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**To:** Susie Bennett, WRA, Inc  
**From:** Kelly Higelmire, Senior Archaeologist, Garcia and Associates  
**Date:** March 27, 2019  
**Re:** Supplemental Cultural Resources Evaluation Memorandum for the Golden Gate Bridge, Highway and Transportation District Corte Madera 4-Acre Tidal Marsh Restoration Project (Contract No. 2014-FT-13) Corte Madera, Marin County, California

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## 1.0 INTRODUCTION

At the request of WRA, Inc, Garcia and Associates (GANDA) conducted a cultural resources evaluation for the Golden Gate Bridge, Highway and Transportation District Corte Madera 4-Acre Tidal Marsh Restoration Project (Contract No. 2014-FT-13) in Corte Madera (Town), Marin County, California (Project). The Project proposes to restore 4-acres of tidal marsh habitat, within a 14.7-acre area, to fulfill obligations established in accordance with the California Ridgeway's Rail 1988 Corps permit (#17486N) and 1996 modification to ferry operations at the Larkspur Ferry Terminal. The Project includes grading the proposed site to elevations suitable for tidal inundation, reroute portions of the existing western and northern berms, and restore native marsh vegetation. Prior to grading, an exclusion fence will be installed around the perimeter of the work site to protect the Salt Marsh Harvest Mouse.

The Project's Area of Direct Impact (ADI) encompasses a 14.7-acre area within the Corte Madera Ecological Reserve. Tidal marsh restoration is limited to multiple areas, varying in size and location, totaling 4 acres within the proposed ADI. The Project area is located in a 72-acre parcel that was previously surveyed by GANDA for WRA, Inc in 2016. The original cultural resources survey investigated three restoration alternatives ranging from minimum restoration of tidal marsh of 4.9 acres to a 32.9-acre restoration of tidal marsh and seasonal wetland, including relocation of the public access easement. The vertical ADI of the earlier proposed restoration project remained in the dredge soil overburden (1-5 feet) throughout the 72-acre area. The 2016 pedestrian field survey and subsequent report results located an extant segment of a previously recorded historic-period built environment resource (P-21-002618). P-21-002618 was determined ineligible for listing in the NRHP in 2013 by the SHPO. The extant segment was included in an update to the P-21-002618 Department of Parks and Recreation (DPR 523) Form. The study concluded that the previous ineligible determination was extended to the segment within the 72-acre parcel. P-21-002618 was also determined ineligible for listing on the CRHR and is not a historical resource for the purposes of CEQA.

This supplemental letter report provides an update to the 2014 cultural resources survey (DeBaker 2016) previously conducted by GANDA. This document includes a description of the previous background research, an updated records search, Project design evaluation, and results of these efforts

to identify additional cultural resources within the ADI for the tidal marsh restoration project. Portions of the DeBaker (2016) study are represented and adapted in the findings below. Additional research and analysis in support of this Project concur with the previous findings and did not identify additional prehistoric or historic period archaeological resources or built environment resources within the current ADI. Similarly, the Project's vertical ADI does not have the potential for uncovering buried prehistoric deposits as it will not exceed the depth (1-5 feet), previously identified as dredge overburden. Based on this evaluation and the previous work, conducted by GANDA, no historic resources, defined under CEQA, are located within the Project ADI.

## **2.0 PROJECT LOCATION AND DESCRIPTION**

The Project is located within the northwestern portion of the Corte Madera Ecological Reserve (Figure 1), bound by the Northern Drainage Channel, the eastern Corte Madera Drainage Easement, and the limits of disturbance identified by the design drawings within the ecological reserve (WRA, Inc 2018). The Project ADI encompasses a 14.7-acre area located in Corte Madera, Marin County, adjacent to San Francisco Bay (Figures 2 and 3). The ADI is mapped on the United States Geologic Surveys (USGS) 7.5-minute San Rafael, California (1995) topographic quadrangle (Figure 2), is irregular in shape, and surrounded on three sides by the marshlands of the Corte Madera Ecological Reserve and the former Muzzi Marsh. The Shorebird Marsh is located to the west of the parcel, the marshlands of the Corte Madera Ecological Reserve are situated to the northern, eastern and southern boundaries of the ADI. The western property line borders the levee adjacent to the railroad right-of-way (ROW) owned by Sonoma Marin Area Rail Transit (SMART). The northern property boundary includes a flood control channel and drainage outfall easement to the Town of Corte Madera. The Corte Madera Ecological Reserve extends to the north and east of the flood control channel and includes an undeveloped graded parcel (Greene Parcel) and the former Heerdt Marsh.

The Project area will be accessed from the north via a gravel roadway along the railroad ROW, where it intersects with the eastern terminus of Industrial Way and a dirt parking lot owned by California Department of Fish & Wildlife (CDFW). The gravel roadway provides access to the Town pump station at a locked gate, crosses the drainage outfall and continues south towards San Clemente Drive. The eastern and southern levees of the parcel border the restored Muzzi Marsh wetlands, now part of the Corte Madera Ecological Reserve and currently owned and managed by the CDFW. The town of Corte Madera maintains a public access easement atop the southern and eastern levees from San Clemente Drive east and north into the Corte Madera Ecological Reserve and out to the San Francisco Bay shoreline adjacent to the Town drainage outfall.

The Project proposes to grade portions of the site, totaling 4-acres, to elevations suitable for tidal inundation, create a staging area near the Pacific Telephone and Telegraph Easement, clear existing trees and shrubs and restore native vegetation, and reroute portions of the existing western and northern berms. Grading limits for the new tidal marsh will not exceed 4.75 feet above mean sea level (amsl) with existing berms elevated to heights between the current grade of 9 feet to 15 feet at the apex (Figures 4-7). Topsoil from the entire area, within the limit of grading, will be stockpiled in the development Staging Area. Prior to grading, an exclusion fence will be installed around the perimeter of the work site to protect the Salt Marsh Harvest Mouse. Exclusion fencing posts will extend 18-inches below grade with silt fence fabric extending 6-inches below grade. Exit funnels, made of 1/8<sup>th</sup> hardware cloth, will be placed in predetermined portions of the exclusion fence. No vehicular traffic will be allowed within the work area once grading is complete.

### **3.0 REGULATORY CONTEXT**

Cultural resources may be determined to be significant if they meet national, state, or local criteria, either individually or in combination. Resource evaluation criteria are determined by the compliance requirements of each specific project. Applicable state and local government policies and significance criteria are briefly presented below.

#### **3.1 STATE REGULATIONS AND CRITERIA**

##### **California Environmental Quality Act (CEQA)**

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally determined eligible for the NRHP, the CRHR, or local registers. CEQA further defines a “historical resource” as a resource that meets any of the following criteria:

- A resource listed in, or determined to be eligible for listing in, the NRHP or CRHR.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- A resource identified as significant (e.g., rated 1–5) in a historical resource survey meeting the requirements of PRC Section 5024.1(g) (Department of Parks and Recreation [DPR] Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered “historically significant” if it meets the criteria for listing on the California Register of Historical Resources (CEQA Guidelines Section 15064.5).

##### **California Register of Historical Resources (CRHR)**

The CRHR is a listing of State of California resources that are significant within the context of California’s history, and includes all resources listed in or formally determined eligible for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or national level under one or more of the following criteria defined in the California Code of Regulations Title 14, Chapter 11.5, Section 4850:

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States (Criterion 1); or
- It is associated with the lives of persons important to local, California, or national history (Criterion 2); or
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion 3); or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4).

A cultural resource’s significance must be demonstrated under one of the CRHR criterion described above, and it must retain its historic integrity. Cultural resource’s integrity is determined using the CRHR’s seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and

association. The CRHR criteria are tied to CEQA, as any resource that meets the above criteria and retains its integrity is an historical resource under CEQA.

### **Regulations Concerning Discovery of Human Remains**

California Public Resources Code §5097.98 (Notification of Native American human remains, descendants; disposition of human remains and associated grave goods) mandates that the lead agency adhere to the following regulations when a project results in the identification or disturbance of Native American human remains:

- a) Whenever the Native American Heritage Commission (NAHC) receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.
- b) Whenever the Native American Heritage Commission is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent, and the mediation provided for in subdivision (k) of Section 5097.94 of the PRC fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property, in a location not subject to further subsurface disturbance.
- c) Notwithstanding the provisions of Section 5097.9 of the PRC, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (l) of Section 5097.94, shall be exempt from the requirements of the California Environmental Quality Act [Division 13 (commencing with Section 21000)].
- d) Notwithstanding the provisions of Section 30244 of the California Coastal Act, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (1) of Section 5097.94, shall be exempt from the requirements of the California Coastal Act of 1976 [Division 20 (commencing with Section 30000)].

### **Marin Countywide Plan (2007)**

The Marin Countywide Plan was adopted in 2007 and discusses the preservation of historical and archaeological resources under socioeconomic policies in Section 4.13: Historical and Archaeological Resources (Hinds 2007). Marin County maintains a checklist used by planners for all new construction, demolition, and modifications to determine if the proposed work is located within a known archaeological site, historic building, and/or district. These review procedures ensure that proposed development projects comply with state and county conservation policies regarding the identification and protection of cultural resources (Hinds 2007:4-131). The County of Marin's Countywide Plan (2007-2050) states the following policies are applicable to cultural resources identified within Marin County:

- Policy HAR-1.1 Preserve Historical Resources:  
Identify archaeological and historical resource sites.
- Policy HAR-1.2 Document Historical Information:  
Provide documents, photographs, and other historical information whenever possible to be catalogued in the Anne T. Kent California Room in the Marin County Free Library.
- Policy HAR-1.3 Avoid Impacts to Historical Resources:  
Ensure that human activity avoids damaging cultural resources.
- Policy HAR-1.4 Participate in Historical Preservation Efforts:  
Work with federal, State, and local agencies, and interested individuals, groups, and educational organizations to obtain funding and employ other methods to preserve archaeological and historical sites.
- Policy HAR-1.5 Regulate Alteration of Historical Buildings:  
Limit the ability to modify historical structures, and require development to respect the heritage, context, design, and scale of older structures and neighborhoods.

#### **4.0 BACKGROUND**

A complete discussion of the environmental, cultural background, and historic context was previously developed during the 2016 (DeBaker) study. For further background information see DeBaker 2016 (pages 9-23).

#### **4.1 RECORDS SEARCH AND LITERATURE REVIEW**

In support of the previous survey (DeBaker 2016) GANDA senior archaeologist, Cassidy DeBaker, M.A., conducted a record search on June 17, 2014 at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University, Rohnert Park (File No. 13-1930). The NWIC is a repository of all cultural resources site records and previously conducted cultural resources studies in Marin County. The purpose of this records search was to compile information pertaining to the locations of previously recorded cultural resources and prior cultural resources studies within a 0.25-mile radius of the 72-acre study area that inform the cultural resources sensitivity of the current ADI.

To ascertain if additional cultural resources were recorded within the Project area or surrounding 0.25-mile radius between 2014 and 2019, an updated record search was conducted by Robin Fies, M.A., on March 20, 2019 for the current 14.7-acre Project ADI. The following sources were consulted during the records search:

- NWIC base map: United States Geological Survey (USGS) 7.5-minute series topographic quadrangle for San Rafael (1995).
- Survey reports from previous cultural resources investigations and cultural resources site records to identify previously recorded cultural resources sites located within a 0.25-mile radius of the ADI.
- California Office of Historic Preservation (OHP) resources, including the *California Inventory of Historic Resources* (1976), the *OHP Archaeological Determinations of Eligibility* for

Marin County (2012a), and the *OHP Historic Properties Directory* for Marin County (2012b), which combines cultural resources listed as California Points of Historic Interest (1992), listed as California Historical Landmarks (1996), and listed in or determined eligible for listing in the NRHP or the CRHR.

### **Records Search Results**

The initial NWIC records search, recorded in DeBaker (2016), identified three cultural studies conducted within the 0.25-mile radius of the 72-acre parcel (Gorrell 1976; Tom Origer and Associates 1990; Psota 1992). At the time of the record search, no cultural resources were recorded within or adjacent to the Corte Madera Ecological Reserve.

The secondary records search, conducted in March 2019, indicated that only one cultural resources survey was completed within the ADI (DeBaker 2016). This GANDA report recorded a portion of the NWPRR (P-21-002618) located within the study area, later determined ineligible for listing on the NRHP/CRHR. No other cultural studies were conducted within the current ADI. Results of this records search also located four additional studies within the 0.25-mile radius search area, entered into the NWIC database between 2014 and 2018 (Byrd 2011; Cox and Hammerle 2013; Darko 2014; Kajankoski and Meyer 2011). None of these studies resulted in the identification of additional cultural resources within the current Project ADI or surrounding area.

DeBaker 2016 Cultural Resources StudyOne previous cultural resources field survey was conducted by GANDA on July 24, 2014. GANDA archaeologists Thomas Martin, M.A., and Robin Fies, M.A., conducted a 72-acre pedestrian survey of the Corte Madera Ecological Reserve (DeBaker 2016; Figure 8), encompassing the current 14.7-acre ADI. The field survey resulted in the identification of one historic-period built environment resource, “a previously unrecorded, 0.4-mile segment of P-21-002618 (NWPRR)...no prehistoric or historic-period archaeological resources were identified” (DeBaker 2016). The study noted that the railroad segment, including its tracks and ties, were removed. No features associated with the NWPRR were observed and the “original railroad grade or dike...has been converted into the modern levee gravel road” (DeBaker 2016).

The NWPRR segment was found to be part of the 17.6-mile long section of the railway, located between Cloverdale and Healdsburg in Sonoma County, recorded as P-21-002618, in 2013 (Jones and Stokes 2000 *In* DeBaker 2016). P-21-002618 was determined ineligible by SHPO for inclusion on the NRHP/CRHR in a letter recorded the same year (DeBaker 2016). While GANDA updated the Department of Parks and Recreation form (DPR 523) to include the segment within the Corte Madera Ecological Reserve, this section of railway, by extension of the previous determination, was found to be ineligible for inclusion on the historic registers as well.

## **5.0 CONCLUSION AND RECOMMENDATIONS**

The 2016 (DeBaker) study adequately identified the lack of cultural resources within the current project area. The prior 72-acre study encompassed the current 14.7-acre Project area and the tidal restoration areas, totaling 4-acres. While the 2016 field results located one historic resource (P-21-002618), after evaluation, the resource was determined ineligible for inclusion in the NRHP and CRHR and is not a historic resource under CEQA (DeBaker 2016). Due to the passage of time, GANDA conducted a supplemental record search within a 0.25-mile radius, similar to the 2014 study. No cultural resources or additional surveys were located within the Project ADI.

Impacts of the Project on the vertical ADI are not anticipated to extend below the previously identified fill layer (1-5 feet below ground surface). Additionally, the majority of planned ground disturbance for this Project are proposed to correspond with the elevation of the existing tidal marsh and will occur primarily within previously identified imported dredge material by DeBaker (2016). In some cases, tidal

restoration activities will occur within marsh deposits, but will be limited to tidal channel modifications. The analysis conducted by the prior cultural resources survey in 2014 and supplemental research to assess the potential for buried prehistoric archaeological deposits within the ADI resulted in a finding that the ADI is not sensitive for such deposits. In conclusion, based on this the previous cultural resource investigation and updated record search, no historical resources will be impacted because of this Project and further study is not necessary.

#### **UNANTICIPATED ARCHAEOLOGICAL SITES**

If there is an unanticipated discovery of archaeological deposits or remains during Project implementation, construction crews shall stop all work until a qualified archaeologist can assess the discovery and provide recommendations. Resources could include buried historic features such as artifact-filled privies, wells, and refuse pits, and artifact deposits, along with concentrations of adobe, stone, or concrete walls or foundations, and concentrations of ceramic, glass, or metal materials. Native American archaeological materials could include obsidian and chert flaked stone tools (such as projectile points and knives), midden (darken soil created culturally from use and containing heat-affected rock, artifacts, animal bones, or shellfish remains), and/or groundstone implements (such as mortars and pestles).

#### **Encountering Human Remains**

While the possibility is low, there remains a chance of encountering human remains either in association with prehistoric occupation sites or separately. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial and Section 5097.99 of the Public Resources Code defines the obtaining or possession of Native American remains or grave goods to be a felony. If human remains are encountered as a result of construction activities, any work in the vicinity shall stop and the Napa County Coroner shall be contacted immediately. In addition, a qualified archaeologist and Native American representative shall be contacted immediately to evaluate the discovery. If the human remains are Native American in origin, then the Coroner must notify the Native American Heritage Commission within 24 hours of this identification.

