the 1939 shoreline is possible. The registration, clarity, and scale of the available mapping allowed for

[1] Limited Geotechnical Soils Characterization at Point Molate Park - NCE Memorandum dated December 13, 2016

[2] The revetment is understood to have been constructed in the early 1940s.

approximate estimates of recession to be made. For the study of recession, 1987, 2002, and 2016 mapping was compared closely. This allows relative recession between the first period of 15 years to be compared with recession over the last 15 years.

In general, recession of a bluff relates to the height of bluff being acted on by water and waves. With a large sea level rise, more of the bluff surface would be exposed to water and wave action for a greater period. Wind wave heights and pressures would increase with sea level rise. The rate of recession would be expected to increase in the future due to sea level rise unless protection is added.

Storm water percolating into the soils behind the beach, water from failed storm water pipes, and natural groundwater would result in soil erosion at the bluff. Areas graded towards the shore will lead to overland storm water saturating and weakening the bluffs.

Soil would be removed from the bluff should an extreme tsunami occur.

Approximate top of bluff lines in 1987 and 2002 have been marked on the 2016 aerial photograph for the area at the end of the existing revetment and the outfall where bluff recession has now extended into the asphalt pavement (Exhibit 3). The 1987 bluff line on the shoreline further to the to the south is shown on Exhibit 4. The magnitude of recession is much less along the beach to the south. It appears that sand has been deposited at the south end of the beach.

Severe erosion has occurred near the storm drain outfall at the end of the existing revetment.

It appears, based upon the information available, that the bluff recession has been caused by a combination of outfall failure and natural erosion processes.

The bluff recession process appears to have been:

- initial failure of the outfall pipe at the original bluff line
- weakening of the bluff due to storm water erosion
- removal of bluff material predominantly by tidal movement and wave action
- loss of support to the next section of pipe
- repetition of pipe loosening and bluff material removal

Pipe corrosion may have contributed to the outfall failure, particularly if the outfall was constructed of corrugated steel pipe.

As the bluff receded, some wave reflection from the end of the existing revetment would add to erosive forces.

Some estimates of the rate of recession and quantity of material removed have been made.

Most of the recession has occurred over a 400-foot length measured southerly from the existing revetment. Estimates have been made separately for the first 240 feet from the revetment and for the next 160 feet length.

From 1987 to 2002 over the 240-foot length, the average rate of recession was 1.4 foot/year for an approximate 1,900-cubic yard loss of material.

From 1987 to 2002 over the next 160-foot length, the average rate of recession was 0.3 foot/year for an approximate 200-cubic yard loss of material.

From 2002 to 2016 over the 240-foot length, the average rate of recession was 1.1 foot/year for an approximate 1,500-cubic yard loss of material.

From 2002 to 2016 over the next 160-foot length, the average rate of recession was 1.1 foot/year for an approximate 700-cubic yard loss of material.

As recession near the storm drain outfall proceeded, the lateral extent of shoreline undergoing recession increased.

The bluff near the outfall receded over the period from 1987 to 2016 by up to 40 feet.

Coastal Processes Considered

Future Sea Level Rise

The San Francisco Bay Conservation and Development Commission (BCDC) and the California Coastal Commission have published sea level rise projections and related inundation maps over the past several years. BCDC have advised that a sea level rise of 0.97 feet by 2030, 1.99 feet by 2050, and 5.46 feet at the end of this century are used in this report.

Tides

The tidal datum values in feet at nearby NOAA Station ID 9414863 are shown below together with estimated tide levels due to future sea level rise. Values are given in feet relative to NAVD88 (North American Vertical Datum of 1988).

		Present Day	2030	2050	2100
High Tide Level	HTL	+7.59	+8.56	+9.58	+13.05
Mean Higher High Water	MHHW	+6.06	+7.03	+8.05	+11.52
Mean High Water	MHW	+5.45	6.42	+7.44	+10.91
Mean Tide Level	MTL	+3.26	+4.23	+4.6	+7.9
Mean Sea Level	MSL	+3.26	+4.23	+5.25	+8.72
Mean Low Water	MLW	+1.12	+2.09	+3.11	+6.58
Mean Lower Low Water	MLLW	0.00	+0.97	+1.99	+5.46

The present published extreme high tide with a one percent exceedance (highest estimated tide) is approximately +9.0 (to within plus or minus 0.5 feet) at Richmond. Such a highest estimated tide would be associated with a storm surge due to sustained high winds in the ocean.

