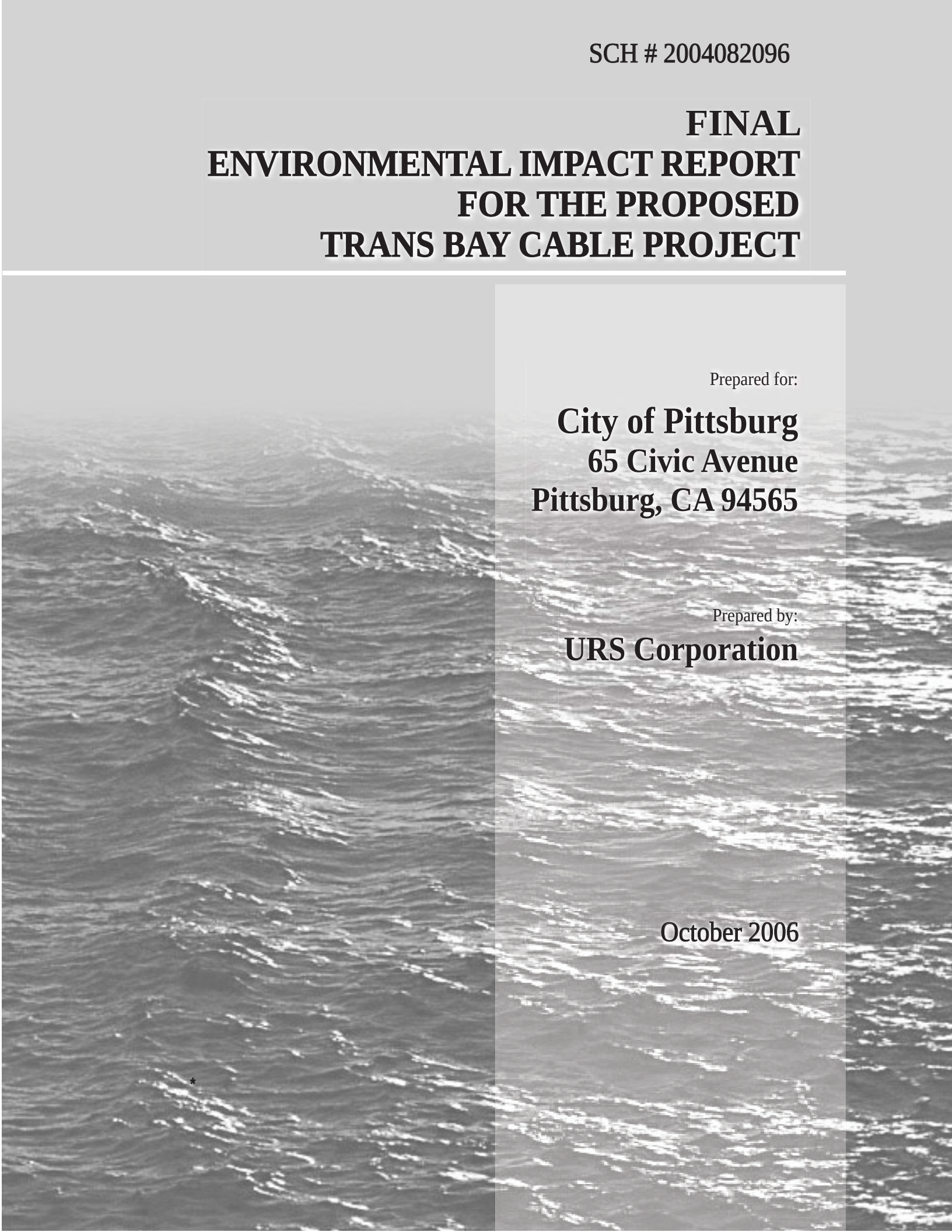
SCH # 2004082096

FINAL ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED TRANS BAY CABLE PROJECT



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Section **Page**

1.0 EXECUTIVE SUMMARY 1-1

1.1 INTRODUCTION 1-1
1.2 SUMMARY OF POTENTIALLY SIGNIFICANT IMPACT FINDINGS..... 1-4

1.2.1 Air Quality 1-6
1.2.2 Geologic Resources and Soils..... 1-6
1.2.3 Water Resources and Quality..... 1-7
1.2.4 Terrestrial Biological Resources..... 1-8
1.2.5 Marine Biological Resources..... 1-8
1.2.6 Cultural Resources..... 1-8
1.2.7 Land Use and Recreation..... 1-9
1.2.8 Marine Transportation and Commercial Fishing..... 1-10
1.2.9 Traffic and Transportation 1-10
1.2.10 Noise and Vibration..... 1-11
1.2.11 Public Services and Utilities..... 1-12
1.2.12 Visual Resources/Aesthetics..... 1-12
1.2.13 Hazardous Materials and Waste Management..... 1-13
1.2.14 Paleontological Resources 1-14
1.2.15 Summary..... 1-15

1.3 ALTERNATIVES CONSIDERED 1-15

1.3.1 Introduction..... 1-15
1.3.2 Alternatives Considered But Eliminated From Further Consideration..... 1-16
1.3.3 No Project Alternative 1-16
1.3.4 Project Alternatives..... 1-16
1.3.5 Environmentally Superior Alternative..... 1-17

3.0 PROJECT DESCRIPTION 3-1

3.1 INTRODUCTION 3-1
3.2 PROJECT OBJECTIVES 3-2
3.3 PROJECT COMPONENTS 3-2
3.4 CONSTRUCTION..... 3-3

3.4.1 Construction in San Francisco 3-3
3.4.2 Construction in San Francisco Bay and Adjoining Waterways..... 3-5

Section **Page**

3.4.3 Construction in Pittsburg 3-5

3.5 OPERATION 3-7

3.5.1 Converter Station Maintenance 3-8
3.5.2 Cable Repair 3-8

3.6 DECOMMISSIONING 3-8

4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION – PROPOSED PROJECT 4.A-1

4.A SAN FRANCISCO HWC (MITIGATED) CONVERTER STATION 4.A-1

4.A.1 Introduction 4.A-1
4.A.2 Air Quality 4.A-2
4.A.3 Geologic Resources and Soils 4.A-2
4.A.4 Water Resources and Quality 4.A-4
4.A.5 Terrestrial Biological Resources 4.A-5
4.A.6 Marine Biological Resources 4.A-5
4.A.7 Cultural Resources 4.A-6
4.A.8 Land Use and Recreation 4.A-10
4.A.9 Marine Transportation and Commercial Fishing 4.A-13
4.A.10 Traffic and Transportation 4.A-13
4.A.11 Noise and Vibration 4.A-14
4.A.12 Public Services and Utilities 4.A-17
4.A.13 Visual Resources/Aesthetics 4.A-17
4.A.14 Hazardous Materials and Waste Management 4.A-25
4.A.15 Paleontological Resources 4.A-30

6.0 COMPARISON OF ALTERNATIVES 6-1

6.1 INTRODUCTION 6-1
6.2 COMPARISON OF ALTERNATIVES 6-1

6.2.1 San Francisco Converter Stations 6-2
6.2.2 Pittsburg Converter Stations 6-2
6.2.3 No Project Alternative 6-3

Section **Page**

6.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE 6-3

9.0 UNAVOIDABLE ADVERSE SIGNIFICANT IMPACTS 9-1

9.1 INTRODUCTION 9-1
9.2 PROPOSED PROJECT 9-1
9.3 PROJECT ALTERNATIVES 9-1

9.3.1 San Francisco Mirant Converter Station Alternative 9-1
9.3.2 Pittsburg West Tenth Street Converter Station Alternative 2 (N/S) 9-3

12.0 RESPONSE TO COMMENTS ON DRAFT EIR 12-1

12.1 INTRODUCTION 12-1

13.0 TEXT REVISIONS IN RESPONSE TO COMMENTS ON DRAFT EIR 13-1

13.1 EXECUTIVE SUMMARY (SECTION 1.0) 13-1
13.2 INTRODUCTION (SECTION 2.0) 13-1
13.3 PROJECT DESCRIPTION (SECTION 3.0) 13-1
13.4 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION – PROPOSED PROJECT (SECTION 4.0) 13-1
13.5 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION – PROJECT ALTERNATIVES (SECTION 5.0) 13-17
13.6 COMPARISON OF ALTERNATIVES (SECTION 6.0) 13-17
13.7 CUMULATIVE IMPACTS (SECTION 7.0) 13-18
13.8 GROWTH-INDUCING IMPACTS (SECTION 8.0) 13-18
13.9 UNAVOIDABLE ADVERSE SIGNIFICANT IMPACTS (SECTION 9.0) 13-18
13.10 EIR PREPARERS AND AGENCY CONSULTATION (SECTION 10.0) .. 13-18
13.11 APPENDICES 13-18

13.11.1 Appendix A (Detailed Project Description) 13-18
13.11.2 Appendix C (CAISO Documents) 13-20
13.11.3 Appendix F (Supplemental Biological Information) 13-20
13.11.4 Other Appendices 13-20

List of Tables

Table 1-1	Summary of Potentially Significant Environmental Impacts and Proposed Mitigation Measures	1-19
Table 4.A.8-1	Potentially Sensitive Land Uses Near San Francisco HWC (Mitigated) Converter Station Site	4.A-11
Table 4.A.11-1	Calculated Sound Levels from Construction of the San Francisco HWC (Mitigated) Converter Station (dBA)	4.A-15
Table 4.A.11-2	Calculated Sound Levels from Operation of the San Francisco HWC (Mitigated) Converter Station (dBA)	4.A.-16
Table 6-1	Summary of Potentially Significant Impacts and Mitigation Measures	6-5
Table 12-1	Summary of Comments Received on the Draft EIR for the Proposed Trans Bay Cable Project	12-2