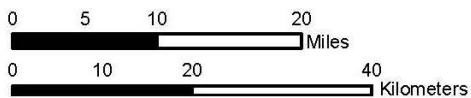
## **Appendix A: Project Maps**

- Figure 1: Project Vicinity Map
- Figure 2: Project Location Map
- Figure 3: Area of Direct Impact
- Figure 4: Demolition and Site Preparation
- Figure 5: Grading Plan
- Figure 6: Grading Plan (cont.)
- Figure 7: Erosion Control Plans and Details
- Figure 8: Previous Survey Map





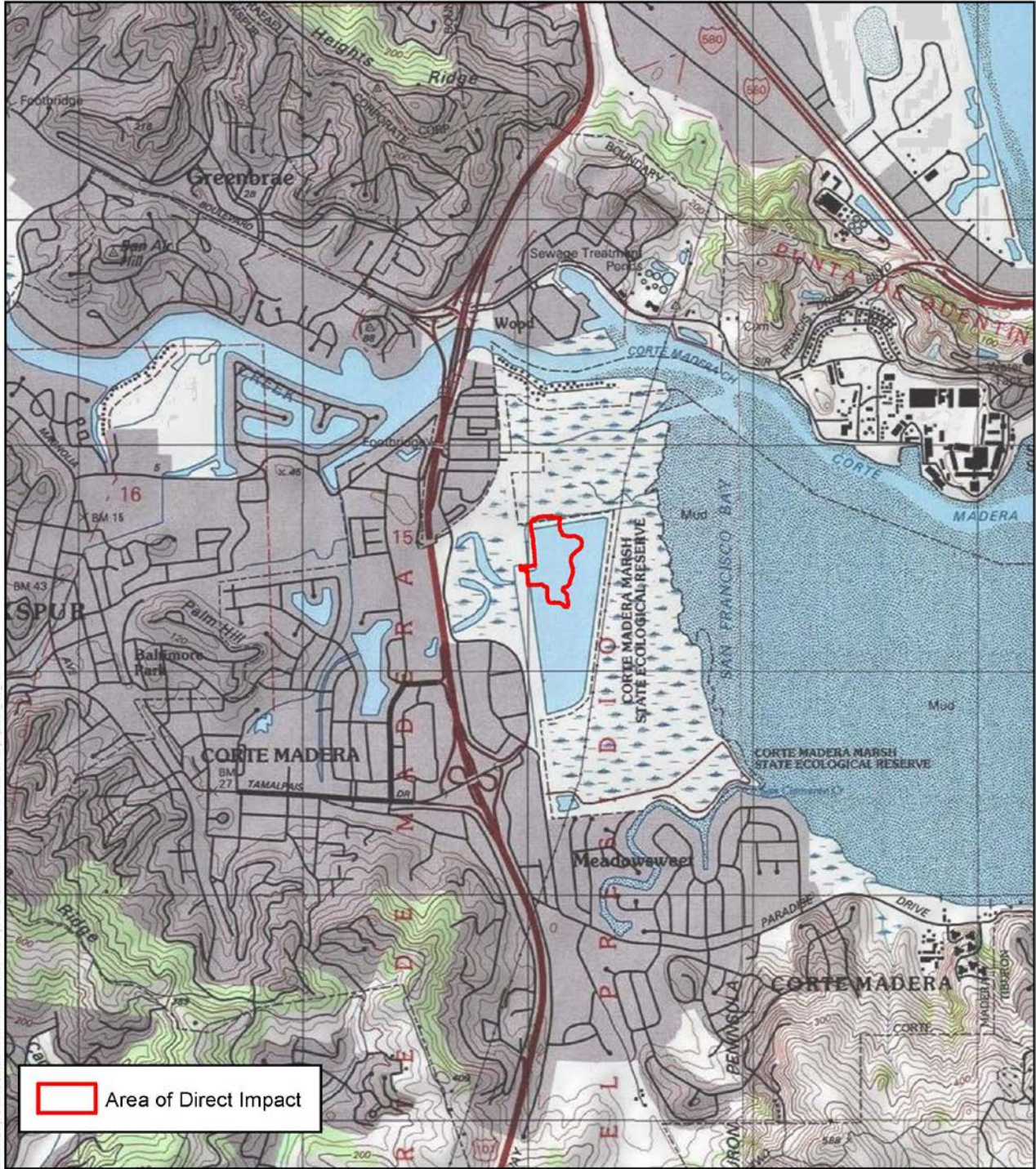
USGS 7.5' Quad: SAN RAFAEL (1993)  
 Legal Description: CORTE MADERA Land Grant



**Figure 1. Regional Vicinity**  
 Golden Gate Bridge, Highway and Transportation District Corte Madera 4-Acre Tidal Marsh Restoration Project (Contract No. 2014-FT-13)

Town of Corte Madera  
 Marin County, California





USGS 7.5' Quad: SAN RAFAEL (1993)  
 Legal Description: CORTE MADERA Land Grant

0 0.5 1 Miles  
 0 0.5 1 Kilometers



Source: National Geographic 2013. GANDA GIS 2018

**Figure 2. Location Map**  
 Golden Gate Bridge, Highway and Transportation District Corte Madera  
 4-Acre Tidal Marsh Restoration Project  
 (Contract No. 2014-FT-13)

Town of Corte Madera  
 Marin County, California





USGS 7.5' Quad: SAN RAFAEL (1993)  
 Legal Description: CORTE MADERA Land Grant


0 600 1,200 Feet  
 0 200 400 Meters

Source: Microsoft Corporation (2019), DigitalGlobe CNES (2019), Distribution Airbus DS (2019), HERE (2019), GANDA GIS (2018)



**Figure 3. Area of Direct Impact**  
 Golden Gate Bridge, Highway and Transportation District Cortez Madera  
 4-Acre Tidal Marsh Restoration Project  
 (Contract No. 2014-FT-13)

Town of Cortez Madera  
 Marin County, California





**35% DESIGN REVIEW**



**GOLDEN GATE BRIDGE**  
GOLDEN MADERA 4-ACRE TIDAL MARSH RESTORATION PROJECT  
35% DESIGN  
DEMOLITION AND SITE PREPARATION, NATURAL RESOURCE PROTECTION

PROJECT NO.	13854-0000-0000
PROJECT NAME	GOLDEN GATE BRIDGE
PROJECT LOCATION	SAN FRANCISCO, CALIFORNIA
PROJECT DATE	2014.11.13
PROJECT STATUS	35% DESIGN
PROJECT OWNER	WIDE PACIFIC
PROJECT ENGINEER	WIDE PACIFIC
PROJECT DATE	2014.11.13

APPROVED BY	BEN SINDLER	REGISTERED CIVIL ENGINEER
DISTRICT ENGINEER	GEORGE SALVADORO	REGISTERED CIVIL ENGINEER
DATE	2014.11.13	PLANS APPROVAL DATE

NO. OF SHEETS	13
SHEET NO.	13
DATE	2014.11.13
PROJECT NO.	13854-0000-0000
PROJECT NAME	GOLDEN GATE BRIDGE
PROJECT LOCATION	SAN FRANCISCO, CALIFORNIA
PROJECT DATE	2014.11.13

PROJECT NO.	13854-0000-0000
PROJECT NAME	GOLDEN GATE BRIDGE
PROJECT LOCATION	SAN FRANCISCO, CALIFORNIA
PROJECT DATE	2014.11.13
PROJECT STATUS	35% DESIGN
PROJECT OWNER	WIDE PACIFIC
PROJECT ENGINEER	WIDE PACIFIC
PROJECT DATE	2014.11.13

Figure 4. Demolition and Site Preparation

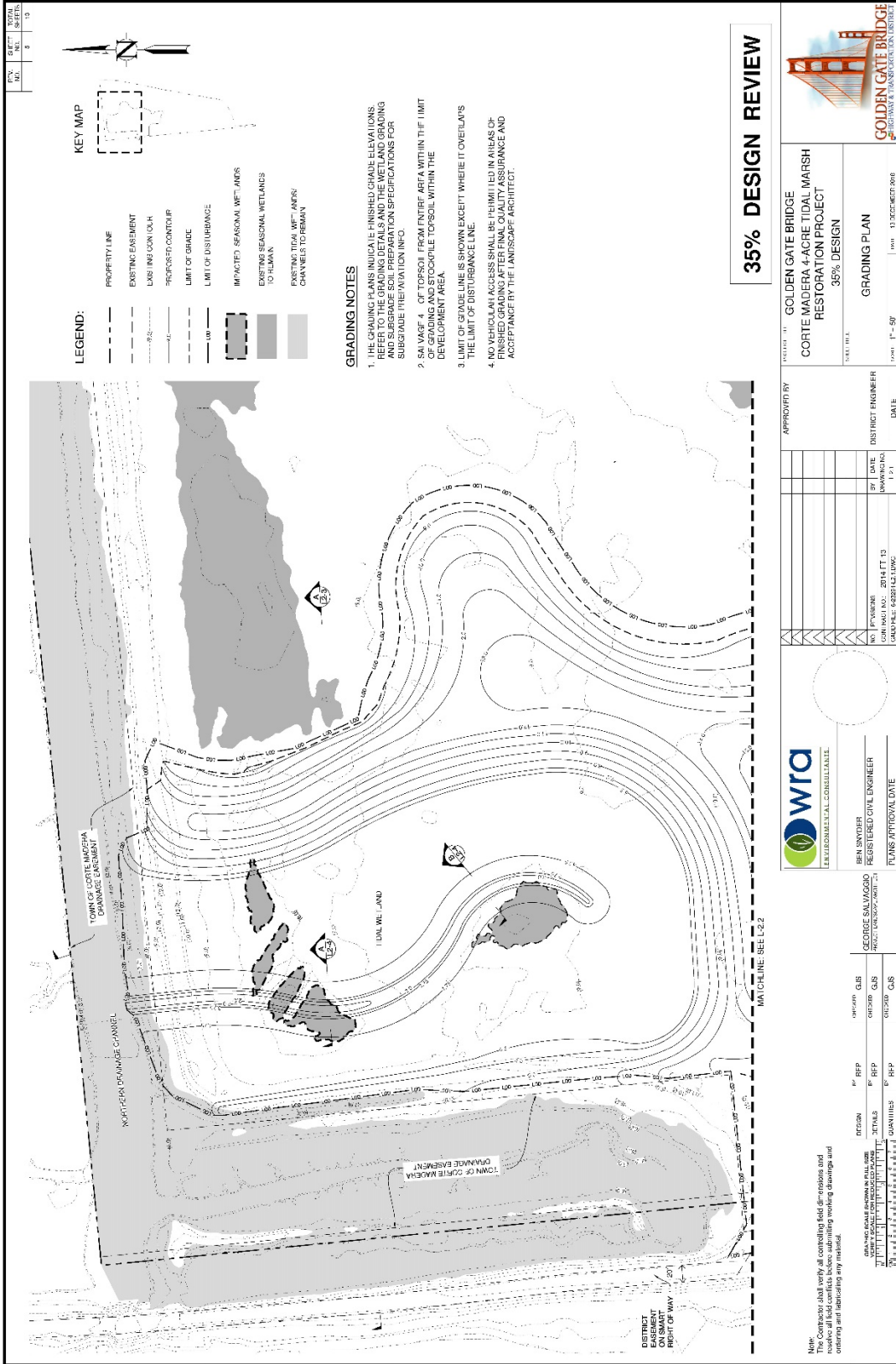


Figure 5. Grading Plan

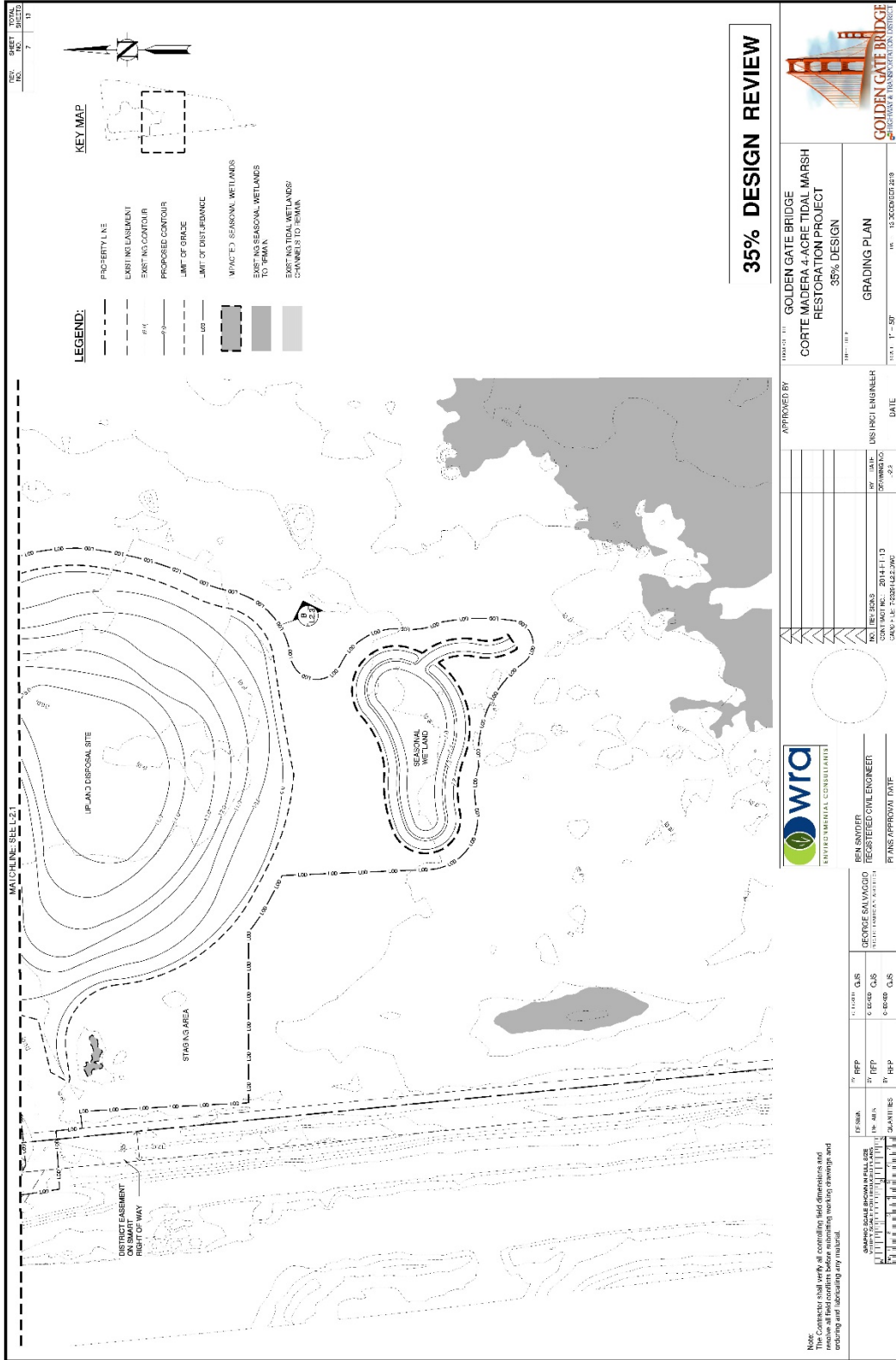


Figure 6. Grading Plan (cont.)





USGS 7.5' Quad: SAN RAFAEL (1993)  
 Legal Description: CORTE MADERA Land Grant

0 600 1,200 Feet

0 200 400 Meters

Source: Microsoft Corporation (2019), DigitalGlobe CNES (2019), Distribution Airbus DS (2019), GANDA GIS (2018)



**Figure 8. Previous Survey Map**  
 Golden Gate Bridge, Highway and Transportation District Cortez Madera  
 4-Acre Tidal Marsh Restoration Project  
 (Contract No. 2014-FT-13)

Town of Cortez Madera  
 Marin County, California





## Appendix B: References Cited

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# Cultural Resources Report

## WETLAND RESTORATION DESIGN AND PERMITTING SUPPORT SERVICES AT CORTE MADERA ECOLOGICAL RESERVE

### CORTE MADERA, MARIN COUNTY, CALIFORNIA

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## 1.0 INTRODUCTION

This report presents the results of the cultural resources investigation conducted by Garcia and Associates (GANDA) for the proposed Wetland Restoration Design and Permitting Support Services at Corte Madera Ecological Reserve, Professional Service Agreement PSA No. 2014-FT-13 (Project) in Marin County, California (Figures 1 and 2). The Golden Gate Bridge, Highway, and Transportation District (District) proposes to restore seasonal and tidal wetlands within a 72-acre parcel located adjacent to the Corte Madera Ecological Reserve and the former Muzzi Marsh. As such, cultural resources must be addressed in accordance with the California Environmental Quality Act (CEQA) and Public Resources Code (PRC). This investigation documents efforts to identify cultural resources located within the Area of Direct Impacts (ADI) that may be considered historical resources as defined by CEQA and the California Register of Historical Resources (CRHR). “Cultural resources” is a general term applied to resources more than 45 years old (standard in cultural resources studies). “Historical resources” is a legal term only used for resources that meet the CRHR criteria.