Wind Waves

Locally generated waves from the west and northwest are limited by the low fetch[3] and the protection from the coastal ridge along the ocean. Waves at the entrance to Richmond Harbor channel are reported to be on the order of 3-foot maximum.

The effective fetch for waves from the west and northwest is estimated at 3.9 nautical miles.[4]

In the region of Point Molate, the significant wave height[5] due to 50 knot[6] winds[7] sustained over 30 minutes would be 3.5-foot high with a 3.5 second wave period. An associated maximum wave would be about 5.6 feet high. Such waves will break and dissipate energy before reaching a bluff or shore protection at this study location.

The calculated wave height would be affected by storm surge, refraction, shoaling, and shelter from wave barriers. The wave height is low and adjustments have not been estimated. It is believed, by engineering judgment, that their effects on the wave height magnitude offset each other.

Storm surge resulting from sustained storms at the Golden Gate would raise up the water surface.

Refraction, the effects of varying bed contours, could reduce the wave height in curved bays and increase the wave height at headlands.

Shoaling, the reduction in wave height due to the very flat slope of the mud beach approaching the foreshore, occurs and would reduce the magnitude of the wave height.

The effect of sea level rise is to produce higher wind generated waves that would break on the shore protection with resulting greater forces and higher run-up.

The United States Geological Survey (USGS) shows the reduction of wave action from large waves moving into the Golden Gate. Waves of over 8 feet significant wave height at Golden Gate decay to less than 3 feet significant wave height as they approach the vicinity of Point Molate.

Wind and wave estimates for San Francisco Airport have been used to assess wave action at the Richmond Marina and the Outer Harbor. The estimated wave heights are larger than the waves near Point Molate. Refraction will cause a reduction in the size of such waves reaching the Point Molate shoreline to a somewhat similar value as estimated above.

The estimated waves are compared below against the operation and berthing conditions for wharves, piers, and the ferry once in use along this shoreline.

Limiting waves compatible with allowing operations at the open wharves at and near Point Molate would be likely be less than 1.5 feet high. The typical vessels moored at the wharves could ride out at berth in waves of 3.5 feet height with a wave period of 3.5 seconds.

[3] "Fetch" is the distance over which waves are generated.
[4] 1 nautical mile = 1.15 miles.
[5] The average height of the one-third highest waves of a group of waves.
[6] 1 knot = 1.15 miles per hour
[7] This is a high estimate. The maximum 30-minute sustained wind may be nearer 45 knots.

Significant wave heights generated in San Pablo Bay are believed to be up to 2 feet only.

The estimated wave height and period conform well with wave criteria related to past waterfront operations.

Concerns over ferry wake damage generally relate to vessels traveling close to beaches and wetlands. This is not the condition at Point Molate Beach Park. The route of ferries from Vallejo to San Francisco is from 1.1 to 1.6 miles from the shoreline. Other vessels move along the same channel. If there is proposed development near the Park involving the maneuvering and berthing of vessels near to the shore, then a further assessment would be appropriate.

In summary, a significant wave height of 3.5 feet and associated significant wave period of 3.5 seconds is suitable for beach assessment purposes.

Wave Run-up

Wave run-up and overtopping[8] will be of consideration for bluff restoration involving shore protection.

Run-up on shore protection depends on rock size, rock shape, slope, and gradation. For proposed rock slope protection, an estimated run-up height of 1.3 times the maximum wave height acting at the shore protection above the MHW level is assumed.

The present day maximum run-up elevation due to a depth limited 2.8 feet high wave is estimated to be no more than +9.1 NAVD88.

By year 2050, using a 24-inch projected sea level rise, the wave run-up at a future MHW of +7.4 NAVD88, would result in a run-up elevation of +13.1 NAVD88. This estimate is based on the higher limits of the sea level projection range from Table A-2 of the NRC (2012).

The trail is designed to be no lower than approximately +15 NAVD88. Therefor no overtopping of the trail is expected over its likely initial life of 20 to 30 years. Should sea level rise meet the high projections assumed for the end of this century then there could be concern over the vertical distance between trail and water surface caused by overtopping. In such a case, the trail could be raised or a protective barrier added as part of a major maintenance or reconstruction project. Other trails in the Bay Area have been designed with the expectation that they would be occasionally flooded.