List of Figures and Maps

Figure 1-1	General Location Map
Figure 3-1	General Location Map
Figure 3-2	Trans Bay Cable Interconnections
Figure 3-3	San Francisco Converter Station Site (HWC Mitigated)
Figure 3-4	San Francisco Converter Station Plan View (HWC Mitigated)
Figure 3-5	San Francisco Converter Station Elevation View (HWC Mitigated)
Figure 3-6	Photosimulation of San Francisco Converter Station (HWC Mitigated Site – View from Potrero Hill)
Figure 3-7	Photosimulation of San Francisco Converter Station (HWC Mitigated Site – View from 24th and Illinois)
Figure 3-8	San Francisco Converter Station (HWC Mitigated) HDD Location
Figure 3-9	Typical Configuration for Submarine Cable
Figure 3-10	Simultaneous Cable Lay and Burial Operation
Figure 3-11	Pittsburg Converter Station Site (West Tenth Street Alternative 1 [E/W])
Figure 3-12	Pittsburg Converter Station Plan View (West Tenth Street Alternative 1 [E/W])
Figure 3-13	Pittsburg Converter Station Elevation View (West Tenth Street – Alternative 1 [E/W])
Figure 3-14	Photosimulation of Pittsburg Converter Station (West Tenth Street – Alternative 1 [E/W])
Figure 3-15	PG&E Pittsburg Switchyard HDD Location
Map A.2-1	Detailed Project Location Map
Figure 4.4-1A	RWQCB Identified Toxic Hot Spots in the Bay (see Section 13.0)
Figure 4.A.13-1	KOP SF-1 Photos A/B

List of Figures and Maps (Continued)

Figure 4.A.13-2 KOP SF-2 Photos A/B
Figure 4.A.13-3 KOP SF-3 Photos A/B
Figure 4.A.13-4 KOP SF-5 Photos A/B

List of Appendices

Appendix C CAISO and CEC Documents
Appendix H Noise Studies

1.1 INTRODUCTION

This Final Environmental Impact Report (Final EIR) assesses the potential environmental impacts associated with the proposed Trans Bay Cable (TBC) Project (Project). The City of Pittsburg has prepared this Final EIR in order to satisfy the requirements of the California Environmental Quality Act (CEQA). The City of Pittsburg is the Lead Agency under CEQA for preparation of this EIR. The Notice of Preparation for this EIR was issued on August 23, 2004, and the Notice of Availability for the Draft EIR was published on May 10, 2006. This Final EIR addresses comments received on the Draft EIR (refer to Section 12.0 of this Final EIR) as well as mitigating refinements that have been made to the proposed Project as summarized herein. This section is intended to replace Section 1.0 provided in the Draft EIR.

The Project is proposed by Trans Bay Cable LLC, an affiliate of Babcock & Brown, in cooperation with the City of Pittsburg and Pittsburg Power Company, a municipal utility.

Siemens Power Transmission & Distribution, Inc. (Siemens) and Prysmian Cavi e Sistemi Energia S.r.L (Prysmian), or companies that provide comparable technology, would provide the converter station and cable technology. Siemens and Prysmian are also expected to provide engineering design, procurement, and construction management services.

The proposed Project is a 400 megawatt (MW) high voltage direct current (HVDC) transmission line consisting of installation of an approximately 53-mile-long HVDC cable in San Francisco Bay and the Carquinez Straits, from a terminus in the City of Pittsburg in Contra Costa County to a terminus in the City of San Francisco in the vicinity of Potrero Point (refer to Figure 1-1). The Project is proposed to transmit electrical power from a converter station in Pittsburg to a converter station in San Francisco, providing a dedicated connection between the East Bay and San Francisco. This electrical power delivered to San Francisco would help meet the City of San Francisco's electrical demand projected for 2012 and beyond. The Project is designed to be a cost-effective, energy-efficient solution addressing San Francisco's need for additional transmission capacity, while improving transmission reliability and load-serving capability. The HVDC transmission line would provide San Francisco with a highly reliable, secure source of the electricity needed to service the load in San Francisco.

The California Independent System Operator (CAISO) is a not-for-profit public benefit corporation that acts as the impartial operator of the state's wholesale power grid, maintaining reliability and directing the electricity traffic on the transmission grid that connects energy suppliers with the energy providers that serve over 30,000,000 Californians. The CAISO identified three transmission system reinforcements to meet the long-term reliable load-serving plan. The following are the three reinforcements with the Project included as the third component to meet the CAISO objectives:

- Jefferson-to-Martin Transmission Line
- Construction and Operation of the City & County of San Francisco Electrical Reliability Project
- TBC HVDC Transmission Line from Pittsburg to San Francisco

The primary goal of the Project is to deliver electricity to San Francisco to meet demand projected beginning in 2012 and beyond (e.g., at least 40 years). The proposed Project would be expected to:

- Meet the CAISO planning and reliability standards
- Decrease transmission grid congestion in the East Bay
- Reduce transmission losses
- Increase the overall security and reliability of the electrical system
- Provide potential savings to ratepayers

The CAISO Management and Board of Governors have determined the Trans Bay Cable Project is required to ensure reliable operation of the transmission system serving the San Francisco Bay area.

On September 8, 2005, the CAISO staff recommended and the Board of Governors approved the Trans Bay Cable Project as the preferred long-term transmission alternative to address the identified reliability concerns in northern San Mateo County and San Francisco beginning in 2012. The CAISO staff and Board of Governors support the early implementation of the Project for operation by 2009.

Two primary refinements to the proposed Project are considered in this Final EIR relative to the description of the proposed Project presented in the Draft EIR as issued in May of 2006. These two refinements are intended to avoid potentially significant Project impacts to cultural/historic resources in San Francisco and avoid or minimize potentially significant impacts to biological resources and water resources in Pittsburg. These refinements are also intended, in part, to address various comments received on the Draft EIR (refer to Section 12.0 of this Final EIR for more information).

In San Francisco, the previously proposed San Francisco HWC Converter Station site layout as assessed in the Draft EIR has been shifted to the western portion of the overall HWC site as a mitigating action to completely avoid the need to demolish two historic buildings on the eastern portion of the overall HWC site. The shifted site is referred to as the "HWC (Mitigated)" site in this Final EIR. Demolition of the two historic buildings on the eastern portion of the overall HWC site was identified as an unavoidable adverse significant impact in the Draft EIR and is not applicable to the HWC (Mitigated) site. The shifted layout is also

located further away from the Bay and would not preclude or interfere with the possible future construction of a Bay Trail segment along the portion of the Bay waterfront to the east. The shifted layout is located between the western boundary of the HWC site assessed in the Draft EIR and Illinois Street. The previously proposed HWC site layout as assessed in the Draft EIR has been deleted from further consideration in this Final EIR.

In Pittsburg, the previously proposed Standard Oil Converter Station site and associated ancillary facilities have been deleted from further consideration and been replaced with the Pittsburg West Tenth Street Alternative 1 (E/W) site that was analyzed in Sections 5.4 and A-8.2.3.1 of the Draft EIR. As discussed in Section 6.3 (Environmentally Superior Alternative) of the Draft and Final EIRs, the proposed West Tenth Street Alternative 1 site would avoid various potentially significant impacts associated with the previously proposed Pittsburg Standard Oil site (and associated onshore/offshore AC/DC cable routes and access road over Kirker Creek), including those to sensitive biological resources and water quality associated with dredging at two locations in New York Slough. The balance of this project description addresses the refined Trans Bay Cable Project.

The proposed HVDC transmission system for the Project is made up of the following primary components:

- Installation of approximately 53 miles of new HVDC cable (submarine and buried onshore)
- Construction of two new converter stations; one in San Francisco and one in Pittsburg
- Installation of approximately 0.7 mile of new underground single-circuit 230 kilovolt (kV) alternating current (AC) transmission cable in Pittsburg
- Installation of approximately 0.2 mile of underground double-circuit 115 kV AC transmission cable in San Francisco

The proposed offshore submarine cable system is planned to be buried to a typical target depth of 3 to 6 feet below the Bay bottom, with the potential for local burial to greater depths if required, using a Hydroplow (or equivalent technology), which would minimize disturbance and suspension of sediments.

The Draft EIR included the following sections:

- Executive Summary (1.0)
- Introduction (2.0)
- Project Description (3.0)
- Environmental Setting, Impacts, and Mitigation – Proposed Project (4.0)

- Environmental Setting, Impacts, and Mitigation – Project Alternatives (5.0)
- Comparison of Alternatives (6.0)
- Cumulative Impacts (7.0)
- Growth-Inducing Impacts (8.0)
- Unavoidable Adverse Significant Impacts (9.0)
- EIR Preparers (10.0)
- List of Acronyms (11.0)
- Appendices (A-K)

Sections 1.0 through 11.0 and Appendix A were presented in Volume 1 of the Draft EIR. Technical Appendices B through K were presented in Volume 2 of the Draft EIR.

This Final EIR includes the following sections:

- Executive Summary (1.0)(this section replaces Section 1.0 of the Draft EIR)
- Project Description (3.0)(this section replaces Section 3.0 of the Draft EIR)
- Environmental Setting, Impacts, and Mitigation – Proposed Project (4.0), Section 4.A (only) – San Francisco HWC (Mitigated) Converter Station (this section supplements Section 4.0 of the Draft EIR)
- Comparison of Alternatives (6.0)(this section replaces Section 6.0 of the Draft EIR)
- Unavoidable Adverse Significant Impacts (9.0)(this section replaces Section 9.0 of the Draft EIR)
- Response to Comments on Draft EIR (12.0)(new section)
- Text Revisions in Response to Comments on Draft EIR (13.0)(new section)
- Appendices (C and H)(these appendices supplement appendices C and H in the Draft EIR)

Refer to the Draft EIR for the EIR sections and appendices that are not replaced by this Final EIR.