This report provides a description of the background research and field survey methods, Native American consultation, and the results of the efforts to identify cultural resources within the ADI. This investigation resulted in the identification of one cultural resource, a previously unrecorded segment of P-21-002618 (Northwestern Pacific Railroad [NWPRR]) within the ADI.<sup>1</sup> In 2013, the California State Historic Preservation Officer (SHPO) determined that P-21-002618 (NWPRR), and associated railroad features, is ineligible for listing in the National Register of Historic Places (NRHP) (Roland-Nawi 2013). By extension, this segment of the NWPRR located within the ADI is considered ineligible for listing in the CRHR and is not considered a historical resource and does not need to be further addressed as part of this project. The California Department of Parks and Recreation (DPR) 523 forms for this resource have been updated to record the new railroad segment (Appendix A). No additional prehistoric or historic period archaeological resources or built environment resources over 45 years old were identified within the ADI.

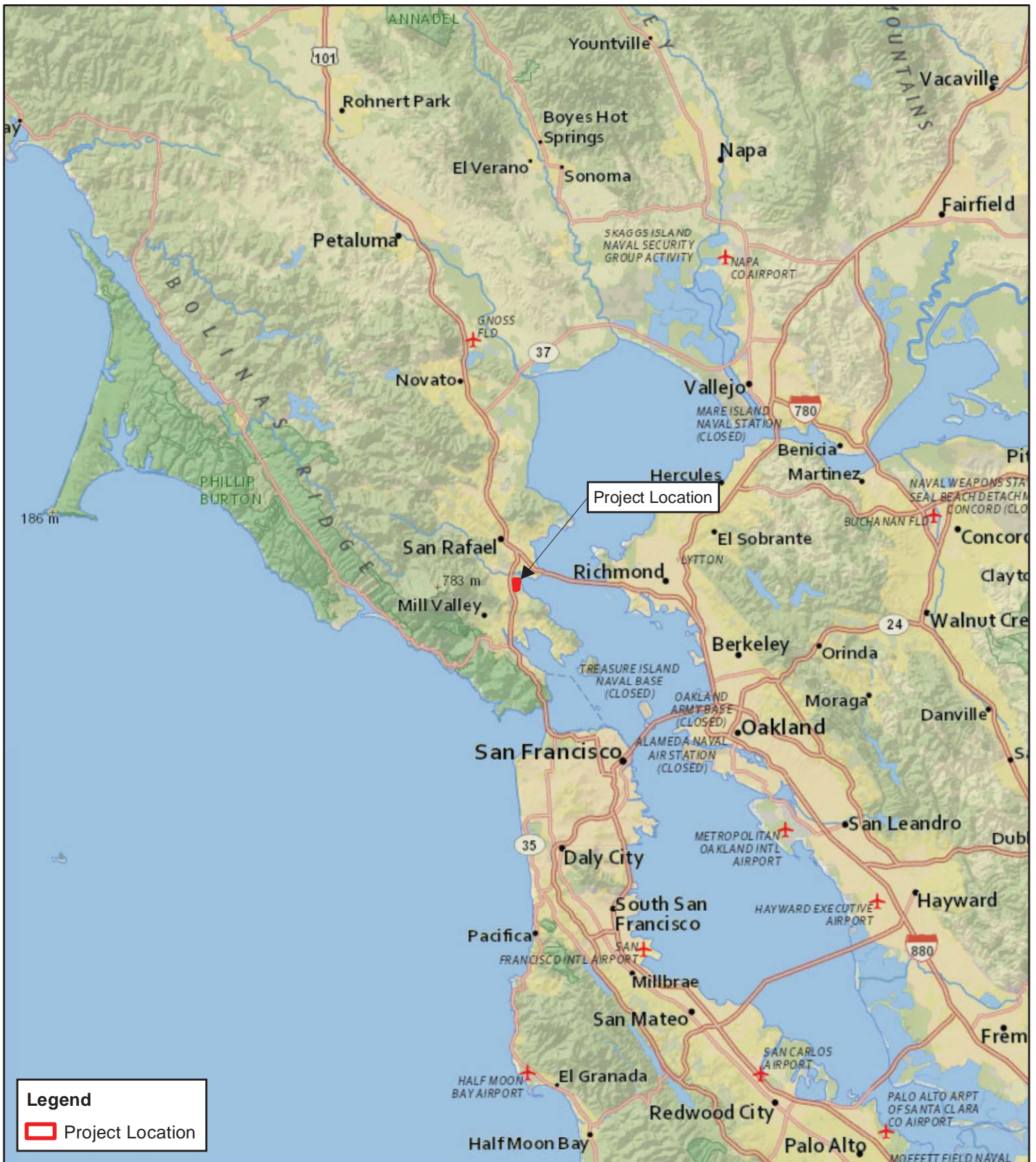
Therefore, this investigation concludes that there are no historical resources located within the ADI. Recommendations for encountering unanticipated archaeological resources are presented at the end of this report.

### 1.1 PROJECT LOCATION

The ADI encompasses a 72-acre parcel located in the town of Corte Madera, Marin County, adjacent to San Francisco Bay. The ADI is mapped on the United States Geologic Surveys (USGS) 7.5 minute San Rafael, California (1995) topographic quadrangle (Figure 2), is roughly triangular in shape, and surrounded on three sides by the marshlands of the Corte Madera Ecological Reserve and the former Muzzi Marsh. The Shorebird Marsh is located to the west of the parcel, the marshlands of the Corte Madera Ecological Reserve are situated to the north, and the former Muzzi Marsh abuts the eastern and southern boundaries of the ADI. The western property line borders the inside toe of the levee adjacent to the railroad right-of-way (ROW) owned by Sonoma Marin Area Rail Transit (SMART). The northern property boundary includes a flood control channel and drainage outfall easement to the Town of Corte Madera.

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<sup>1</sup> Segments of the NWPRR have been recorded in three counties and are associated with the following Primary and Trinomial Numbers: P-21-002618 (Marin County), CA-SON-2322H/P-49-002834 (Sonoma County), and CA-MEN-3111H/P-21-003663 (Mendocino County).



**Legend**

Project Location



USGS 7.5' Quad:  
SAN RAFAEL (1995)

Legal Description:  
T1N, R6W Sections 10, 15

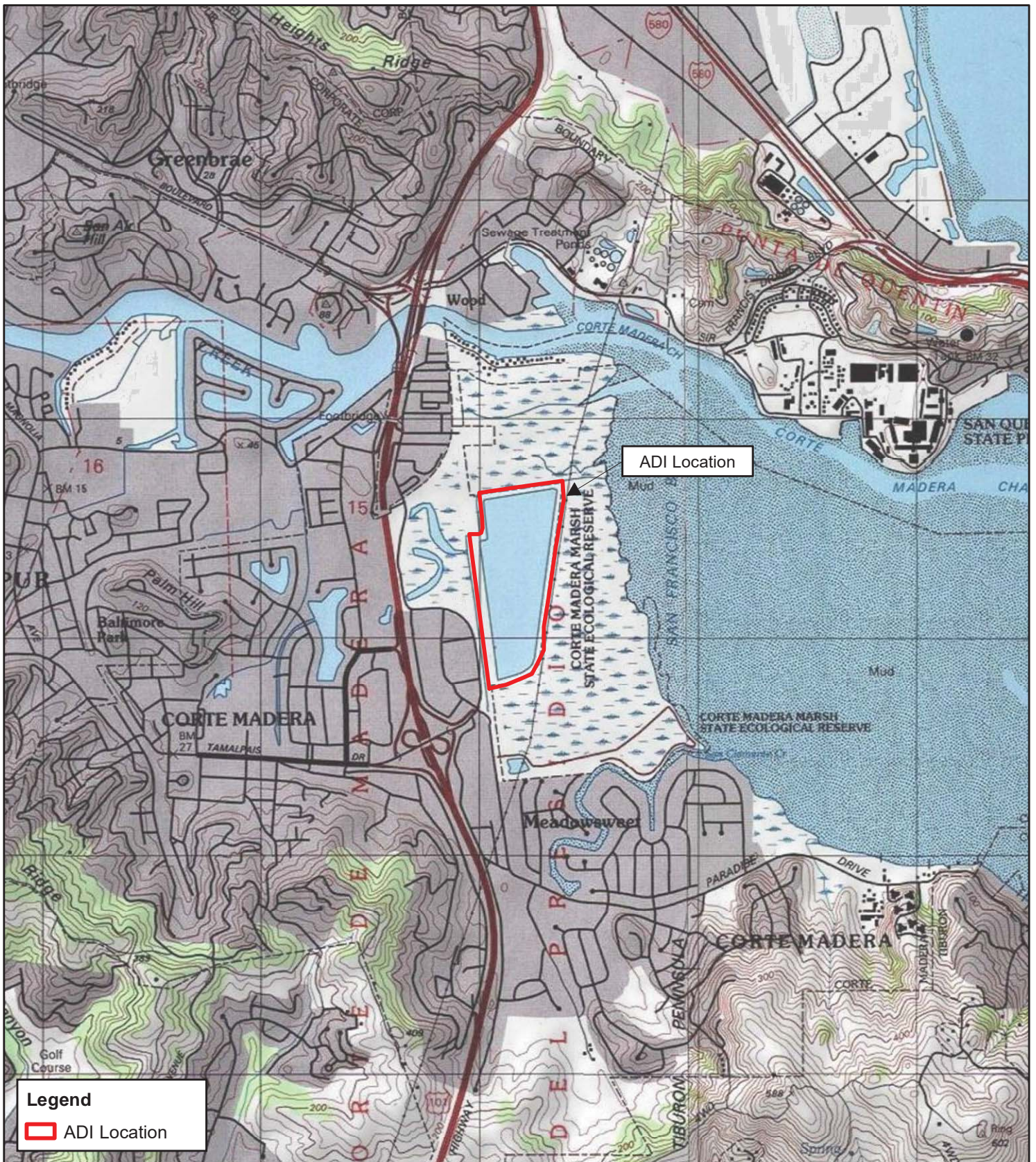


Wetland Restoration Design and Permitting Support Services at  
Corte Madera Ecological Reserve

**Figure 1. Project Vicinity**

Marin County, CA





**Legend**

ADI Location



USGS 7.5' Quad:  
SAN RAFAEL (1995)

Legal Description:  
T1N, R6W Sections 10, 15



**Figure 2. Area of Direct Impacts Location**

Marin County, CA

Wetland Restoration Design and Permitting Support Services at Cortez Madera Ecological Reserve

0 1,000 2,000  
Feet





The Corte Madera Ecological Reserve extends to the north and east of the flood control channel and includes an undeveloped graded parcel (Greene Parcel) and the former Heerdt Marsh.

The ADI can be accessed from the north via a gravel roadway along the railroad right of way (ROW), where it intersects with the eastern terminus of Industrial Way and a dirt parking lot owned by California Department of Fish & Wildlife (CDFW). The gravel roadway provides access to the Town pump station at a locked gate, crosses the drainage outfall and continues south towards San Clemente Drive. The eastern and southern levees of the 72-acre parcel border the restored Muzzi Marsh wetlands, now part of the Corte Madera Ecological Reserve and currently owned and managed by the CDFW. The Town of Corte Madera maintains a public access easement atop the southern and eastern levees from San Clemente Drive east and north into the Corte Madera Ecological Reserve and out to the San Francisco Bay shoreline adjacent to the Town drainage outfall.

## **2.0 PROJECT DESCRIPTION**

The District proposes to restore wetland habitat to portions of the ADI. Three restoration alternatives were developed: Alternative 1 provides the minimum amount of required tidal marsh acreage; Alternative 2 creates the maximum amount of tidal marsh that is feasible without significant off-haul; and Alternative 3 balances existing and future tidal creation and seasonal wetland habitat. These three alternatives were also evaluated for modifying public access through raising the elevation or relocating existing easements. Alternative 1A includes 4.9 acres of new tidal marsh, while Alternative 1B includes 4.9 acres of new tidal marsh and a raised public access easement to protect from rising sea level. Alternative 2A would include 30.7 acres of new tidal marsh and a raised public access easement. Alternative 2B would include 32.9 acres of new tidal marsh and relocation of the public access easement to disposal area. Alternative 3A includes 20.5 acres of new tidal marsh and, 7.5 acres of seasonal wetland. Alternative 3B includes 22.5 acres of new tidal marsh, 7.5 acres of seasonal wetland, and the relocation of the public access easement to a proposed centralized 5.5-acre park in upland area of the site.

### **2.1 AREA OF DIRECT IMPACTS (ADI)**

The horizontal ADI encompasses the 72-acre parcel where the seasonal and tidal wetlands will be restored and includes the full extent of all project activities. As such, the ADI is defined as the entire footprint of the Project area where ground disturbing activities will occur (Figure 3). The vertical ADI varies within the Project area and is expected to occur primarily within dredge material that was disposed within the ADI during the 1970s. Based on the geotechnical boring data, it is estimated that the dredge soil overburden is 1 to 5 feet thick throughout the ADI, with the exception of the levees, which are comprised of 6 to 8 feet of fill. Restoration activities that require ground disturbances are listed below. All excavated material will be disposed of within the ADI and distributed in the northwest portion in existing upland areas or along the outer eastern levee. The excavated material will be used to create a natural contour and facilitate wildlife refuge and public access. Direct impacts will include the following:

- Excavations will occur throughout the site to create new tidal marsh and will remove 1 to 3 feet of material.
- Excavation will also include the creation of a primary breach at the northern drainage channel and may include a secondary breach along the southern boundary of the ADI.
- Excavation may include the creation of new seasonal wetlands, which will involve the removal of 4 to 6 inches of material.
- In general, excavated material will be placed in the northwestern portion of the ADI or along the outer eastern levee.



USGS 7.5' Quad:  
 SAN RAFAEL (1995)

Legal Description:  
 T1N, R6W Sections 10, 15



Wetland Restoration Design and Permitting Support Services at  
 Corte Madera Ecological Reserve

**Figure 3. Area of Direct Impacts**

Marin County, CA



### **3.0 REGULATORY CONTEXT**

Cultural resources may be determined to be significant if they meet national, state, or local criteria, either individually or in combination. Resource evaluation criteria are determined by the compliance requirements of each specific project. Applicable state and local government policies and significance criteria are briefly presented below.

#### **3.1 STATE REGULATIONS AND CRITERIA**

##### **3.1.1 California Environmental Quality Act (CEQA)**

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally determined eligible for the NRHP, the CRHR, or local registers. CEQA further defines a “historical resource” as a resource that meets any of the following criteria:

- A resource listed in, or determined to be eligible for listing in, the NRHP or CRHR.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- A resource identified as significant (e.g., rated 1–5) in a historical resource survey meeting the requirements of PRC Section 5024.1(g) (Department of Parks and Recreation [DPR] Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered “historically significant” if it meets the criteria for listing on the California Register of Historical Resources (CEQA Guidelines Section 15064.5).

##### **3.1.2 California Register of Historical Resources (CRHR)**

The CRHR is a listing of State of California resources that are significant within the context of California’s history, and includes all resources listed in or formally determined eligible for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or national level under one or more of the following criteria defined in the California Code of Regulations Title 14, Chapter 11.5, Section 4850:

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States (Criterion 1); or
- It is associated with the lives of persons important to local, California, or national history (Criterion 2); or

- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion 3); or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4).

A cultural resource's significance must be demonstrated under one of the CRHR criterion described above, and it must retain its historic integrity. Cultural resources integrity is determined using the CRHR's seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The CRHR criteria are tied to CEQA, as any resource that meets the above criteria and retains its integrity is considered to be an historical resource under CEQA.

### **3.1.3 Regulations Concerning Discovery of Human Remains**

California Public Resources Code §5097.98 (Notification of Native American human remains, descendants; disposition of human remains and associated grave goods) mandates that the lead agency adhere to the following regulations when a project results in the identification or disturbance of Native American human remains:

- a) Whenever the Native American Heritage Commission (NAHC) receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.
- b) Whenever the Native American Heritage Commission is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent, and the mediation provided for in subdivision (k) of Section 5097.94 of the PRC fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property, in a location not subject to further subsurface disturbance.
- c) Notwithstanding the provisions of Section 5097.9 of the PRC, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (l) of Section 5097.94, shall be exempt from the requirements of the California Environmental Quality Act [Division 13 (commencing with Section 21000)].
- d) Notwithstanding the provisions of Section 30244 of the California Coastal Act, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (1) of Section 5097.94, shall be exempt from

the requirements of the California Coastal Act of 1976 [Division 20 (commencing with Section 30000)].