Splashing and spray could occur due to winds approaching from the Bay acting together with larger waves at higher tides. Splash and spray nuisance would increase as sea level rises depending on the elevation and set back of the trail. Where the proposed alignment shows a setback of typically 20 feet or more from the top of bluff, the nuisance is likely to be slight during its initial life.

Tsunami[9]

Tsunami effects result from generation in the ocean at a great distance from the entrance to San Francisco Bay. The magnitude of a tsunami is reduced as it moves through the Bay to Point Molate to about a third of the height at the Golden Gate.

[8] The passing of water over the top of a structure resulting from wave run-up.
[9] A long period wave caused by an underwater earthquake or volcanic eruption.

Tsunami maximum water levels for marine terminal design are published for this area in Chapter 31F "Marine Oil Terminals" of the 2013 California Building Code (2013 CBC).

Another recent source[10] indicates a varying tsunami water surface level of +13 feet reducing to +9 feet NAVD88 along the west side of the Chevron Richmond Refinery.

The tsunami wave heights at the refinery are for a very extreme long term condition and overly conservative for a trail located away from Risk Category III and IV development.[11] The more appropriate recurrence interval related to a coastal trail with low risk category development nearby might be less than 100 years. Values for a 100-year return period are given in this report. The tsunami run-up height at Point Molate for a 100-year return period could be just over a foot above mean high tide.

Records of tsunami related readings in the Bay over the past few decades are consistent with tsunami run-up heights of about a foot or less at Point Molate Beach Park.

Information on and analysis of tsunamis has been incorporated in the American Society of Civil Engineer's ASCE 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures for inclusion by reference to the next edition of the California Building Code. If there is to be new Risk Category III or IV building development close to the trail, the Tsunami run-up appropriate for that level of development will likely be that related to a 2,500-year return period (0.0004 annual occurrence rate and a 2 percent probability of occurrence in the next 50 years).

Summary of Water Surface and Run-up Elevations

The higher still water elevations, wave run-up predictions at the bluff, and the BCDC 100-year Base Flood Elevations are summarized below.

		Present Day	2030	2050	2100
BCDC 100-year Base Flood Elevation			+13.97	+14.99	+18.46
Highest Wave Run-up Elevation with water surface at MHW		+9.1	+11.0	+13.1	+18.3
Tsunami run-up with 2,500-year return period		+10.9	+11.8	+12.8	+16.3
Approximate Extreme High Tide at Richmond		+9.0	+10.0	+11.0	+14.5
Tsunami run-up with 100-year return period with water surface at MHW		+6.6	+7.5	+8.5	+12.0
High Tide Level	HTL	+7.59	+8.6	+9.6	+13.1
Mean Higher High Water	MHHW	+6.06	+7.0	+8.1	+11.5
Mean High Water	MHW	+5.45	+6.4	+7.4	+10.9
Mean Tide Level	MTL	+3.26	+4.2	+5.3	+8.7

[10] Draft report to Chevron by URS.

[11] Table 1604.5 of 2013 CBC.

Values are given relative to NAVD88 (North American Vertical Datum of 1988).

The approximate extent of inundation under the BCDC 100-year Base Flood elevations of 2030, 2050, and 2100 is shown on the NCE Shore Erosion Layout Plans. The trail through the park is not inundated by the 2050 100-year Base Flood but portions are shown as inundated by the 2100 100-year Base Flood.