1.2 SUMMARY OF POTENTIALLY SIGNIFICANT IMPACT FINDINGS

The impact findings for the refined proposed Project, including a listing of identified potentially significant impacts, proposed mitigation measures, and residual impact findings are presented by resource topic in Table 1-1. The table presents the summary findings for the proposed Project in the following order: 1) San Francisco HWC (Mitigated) Converter

Station site; 2) Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site; and 3) Offshore Cable Route. A summary of key impact findings for the Project alternatives is presented in Section 1.3.4. Refer to Section 5.0 of the Draft EIR for more information regarding the impact findings for the Project alternatives and to Section 6.0 of this Final EIR for a comparison of alternatives, including the proposed Project.

While many impacts associated with implementation of the proposed Project are considered to be potentially significant, with implementation of the proposed mitigation measures no impacts would remain significant. The mitigating refinements that have been made to the proposed Project (i.e., replacement of former HWC site with HWC [Mitigated] site, and replacement of Pittsburg Standard Oil site with the Pittsburg West Tenth Street, Alternative 1 [E/W] site) reduce the impacts of the Project as presented in the Draft EIR and present no new potentially significant impacts.

The resource topics addressed in this EIR and a summary of residual impact findings for the proposed Project follow:

Issue/Resource Topic	Resulting Level of Significance With Implementation of Mitigation
Air Quality	Less than Significant
Geologic Resources and Soils	Less than Significant
Water Resources and Quality	Less than Significant
Terrestrial Biological Resources	Less than Significant
Marine Biological Resources	Less than Significant
Cultural Resources	Less than Significant
Land Use and Recreation	Less than Significant
Marine Transportation and Commercial Fishing	Less than Significant
Traffic and Transportation	Less than Significant
Noise and Vibration	Less than Significant
Public Services and Utilities	Less than Significant
Visual Resources/Aesthetics	Less than Significant
Hazardous Materials and Waste Management	Less than Significant
Paleontological Resources	Less than Significant

The following discussions summarize the potentially significant impact findings by resource topic, for the proposed Project. The mitigation measures discussed in the following sections are presented in Table 1-1 of this Final EIR, as well as in Section 4.0 of the Draft EIR.

1.2.1 Air Quality

Construction of the proposed Project would generate fugitive dust and heavy equipment and truck exhaust emissions at the onshore facility locations in San Francisco and Pittsburg over the estimated 27- to 30-month construction period. Maximum emissions would be expected to occur over an approximate 8-month period during demolition and site preparation activities. Additionally, installation of the proposed offshore submarine HVDC cable system would generate substantial emissions from the marine vessels required to install the submarine cable over an estimated 4- to 5-month period. Project-related fugitive dust emissions and onshore equipment exhaust emissions (Impacts AIR-1 and AIR-2, respectively) are considered to be potentially significant. With implementation of proposed mitigation measures (Mitigation Measures AIR-1 and AIR-2), these potentially significant impacts would be reduced or limited to a less-than-significant level.

Marine vessel emissions of criteria pollutants (Impacts AIR-3)(e.g., estimated 0.7 tons per day of nitrogen oxides [NO_x]) and toxic air contaminants (Impact AIR-4) associated with installation of the proposed offshore submarine HVDC cable system would be potentially significant over a 4- to 5-month period. With implementation of proposed Mitigation Measures AIR-3 and AIR-4, potentially significant Impacts AIR-3 and AIR-4 would be reduced or limited to less-than-significant levels.

Operation of the proposed Project would result in periodic emissions from required testing of one diesel-fueled emergency generator and two diesel-fueled fire pumps at each converter station site. This potential impact would be negligible and would be considered less than significant.

1.2.2 Geologic Resources and Soils

Construction of the proposed Project would involve excavation and grading activities at the converter station sites and onshore cable routes during the construction phase in San Francisco and Pittsburg. The construction activities would cause soil erosion (Impact GEO-1). With implementation of proposed Mitigation Measure GEO-1, this potentially significant impact would be reduced to a less-than-significant level.

Subsurface construction activities at the proposed San Francisco HWC (Mitigated) Converter Station site could encounter serpentinite which is an asbestos bearing rock. Asbestos containing serpentinite could be disturbed and asbestos could be released during construction and this is considered to be a potentially significant impact (Impact GEO-2). With implementation of proposed Mitigation Measure GEO-2, this potentially significant impact would be reduced to a less-than-significant level.

Project facilities (i.e., converter stations and onshore cables) would potentially be subject to multiple significant geologic hazards (strong ground shaking, liquefaction, and shrink-

swell/subsidence [Impacts GEO-3 through GEO-5]). With implementation of proposed Mitigation Measures GEO-3 through GEO-5, these potentially significant geologic hazards would be reduced to acceptable, less-than-significant levels.

1.2.3 Water Resources and Quality

Onshore Project-related construction activities could increase the potential for uncontrolled runoff laden with sediments or other pollutants that could significantly impact surface water quality. Additionally, operation and maintenance of the proposed converter station sites in San Francisco and Pittsburg could significantly impact surface water quality (e.g., San Francisco Bay) through inadvertent spills or discharges (Impact WATER-1). With implementation of proposed Mitigation Measure WATER-1, these potentially significant impacts would be reduced to less-than-significant levels.

Installation of the proposed HVDC cable in San Francisco and Pittsburg at the landfalls adjacent to the Bay would involve horizontal directional drilling (HDD) or comparable technology which could significantly impact water quality in the Bay and/or groundwater resources due to the potential release of drilling fluids (e.g., bentonite clay and inert, non-toxic polymers)(Impacts WATER-2 and WATER-3). These potentially significant impacts would be reduced to less-than-significant levels with implementation of proposed Mitigation Measures WATER-2 and WATER-3.

Installation of the offshore submarine cable system could significantly impact water quality in the Bay associated with the proposed use of a Hydroplow or equivalent technology (Impact WATER-5) if the construction zones contain contaminated sediments. These potentially significant impacts would be reduced to less-than-significant levels with implementation of proposed Mitigation Measures WATER-5.

The proposed installation of the offshore submarine cable system would involve the use of marine vessels, which could result in an accidental vessel fuel spill. Although this event has a low probability of occurring, a potentially significant spill with associated water quality impacts could occur (Impact WATER-7). With implementation of proposed Mitigation Measure WATER-7, this potentially significant impact would be reduced to a less-than-significant level.

The northwest corner of the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site is located in the 100-year flood zone. Impacts due to flooding are considered to be potentially significant. With implementation of Mitigation Measure WATER-8, this potentially significant impact would be reduced to a less-then-significant level.

1.2.4 Terrestrial Biological Resources

The proposed San Francisco HWC (Mitigated) Converter Station site and ancillary facilities are located on previously disturbed developed properties on artificial fill soils. No potentially significant impacts to terrestrial biological resources would be expected to result from construction or operation of the proposed Project facilities in San Francisco.

Construction of the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station, including onshore cable routes and laydown areas, is located on previously disturbed developed properties. No potentially significant impacts to terrestrial biological resources would be expected to result from construction or operation of the proposed Project facilities in Pittsburg.

No operations-related Project impacts to terrestrial biological resources would be expected to occur.

1.2.5 Marine Biological Resources

Potential Project-related impacts to marine biological resources would be limited to installation and operation of proposed offshore submarine cable system which is planned to typically be buried 3-6 feet below the bottom of the Bay. The actual burial depth will be determined by the forthcoming marine survey and risk analysis, and insurance company requirements. The construction phase for the offshore cable installation is planned to occur over a 4- to 5-month period between June 1 and November 30, thereby avoiding the sensitive life stages of salmonids (Chinook and steelhead), which are listed on the Endangered Species Act (ESA) list, and the typical Pacific herring spawning period. In addition, the proposed cable route was selected to avoid potentially sensitive marine habitat such as eelgrass beds and pinniped (e.g., seals and sea lions) haul out areas. Cable installation impacts on benthic organisms associated with use of the Hydroplow or equivalent technology burial method would be expected to be localized and minor. Potential operations-related impacts on marine organisms associated with electric and magnetic fields and cable heat are also expected to be insignificant. In summary, no potentially significant impacts to marine biological resources would be expected to occur associated with the proposed Project.

1.2.6 Cultural Resources

Potential Project-related impacts to cultural resources include potential construction-related impacts to archaeological resources that may be present in subsurface areas associated with proposed facilities in San Francisco. In addition, archaeological resources (shipwrecks) may be present along the offshore submarine cable system route between San Francisco and Pittsburg.

Construction of the proposed San Francisco HWC (Mitigated) Converter Station and associated onshore cables could potentially impact subsurface archaeological resources that may be present on the HWC (Mitigated) Converter Station site or the Mirant Power Plant property, which is associated with the proposed AC cable interconnection between the HWC (Mitigated) site and Pacific Gas and Electric Company's (PG&E's) Potrero substation (Impact CUL-1). With implementation of Mitigation Measures CUL-1a, b, and c, this potentially significant impact would be reduced to a less-than-significant level.

Construction and operation of the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station, including ancillary facilities, would not be expected to result in any potentially significant onshore impacts to cultural resources (archaeological or historic). Installation of the proposed offshore submarine cable has the potential to significantly impact submerged and buried shipwrecks (Impact CUL-3). Implementation of proposed Mitigation Measures CUL-3a, b, and c would reduce this potentially significant impact to a less-than-significant level. The construction of the submarine cable will require a 404 permit from the U.S. Army Corps of Engineers. This federal agency permitting requirement creates a nexus with Section 106 of the National Historic Preservation Act and compliance with the implementing regulations found at 36 CFR 800.