### **3.1.4 Marin Countywide Plan (2007)**

The Marin Countywide Plan was adopted in 2007 and discusses the preservation of historical and archaeological resources under socioeconomic policies in Section 4.13: Historical and Archaeological Resources (Hinds 2007). Marin County maintains a checklist used by planners for all new construction, demolition, and modifications to determine if the proposed work is located within a known archaeological site, historic building, and/or district. These review procedures ensure that proposed development projects comply with state and county conservation policies regarding the identification and protection of cultural resources (Hinds 2007:4-131). The County of Marin's Countywide Plan (2007-2050) states the following policies are applicable to cultural resources identified within Marin County:

- Policy HAR-1.1 Preserve Historical Resources:  
Identify archaeological and historical resource sites.
- Policy HAR-1.2 Document Historical Information:  
Provide documents, photographs, and other historical information whenever possible to be catalogued in the Anne T. Kent California Room in the Marin County Free Library.
- Policy HAR-1.3 Avoid Impacts to Historical Resources:  
Ensure that human activity avoids damaging cultural resources.
- Policy HAR-1.4 Participate in Historical Preservation Efforts:  
Work with federal, State, and local agencies, and interested individuals, groups, and educational organizations to obtain funding and employ other methods to preserve archaeological and historical sites.
- Policy HAR-1.5 Regulate Alteration of Historical Buildings:  
Limit the ability to modify historical structures, and require development to respect the heritage, context, design, and scale of older structures and neighborhoods.

## 4.0 BACKGROUND

This section presents the environmental, prehistoric, ethnographic, and historic-period contexts for the ADI. This background information is described here because it provides the context within which cultural resources are assessed for their potential significance and allow the cultural resources specialist to assess the sensitivity of the ADI for various types of prehistoric and historic archaeological and historic period built environment resources.

### 4.1 ENVIRONMENTAL

The ADI is situated within the San Francisco Bay region, on the Marin Peninsula of the North Bay. The San Francisco Bay is part of a large estuary that includes San Pablo and Suisun bays and the Carquinez Strait. The ADI is surrounded on three sides by the Corte Madera Marsh Ecological Reserve, which is bordered to the east by the San Francisco Bay, Corte Madera Creek to the north, and San Clemente Creek to the south. The ADI is classified as a northern coastal salt marsh with vegetation consisting of cordgrass, pickleweed, salt grass, coyote bush, gum-plant, marsh rosemary, dock, annual grasses and herbs, and various non-native shrub and grass species (i.e., *Arundo donax*). Heavy rains from October to April provide the vast majority of annual precipitation. The climatic regime is Mediterranean, with hot, dry summers and cool, wet winters. Temperature extremes, however, are muted by the oceanic influence. Temperatures stay moderate most of the year, rarely breaking 90 degrees Fahrenheit during summer months.

Based on historical ecology mapping data for the San Francisco Bay Area, two hundred years ago, the ADI looked significantly different than it does today (EcoAtlas 2013). Near the end of the eighteenth century, the ADI was inundated with deep water and tidal marsh. These historical Bay marshlands would have provided an abundance and diversity of natural subsistence resources, such as plants, fish, shellfish, and large mammals. The Coast Miwok, whose ethnographic territory encompasses this region, took advantage of the availability and diversity of these coastal resources. By the 1900s most of the marshlands had been subject to large-scale development.

### 4.2 PREHISTORY

The following is a summary of San Francisco Bay Area prehistory and cultural sequence, followed by a discussion of the archaeology specific to the ADI. Serious efforts at constructing a prehistoric cultural chronology or taxonomy can be traced to excavations in the 1930s during excavations in the Lower Sacramento and Upper San Joaquin Valley (Lillard, Heizer, and Fenenga 1939). The observations of three cultural stratified artifact assemblages and burial lot associated grave goods lead to the development of what would become the Early, Middle, Late taxonomy of the Central California Taxonomic System (CCTS) (Gerow 1968). These were originally referred to as “Horizons” (Beardsley 1948, 1954). This caused some confusion, because it mixed the cultural and temporal designations into one term.

Fredrickson’s (1973, 1993) taxonomic system was originally designed to try and allow enough flexibility to be applicable to many different cultural chronological situations found in different regions of the state. This was achieved by defining broad temporal *periods* (Archaic, Emergent) that would be defined by regional economic *patterns*. Patterns are defined by an assemblage of mostly functional artifacts such as projectile points and groundstone artifacts. These patterns are then defined more locally as *aspects* which are usually differentiated by stylistic difference in artifacts.

Miliken et al. 2007 use a hybrid system of these two taxonomies that combine the Early, Middle, Late periods of the CCTS with the patterns and aspects of Fredrickson’s system. Fredrickson’s Paleo-

Indian, Archaic, and Emergent period system covers a much longer period of time and is commonly used in northern Marin and Sonoma counties. The CCTS terminology has been more commonly used in shell midden excavations near the San Francisco Bay and in southern Marin County. Both period terms are presented here with Fredrickson's terms in parenthesis.

#### **4.2.1 Pleistocene/Holocene Transition to Middle Holocene (Paleo-Indian and Early Archaic), 8000 BC to 3500 BC**

Cultural chronologies of the San Francisco Bay Area typically start with the Early Period around 3500 BC. However, areas surrounding the San Francisco Bay Area have evidence for occupations that stretch back much further. The Post Pattern of the Paleo-Indian period is poorly defined but has been identified by fluted points similar to Clovis and eccentric crescents at places like Warm Springs in Sonoma County and Borax Lake in Lake County (Hildebrandt 2007; White 2002). Little is known of life ways in this time period and no evidence of it has been found in Marin County. The Borax Lake Pattern of the Early Archaic is better defined and found in areas throughout the North Coast Ranges. It is characterized by large wide stemmed projectile points, handstones, and milling slabs (Hildebrandt 2007; White 2002). Just like the Post Pattern, no evidence from this period has been found in Marin County.

It is unlikely that early Holocene occupations would be represented within archaeological deposits found throughout the North Coast Ranges (Borax Lake), the southern San Joaquin Valley (Tule Lake), the Channel Islands (Paleo-coastal traditions), the Mojave Desert (many Great Basin Stemmed Series sites), and the Sierra Foot Hills (Skyrocket site), but be absent from the San Francisco Bay Area or Marin County. It has long been recognized that the formation of the San Francisco Bay, and the sea level rise that inundated large portions of the coastline likely resulted in burying sites from this period. Additionally, archaeological deposits of this antiquity are likely deeply buried under alluvial fans and floodplain deposits. Early Holocene sites along the periphery of the San Francisco Bay Area have been found in these settings (Rosenthal and Meyer 2004).

#### **4.2.2 Early Period (Middle Archaic), cal. 3500-500 BC**

The first evidence of human occupation in Marin County dates to the Early Period. Radiocarbon dates from sites CA-MRN-17 and CA-MRN-152 reveal occupations dating back 3,000 to 5,000 years ago (Schwitalla and Powell 2014). However, well-defined Early Period components or artifact assemblages are not available from these sites. A recently excavated prehistoric site, CA-MRN-67, has produced a well-defined and robust Early Period component, dating back 5,000 years (Schwitalla and Powell 2014). Hundreds of burials, a vast groundstone assemblage, and extensive evidence of charmstone manufacturing are all present. This site is located in Larkspur, approximately one mile to the northwest of the ADI.

Archaeologists at MRN-67 (Schwitalla and Powell 2014) have noted that the Early Period assemblage at that site closely resembles the Windmill Pattern present in the Early Period of the Sacramento Valley (Beardsley 1954). The richness and specialized nature of the assemblage and the artifact manufacturing that took place at the site indicate that social complexity, well established trade networks, and some form of sedentism were already present in Marin County during this time period. Marker artifacts from this time period include rectangular *Haliotis* and *Olivella* beads; various stemmed, corner notched, and leaf-shaped points; and finely crafted charmstones.

During excavations at the Middle Period site CA-MRN-27, in Tiburon, Tom King studied 49 burials and the level of social stratification that was evident in regards to the presence of grave goods. The artifact distribution and type strongly suggested clear status differentiation and the development of social organization that centered on an increase in sedentism, access to and storage of resources, and

the subsequent consolidation of wealth (Bieling 1998:45). CA-MRN-27 is located approximately 2.0 miles southeast of the ADI.

#### **4.2.3 Middle Period (Upper Archaic), cal. 500 BC-AD 1050**

The representative adaptive cultural pattern in Marin for the Middle Period is the Berkeley Pattern. Spanning about 2,500 to 1,300 years ago, this pattern generally resembles earlier cultural patterns; however, there does appear to be an increase in larger and more frequent settlements. Fredrickson (1973) defined the Berkeley Pattern by the economic adaptive strategies developed around the extensive and rich resources of the San Francisco Bay Area during this time period. There were numerous marshes, tidal wetlands, and inland areas that offered an abundant resource base due to the slightly wetter period of prehistory during the late Holocene. Out of the Berkeley Pattern emerged larger occupation sites located near water sources with the presence of projectile points and atlatls (spear-throwers) (Fredrickson 1989). This is demonstrated by the large number of shellmounds that Nels Nelson identified along the entire perimeter of San Francisco Bay (Nelson 1909).

Split beveled and saucer *Olivella* beads replace the rectangular shell beads that were widely used over the previous 3,000 years, representing a dramatic cultural change in the area. Mortuaries that date to this period contain fewer grave goods and cut *Olivella* beads are less common than spire-topped *Olivella* beads (Milliken et al. 2007). Artifact types include *Olivella* saucer beads; circular *Haliotis* ornaments; new forms of bone tools, including those for coiled basketry; barbless fish spears; elk femur spatulas; and tubes and whistles.

Berkeley Pattern assemblages generally show a decrease in the presence of milling slabs and handstones and a shift to the mortar-and-pestle technology, indicating an increased dependence on acorns as a staple. However, millstone technology continues to be in use in the North Bay region during this time (Milliken et al. 2007:115). While gathered resources gained importance during this period, the continued presence of projectile points and atlatls in the archaeological record indicates that hunting was still an important activity (Fredrickson 1973).

#### **4.2.4 Late Period (Emergent Period), ca. AD 1050-1550**

The Middle to Late transition and the Late Period in the San Francisco Bay Area are characterized by evidence of elaborate social organization and the formation of small, autonomous socio-political groups called tribelets. The Augustine adaptive pattern exhibits an increase in ceremonialism, social organization, and stratification. An economic relationship was maintained among the many small groups, and trade was frequent between the coastal groups and the valley and bayshore groups. Trade was clearly an important element of this adaptation and is evident in the various types of obsidian from the North Bay region, including the Napa, Annadel, and Borax Lake sources, and shell beads (Hylkema 2002). Late Period archaeological sites are characterized by a general increase in population and settlements, a more regularized exchange system, and more evidence of ceremonialism. A widespread series of droughts, known as the Medieval Climatic Anomaly, from AD 800 to 1300, may have affected the San Francisco Bay Area and surrounding regions (Fagan 2003; Lightfoot and Luby 2002).

Sites associated with the Augustine Pattern demonstrate that during this period, local populations became more dependent on the acorn, evident through the prevalence of mortars, pestles, and hopper mortars throughout the archaeological record. Other important artifacts that are representative of this time period include smoking pipes, harpoons, baked clay manufacture of pottery vessels and figurines, coiled basketry, clamshell disks, and pine nut beads. The use of small projectile points, especially Rattlesnake corner-notched and then Desert side-notched series points denote the adoption of the bow-and-arrow (Moratto 2004). This period is also represented by the



presence of *Olivella* callus cup beads, banjo *Haliotis* ornaments, flanged pipes, and the bow-and-arrow (Milliken et al. 2007).

#### 4.2.5 Coast Miwok Ethnography

Coast Miwok territory encompassed the area along the coast and inland between Duncan's Point north of Bodega Bay southward to San Pablo Bay in Marin and Sonoma counties and their territory extended as far inland as the Napa River. Coast Miwok villages are mainly located near watercourses and not necessarily near the Pacific coast (Kelly 1978). According to Milliken (2009), the area around San Rafael valley was held by the Augusto tribe. Portions of the Lagunitas, Miller, San Anslemo, and San Rafael Creek watersheds were all part of the Augusto territory. Four village names are recorded to the north of Corte Madera: the site of Mission San Rafael (*Awani-mi*), along Gallinas Creek (*Enu*), and two along Miller Creek (*Puyuku* and *Shotomoko-cha*) (Milliken 2009). No named villages are recorded along Corte Madera Creek in the ethnographic literature. The contact period history and missionization of the Coast Miwok and the Augusto, in particular, began with the founding of *Mission San Francisco de Asís* (Mission Dolores) in San Francisco. Between 1794 and 1814, 283 people from the Augusto tribe were baptized at this mission (Milliken 2009); later these tribal people helped found *Mission San Rafael Arcángel*.

Coast Miwok political organization revolved around village life. In larger villages, the chief held a non-hereditary position. The chief was responsible for taking care of the villagers, advising them, and overseeing activities in the mixed dance house. The reigning chief and four elderly women tutored upcoming chiefs (Kelly 1978). Other leaders of the Coast Miwok included the woman chief and *maien*. The woman chief functioned primarily as a ceremonial leader deeply involved in the Bird Cult that presided over the Acorn Dance and Sunwele Dance. The *maien* was the head of the female ceremonial house. She directed construction of new dance houses, hauled wood for festivals and events, supervised the preparation of food for special events, sent invitations for dances, and often selected dance performers (Kelly 1978).

Coast Miwok villages were composed of various structures including residential dwellings, sweathouses, and secret society dance houses. Residential dwellings were conical structures framed with willow or driftwood and thatched with bunches of grass, tule reeds, or rushes. Each house held from six to ten individuals and had a central stone hearth and a smoke hole in the roof. Sweathouses were round semi-subterranean structures recessed into the earth four to five feet. A framework of poles supported a brush, grass, and earth covering. Secret society dance houses were much like the sweat lodges. One type was built for mixed gender dances, and another was for female secret society dances (Kelly 1978).

Today, members of the Coast Miwok together with members of the Southern Pomo make up the Federated Indian of Graton Rancheria (FIGR). Members of FIGR are active in preserving native plant landscapes, plant and animal resources, archaeological resources, and places of important tribal significance associated with their heritage throughout Marin County and southern Sonoma County.

### 4.3 HISTORIC CONTEXT

The ADI was historically located under the San Francisco Bay, as water extended as far inland as present day Corte Madera Town Center shopping mall. Although naturally marshy, the edges of the Bay were filled in over time by sediment flushed into the bay by hydraulic gold mining in the Sierra Nevada during the 1850s Gold Rush. Later, diking, draining, and land filling extended dry land east, toward the San Francisco Bay, resulting in the exposure of the ADI and creating dryer land, though it still remained on the swampy margin of the bay. The marshland in which the ADI is located, now referred to as Muzzi Marsh after a past land owner, was also once bisected by numerous deep

winding channels, which became filled by sediment and landfill, leaving only major creeks, like Corte Madera and San Clemente creeks (Harris 2008).

Prior to European settlement, the area of Marin County where the town of Corte Madera and the ADI is now located was inhabited by the indigenous Coast Miwok people, who actively used the shoreline of the bay for hunting and gathering plant, shellfish, and animal resources from the marshlands. These people were subjugated by the Spanish Catholic Mission system that established the nearby Mission San Francisco de Asís (Mission Dolores) in 1776 and its Marin subsidiary, Mission San Rafael Arcangel, in 1817. As part of this Spanish colonization, the *Presidio of San Francisco* was also established and used the area around Corte Madera as a source of wood, from which lumber was milled and shipped to the Presidio from the Tiburon Peninsula. “Corte Madera” means “cut wood,” which gave the area, and later the town, its name (Corte Madera History & Heritage Group 2002).

Upon the transfer of power in California from Spain to Mexico in 1821 and the subsequent secularization of the missions in 1832, the land previously held by the Catholic Church was granted to private owners by the Mexican government. The present-day town of Corte Madera was located within the boundaries of *Ranch Corte Madera de Presidio*, with the ADI sitting near the rancho’s northern edge, which was delineated by the course of Corte Madera Creek (Dodge 1892). Rancho Corte Madera de Presidio was granted to John Reed in October of 1834; the first grant to be made north of San Francisco. Reed’s own homestead was located in the area of present-day Mill Valley and the rancho featured a saw mill, brickyard, and stone quarry. It also boasted boundless natural resources which produced materials and goods that could be shipped to San Francisco via water. The Rancho boasted deep-water anchorage off Tiburon peninsula and at the mouth of Corte Madera Creek. The Corte Madera area remained vacant and served primarily as pastureland for Reed’s large herds of horses and cattle. Reed died in 1843, and the rancho’s ownership passed to his four minor aged children. The children and Reed’s widow moved to San Francisco, leaving the rancho in the hands of a few regents (Corte Madera History & Heritage Group 2002).