Conclusions

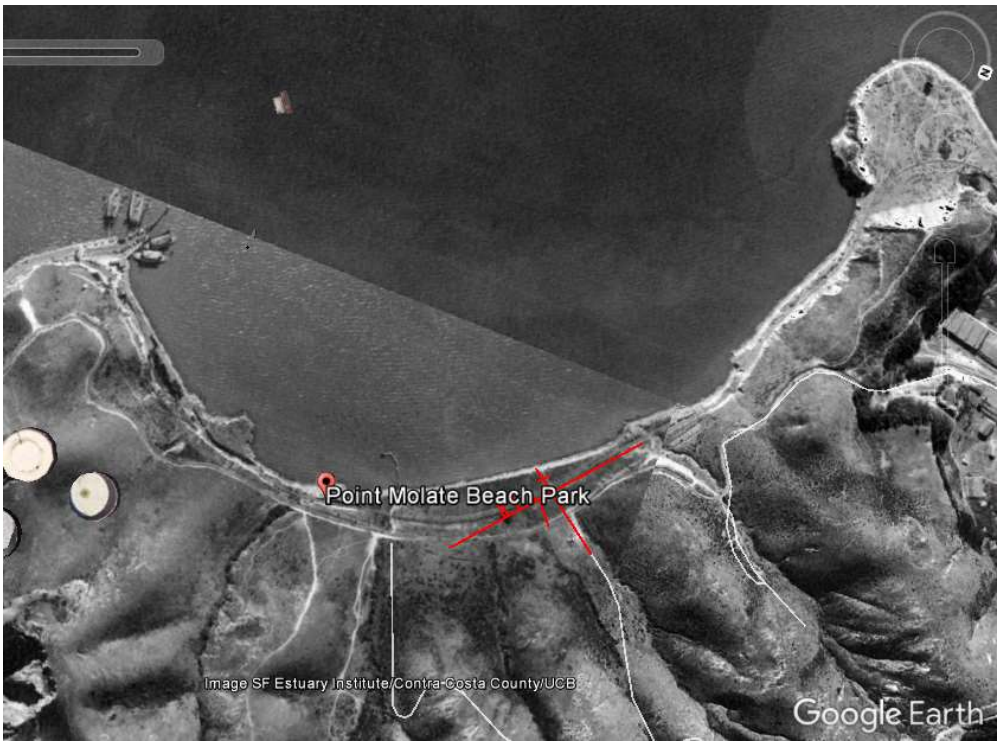
The shoreline within the Beach Park and to the north of the Park has been undergoing recession over the past 30 years or more. This recession appears to be the result of a combination of progressive storm drain outfall failure and bluff erosion caused by the action of storm water, seepage, tides, waves, rain and wind.

Over the past 30-years bluff recession has ranged from negligible towards the south end of the Beach Park up to 40 feet at the storm drain outfall close to the existing rock revetment at the north end of the Beach Park.

Shoreline and outfall restoration is necessary to halt further bluff recession, preserve the beach, and to allow the future trail to be extended on its proposed alignment through this area.