1.2.7 Land Use and Recreation

In general, construction and operation of the proposed San Francisco HWC (Mitigated) Converter Station and ancillary facilities would not be expected to result in any potentially significant land use-related impacts.

The proposed San Francisco HWC Converter Station site (mitigated) is currently zoned M-2 (Heavy Industrial) and the proposed Project is consistent with this zoning designation. The San Francisco Planning Department has proposed to rezone the site from M-2 to PDR (Production, Distribution, & Repair). The PDR zoning would prohibit residential and most office developments. Utilities are described as a core use within the PDR district. Although the allowed uses within the PDR district are still being refined, City staff have indicated that they plan on adding a broad range of industrial uses within the PDR district and that the proposed converter station would be consistent with what they intend to propose.

Implementation of the proposed Project at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site is not a permitted use in the existing CS-O (1171)(Service Commercial with Limited Overlay [Ordinance No. 00-1171]) zoning district. The City of Pittsburg is in the process of amending the existing zoning district for a group of parcels. The affected zoning district encompasses an area larger than that required for the proposed West Tenth Street Converter Station Alternative 1. The details of the proposed Overlay Zoning Amendment with respect to allowable uses, setback, and height limitation are as described in

Section 3.4.3 of this Final EIR. Approval of this zoning overlay would allow the use and height of the proposed structures at the Pittsburg West Tenth Street Alternative 1 site.

Installation of the proposed offshore submarine cables would involve a temporary (4 to 5 months) increase in vessel traffic on the Bay, which could conflict with recreational uses of the Bay. This potentially significant impact (Impact LU-4) would be reduced to a less-than-significant level with implementation of proposed mitigation measures LU-4a and b. Implementation of proposed Mitigation Measure LU-5 would ensure that installation of the proposed offshore cable system would not conflict with established local land use plans or policies.

1.2.8 Marine Transportation and Commercial Fishing

Construction and operation of the proposed onshore facilities (converter stations and ancillary facilities) in San Francisco and Pittsburg would not impact marine transportation or commercial fishing. Potential Project-related impacts to marine transportation and commercial fishing would be limited to the planned 4- to 5-month offshore submarine cable system installation phase. Potentially significant marine transportation-related Project impacts consist of the creation of potential navigation hazards due to the presence of Project-related marine vessels in the Bay during submarine cable installation (Impact MTRANS-1). With implementation of proposed Mitigation Measures MTRANS-1a, b, c, and d, this potentially significant impact would be reduced to a less-than-significant level.

Potentially significant Project-related impacts to commercial fishing operations could occur if the offshore submarine cable system installation activities coincided in time and place with commercial herring fishing/harvesting operations in the Bay (Impact MTRANS-2). With implementation of proposed Mitigation Measure MTRANS-2a and b, this potentially significant impact would be reduced to a less-than-significant level.

The proposed offshore cable system installation vessels could cross and conflict with commercial sport fishing vessel paths as they pursue migratory sport fish (e.g., salmon, striped bass, and steelhead) in the Bay. This potentially significant impact (Impact MTRANS-3) would be reduced to a less-than-significant level with implementation of proposed Mitigation Measures MTRANS-3a and b.

1.2.9 Traffic and Transportation

Construction of the proposed onshore Project components over a 27- to 30-month period would involve substantial truck traffic on the regional and local road networks in the Bay Area, San Francisco, and Pittsburg. The equipment to be installed at the proposed converter stations in San Francisco and Pittsburg would be delivered primarily to the Port of Oakland via container ships and then be trucked over the regional and local road networks to the converter station sites and/or construction laydown areas. Truck shipments would include a

limited number of oversize loads (e.g., transformers and cable reels). Construction activities would also include truck traffic associated with hauling construction debris (e.g., demolished buildings) and possibly contaminated soil, as well as construction workforce commute trips.

Truck traffic associated with construction of the proposed San Francisco Converter Station would contribute to cumulative traffic impacts on regional roadways that are already operating with significant delays during peak periods (e.g., Interstate 280 and U.S. 101). The proposed Project's contribution of additional traffic during the peak periods on these roadways is considered to be a potentially significant cumulative traffic impact on regional road networks. With implementation of proposed Mitigation Measure TRAFFIC-1, this potentially significant impact would be reduced to a less-than-significant level. This potentially significant impact also applies to the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site relative to the Project's contribution to cumulative traffic levels on Interstate 80 and State Route 4. Proposed Mitigation Measure TRAFFIC-1 would also reduce the potentially significant cumulative impact to a less-than-significant level for the Pittsburg converter station.

Another potentially significant traffic-related impact identified for the proposed San Francisco and Pittsburg converter stations consists of the transport of oversize loads (Impact TRAFFIC-2). This potentially significant impact would be reduced to a less-than-significant level via implementation of proposed Mitigation Measure TRAFFIC-2.

Additional potentially significant, localized traffic-related impacts identified for the construction phase of the proposed San Francisco HWC (Mitigated) Converter Station and ancillary facilities are as follows: Impact TRAFFIC-3 – Temporary Street Closures Affecting Traffic, Bicycle, and Pedestrian Circulation; and Impact TRAFFIC-4 – Impact on Metro East Light Rail Facility. With implementation of proposed Mitigation Measures TRAFFIC-3 and -4, these potentially significant impacts would be reduced to less-than-significant levels.

No potentially significant operations-related traffic impacts have been identified for the proposed Project.

1.2.10 Noise and Vibration

Construction of the proposed Project facilities in San Francisco and Pittsburg would result in short-term (approximately 20 months) increases in ambient noise levels associated with the use of construction equipment, pile driving (4- to 5-month duration), and truck traffic. Operation of the proposed converter station would also generate noise associated with transformers, filters, heating and air conditioning units, circuit breakers, and emergency generators. Based on the results of the noise modeling performed, no potentially significant construction or operations-related noise impacts have been identified for the proposed San Francisco HWC (Mitigated) Converter Station. Although no potentially significant

construction noise impacts have been identified for the construction phase at the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station (including ancillary facilities), a potentially significant noise impact (Impact NOISE-1) has been identified for the operations phase due to the estimated unmitigated noise level of 77 to 79 A-weighted sound level (dbA) Day-Night Average Noise Level (L_{dn}) at the property lines, which exceeds the City of Pittsburg's 75 dbA L_{dn} requirement. With implementation of proposed mitigation measure NOISE-1, this potentially significant noise impact would be reduced to a less-than-significant level.

No potentially significant noise impacts have been identified associated with installation of the proposed offshore submarine cable system.

1.2.11 Public Services and Utilities

Construction and operation of the proposed Project have the potential to require and adversely impact public services (e.g., fire) and underground utilities. In addition, the proposed offshore submarine cable route crosses multiple utilities (fiber optic cables and pipelines, BART tube, etc.) that are present in the floor of the Bay.

Construction of the proposed converter stations in San Francisco and Pittsburg have the potential to result in significant impacts related to: creation of construction fire hazards (Impact PS-1); and damage to existing onshore underground utilities (Impact PS-2). With implementation of proposed Mitigation Measures PS-1 and -2, these potentially significant impacts would be reduced to a less-than-significant level.

Operations at the proposed converter stations in San Francisco and Pittsburg could create a fire hazard that is considered to be potentially significant (Impact PS-3). With implementation of proposed Mitigation Measure PS-3, this potentially significant impact would be reduced to a less-than-significant level.

1.2.12 Visual Resources/Aesthetics

Implementation of the proposed Project in San Francisco and Pittsburg has the potential to result in long-term visual impacts associated with the proposed San Francisco and Pittsburg converter stations. Construction of the proposed converter stations at the HWC (Mitigated) site in San Francisco and the West Tenth Street Alternative 1 (E/W) site in Pittsburg would result in potentially adverse, but not significant, visual impacts associated with the facilities' domination of views (Impact VIS-1) from key observation points/public viewing locations. These include views of the HWC (Mitigated) site from Warm Water Cove Park in San Francisco and views of the West Tenth Street Alternative 1 (E/W) site from West Tenth Street. With implementation of proposed Mitigation Measures VIS-1a and b, these potentially adverse impacts would be reduced to a less-than-significant level.

The proposed San Francisco HWC (Mitigated) Converter Station could also result in a potentially significant visual impact on viewers at Warm Water Cove Park related to the creation of visual clutter (Impact VIS-3). With implementation of proposed Mitigation Measure VIS-3, this potentially significant impact would be reduced to a less-than-significant level.

Operation of the proposed converter stations in San Francisco and Pittsburg could also result in adverse, but less than significant, visual impacts related to creation of substantial light and glare (Impact VIS-2) as viewed from key observation points in San Francisco (Warm Water Cove Park and Potrero Hill) and Pittsburg (West Tenth Street). With implementation of proposed Mitigation Measure VIS-2, these potentially adverse visual impacts would be reduced to a less-than-significant level.

1.2.13 Hazardous Materials and Waste Management

The proposed Project has the potential to result in significant hazardous material and waste management-related impacts associated with construction and operation of the onshore converter stations and ancillary facilities as well as the offshore submarine cable system. Potentially significant hazardous material and waste management impacts associated with installation of the offshore submarine cable system are addressed in the Water Resources and Quality assessment. Construction of the proposed San Francisco HWC (Mitigated) Converter Station and the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station, including ancillary facilities, would involve demolition of existing structures and excavation/ remediation of potentially contaminated soil material related to past activities at the sites and adjacent areas.