Eventually, in 1850, the Reeds sold Rancho Corte Madera to Benjamin Rush Buckelew, who simultaneously purchased the adjacent ranchos *Punta de Quentin* and *Nicasio*. Buckelew had made a fortune as a jeweler and watchmaker in San Francisco during the Gold Rush and later owned and operated the newspaper, *The Californian*. His financial success was short-lived, however, and he lost the rancho within a few years. Although the Reed family managed to regain it through foreclosure, their own claim to Rancho Corte Madera was threatened. Unable to prove ownership of the entire extent of the rancho, the family was able to retain only the Tiburon peninsula, as far north as the line of San Clemente Creek. The other areas of the rancho, including the ADI, were known as *Reed Sobrantes*, or “lost lands.” The United States government declared them public lands and although the Reed family’s litigation eventually saw the accepted rancho boundaries extended as far north as Baltimore Canyon, the area was already overrun with squatters, especially near the shoreline (Corte Madera History & Heritage Group 2002).

In 1846, Corte Madera had become a significant port within the San Francisco Bay. Because of its deep channel through the shallow marsh at the edge of the bay, Corte Madera Creek was one of the few places where ships were able to anchor in order to load and unload cargo. Whaling ships commonly moored off the shoreline between journeys and steamboats shuttled building materials and food produced in Marin to San Francisco and brought manufactured goods back from the city. A small wharf at the mouth of the creek was used to transfer cargo from shore to ship. By the early 1860s, however, the lumber industry in Marin had denuded the land to such an extent that erosion began to silt up Corte Madera Creek making the deep channel more shallow and the shoreline anchorage obsolete.

In 1882, the railroad came through Corte Madera. The San Francisco & North Pacific Railroad had been established as early as 1869, heading north from Petaluma. It was not until 1879, that the line extended south from Petaluma to San Rafael, and not until 1882, under the name San Francisco & San Rafael Railroad (later the Northwestern Pacific Railroad ([NWPRR]), did it extend from San Rafael to Tiburon, passing through Corte Madera. The railroad carried primarily lumber, and later, provided passenger service. The first rail line ran over Alto Hill, through the Meadowsweet area to the southwest of the ADI (near the current intersection of Hwy 101 and Tamalpais Drive) and west into the center of Corte Madera, where the station was located. A second line was later built by Peter Donohue and served a station at Meadowsweet, without passing west through Corte Madera town center. That line ran atop a dike that Donohue constructed over the marshland. The dike runs along the western boundary of the ADI today and separates the location of the present-day Village Shopping Center from the marsh to the east.

Land ownership in and around Corte Madera experienced an upheaval in 1885, when the Secretary of the Interior finally upheld the Reed family's claim to the Rancho Corte Madera and Reed Sobrantes. Land speculators to whom the Reeds had sold quit-claim deeds out of financial necessity, suddenly found themselves in control of the land, and homesteaders who had established residence under the 1862 National Homestead Act found themselves without claims and unable to pay the high prices demanded by speculators to buy their land back legally. Through dealings with the speculators, the Reed family once again regained control of much of the original Rancho Corte Madera. Speculators also greased the wheels for many areas to be put under the control of the railroad (Corte Madera History & Heritage Group 2002).

From the 1860s to the 1920s, a large portion of the Corte Madera area was dominated by the holdings of the Reynegom and Pixley families, the former of which was able to maintain rights to their homestead, despite reallocation of land to the Reeds in the 1880s. Their ranch, later called Owl's Wood, covered a large area and ostensibly extended to the edge of the Bay, possibly encompassing the ADI; however, no real claim or use seems to have been applied to the marshy margins of the land. An 1873 map of Marin County by H. Austin and F. Whitney shows the ADI located on the very northern edge of Sausalito Township. No owner name was associated with the parcel, which is approximately located near the notations of section numbers 14 and 15 (Figure 4).

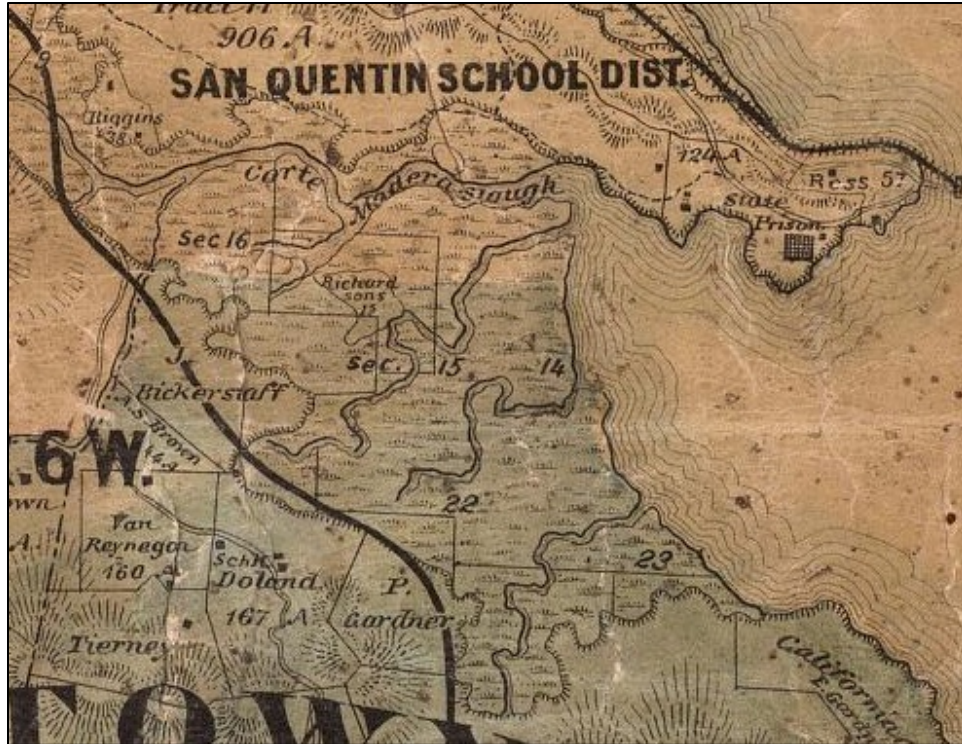


Figure 4. Excerpt of *Map of Marin County, California* by H. Austin and F. Whitney, 1873. Section numbers 14 and 15 indicate the approximate location of the ADI (Courtesy of David Rumsey Map Collection).

Starting in 1871, the undeveloped margins of the bay were utilized as recreation grounds. Filled and graded marsh land in vicinity of today's Town Park was developed by James McCue as a horse racing track, and the location was later used as a community baseball field where the local volunteer fire department team played. However, this occurred west of the ADI, illustrating how the waters of the San Francisco Bay extended considerably farther inland than they do today and that the ADI was even more marshy and unbuildable than its current condition.

In the late 1800s, landowners in and around the center of Corte Madera begin subdividing and selling lots, growing the town core. Minimal parceling of land occurred closer to the bay. An 1892 *Official Map of Marin County* illustrated the land where the subject parcel is located belonging to Thomas B. Valentine, et al. (Dodge 1892). Valentine was a speculator who claimed hundreds of acres of Rancho Corte Madera, including the claim that encompassed the ADI, which stretched from Corte Madera Creek to San Clemente Creek and northwest into the Baltimore Canyon area (Corte Madera History & Heritage Group 2002). Valentine acquired the land from the Reeds in the mid-1800s (Figure 5).



Figure 5. Excerpt of *Official Map of Marin County, California*, by George M. Dodge, 1892. (Courtesy of David Rumsey Map Collection).

Around 1900, the Sherman family (of Sherman Oaks, in Southern California) bought the property from Valentine and built a summer home called Overmarsh that, as its name implies, overlooked the marshlands. One of the Sherman daughters married local engineer Frank Keever, who saw great potential in the marshlands as pasture for growing hay and grazing cattle. In the late 1920s, he designed and installed a system of flood gates that drained 1,400 acres of marshland, drying out the area of the ADI to some extent. The Keevers subsequently went into the dairy business, with the newly drained pasture supporting their Meadowsweet Farm Dairy (Figure 6). The dairy provided employment for many locals during the Great Depression, but by 1940, the Keevers had divorced and sold Meadowsweet Dairy to Hugh Porter. The family home and surrounding land was sold to San Francisco businessman Fred Sanford. In 1937, Sanford sold 23 acres of the land to the town, and Corte Madera Town Park was created (Corte Madera History & Heritage Group 2002).



Figure 6. Late 1920s, looking west across the drained marshland that became the Meadowsweet Dairy pastures. The photograph was taken from a spot which is near the rear parking lot of what is present day Village Shopping Center, just west of the ADI. (Courtesy of Corte Madera History & Heritage Group 2002.)

A 1905 *United States Coast & Geodetic Survey Map* shows the state of the ADI at that time, with the San Francisco & North Pacific Railway (later NWPRR) line running north-south adjacent to the marshland, while Tiburon & San Rafael Boulevard run parallel to the rail line to the west (Figure 7). The map captures a moment just before great change came to Marin County. A year later, in 1906, the earthquake and fires that decimated much of San Francisco, sent refugees flocking to surrounding communities, including Corte Madera, which experienced a subsequent development boom. Still, the eastern edges of town remained marshy, and development did not spread in that direction. In 1907, both rail lines running through Corte Madera were absorbed by the Santa Fe & Southern Pacific railways and were merged into a subsidiary named the NWPRR. After the merger, broad-gauge electric trains ran simultaneously with the narrow gauge. All passenger service was shifted to the original San Francisco & North Pacific Railroad tracks and the station at the center of Corte Madera, while freight trains ran on the tracks that traversed the marsh adjacent to the ADI. Freight service on this line continued until about 1970 (Corte Madera History & Heritage Group 2002). Although it had experienced a population boom after the 1906 earthquake, Corte Madera remained a somewhat seasonal settlement.

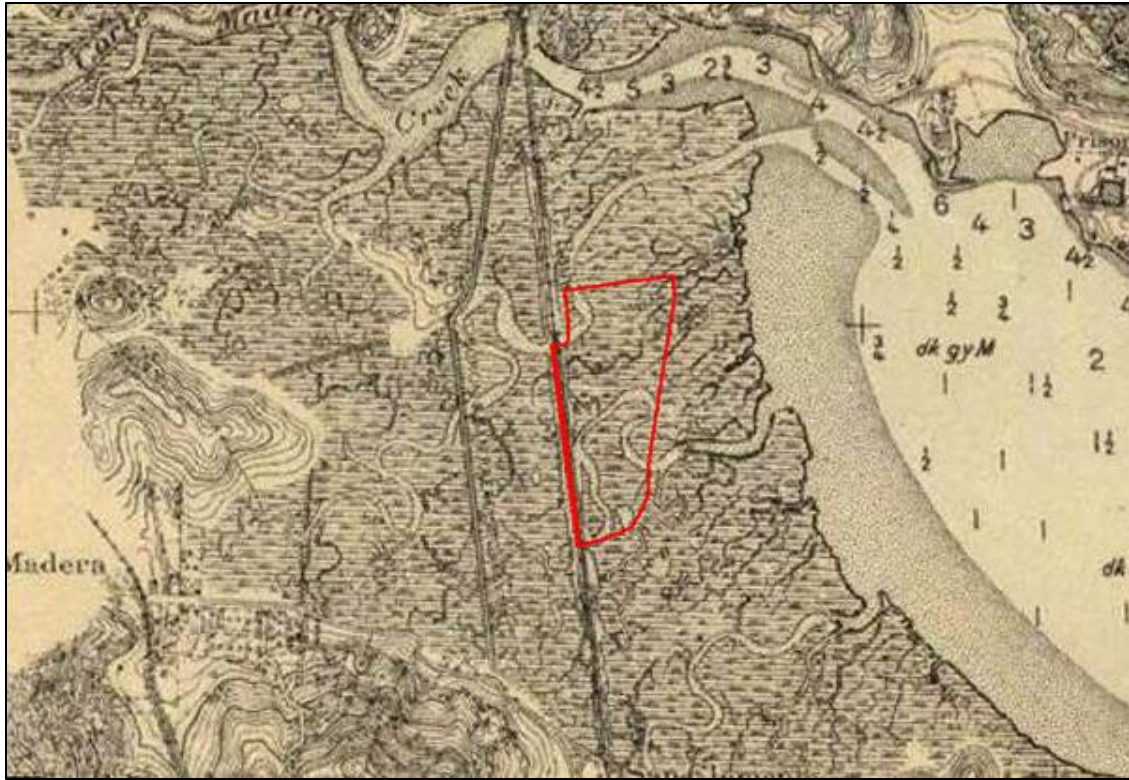


Figure 7. Excerpt from the 1905 *United States Coast & Geodetic Survey Map*. ADI in red.  
(Courtesy of David Rumsey Map Collection.)



Figure 8. Photograph of Corte Madera marshland, ca. 1913, looking north with Corte Madera Creek located at top. The approximate location of ADI is located just out of frame at middle right. (Courtesy of Corte Madera History & Heritage Group 2002.)

Although the marshlands at the edge of the Bay were largely unbuildable, locals found ingenious ways to make use of the semi-solid ground as real estate. In the 1920s, the Greenbrae Boardwalk was established along the south bank of Corte Madera Creek, just north of the ADI. It consisted of a community of floating arks, or flat-bottomed scows, which could be anchored in the mud flats. Structures that looked more like buildings than boats were built on top, creating a district that moved with the tide. Ark communities were popular around the bay starting in the 1880s and are a tradition continued in today's houseboat communities. The Greenbrae Boardwalk was the mooring point for up to 400 arks at its peak. Most were built elsewhere and floated to the boardwalk, which itself consisted of long planks connected end to end, forming an articulated floating walkway that could also move with the tide and the shifting of arks. The Greenbrae Boardwalk was known as the location of the 50-50 Club, which was established in 1940 and served as a community gathering place throughout the mid-twentieth century. In 1946, the boardwalk was purchased by the Greenbrae Land Company and more arks were moved to the area, many of which were subsequently evicted from the Lucky Point ark community by freeway construction in that location (Cardno Entrix 2013).

A 1926 *United States Coast & Geodetic Survey Map* shows little change in the ADI (Figure 9). A "cable and pipe line area" is noted just north of the parcel, near Corte Madera Creek, and "Detour" is noted to northwest of the parcel, indicating a rail junction near that point. A few years later, in 1929, Redwood Highway was constructed across the marshland. Like the freight rail line, it was built atop a dike, which barely raised the road bed above the high tide line. This new route replaced the old state highway that ran over Corte Madera Ridge and opened up only the second north-south route through Marin at the time. Transportation through Marin was improved yet again in 1937, when the Golden Gate Bridge opened, resulting in increased auto traffic along Redwood Highway (Figure 10).



The direct automobile access to San Francisco turned the towns of Marin into bedroom communities. A boom in year-round residents resulted in increased development of not only housing, but commercial construction, infrastructure, and community services. Corte Madera lost much of its rural nature and became a destination along the highway, though its eastern fringe remained wild marshland (Corte Madera History & Heritage Group 2002).



Figure 9. Excerpt from the 1926 *United States Coast & Geodetic Survey Map*. (Courtesy of David Rumsey Map Collection.)



Figure 10. Looking northeast from Highway 101 (Redwood Highway) traversing the ADI, ca. 1930. (Courtesy of Corte Madera History & Heritage Group 2002.)

In 1945, marshlands still extended from the bay to the train station near town center. County Planning Department made plans to build a regional airport on the Corte Madera marshlands, east of Redwood Highway, but the project was never realized. The marshlands remained undeveloped with only one road, Paradise Drive, extending east of the highway, well south of the ADI. It was originally a short 0.75-mile road leading to the Union Salt Works plant. The road was later used during World War II as a two-lane paved road accessing the Tiburon Net Depot. It became a county road in 1954, and today is a looping road that provides access to a residential neighborhood north of Tiburon.



Figure 11. Looking north from Christmas Tree Hill toward San Quentin, across ADI, 1945. (Courtesy of Corte Madera History & Heritage Group 2002).