POINT MOLATE
SHORELINE AND TOPOGRAPHY

EXHIBIT 1



1939



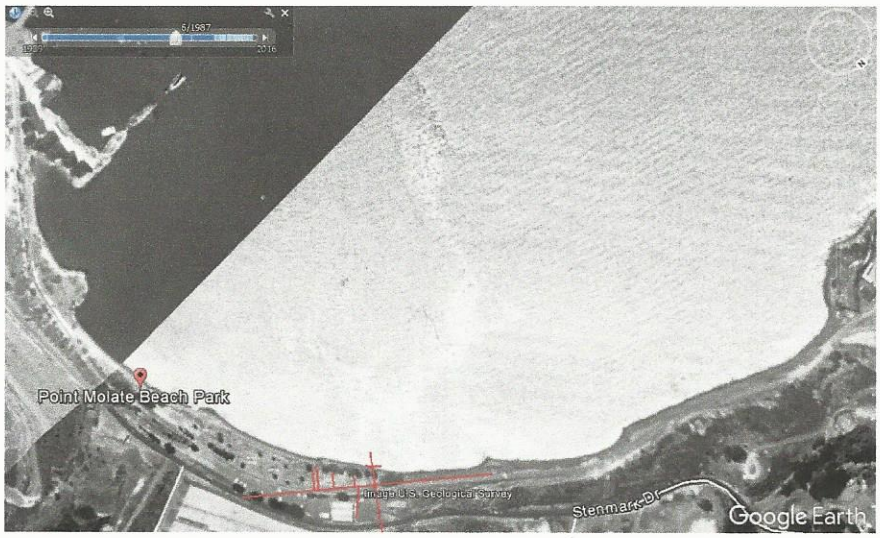
2016

POINT MOLATE
BEACH CONFIGURATION

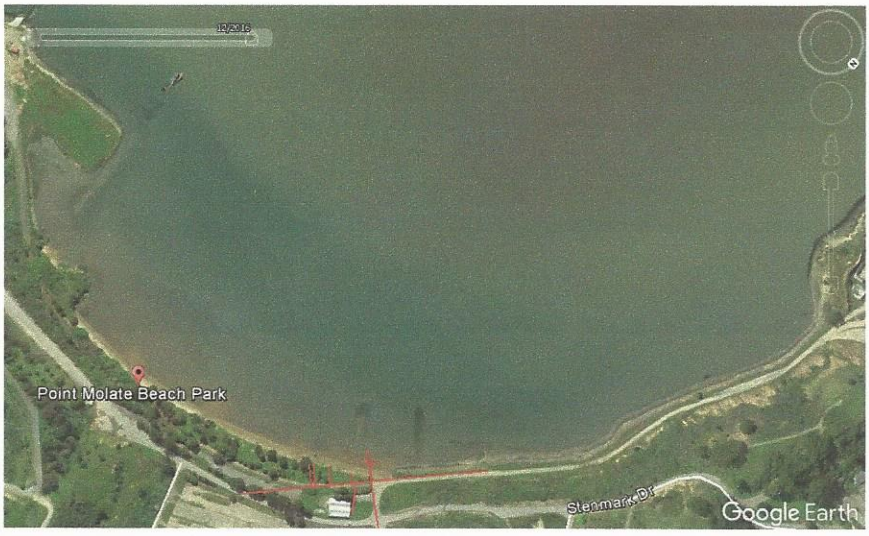
EXHIBIT 2