Development of the proposed Project at the San Francisco HWC (Mitigated) Converter Station site would require demolition of buildings that contain hazardous building materials (e.g., asbestos and lead-based paint), excavation and remediation of subsurface, contaminated soil, and possibly groundwater. Development of the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site, including ancillary facilities, would also involve demolition activities and excavation of potentially contaminated soils. Although the same impact categories generally apply to the proposed HWC (Mitigated) and West Tenth Street Alternative 1 (E/W) sites, the hazardous material/waste conditions for the HWC (Mitigated) site in San Francisco are more substantial than those at the Pittsburg West Tenth Street Alternative 1 site. Implementation of the proposed Project at the HWC (Mitigated) site would also involve an AC cable interconnection from the HWC (Mitigated) Converter Station to the PG&E Potrero Substation, including a portion on the Mirant Potrero property, which is known to have subsurface contamination issues as well. The following potentially significant impacts have been identified for both the proposed HWC (Mitigated) and West Tenth Street Alternative 1 (E/W) converter station sites, including ancillary facilities (as applicable):

- Impact HAZ-1: Removal of Potentially Hazardous Building Materials Resulting from Demolition
- Impact HAZ-2: Soil Removal
- Impact HAZ-3: Construction-phase Hazardous Materials Use
- Impact HAZ-4: Construction-phase Waste Streams
- Impact HAZ-5: Construction-phase Accidental Spills
- Impact HAZ-6: Construction-phase Dust and Volatilization of Contaminants
- Impact HAZ-7: Contaminated Groundwater
- Impact HAZ-8: Operations-phase Hazardous Materials Usage
- Impact HAZ-9: Operations-phase Waste Streams
- Impact HAZ-10: Operations-phase Accidental Spills
- Impact HAZ-11: Operations-phase Fire and Explosion Risk
- Impact HAZ-12: Impacts from Seismic Activity

With implementation of proposed Mitigation Measures HAZ-1 through HAZ-12, all 12 potentially significant hazardous material- and waste management-related impacts would be reduced to less-than-significant levels.

1.2.14 Paleontological Resources

Construction of the proposed Project at the San Francisco HWC (Mitigated) and Pittsburg West Tenth Street Alternative 1 (E/W) sites, including ancillary facilities, has the potential to significantly impact fossil resources during subsurface excavation activities. Development of the proposed converter station sites may involve excavation of undisturbed quaternary alluvium (*Qal*) that may be present under the site areas. *Qal* deposits have a high potential for containing significant fossil resources. If excavations associated with construction involved disturbance of *Qal*, a potentially significant impact to paleontological resources could occur (Impact PALEO-1). With implementation of proposed Mitigation Measure PALEO-1, this potentially significant impact would be reduced to a less-than-significant level.

No potentially significant impacts to paleontological resources would be expected to occur associated with installation of the proposed offshore submarine cable system.

1.2.15 Summary

With implementation of the proposed mitigation measures, all of the identified potentially significant impacts would be reduced to levels that are less than significant. Implementation of the proposed Project would be expected to result in no unavoidable adverse significant impacts.

1.3 ALTERNATIVES CONSIDERED

1.3.1 Introduction

The primary goal of the Trans Bay Cable Project is to deliver 400 MW of electric capacity and energy to San Francisco to meet demand projected for the beginning of 2012 and beyond. The proposed Project is anticipated to meet CAISO planning and reliability standards while improving load serving capability and creating economic benefit compared to Project costs. Should the Project be approved it will potentially reduce the need for in-city generation in the City of San Francisco, decrease transmission grid congestion in the East Bay, increase the overall security and reliability of the electrical system, improve the load serving capability, and provide potential savings to ratepayers.

The Project proposes to meet the primary goals by constructing an approximately 53-mile-long 400 MW HVDC subsea cable in San Francisco Bay from Pittsburg in Contra Costa County to the Potrero area in San Francisco as well as converter stations on each end and associated AC cables to connect the converter stations with the existing PG&E substations near Pittsburg and in San Francisco. In accordance with CEQA Guidelines (Section 14126[a]), this EIR assesses a reasonable range of alternatives to the proposed Project that are potentially capable of meeting the Project goals and objectives, including:

a) Project Alternatives

- Alternative converter station sites, layouts, and associated ancillary facilities

b) Pittsburg to San Francisco land-based transmission routes

- New transmission corridor
- Within existing utility and transportation corridors (e.g., rail, highway, and BART)

c) Reconductoring and/or retrofitting of the existing transmission grid

d) New generation capacity in San Francisco

e) Transmission grid enhancements/demand management

f) No Project Alternative

1.3.2 Alternatives Considered But Eliminated From Further Consideration

Alternative categories b, c, d, and e (above) were subjected to a screening process to assess their potential feasibility and capability to meet the Project goals and objectives; none of these potential alternatives to the proposed Project were determined to be feasible and/or capable of meeting the Project goals and objectives. Accordingly, these alternative categories were eliminated from further consideration in this EIR. Refer to Section A.8.3 in Appendix A of the Draft EIR for more information regarding these potential alternatives, the screening process used, and the rationale for eliminating these alternatives from further consideration.

1.3.3 No Project Alternative

The No Project Alternative would involve taking no action to provide additional electrical transmission capacity to San Francisco (i.e., status quo). Under the No Project Alternative, the potential environmental impacts and benefits of the proposed Trans Bay Cable Project would not occur as a direct consequence of Project implementation. However, the No Project Alternative is incapable of meeting the Project goals and objectives, or the CAISO's objectives for solving the near-term and long-term electrical supply and reliability issues in San Francisco and the northern Peninsula area. Another potential consequence of the No Project Alternative would be the lost potential to save an estimated 20 MW of electrical power that is currently expended in electrical line losses, which would be avoided by the proposed HVDC Project. In summary, the No Project Alternative does not constitute a reasonable alternative to the proposed Project.

1.3.4 Project Alternatives

The following Project Alternatives are assessed in detail in Section 5.0 of the Draft EIR, and compared to each other and the proposed Project as refined in Section 6.0 of this Final EIR:

- San Francisco Mirant Potrero Converter Station (three layouts)(and ancillary facilities)
- San Francisco Sheedy Converter Station (and ancillary facilities)
- Pittsburg West Tenth Street Converter Station Alternative 1 (and ancillary facilities)(now proposed)
- Pittsburg West Tenth Street Converter Station Alternative 2 (and ancillary facilities)
- Pittsburg Mirant Converter Station (and ancillary facilities)

In general, the potentially significant impacts of the various Project alternatives are the same or similar to those associated with the proposed Project. Key issues potentially associated with the Project alternatives are summarized below.

1.3.4.1 San Francisco Mirant Potrero Converter Station Alternative

Development at this alternative site (at all three site layouts under consideration) would result in an unavoidable adverse significant cultural resource impact associated with the need to demolish historic structures (Station A Complex) during site preparation (Impact CUL-2).

1.3.4.2 San Francisco Sheedy Converter Station Alternative

No unavoidable significant impacts have been identified for this alternative site.

1.3.4.3 Pittsburg West Tenth Street Converter Station Alternative 2

Implementation of the Project on the Pittsburg West Tenth Street Alternative 2 site would result in unavoidable adverse significant noise impacts associated with pile driving activities (4-5 months) during the construction phase and long-term visual impacts.

1.3.4.4 Pittsburg Mirant Converter Station

No unavoidable adverse significant impacts have been identified for the Pittsburg Mirant Converter Station Alternative.

1.3.5 Environmentally Superior Alternative

The No Project Alternative would result in the fewest environmental effects. However, the No Project Alternative would not meet the Project/CAISO goals and is not considered to be a reasonable or feasible alternative. Numerous "non-Project" alternatives were also considered, as discussed in Section A.8.3 in Appendix A of the Draft EIR. None of the various alternatives evaluated are considered to be capable of meeting all of the Project objectives and the related screening criteria for "feasibility" and "environmental impacts avoidance and minimization." Therefore, none of the potential non-Project alternatives were retained for further consideration in this EIR.

The Trans Bay Cable Project Alternatives are considered by the City of Pittsburg to be the only feasible alternative for meeting the Project and CAISO objectives at this point in time.

It is difficult to determine, however, which of Trans Bay Cable Project converter station site alternatives in San Francisco and Pittsburg is clearly the environmentally superior alternative as, with few exceptions, the sites are very similar to each other in terms of potential impacts. The proposed San Francisco HWC (Mitigated) Converter Station site and the San Francisco Sheedy Converter Station Alternative would avoid the unavoidable adverse significant impact to historic architectural resources associated with the alternative San Francisco Mirant sites. However, Mirant tentatively plans to demolish the buildings considered to be historic (i.e., Station A Complex) on the San Francisco Mirant property due to their deteriorated

condition and seismic safety concerns. Locating the proposed Trans Bay Cable Project San Francisco converter station on any one of the three alternative Mirant site layouts would consolidate the electrical station facilities (i.e., PG&E Potrero Substation and the Trans Bay Cable San Francisco converter station) at one location and would avoid potential conflicts with possible future improvements to public access to San Francisco Bay (Impact LU-1) associated with the Sheedy alternative. In addition, the required electrical interconnection (115 kV AC) between the Sheedy Converter Station site and the PG&E Potrero Substation is problematic due to potential conflicts with existing underground utilities along Illinois Street. No one site in San Francisco is clearly environmentally superior to another. The proposed HWC (Mitigated) site has no identified unavoidable adverse significant impacts and this is the only site in San Francisco for which the Project proponent has site control, thus the HWC (Mitigated) site is the only feasible site at the time this Final EIR was prepared.