World War II spurred another population boom in Marin County. To meet demands for housing and other construction, developers undertook the filling and grading of additional portions of the Corte Madera marshlands. Correspondingly, the town annexed lands east of the highway in 1947. The Marina Village neighborhood, south of the ADI, was built on a site that had been graded previously for proposed use as a government munitions storage facility and, within ten years, most of the rest of the marshlands and tidal sloughs had been converted to dry land using fill taken from local hillsides. This realized almost all of the land west of the railroad dike, leaving only the fringe of marsh on which the ADI is located in its near-original state (Figure 12). Developer Jerry Rusalem was one of the most prominent influences on the marshlands at that time; responsible for building a shopping center along the highway and Madera Gardens housing development in 1952, and Paradise Shopping Center in 1962. Other housing developments located on filled marshland included Marin Estates, Mariner Cove, Mariner Green, Mariner Highlands, and Vista del Bahia. The marshlands continued to flood and flood gates were finally installed in the 1960s to curtail tidal action (Corte Madera History & Heritage Group 2002).



Figure 12. Aerial view, looking north, ca. 1950. The ADI is located at center left. (Courtesy of Corte Madera History & Heritage Group 2002.)

The current location of The Village Shopping Center, directly adjacent to the ADI, was not developed until as late as the 1980s. In the mid-1960s, it was proposed as the location of a garbage dump, but the plan was not approved. Later, a discount shopping center was proposed for the site, but was also rejected. Around 1970, construction of the Larkspur ferry landing began, and the 72-acre parcel, including the adjacent Muzzi Marsh, was purchased by the District, which used it as a deposit area for soil and sediment dredged from the new ferry slip and navigational channel (Marin Audubon Society 2014). Later, the District restored the tidal action of the marshland as mitigation for the construction of the Larkspur Ferry Terminal (Figure 13). Community pressure driven by environmental conservation sentiments, kept the shopping center restricted in size and configuration. Outer levees were breached after decades of use as pastureland, and bay water was allowed to infiltrate the land. Wildlife habitat enhancement resulted in the creation of Shorebird Marsh Park on the northern edge of the shopping center and immediately west of the ADI. With these changes, the marsh has returned to its original levels of vegetation and channels have developed again. Muzzi Marsh is now the largest portion of tidal wetland in the Corte Madera Creek Watershed (Harris 2008; Epke 2012).



Figure 13. Looking northeast from Christmas Tree Hill, across the ADI (center), toward the Richmond-San Rafael Bridge, 1982. (Courtesy of Corte Madera History & Heritage Group 2002).

## 5.0 METHODS AND RESULTS

The methods used to conduct the records search, Native American consultation, geoarchaeological analysis, and field survey for this investigation, and the results of those efforts are described in detail below.

### 5.1 RECORDS SEARCH

#### 5.1.1 Records Search Methods

On June 17, 2014, GANDA senior archaeologist Cassidy DeBaker, M.A., conducted a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University, Rohnert Park (File No. 13-1930). The NWIC is a repository of all cultural resources site records and previously conducted cultural resources studies in Marin County. The purpose of this records search was to compile information pertaining to the locations of previously recorded cultural resources and prior cultural resources studies within a 0.25-mile radius of the ADI that inform the cultural resources sensitivity of the ADI. The following sources were consulted during the records search:

- NWIC base map: United States Geological Survey (USGS) 7.5-minute series topographic quadrangle for San Rafael (1995).
- Survey reports from previous cultural resources investigations and cultural resources site records to identify previously recorded cultural resources sites located within a 0.25-mile radius of the ADI.
- California Office of Historic Preservation (OHP) resources, including the *California Inventory of Historic Resources* (1976), the *OHP Archaeological Determinations of Eligibility* for Marin County (2012a), and the *OHP Historic Properties Directory* for Marin County (2012b), which combines cultural resources listed as California Points of Historic Interest (1992), listed as California Historical Landmarks (1996), and listed in or determined eligible for listing in the NRHP or the CRHR.

#### 5.1.2 Records Search Results

The results of the records search indicate that no previous cultural resources studies have been completed within the ADI and no known cultural resources have been recorded within the ADI (however, as described in Section 1.0, one cultural resource, previously unrecorded, has been identified within the ADI during the field survey for this investigation). Three previous cultural resources studies have been conducted within a 0.25-mile radius of the ADI, none of which resulted in the identification of cultural resources (Gorrell 1976; Origer 1990; Psota 1992). A portion of the NWPRR was previously documented approximately 0.50 mile north of the ADI and was determined ineligible for listing in the NRHP/CRHR.

## 5.2 NATIVE AMERICAN CONSULTATION

As part of the tribal consultation process with Native American groups and individuals, C. DeBaker contacted the NAHC on October 28, 2014 with a request for information about sacred lands that may be located within the APE and a list of interested Native American groups and individuals who might have information regarding resources within or near the ADI. GANDA received a response on November 17, 2014 from the NAHC, which did not result in the identification of any sacred

lands within the ADI. The NAHC provided a list of local groups and individuals to contact for further information regarding local knowledge of the ADI. C. DeBaker sent letters and associated maps to the individuals from these local groups on November 21, 2014. Included in the correspondence were the project description and project maps, with a request that the project consultant be notified of any information about the ADI or of concerns about the project.

On December 11, 2014, GANDA received a letter from Nick Tipon, member of the Federated Indians of Graton Rancheria (FIGR) Sacred Sites Protection Committee, which included concerns regarding buried cultural resources and requested information regarding “the depths of soil disturbance and other details of the project before making comments on this project.” C. DeBaker contacted N. Tipon on March 18, 2015 and informed him of the depth of proposed ground disturbance and the results of the geoarchaeological analysis and archaeological field survey. N. Tipon will also be provided a copy of this report for review.

### **5.3 GEOARCHAEOLOGICAL ANALYSIS**

The depositional sequence within the ADI is comprised of: Artificial Fill over Bay Mud (afbm); Holocene Bay Mud (Qhbm); Holocene Alluvium (Qha); and Bedrock (br) (Figures 14 and 15). These results are derived from overlaying the ADI onto the previously mapped soils and quaternary geology of the area and provide the context for assessing the potential for encountering buried prehistoric archaeological deposits. It is important to note that prior to the disposal of dredge material in the 1970s within the ADI, thus creating the current topography, the ADI had been historically inundated with water, forming a marsh and wetland habitat (see Figures 4-11).

The surface stratum of the ADI is mapped as a patchwork veneer of historic and modern Artificial Fill mixed with Bay Mud (afbm) that was previously disposed of in this location to raise the elevation of bay margin and realign Corte Madera Creek. The fill consists of a mixture of locally dredged bay material, as well as imported material. Underlying the fill, is Holocene Bay Mud (Qhbm) which consists of fine grained marsh and estuary deposits (Atwater et al 1977; Dibblee 1980; Trask and Rolston 1951). Below the Holocene Bay Mud is Holocene Alluvium (Qha), of terrestrial origin, and is attributed to sea level transgression (rise in sea level) with an associated on-lapping of bay muds onto terrestrial (shoreline) deposits. Underlying the Holocene Alluvium is bedrock (br), such as the Posey Formation, San Antonio Formation, and Alameda Formation, which dates to the Late Pleistocene and earlier (Atwater et al. 1977; Diblee 1980), when the coast of the Pacific Ocean was 25 to 50 kilometers to the west.

#### **5.3.1 Buried Site Analysis**

The Artificial Fill over Bay Mud is not considered sensitive for prehistoric archaeological deposits, although historic and prehistoric artifacts may be redeposited into the fill matrix depending on its origin. While Holocene Bay Mud deposits are typically considered low in archaeological sensitivity, there are documented exceptions such as the discovery of a 5,000 year old human skeleton at CA-SFr-28 (Meyer 2011) within this geomorphological context. These remains were identified in similar deposits within San Francisco Bay Area suggesting that the Bay Mud and marsh deposits have the potential to contain sealed human remains associated with burial practices of the region. The skeleton was recorded in marsh deposits at elevation -23 feet (23 feet below sea level). Additionally, at CA-MRN-67 in nearby Larkspur, burials were found in marsh and estuary deposits below the shell midden, but these deposits represent burial pits that were prepared and dug out through the existing terrestrial deposits into the Bay Mud below the living surface (Schwitalla and Powell 2014). The interface of Fill and Holocene Bay Mud, is only considered to have a high sensitivity for prehistoric archaeological sites, especially deposits associated with the coastal shell mounds, if there are terrestrial, or well developed soils present at that interface, which would indicate that there was an

available land surface for the prehistoric population to use. The presence of an abnormally high shell concentration within this zone would suggest the presence of a shell midden that was deposited at the bay margin prior to emplacement of fill and historic development in the area (Siskin and Steinkamp 2011).

The base of the Bay Mud and underlying Holocene Alluvium is considered sensitive for the presence of prehistoric archaeological deposits. Human occupations along the bay margin shoreline would adjust to sea-level variations, thus sites of various age, as suggested by the presence of sealed shell concentrations, artifacts, features (e.g., fire hearths, living floors) or midden deposits, may be located at various elevations that were buried by transgressing/on-lapping marsh deposits. Nearby subsurface geoarchaeological testing for the Central Marin Ferry Connection Project (Kajankoski and Meyer 2009), also revealed a formerly stable Pleistocene aged land surface buried 3-4 meters (9.8-13.4 feet) below the ground surface and situated 2.5-1.0 meters (8.2-3.2 feet) below the Bay Mud and marsh deposits. While these deeply buried landforms have the potential to contain archaeological deposits, they are found at a depth much deeper than the vertical ADI. The vertical ADI is not anticipated to extend below Bay Mud deposits, in fact the majority of ground disturbances are proposed to occur within fill material, and in some cases into Bay Mud (i.e., tidal channel alterations). In summary, the analysis conducted to assess the potential for buried archaeological sites within the ADI indicates that the vertical ADI is not considered sensitive for buried prehistoric deposits.

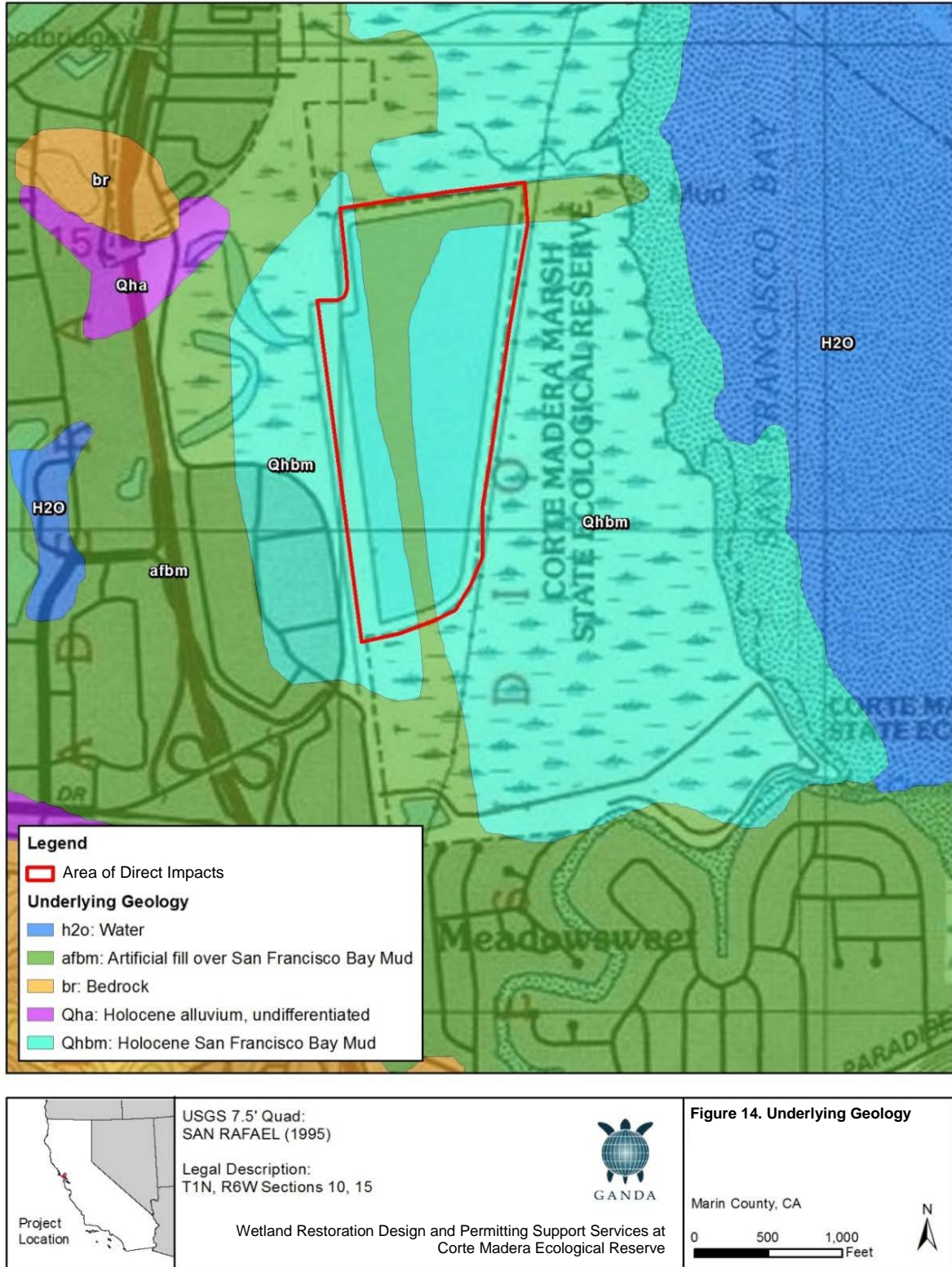


Figure 14. Underlying Geology of the ADI (Artificial Fill and Bay Mud).



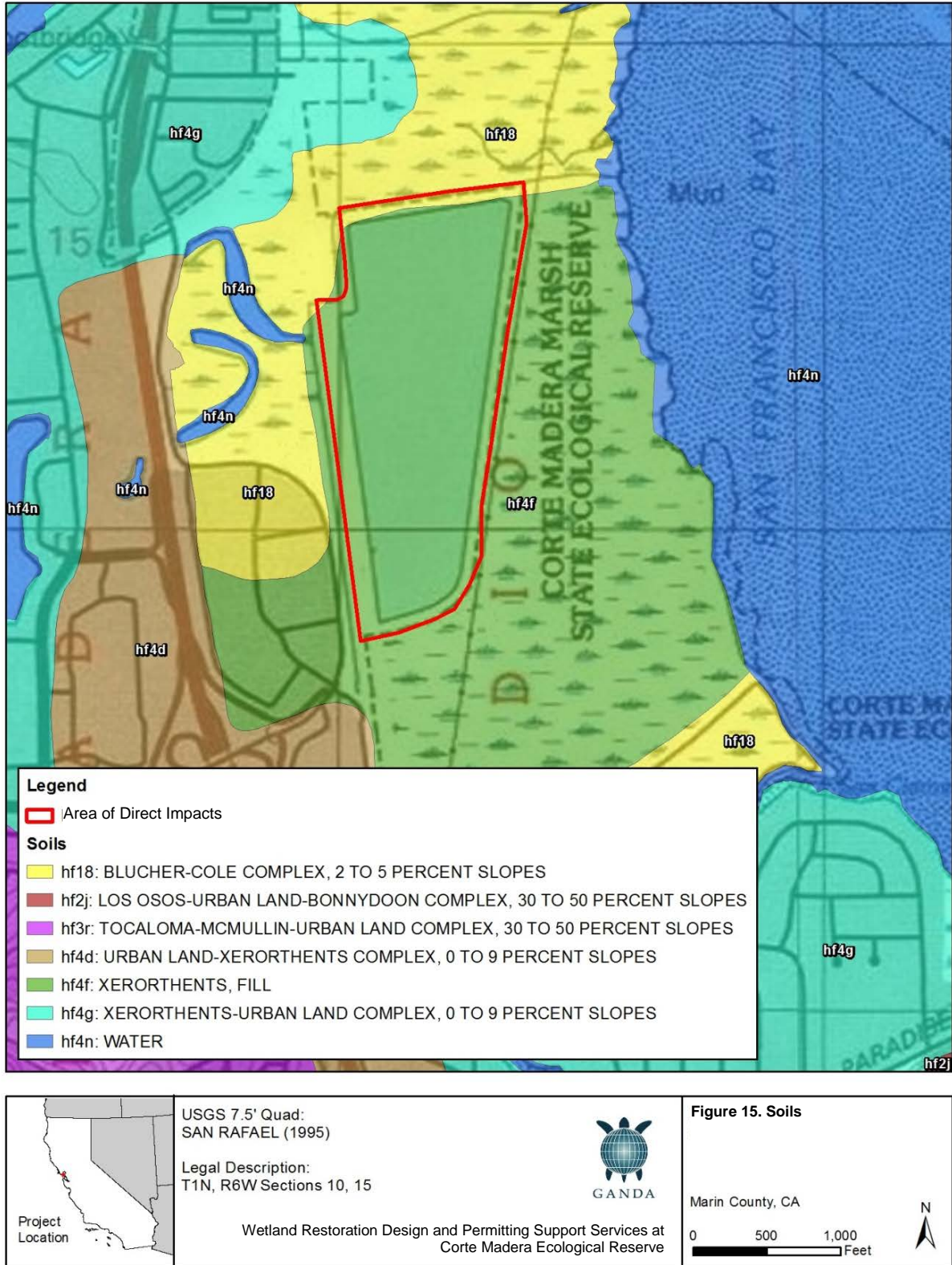


Figure 15. Soils of the ADI (Fill).