1939

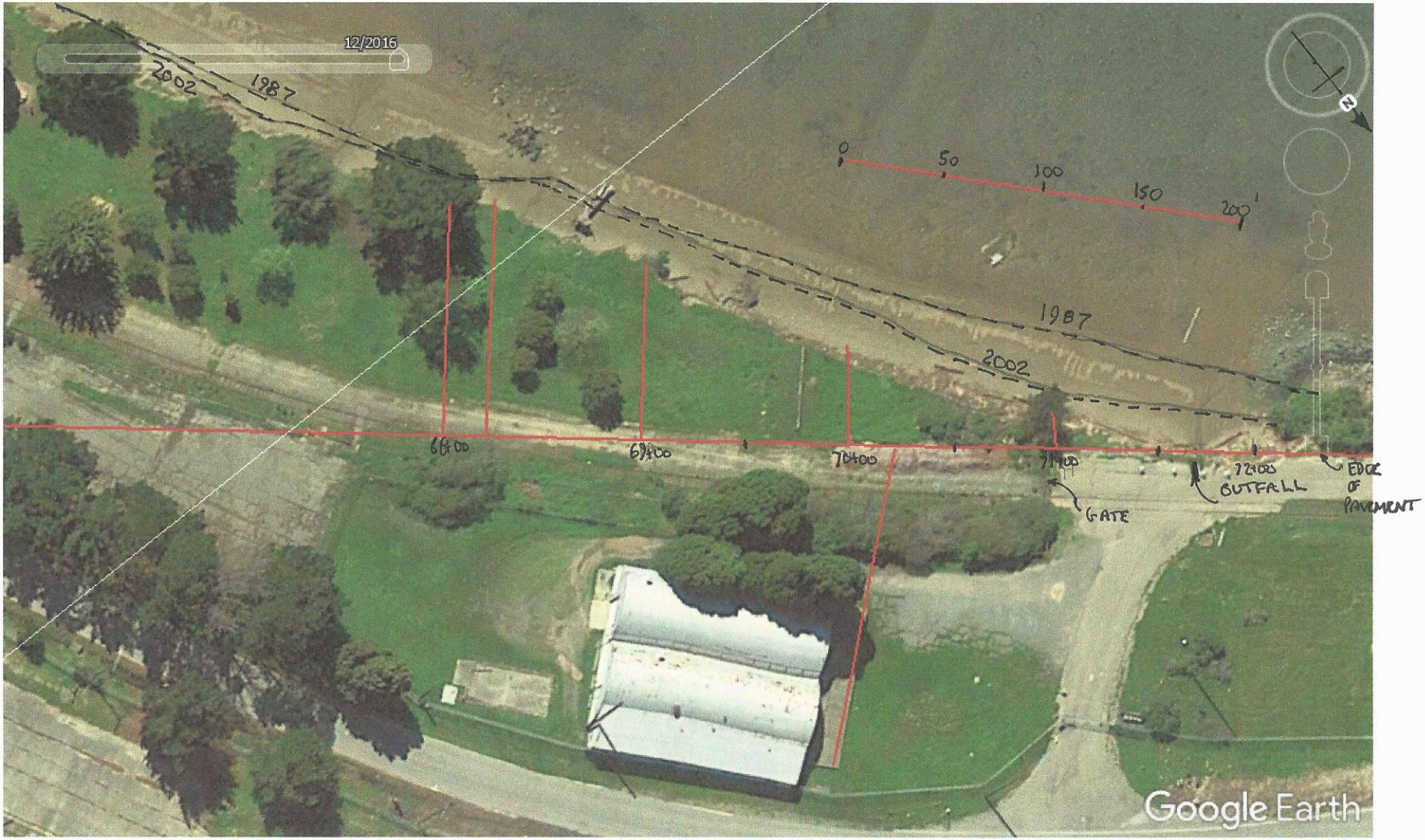


1987



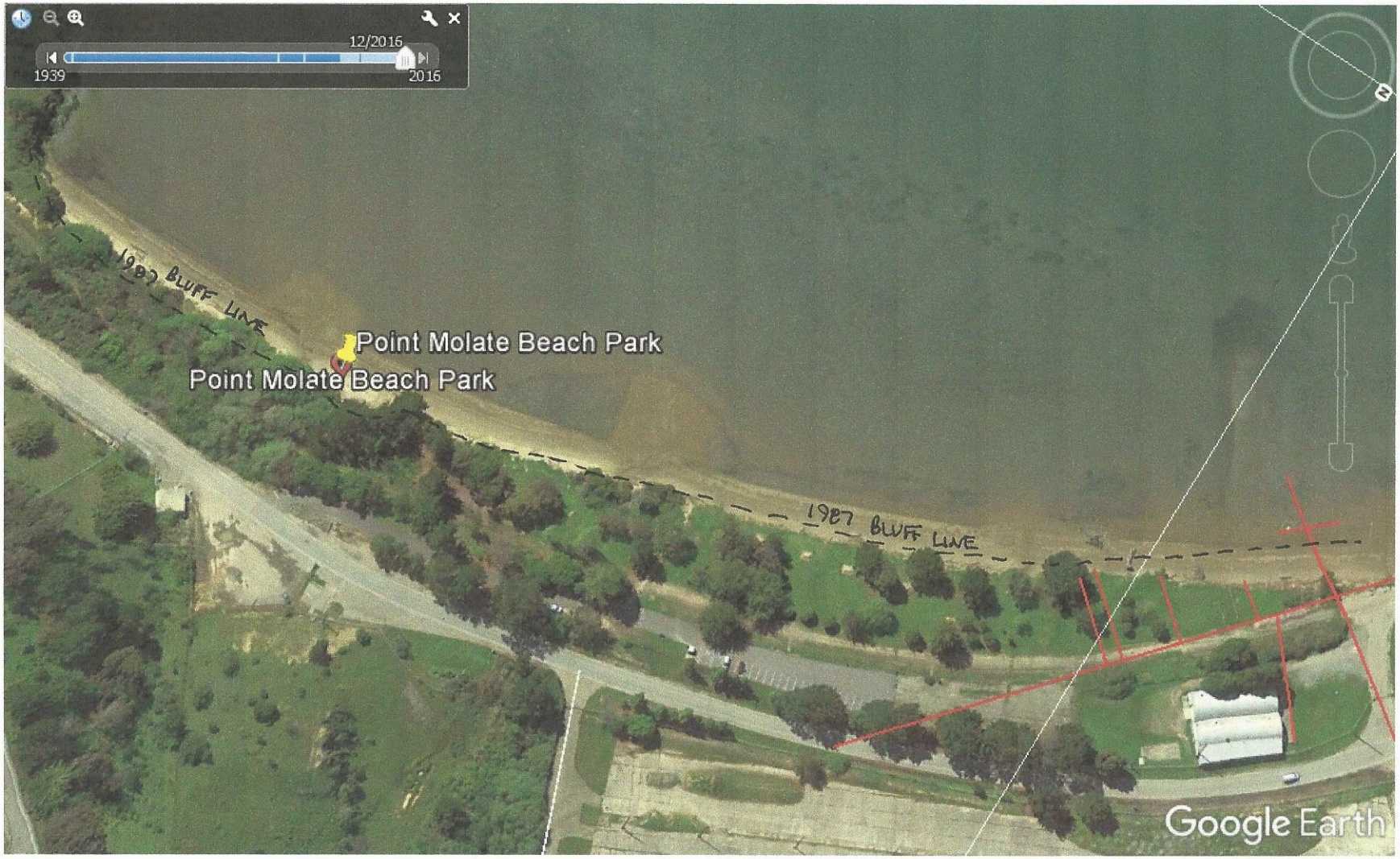
2016

EXHIBIT 3



2016

EXHIBIT 4



DEC 2016

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