Of the proposed and alternative converter station sites in Pittsburg (including ancillary facilities), it is also difficult to determine the clearly environmentally superior alternative. Due to the unavoidable adverse significant noise and visual impacts associated with the Pittsburg West Tenth Street Alternative 2 site, this alternative site is the least preferable from an environmental impact perspective. Accordingly, the proposed Pittsburg West Tenth Street Alternative 1 (E/W) and Pittsburg Mirant alternative sites are considered to be environmentally superior to the Pittsburg West Tenth Street Alternative 2 site. It is not possible to clearly differentiate the environmentally superior alternative in Pittsburg between the West Tenth Street Alternative 1 site and the Pittsburg Mirant site. However, since the Project proponent does not have site control at the Pittsburg Mirant site, the Pittsburg West Tenth Street Alternative 1 (E/W) site is the only environmentally acceptable and feasible site at the time this Final EIR was prepared.

TABLE 1-1[1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
AIR-1: Fugitive Dust Emissions. The Project proposes to use fugitive dust suppression with water and other methods to control construction-related emissions. The use of chemical additives is not planned. Controlled worst-case fugitive dust is estimated to be 29 pounds per day; 0.32 tons per month; and 2.6 tons over the 27- to 30-month construction period for the San Francisco site. Without fugitive dust control measures the impact is considered potentially significant.	**AIR-1: Fugitive Dust Controls.** Best achievable control measures (BACM) shall be utilized during construction phases of the Project. Fugitive dust control measures are stipulated by BAAQMD Regulation 6 (BAAQMD, 1999) and shall include all of the following as applicable to the Project site: • Water all active construction areas at least twice daily • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites • Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more) • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.) • Install sandbags or other erosion control measures to prevent silt runoff to public roadways • No vehicle shall exceed 10 miles per hour speed limit within the construction site • The construction site entrance shall be posted with visible speed limit signs • All construction vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering public roadways • Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	• All unpaved exits from the construction site shall be graveled to prevent track out to public roadways • All construction vehicles shall enter the construction site through the graveled roadways, unless an alternative route has been submitted to and approved for use by the City • At least the first 500 feet of any public roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways	
AIR-2: Equipment Exhaust Emissions. See Table 4.2-10 for emissions estimates for the San Francisco HWC (Mitigated) Converter Station site. The impact of these emissions would be considered to be potentially significant.	**AIR-2: Exhaust Controls.** The following controls pertaining to equipment emissions (BAAQMD, 1999) shall be implemented during construction to reduce emissions from construction equipment exhaust: • Use alternative fueled construction equipment, as practical. • Minimize idling time. • Maintain properly tuned equipment. • Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use. • All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur. • All diesel-fueled engines used in the construction of the facility shall have clearly visible tags showing that the engine meets the conditions set forth herein. • All construction diesel engines, which have a rating of 100 horsepower (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1). In the event a Tier 2 engine is not available for any off-road	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" if, among other reasons: ▪ There is no available soot filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question. ▪ The construction equipment is intended to be on-site for ten (10) days or less. ▪ The City may grant relief from this requirement if the construction contractor can demonstrate that they have made a good faith effort to comply with this requirement and that compliance is not possible. • The use of a soot filter may be terminated immediately if one of the following conditions exists, provided that the City is informed within ten (10) working days of the termination: ▪ The use of the soot filter is excessively reducing normal availability of the construction equipment due to increased time for maintenance, and/or reduced power output due to an excessive increase in backpressure. ▪ The soot filter is causing or is reasonably expected to cause significant engine damage. ▪ The soot filter is causing or is reasonably expected to cause a significant risk to workers or the public. ▪ Any other seriously detrimental cause which has the approval of the City prior to the termination being implemented.	

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	• All heavy earthmoving equipment and heavy duty construction related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications. • All diesel heavy construction equipment shall not remain running idle for more than five minutes, to the extent practical.	
GEO-1: Soil Erosion and Compaction. Construction activities would lead to soil compaction and could lead to soil erosion. This impact is considered to be potentially significant.	**GEO-1: Design Project for Erosion Control.** Standard Best Management Practices (BMPs) shall be incorporated into the Storm Water Pollution Prevention Plans (SWPPPs) for construction and operation, and shall minimize onsite soil erosion and offsite sedimentation. Temporary erosion control measures shall be required during the construction period to help maintain water quality, protect property from erosion damage, and prevent accelerated soil erosion or dust generation.	Less than significant
GEO-2: Asbestos-containing Serpentine. The San Francisco site is potentially underlain with asbestos-containing soils and rocks. Asbestos could be released during construction phases at the San Francisco sites. Asbestos is a human health hazard when airborne. This is considered a potentially significant impact.	**GEO-2: Controls for Excavation of Serpentine.** Prior to Project construction, previously-prepared geotechnical reports and boring and trenching logs from the site would be reviewed to identify areas of serpentinite bedrock that would be disturbed during excavation and Project construction. An Asbestos Dust Mitigation Plan would be submitted to the Bay Area Air Quality Management District (BAAQMD) for approval in accordance with the *Final Regulation Order Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.*	Less than significant
GEO-3: Strong Ground Shaking. There is a high risk of strong ground shaking in the event of a large earthquake in the area. This impact is considered potentially significant.	**GEO-3: Design to Seismic Design Requirements.** Due to the site's proximity to earthquake faults and the characteristics of the soil profile, a site-specific study shall be conducted to develop seismic design criteria. Project facilities shall be designed and constructed at a minimum to the seismic design requirements for ground shaking specified in the Uniform Building Code for Seismic Zone 4. Additionally, to satisfy the provisions of the 1998 California Building Code, these facilities shall be designed to withstand ground motions equating to approximately a 500-year return period (10 percent probability of exceedance in 50 years). For design purposes, site-specific ground motions shall be calculated for all project sites.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
GEO-4: Liquefaction. There is a potential for liquefaction at the Project site. This impact is considered potentially significant.	**GEO-4: Design Project for Liquefiable Deposits.** A site-specific program of exploratory borings and accompanying laboratory testing shall be required in order to delineate potentially liquefiable materials beneath the construction area. Geotechnical investigations shall be required for consideration prior to foundation design and development of site-specific design criteria.	Less than significant
GEO-5: Shrink-Swell/Subsistence. The proposed San Francisco HWC (Mitigated) Converter Station site is potentially underlain with expansive soils, which requires specific attention during grading to avoid future heaving and cracking of overlying materials. The potential for damage due to shrink-swell/subsidence to site facilities is potentially significant.	**GEO-5: Design Project for Shrink-Swell/Subsistence.** A program of site-specific exploratory borings and accompanying laboratory testing shall be required to delineate any potentially expansive materials underneath the proposed Project facility sites and to evaluate the potential for site subsidence and identify and implement appropriate design measures (e.g. pile supports or replacement of undesirable materials) in accordance with applicable codes.	Less than significant
WATER-1: Erosion and Contaminated Runoff. Erosion and contaminated runoff during construction and operation could significantly impact water quality within San Francisco Bay. This is considered a potentially significant impact.	**WATER-1: Erosion Control and Contaminant Source Control.** Apply for and comply with NPDES construction permit, and Industrial Activities General Permit. Requirements for the permits include submittal of a Notice of Intent, development of a Stormwater Pollution Prevention Plan (SWPPP), monitoring and inspections, and submittal of annual compliance reports.	Less than significant
WATER-2: Surface Water Quality Impacts from HDD. HDD could have significant water quality impacts through loss of drilling fluids and disruption of Bay bottom sediment at the sediment surface where the borehole emerges. This is considered a potentially significant impact.	**WATER-2: Spill Prevention and Control Plan for HDD.** Drilling shall be performed in accordance with a site-specific Spill Prevention and Control (SPCC) Plan for HDD Operations for Drill Fluids and Cuttings. Spill response measures included in this plan, should a spill occur, shall include reducing fluid pressures, thickening the fluid mixture, and/or adding pre-approved loss circulation materials (LCMs) to the mixture.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
WATER-3: Groundwater Quality Impacts from HDD. HDD could have significant water quality impacts through loss of drilling fluids that would increase suspended material in groundwater. This would be considered a potentially significant impact.	**WATER-3: Use of Pilot Hole and Reaming.** HDD shall be performed using a pilot hole plus reaming technique to minimize the potential for impacts to groundwater. To prevent significant water quality impacts, drilling muds shall consist of naturally occurring materials such as water and bentonite clay, plus inert, non-toxic polymers. Both the drilling technique and early detection and response shall be used to minimize release of fluids to the environment. HDD shall start with completion of a small-diameter pilot hole. The pilot hole is gradually enlarged using reaming. This technique acts to prevent sudden loss of large volumes of drilling fluids. Early detection and rapid response shall be implemented to minimize loss of drilling fluids. In the event loss of drilling fluids is detected, natural LCMs such as cotton dust, cottonseed hulls, wood fiber, mica, and cedar fiber shall be added to the drilling fluid. Alternative actions that shall be considered and implemented, as required, include reduction in drilling pressure, thickening of the fluid mixture, and construction of spill control structures, pits, and silt fences onshore, or silt curtains offshore.	Less than significant
CUL-1: Disturbance of Archaeological Resources. Buried historical resources may exist on the HWC (Mitigated) site and Mirant Potrero Power Plant site. Construction of the AC cable route from the converter station across the power plant property to the PG&E Potrero substation may disturb these resources. This is considered a potentially significant impact.	**CUL-1a: Archeological Resource Testing.** Due to the potential for buried cultural resources within the Mirant Potrero Power Plant portion of the Project area, it is recommended that subsurface survey (i.e., testing) of the cable route across the plant utilizing mechanical exploratory borings be initiated prior to construction activities. The subsurface survey should be implemented as a means to determine the presence and extent of buried archaeological resources within the plant area as well as to evaluate the potential significance of any resources encountered. Identified remains would be evaluated against the NRHP/CRHR significance criteria. If the resources are not eligible for the NRHP/CRHR, then no further consideration of these resources would be required. If the resources are eligible for the NRHP/CRHR, additional mitigation measures may be required.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	The testing program would be documented within a technical report. The report would include the aforementioned resource evaluations, if any, and provide recommendations for the further management of cultural resources. Such recommendations could include data recovery excavations as well as the monitoring of all ground-disturbing activities associated with the project. **CUL-1b: Archaeological Resource Data Recovery.** Based upon the results of the testing program, it may be necessary that a data recovery excavation be implemented. CEQA stipulates that if avoidance of the important archaeological resource is not feasible, a data recovery excavation may be warranted. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the resource, shall be prepared and adopted prior to any excavation being undertaken. The development of this plan, as well as the implementation of field work, would be conducted in consultation with the SHPO, and, if the site is of aboriginal association, with the NAHC and local Native American community as well. **CUL-1c: Archaeological Resource Construction Monitoring.** Following completion of the archaeological testing efforts, it may be determined that construction monitoring is necessary to prevent significant impacts to important cultural resources. In the event monitoring is warranted, a qualified professional archaeologist shall be retained to observe all ground-disturbing activities associated with the Project. If archaeological materials are observed by the monitoring archaeologist, he/she would have the authority to halt all ground-disturbing activities within the vicinity of the exposed materials until the nature and significance of the find could be evaluated and mitigation measures implemented, if needed. The development of mitigation measures would be conducted in consultation with SHPO and, if the site is of aboriginal association, with the NAHC and local Native American community as well.	