## 5.4 FIELD SURVEY

### 5.4.1 Field Survey Methods

On July 24, 2014, GANDA archaeologists Thomas Martin, M.A., and Robin Fies, M.A., conducted a pedestrian survey of the 72-acre ADI in Corte Madera, Marin County. They approached the area with a systematic but mixed survey strategy that was informed by conditions of terrain, vegetation, and ground visibility. T. Martin and R. Fies first surveyed the western border of the ADI along the well-traveled gravel road situated on top of a 20-foot wide, 0.4-mile-long segment of the levee that formerly supported the NPWRR grade. They then covered the southern, eastern, and western perimeters of the ADI and inspected all open ground on the contiguous levee roads and the narrow exterior levee banks (Figure 16). They surveyed the western levee and associated footpaths, situated between the road and the large, flat interior of the ADI, where possible. T. Martin and R. Fies surveyed the interior of the ADI with parallel, east-west transects that ranged from 65 to 130 feet in width, depending on the conditions (Figure 17); the transects were generally wider in the north half where ground visibility was minimal or non-existent. All fieldwork took place atop the surface of mid-1970s fill material (i.e., dredging spoils), with no observed underlying bay muds or other native soils.

The vast majority of the ADI was carpeted with groundcover plants, brush and bushes, and dense stands of trees that inhibited observation of soil, and, any subtle landform alterations or features. The interior of the ADI's southern half was notable for its pickleweed, and the northern half was dominated in part by giant cane, fennel, and other grasses, including pickleweed along the northern boundary (Figure 18). The levees were densely covered in grass and fennel, and, in part of the western ADI, by acacias and oaks. As such, ground visibility over most of the ADI was a minimal (0-5 percent). The southern half of the interior of the ADI, as well as a recently burned area of giant cane in the central portion, provided a patchwork of open ground and small pockets of ground visibility of 50-75 percent in places. Most levee tops were clear of vegetation and offered long and wide swaths of open visible ground due to their graveled road surfaces and frequent recreational use. Similarly, various well-used offshoot footpaths provided additional exposure.

### 5.4.2 Field Survey Results

The field survey resulted in the identification of one historic-period built environment resource: a previously unrecorded, 0.4-mile segment of P-21-002618 (NWPRR) (Figure 19). No prehistoric or historic-period archaeological resources were identified.

#### P-21-002618 (NWPRR)

This 0.4-mile long railroad segment is located along the western border of the ADI and its tracks and ties have been removed (Figure 20). No features associated with the NWPRR (e.g., signs, signals) were observed, although remnants may be obscured by dense vegetation located adjacent to the former railroad tracks. The original railroad grade or dike that was constructed over the marshland has been converted into the modern levee gravel road (see Figure 19).



Figure 16. View of the levee road at the ADI's southern end, facing southwest (July 24, 2014).



Figure 17. View of the southern and central portions of the interior of the ADI, facing north (July 24, 2014).



Figure 18. View of the northeastern corner of the ADI, facing northwest, with the levee beyond (July 24, 2014).



Figure 19. View of the newly identified segment of P-21-002618 (NWPRR) located at the southwest corner of the ADI, facing N-NW (July 24, 2014).



**Legend**

- Area of Direct Impacts
- Former NWPRR Segment (P-21-002618)



USGS 7.5' Quad:  
SAN RAFAEL (1995)

Legal Description:  
T1N, R6W Sections 10, 15



Wetland Restoration Design and Permitting Support Services at  
Corte Madera Ecological Reserve

**Figure 20. Cultural Resources within the ADI**

Marin County, CA



### Modern Infrastructure

The remains of modern built environment infrastructure was identified within the ADI; since they are less than 45 years old, they are not considered to be cultural resources for the purposes of this report. Additionally, the modern infrastructure within the ADI is not considered to be a historical resource as defined by CRHR criteria. This modern infrastructure includes four tall, vertical iron half-cylinders that were observed protruding from wet ground alongside the levee near the ADI's southwest corner (Figure 21). They are presumed to post-date reclamation efforts of the early 1970s, and are known to have functioned as drainage culverts that drained the dredge spoils after deposition via a pipeline in the mid 1970's. The additional levees (excluding the one associated with the NWPRR railroad) and tidal channels also post-date the 1970s when the construction of the Larkspur ferry landing began, and the parcel was purchased by the District.



Figure 21. View of the four vertical iron half-cylinder drainage culverts within southwest corner of the ADI, facing west (July 29, 2014).

At the northern end of the ADI, a discrete accumulation of naturally occurring shell was observed in soils at the foot of the exterior, northern slope of the levee (Figure 22). The shell was identified in the eastern half of the levee amongst dense fennel, just above an extensive mat of pickleweed at the edge of the ADI. Small amounts of natural marine shell were visible in patches of open ground surface over an east-west distance of about 30 meters, and were first identified in a collapsed rodent burrow or similar hole (Figure 23). The shell fragments ranged in size from small flecks to 1 inch in length and were embedded in a gravelly matrix of light brown loamy clay. The shell material appears to be associated with imported dredge spoils. The shell has been assessed as naturally occurring and not associated with potential prehistoric archaeological deposits.



Figure 22. View of the modern levee road at northern edge of the ADI, facing east (July 24, 2014).



Figure 23. Overview of naturally occurring shell associated with fill material, facing east-northeast, with the shell-flecked rodent burrow at red arrow (July 24, 2014).

## 6.0 CULTURAL RESOURCE EVALUATION

This cultural resources investigation resulted in the identification of a newly identified segment of P-21-002618 (NWPRR) within the ADI. This section presents the CRHR evaluation for the new segment of P-21-002618 (NWPRR) (see Figure 20).

### **P-21-002618 (NWPRR)**

This resource was originally recorded as a 17.6 mile-long segment of the NWPRR located between the cities of Cloverdale and Healdsburg in Sonoma County (Jones and Stokes 2000), and was subsequently updated to include additional rail segments in both Marin and Sonoma counties (GANDA 2004a and 2004b; JRP Historical Consulting Services 2004; Tom Origer & Associates 2006). In 2004, GANDA conducted an intensive pedestrian survey of the existing rail corridor from Mile Post (MP) 14.3 in Larkspur, Marin County to MP 85.5 in Cloverdale, Sonoma County. GANDA updated the DPR 523 forms for P-21-002618 (NWPRR) to include the 70-mile NWPRR rail segment and all associated features including: bridges, trestles, sidings, spurs, switches, culverts, stations, depots, signposts, call boxes, earthworks, telegraph and telephone poles, pylons, turntables, tunnels, vaults, and whistle boards (Hart 2004). The resource was recommended as ineligible for listing in the NRHP and CRHR. In 2013, the California State Historic Preservation Officer (SHPO) determined that P-21-002618 (NWPRR), including the rail segment and associated features, is not eligible for listing in the NRHP (Roland-Nawi 2013). A copy of the SHPO concurrence letter is presented in Appendix A.

As a result of the current investigation, a 0.4-mile long segment of the NWPRR was identified within the ADI approximately 0.9-mile south of the previously recorded segment of this resource. Since it is part of P-21-002618 (NWPRR), it is, by extension, recommended ineligible for listing in the NRHP and CRHR. The DPR 523 forms for P-21-002618 (NWPRR) have been updated to include a description of the newly identified segment and is included in Appendix A.



## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

This cultural resources investigation resulted in the identification of a newly identified segment of P-21-002618 (NWPRR) within the ADI. In 2013, SHPO determined that P-21-002618 (NWPRR), including the rail segment and associated features, is ineligible for listing in the NRHP (Roland-Nawi 2013). By extension, the newly identified segment of this resource is also considered ineligible for listing in the NRHP or the CRHR and is not a historical resource for the purposes of CEQA. No prehistoric or historic-period archaeological resources were identified within the ADI.

While the results of the geoarchaeological analysis indicate potential for buried prehistoric deposits within Holocene Bay Mud and Holocene Alluvium strata beneath the ADI, such deposits are found at a depth significantly deeper than the proposed project impacts within the relatively shallow vertical ADI. The vertical ADI is not anticipated to extend below fill, and the majority of ground disturbances are proposed to correspond with the elevation of the existing tidal marsh and will occur primarily within previously imported dredge material. In some cases, restoration activities will occur within marsh deposits, but will be limited to tidal channel modifications. In summary, the analysis conducted to assess the potential for buried prehistoric archaeological deposits within the ADI resulted in a finding that the ADI is not sensitive for such deposits. In conclusion, based on this cultural resources investigation, no historical resources will be impacted as a result of the Project.

### **7.1 UNANTICIPATED ARCHAEOLOGICAL SITES**

If there is an unanticipated discovery of archaeological deposits or remains during Project implementation, construction crews shall stop all work within 100 feet of the discovery until a qualified archaeologist can assess the discovery and provide recommendations. Resources could include buried historic features such as artifact-filled privies, wells, and refuse pits, and artifact deposits, along with concentrations of adobe, stone, or concrete walls or foundations, and concentrations of ceramic, glass, or metal materials. Native American archaeological materials could include obsidian and chert flaked stone tools (such as projectile points and knives), midden (darken soil created culturally from use and containing heat-affected rock, artifacts, animal bones, or shellfish remains), and/or groundstone implements (such as mortars and pestles).

### **7.2 ENCOUNTERING HUMAN REMAINS**

While the possibility is low, there remains a chance of encountering human remains either in association with prehistoric occupation sites or separately. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial and Section 5097.99 of the Public Resources Code defines the obtaining or possession of Native American remains or grave goods to be a felony. If human remains are encountered as a result of construction activities, any work in the vicinity shall stop and the Marin County Coroner shall be contacted immediately. In addition, a qualified archaeologist shall be contacted immediately to evaluate the discovery, if a monitor is not already present. If the human remains are Native American in origin, then the Coroner must notify the Native American Heritage Commission within 24 hours of this identification.

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**APPENDIX A:**

**DEPARTMENT OF PARKS AND RECREATION (DPR) 523 FORMS**



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### Summary

Garcia and Associates (GANDA) prepared the following DPR 523L (Continuation) forms to record a newly identified segment of the Northwestern Pacific Railroad (NWPRR) located along a 72-acre parcel in the town of Corte Madera, Marin County, adjacent to San Francisco Bay (DeBaker 2016). The following sections provide a summary of previous surveys of the NWPRR and the NRHP/CRHR determination of the resource as well as a description and NRHP/CRHR evaluation of the newly identified segment.

### Previous Surveys and NRHP/CRHR Determination

Other segments of the NWPRR have been recorded in three counties, and the resource has been assigned the following Primary and Trinomial Numbers: P-21-002618 (Marin County), CA-SON-2322H/P-49-002834 (Sonoma County), and CA-MEN-3111H/P-21-003663 (Mendocino County). It was originally recorded as a 17.6 mile-long segment located between the cities of Cloverdale and Healdsburg in Sonoma County (Jones and Stokes 2000), and was subsequently updated to include additional rail segments in both Marin and Sonoma counties (GANDA 2004a and 2004b; JRP Historical Consulting Services 2004; Tom Origer & Associates 2006). In 2004, GANDA conducted an intensive pedestrian survey of the existing rail corridor from Mile Post (MP) 14.3 in Larkspur, Marin County to MP 85.5 in Cloverdale, Sonoma County. GANDA updated the DPR 523 forms for P-21-002618 (NWPRR) to include the 70-mile NWPRR rail segment and all associated features including: bridges, trestles, sidings, spurs, switches, culverts, stations, depots, signposts, call boxes, earthworks, telegraph and telephone poles, pylons, turntables, tunnels, vaults, and whistle boards (Hart 2004). The resource was recommended as ineligible for listing in the NRHP and CRHR. In 2013, the California State Historic Preservation Officer (SHPO) determined that P-21-002618 (NWPRR), including the rail segment and associated features, is not eligible for listing in the NRHP (Roland-Nawi 2013).

### Newly Recorded Segment

As a result of the current investigation (DeBaker 2016), a 0.4-mile long segment of the NWPRR was identified during a field survey on July 24, 2014, approximately 0.9-mile south of the previously recorded segment of this resource on the United States Geologic Surveys (USGS) 7.5 minute *San Rafael, California* (1995) topographic quadrangle. The segment runs along the western edge of the 72-acre parcel, which is bordered by the Shorebird Marsh to the west, the marshlands of the Corte Madera Ecological Reserve to the north, and the former Muzzi Marsh to the south and east. No features associated with the railroad were observed within the 0.4-mile long segment. All of the tracks, ties, ballast, signs, signals, and other features have been removed, and the railroad grade has been converted into the modern levee gravel road. Since it is part of P-21-002618 (NWPRR), it is, by extension, recommended ineligible for listing in the NRHP and CRHR.

Location Map



Newly recorded 0.4-mile long segment of the NWPRR in yellow

**Photographs of the Newly Recorded Segment**



View of the levee road at the ADI's southern end, facing southwest (July 24, 2014).



View north/northwest toward the former NWPRR alignment (July 24, 2014).

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##### Jones and Stokes

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**APPENDIX B:**  
**NATIVE AMERICAN CONSULTATION**

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October 28, 2014

Ms. Debbie Pilas-Tredway  
California Native American Heritage Commission  
1550 Harbor Boulevard, Suite 100  
West Sacramento, CA 95691

**Subject: Cultural Resources Investigation for Wetland Restoration Design and Permitting Support at Corte Madera Ecological Reserve, Marin County, California (APN: 023-070-013 and 023-070-014)**

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Dear Ms. Pilas-Tredway:

Garcia and Associates (GANDA) is conducting cultural resources compliance services for the Corte Madera Ecological Reserve Project in Marin County, California. The cultural resources work for this project addresses requirements of the California Environmental Quality Act (CEQA) and the Golden Gate Bridge Highway and Transportation District is the lead agency under CEQA.

**Location: San Rafael USGS quadrangle map (1997); T1N, R6W Sections 10, 15 (see attached map)**

GANDA requests that you check your inventory of sacred lands for properties that may be affected by the project or are within a 0.25-mile radius of the project area (please see attached map). In addition, we are requesting a list of representatives from the Native American community to contact regarding cultural resources for this project. Please contact Cassidy DeBaker at **(415) 250-1687** if you have any questions or comments regarding this project, or require any additional information.

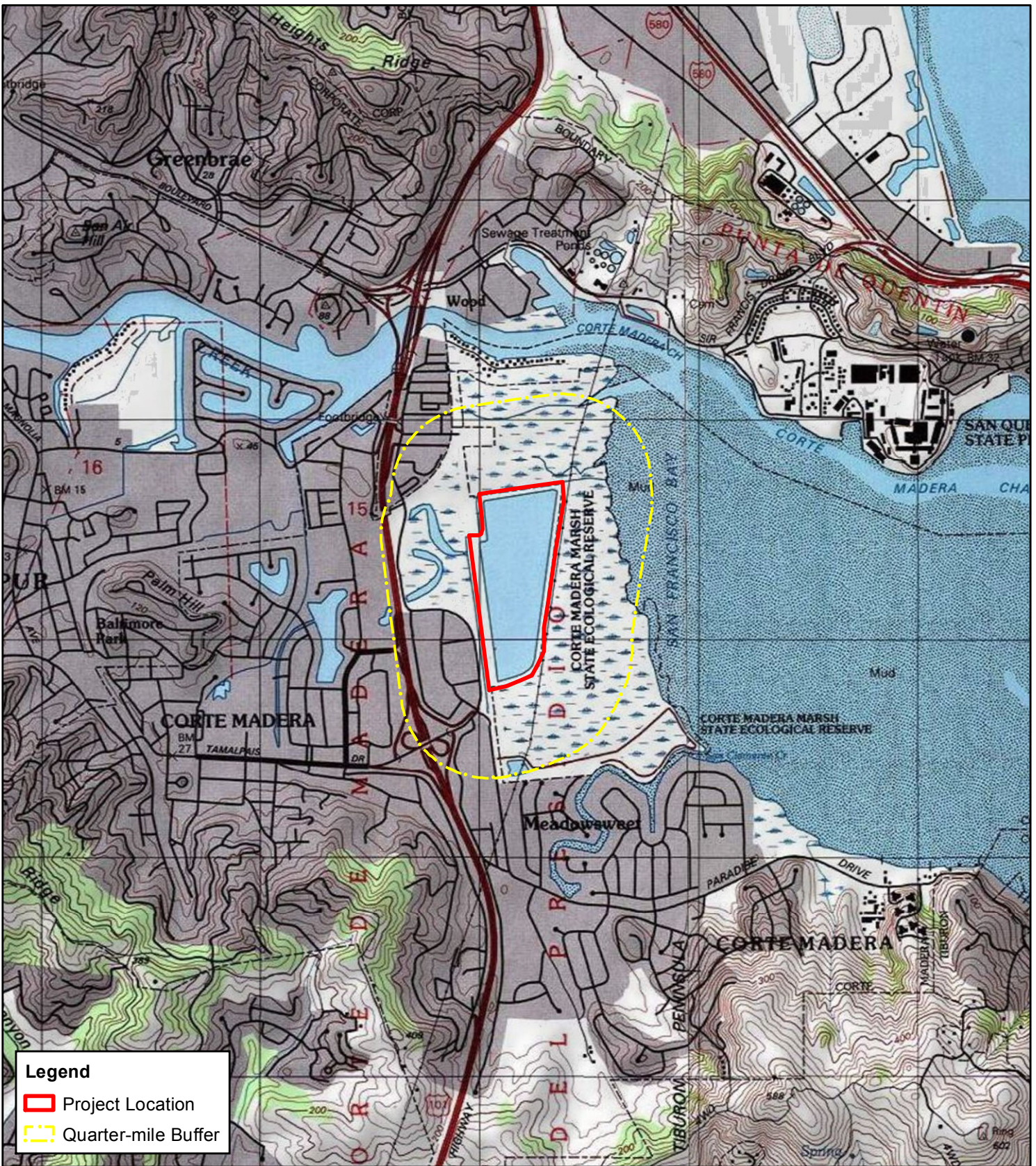
Thank you in advance for your cooperation.

Best Regards,



Cassidy DeBaker, GANDA Senior Archaeologist  
[cdebaker@garciaandassociates.com](mailto:cdebaker@garciaandassociates.com)  
415-250-1687 mobile





**Legend**

- Project Location
- Quarter-mile Buffer



USGS 7.5' Quad:  
SAN RAFAEL (1995)

Legal Description:  
T1N, R6W Sections 10, 15



**Record Search Map**  
**Corte Madera Ecological Reserve**

Marin County, CA  
June 2014

0 1,000 2,000  
Feet

**NATIVE AMERICAN HERITAGE COMMISSION**

1550 Harbor Blvd., ROOM 100  
West SACRAMENTO, CA 95691  
(916) 373-3710  
Fax (916) 373-5471



November 17, 2014

Cassidy DeBaker

GANDA

1 Saunders Ave.

San Anselmo, CA, 94960

Wetland Restoration Design and Permitting Support at Corte Madera Ecological Reserve,  
Marin County, 2 pages

~~FAX: 415-458-5829~~ MAILED

Ms. DeBaker,

Government Code §65352.3 requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above project.

As a part of consultation, the NAHC recommends that local governments conduct record searches through the NAHC and California Historic Resources Information System (CHRIS) to determine if any cultural places are located within the area(s) affected by the proposed action. A *Sacred Lands File* search was completed with negative results. Local governments 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 cultural place. A tribe may be the only source of information regarding the existence of a cultural place.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address:  
Katy.Sanchez@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Katy Sanchez" with a stylized flourish at the end.

Katy Sanchez

Associate Government Program Analyst

cc: State Clearinghouse

**Native American Contacts  
Marin County  
November 12, 2014**

The Federated Indians of Graton Rancheria  
Gene Buvelot  
6400 Redwood Drive, Ste      Coast Miwok  
Rohnert Park, CA 94928      Southern Pomo  
coastmiwok@aol.com  
(415) 279-4844 Cell  
(707) 566-2288 ext 103

The Federated Indians of Graton Rancheria  
Greg Sarris, Chairperson  
6400 Redwood Drive, Ste      Coast Miwok  
Rohnert Park, CA 94928      Southern Pomo  
coastmiwok@aol.com  
(707) 566-2288 Office  
(707) 566-2291 Fax

The Federated Indians of Graton Rancheria  
Gene Buvelot  
6400 Redwood Drive, Ste 300      Coast Miwok  
Rohnert Park, CA 94928      Southern Pomo  
coastmiwok@aol.com  
(415) 279-4844 Cell  
(707) 566-2288 ext 103

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the 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 only applicable for contacting locative Americans with regard to cultural resources for the proposed Wetland Restoration Design and Permitting Support at Corte Madera Ecological Reserve, Marin County.

November 21, 2014

Federated Indians of Graton Rancheria  
Gene Buvelot  
6400 Redwood Drive  
Rohnert Park, CA 94928  
coastmiwokaol.com

**Subject: Cultural Resources Investigation for Wetland Restoration Design and Permitting Support at Corte Madera Ecological Reserve, Marin County, California (APN: 023-070-013 and 023-070-014)**

Dear Mr. Buvelot,

Garcia and Associates (GANDA) is conducting cultural resources compliance services for the Corte Madera Ecological Reserve Project in Marin County, California. The cultural resources work for this project addresses requirements of the California Environmental Quality Act (CEQA) and the Golden Gate Bridge Highway and Transportation District is the lead agency under CEQA. An important element of our investigation is to identify sites, resources, or locations of cultural importance to the local Native American community. We would appreciate receiving any information you have concerning any resources in the Project Area. We have included a brief description below and a map showing the Project Area location:

**Location: San Rafael USGS quadrangle topographic map (1997); T1N, R6W Sections 10, 15 (see attached map)**

GANDA has reviewed the records of the California Native American Heritage Commission (NAHC). The NAHC reports that a search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. A record search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) which indicated that there were no recorded cultural resources in or within 0.25 miles of the project area. The archaeological survey did not result in the identification of any archaeological resources.

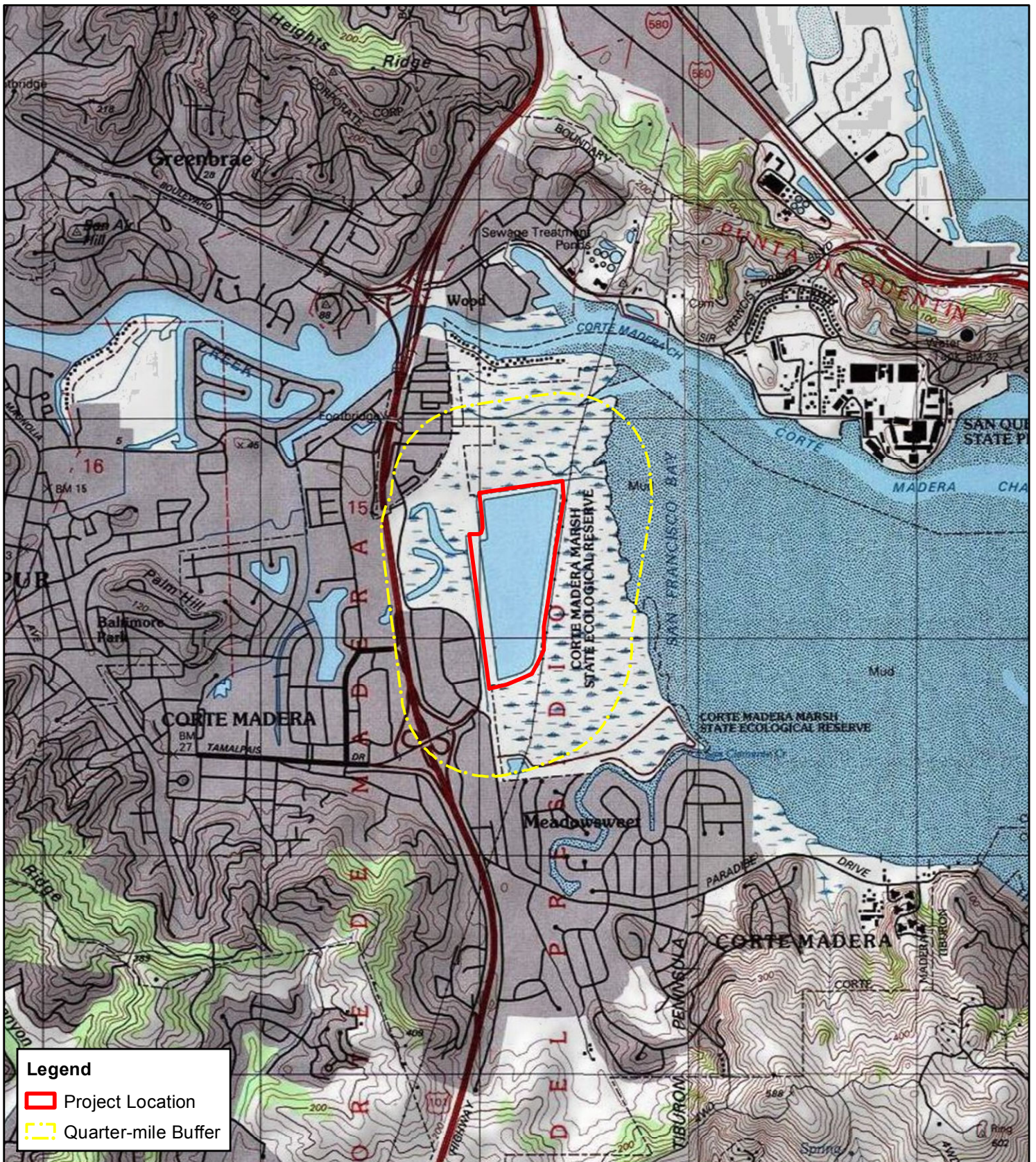
Please contact Cassidy DeBaker, at **(415) 250-1687** if you have any questions or comments regarding this project, or require any additional information.

Thank you in advance for your cooperation.

Best regards,



Cassidy DeBaker, GANDA Senior Archaeologist  
[cdebaker@garciaandassociates.com](mailto:cdebaker@garciaandassociates.com)  
415-250-1687 mobile  
415-458-5830 office



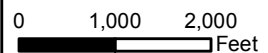
USGS 7.5' Quad:  
SAN RAFAEL (1995)

Legal Description:  
T1N, R6W Sections 10, 15



**Record Search Map  
Corte Madera Ecological Reserve**

Marin County, CA  
June 2014



November 21, 2014

Federated Indians of Graton Rancheria  
Gregg Sarris, Chairperson  
6400 Redwood Drive  
Rohnert Park, CA 94928  
coastmiwokaol.com

**Subject: Cultural Resources Investigation for Wetland Restoration Design and Permitting Support at Corte Madera Ecological Reserve, Marin County, California (APN: 023-070-013 and 023-070-014)**

Dear Mr. Sarris,

Garcia and Associates (GANDA) is conducting cultural resources compliance services for the Corte Madera Ecological Reserve Project in Marin County, California. The cultural resources work for this project addresses requirements of the California Environmental Quality Act (CEQA) and the Golden Gate Bridge Highway and Transportation District is the lead agency under CEQA. An important element of our investigation is to identify sites, resources, or locations of cultural importance to the local Native American community. We would appreciate receiving any information you have concerning any resources in the Project Area. We have included a brief description below and a map showing the Project Area location:

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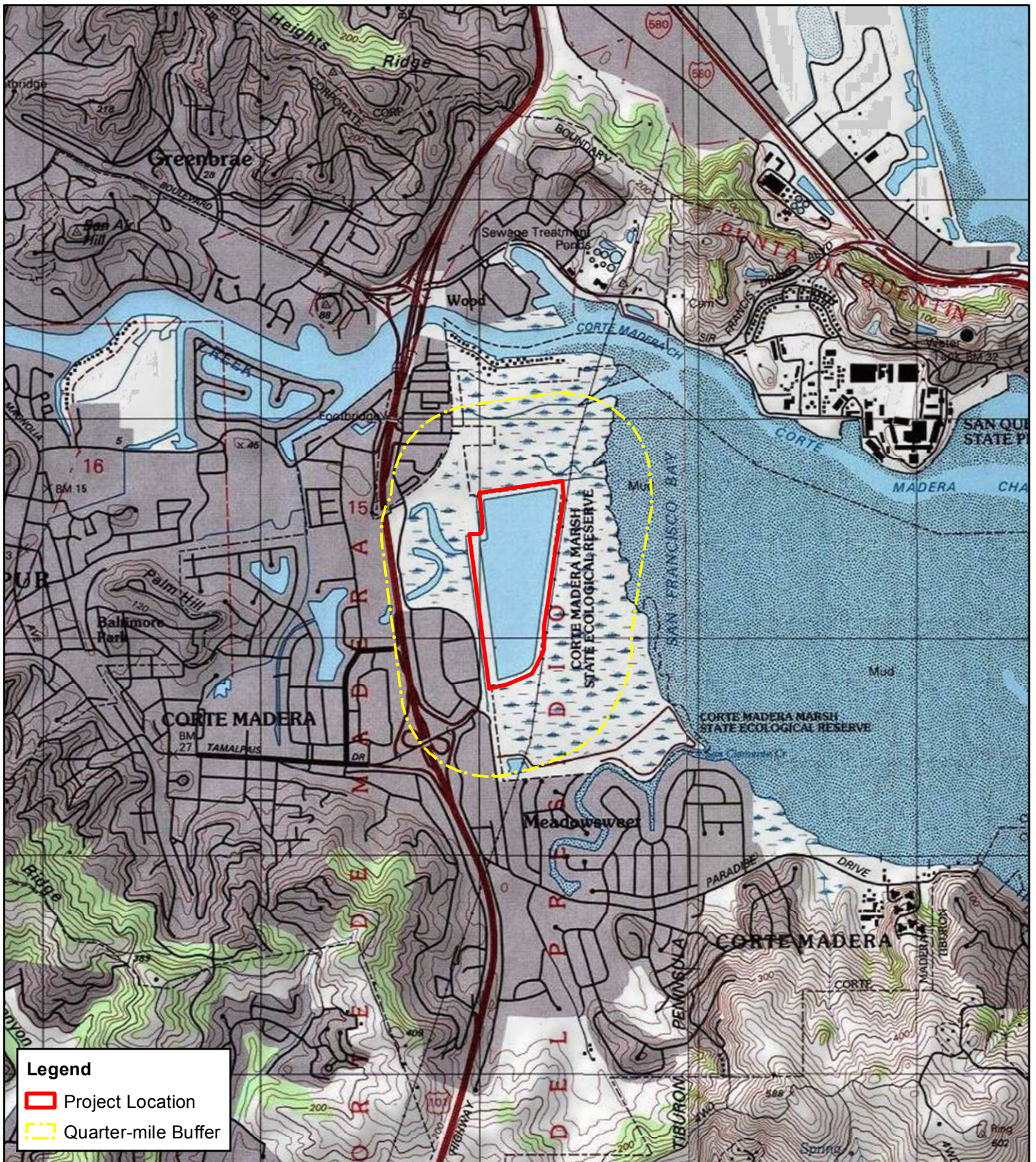
Please contact Cassidy DeBaker, at **(415) 250-1687** if you have any questions or comments regarding this project, or require any additional information.

Thank you in advance for your cooperation.

Best regards,



Cassidy DeBaker, GANDA Senior Archaeologist  
[cdebaker@garciaandassociates.com](mailto:cdebaker@garciaandassociates.com)  
415-250-1687 mobile  
415-458-5830 office



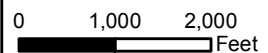
USGS 7.5' Quad:  
SAN RAFAEL (1995)

Legal Description:  
T1N, R6W Sections 10, 15



**Record Search Map  
Corte Madera Ecological Reserve**

Marin County, CA  
June 2014





Federated Indians of Graton Rancheria  
Sacred Sites Protection Committee  
6400 Redwood Drive Suite 300  
Rohnert Park, CA 94928

December 11, 2014

DEC 15 2014

Cassidy DeBaker  
GANDA  
Saunders Ave.  
San Anselmo, CA 94960

RE: Corte Madera Ecological Reserve

Dear Cassidy:

The Federated Indians of Graton Rancheria (FIGR), a federally recognized Tribe and sovereign government, has received your request for comments regarding your study for the proposed Corte Madera Ecological Reserve project. FIGR provides comments regarding sacred lands and other cultural sites to protect and/or avoid our cultural resources that might be adversely impacted by the scope of work of the project. The Sacred Site Protection Committee (SSPC) is authorized by the Tribal Council to work with agencies to develop the specific plans and procedures to avoid any potential adverse impacts.

This project will take place where there is a possibility of discovering buried cultural resources. These resources may have been buried by rising water levels and/or historic changes to the bay's shoreline. We request more information on the depths of soil disturbance and other details of the project before making comments on this project.

Respectfully,

Nick Tipon  
Sacred Sites Protection Committee  
707 321-4792