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
TRAFFIC-1: Cumulative Traffic Impacts. Project-related trips to and from the HWC (Mitigated) Converter Station site would contribute to delays on the regional roadway system, a potentially significant impact.	**TRAFFIC-1: Coordination to Reduce Cumulative Traffic Impacts.** Truck shipments on the regional roadway shall be scheduled for non-peak periods when delays are less prevalent, as practical. The construction contractor shall coordinate with Caltrans to identify appropriate routings and times for site deliveries and comply with Caltrans recommendations. This mitigation measure would successfully mitigate the Project's contribution to cumulative impacts occurring on the regional roadway system.	Less than significant
TRAFFIC-2: Oversized Loads. Oversized shipments would require a permit from Caltrans that identifies the permitted hours of operation and the size of the truck to transport the shipment on the regional roadway network. If the permit conditions were not followed adequately, this would constitute a potentially significant adverse impact.	**TRAFFIC-2: Coordination of Oversized Loads.** Coordination with Caltrans and local jurisdictions shall be conducted to ensure proper permitting for oversized loads, which shall be required in advance of construction.	Less than significant
TRAFFIC-3: Temporary Street Closures Affecting Traffic, Bicycle, and Pedestrian Circulation. The temporary closure of streets for Project-related construction would affect traffic circulation in the study area and may impede the delivery and access to businesses in the area and the use of the Bay Trail and bicycle circulation for short intervals. This impact is considered to be potentially significant.	**TRAFFIC-3: Signage for Temporary Street Closures.** Any needed temporary closure of local streets in San Francisco will be mitigated by coordinating street closures with the San Francisco Department of Parking and Traffic (DPT) and, if appropriate, erecting signage that reroutes traffic onto neighboring streets. The coordination would account for providing continued access for emergency vehicles in the study area and ensure that the City of San Francisco's Emergency Operations Plan could be activated without impediment. With these mitigation measures, temporary construction impacts on traffic circulation would be mitigated to a less-than-significant level.	Less than significant
TRAFFIC-4: Impacts on Metro East Light Rail Facility. If truck shipments were destined for the proposed laydown area (Western Pacific site) at the same time MUNI begins using 25th Street to dispatch light rail vehicles to Third Street, they could conflict with the most	**Mitigation Measure TRAFFIC-4: Reducing Impact on the Movement of MUNI Light Rail Vehicles into and out of the Metro East Maintenance Facility.** The Project laydown area located at Pier 94/96 is the preferred laydown area. As indicated in Section 4.10.3.2.1 of the Draft EIR, Construction-related Impacts, truck deliveries to the Pier 94/96 laydown area would not produce significant impacts along Cargo Way and would avoid a	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
active light rail dispatch and return hours at the beginning and end of the peak periods. This is considered to be a potentially significant impact.	potential conflict with the movement of MUNI light rail vehicles along 25th Street. If the Western Pacific site were used as an alternative laydown area, the Construction contractor will coordinate with MUNI, Port of San Francisco, and the Department of Parking and Traffic to minimize delays to MUNI Metro operation and to define times for scheduling of truck deliveries if the truck deliveries were to occur during the peak period.	
PS-1: Construction Fire Hazards. Without appropriate precautions, construction activities requiring the use of flammable and combustible materials could create fire hazards. The potential to increase fire events could affect the level of service by the fire department to the surrounding area. This impact is considered potentially significant.	**PS-1: Construction Fire Prevention.** A Construction Fire Prevention and Protection Program shall be developed for the Project to be followed throughout all phases of construction. The program will specifically address: • General requirements • Responsibilities • Housekeeping • Employee alarm/communication system • Portable fire extinguishers • Fixed fire-fighting equipment • Fire control • Flammable and combustible liquid storage • Use and handling of flammable and combustible liquids • Dispensing and disposal of flammable and combustible liquids • Servicing and refueling areas • Training	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
PS-2: Existing Onshore Underground Utilities. Without appropriate precautions, installation of proposed underground utility lines could impact existing underground utilities and public service connections. This impact would be considered potentially significant.	**PS-2: Utility Survey.** Prior to any excavation work a survey shall be conducted to identify locations of subsurface utilities.	Less than significant
PS-3: Operations Fire Hazards. Without appropriate precautions, operations requiring the use of flammable and combustible materials could induce fire hazards. The potential to increase fire events could affect the level of service by the fire department to the surrounding area. This impact is considered potentially significant.	**PS-3: Operations Fire Prevention.** An Operations Fire Prevention and Protection Program shall be developed for the Project to be followed throughout all phases of operation. The program will specifically address: • Names and/or job titles responsible for maintaining equipment and accumulation of flammable or combustible material • Procedures in the event of fire • Fire alarm and protection equipment • System and equipment maintenance • Monthly inspections • Annual inspections • Fire-fighting demonstrations and training • Housekeeping practices • Training	Less than significant
VIS-1A: Converter Station Domination of View. Since the architectural design character of the building and the general character of proposed landscaping have not been identified in detail, there is the possibility of generating potentially significant visual impacts based upon the potential of the Project to dominate the scene or become	**VIS-1Aa: Plan Submittal Requirements for Building Materials and Colors.** All major Project features, including buildings, structures, fencing, and sign backgrounds (excluding electric switch gear and related wires and cables, etc. which shall be galvanized gray as shown in the simulations) shall be painted with neutral tan or gray colors that will minimize the size and height of the facility, blend with adjacent structures and be compatible with natural landscapes where applicable. A specific painting plan shall be developed for	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
obtrusive on views from Warm Water Cove Park. While this impact has been classified as less than significant without design controls, it may still be adverse. This adversity can be lessened through the application of Mitigation Measures VIS-1Aa and VIS-1Ab.	approval by the agency with local jurisdiction to ensure that the proposed colors do not unduly contrast with the surrounding landscape colors. All treatments shall be in non-reflective colors. The painting plan shall be submitted sufficiently early to ensure that any pre-colored buildings, structures and linear facilities shall have colors approved and included in bid specifications for such buildings or structures. **VIS-1Ab: Plan Submittal Requirements for Landscaping.** A specific landscaping plan shall be prepared showing the location of proposed landscaping, the varieties and sizes of plants to be planted, and the proposed time of maturity for each species. Plants shall be selected from the approved species list prepared by the agencies with jurisdiction.	
VIS-2: Converter Station will Create Substantial Light and Glare. There is potential for the Project to cast more ambient light into the immediate area than the existing conditions. There is also the possibility that the luminaries of some of the lighting fixtures may be seen directly by either residents of Potrero Hill or users of Warm Water Cove Park, which through the abrupt contrast of the fixtures' light with the surrounding general darkness, may create the effect of glare. While this impact has been classified as less than significant, without design controls it may still be adverse. This adversity can be lessened through the application of Mitigation Measure VIS-2.	**VIS-2: Plan Submittal Requirements for Lighting.** Except as required by security and worker-safety requirements, night lighting shall be hooded to direct illumination downward and inward toward the areas to be illuminated in order to minimize nighttime light and glare, backscatter to the nighttime sky, and visibility of lighting to public viewing areas. A specific lighting plan consistent with operational and safety needs and limiting the general lighting levels to a maximum reasonable level shall be submitted to each agency with jurisdiction for approval. The plan shall include provisions for timed and/or motion detection-controlled switches.	Less than significant
VIS-3: Creation of Visual Clutter. There is the possibility that views of the proposed HWC (Mitigated) Converter Station from Warm Water Cove Park would be adversely affected without supplemental screening landscaping	**VIS-3: Landscaping Plan.** The view of the proposed HWC Converter Station (mitigated) from Warm Water Cove Park shall be improved by addition of landscaping screening. In order to improve views northward from Warm Water Cove Park, the applicant shall develop a landscape plan which provides screening foliage where consistent with facility	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
along the waterfront given the potential for the Project to be more obtrusive than the existing condition. This impact would be considered potentially significant.	location and safety. The landscaping plans shall be reviewed and approved by agencies with jurisdiction.	
HAZ-1: Removal of Potentially Hazardous Building Materials Resulting from Demolition. Structures on the converter station site contain or potentially contain ACMs and LBP. Improper removal or remediation of these materials could result in a potentially significant environmental impact	**HAZ-1: Complete an ACM Abatement Plan and an LBP Abatement Plan.** Complete ACM and LBP investigation and characterization on the converter station site to fill data gaps and to support development of worker safety procedures, in accordance with regulatory requirements to protect construction workers and the public. The ACM and LBP Abatement Plans shall be completed in compliance with application regulations based on the historical and newly acquired ACM and LBP data. If ACM and LBP are confirmed to be present in concentrations above regulatory limits, the Project proponent shall use ACM- and LBP-certified removal contractors and trained asbestos and lead-based paint removal workers, conduct dust monitoring, and properly dispose of generated wastes offsite. The Project proponent shall also prepare a site Health and Safety Plan for this work.	Less than significant
HAZ-2: Soil Removal. Soils removed during construction of the converter station and cable routes could be contaminated. Improper sampling, handling, analyzing, or characterizing of the soils could result in a potentially significant environmental impact. Soils at the HWC (Mitigated) site are likely to be contaminated with metals and either TPH or PAHs, depending on location. Portions of a naturally occurring subsurface serpentinite ridge may require excavation. Serpentinite contains naturally occurring asbestos and these soils, if disposed of offsite, would likely require disposal as California hazardous waste.	**HAZ-2: Soil Removal Protocols.** Previously uncharacterized soils that are stained or odiferous shall be segregated on plastic, sampled, and characterized for onsite use or offsite disposal. The Soil and Groundwater Management plans (SMP, GMP) shall detail storage, transportation, and disposal options for soil and groundwater excavated/extracted during the converter station construction. They would also specify dust monitoring needs for soil excavation and management. Previously characterized hazardous soils shall be loaded onto trucks for offsite disposal. Hazardous soil disposal requires that hazardous waste manifests accompany the waste. Hazardous waste transporters shall be required to haul hazardous soils to a Class I hazardous waste landfill. The personnel handling the hazardous soils are required to have met the OSHA hazardous work operations training requirements. A Health and Safety Plan shall be prepared for this work. Previously characterized non-hazardous soils shall be stockpiled for onsite or offsite reuse or offsite disposal, as needed.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
HAZ-3: Construction-phase Hazardous Materials Use. Hazardous materials would be used during construction activities. Misuse, inadequate storage, or improper disposal of these materials could result in a potentially significant environmental impact.	**HAZ-3: Reduction of Hazards During Construction Phase.** The hazards presented by the use of hazardous materials during the construction phase are well understood, and the appropriate management controls to mitigate potential impacts shall be implemented. These controls include: 1) developing required management plans, e.g., a Spill Prevention, Control, and Countermeasure Plan (see HAZ-5 for more SPCC Plan details); 2) secondary containment; 3) separate storage of incompatible materials; and 4) proper training of personnel. Additionally, construction personnel shall be trained in safety and defensive emergency response procedures. Construction personnel shall also receive hazardous-waste-related training that focuses on recognition of potentially contaminated soil and/or groundwater that may be encountered during subsurface excavations for foundations or pipeline/cable trenches. If such contaminated soil or groundwater is suspected, contingency procedures shall be followed to protect worker safety and public health. All vehicles and construction equipment shall be inspected to ensure that no fluids are leaking (e.g., oil, hydraulic fluid, lubricants, or brake fluid) and that all fuels and fluids are stored in proper, clearly labeled containers. Hazardous materials that must be disposed of will be disposed of as hazardous waste in accordance with the appropriate regulations for storage, transportation, and disposal of hazardous waste.	Less than significant
HAZ-4: Construction-phase Waste Streams. Improper storage and disposal of solid waste and hazardous construction wastes could result in a potentially significant environmental impact.	**HAZ-4: Management of Construction-phase Waste Streams.** The onsite management and offsite disposal procedures of solid wastes (including potentially contaminated soil) shall be in a Solid Waste Management Plan for the Project. Waste shall be stockpiled temporarily before disposal offsite. The local fire department and emergency management team shall be provided a list of the waste material expected to be generated and stored onsite.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	Hazardous wastes generated during construction shall be collected in hazardous waste accumulation containers near the point of generation and moved daily to the construction contractor's 90-day hazardous waste storage area at the converter station site. The accumulated waste shall be delivered to an authorized waste management facility. The exact volume of hazardous wastes to be generated at the San Francisco HWC (Mitigated) Converter Station site cannot be estimated at this time, but the estimated amount of excavated soil that would need to be disposed of offsite is estimated at approximately 15,000 cubic yards for this converter station site. Even if this entire amount of excavated soil would need to be disposed of as hazardous waste, it would not exceed a significant portion of the available hazardous waste landfill capacity in California. The capacity details of various landfills for both non-hazardous and hazardous waste are detailed in Table 4.14-5. The capacity and estimates for daily volumes of waste received were verified, as detailed in the personal communications provided in the references for this section.	
HAZ-5: Construction-phase Accidental Spills. An accidental spill or a release of hazardous materials could occur during construction. This impact is considered potentially significant.	**HAZ-5: Construction-phase Spill Prevention, Control, and Countermeasures.** The following shall be implemented both to prevent spills from occurring and to minimize impacts in the event that they do occur: • All spills shall be cleaned up quickly and all workers shall be adequately trained to recognize the hazards associated with such spills. • A Spill Prevention, Control, and Countermeasure (SPCC) Plan for the converter station shall be prepared in accordance with federal and state regulations. This plan must be prepared if petroleum products are stored onsite in ASTs with a capacity that equals or exceeds 55 gallons for a single tank or equals or exceeds 1,320 gallons aggregate for more than one tank. The SPCC Plan must be prepared before the delivery of petroleum products to the site. The SPCC Plan shall include information on spill response procedures and fuel storage.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	• Material Safety Data Sheets (MSDSs) for each chemical used during construction shall be kept onsite. Construction employees shall be informed of the location and content of the MSDSs, as required by OSHA's Hazard Communication Standard, Title 29 of the Code of Federal Regulations (CFR) Section 1910.1200. • In case of an accident, the City and County of San Francisco Fire Department shall be notified as the first responder. All other federal, state, and local notification requirements shall be followed for any release that exceeds the reportable quantity or threatens to have a significant impact. • The Project shall comply with all transportation requirements for hazardous materials on state highways. These requirements apply to both hazardous materials coming onto the site and hazardous wastes leaving the site. All vehicles and construction equipment shall be inspected to ensure that there are no leaking fluids (e.g., oil, hydraulic, lubricants, or brake fluid) and that all fuels and fluids are stored in proper, labeled containers. Any observation of spills, leaking fluids, or improperly stored fluids shall trigger the issuance of a "stop work" notice until the problem is resolved, including the removal of any soil contaminated by vehicle fluids. The Project shall comply with all transportation requirements for hazardous materials on state highways. These requirements apply to both hazardous materials coming onto the site and hazardous wastes leaving the site.	

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
HAZ-6: Construction-phase Dust and Volatilization of Contaminants. Excavation of contaminated soil and generation of hazardous waste soils could result in construction dust and volatilization of contaminants that pose environmental and human health risks, particularly to construction workers. This impact is considered potentially significant.	**HAZ-6: Reduction of Construction Dust and Volatilization of Contaminants.** Dust control measures (i.e., keeping the soil wet during excavation) shall be implemented during excavation and construction activities, and dust monitoring shall be performed. Suspected contaminated soil that is stockpiled on the site shall be covered daily with plastic to prevent volatilization of contaminants and to control dust. Contaminated soil may also be loaded directly onto trucks for transport to an appropriate offsite disposal facility. The loaded soils shall be properly covered and manifested as necessary. Dust monitoring shall be performed during excavation and loading of hazardous soils. The accumulated waste will then be delivered to an authorized waste management facility. Dust monitoring shall confirm that the dust control measures are effectively protecting site workers and the public.	Less than significant
HAZ-7: Contaminated Groundwater. The San Francisco HWC (Mitigated) Converter Station site is known to have contaminated groundwater. Groundwater may be encountered during construction and groundwater dewatering. The lead regulatory agency associated with the proposed Project may require control or remediation of the site groundwater for redevelopment of the property. Failure to control the contaminated groundwater flow could result in a potentially significant impact.	**HAZ-7: Contaminated Groundwater Control.** If groundwater was encountered during construction at the converter station site, the water shall be collected onsite in a tank or tanks, sampled, and analyzed. Based on the analytical data, the water shall be characterized for disposal by one of the following methods: • Used onsite for dust control. • Treated onsite and discharged under the authority of a general National Pollutant Discharge Elimination System (NPDES) permit. Treatment options would include, but are not limited to, filtration or filtration and treatment by granular-activated carbon (GAC). Treatment residuals would be sampled, analyzed, characterized, and disposed of offsite in compliance with applicable regulations. • Disposed of offsite at a commercial water treatment facility in compliance with applicable regulations. If groundwater was encountered at the HWC (Mitigated) Converter Station site and it was found to be contaminated, it is possible that the RWQCB would require groundwater	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	control as part of the development plan for the Project on that site. Potential groundwater-remedial strategies would depend on a number of factors including: site contaminants, evaluation of impacts to human health and the environment, and evaluation of the technical merits of available remedial strategies. The final selection would be made by the RWQCB. Potential groundwater control methodologies include installing a slurry wall around a portion or the entire contaminated site combined with groundwater pump and treatment and discharge of treated groundwater to a storm drain/sewer system under the authority of an NPDES permit. Other alternative technologies include in situ biological treatment and in situ oxidation or reduction, depending on the site-specific contaminants and hydrogeological conditions.	
HAZ-8: Operations-phase Hazardous Materials Usage. Hazardous materials shall be used during operations and maintenance activities. Misuse, inadequate storage, or improper disposal of these materials could result in a potentially significant environmental impact.	**HAZ-8: Control of Operations-phase Hazardous Materials.** A Hazardous Materials Business Plan (HMBP) shall be developed and implemented prior to turnover of site management from the construction contractor to the operating company. All hazardous materials shall be handled and stored in accordance with applicable codes and regulations. Storage quantities of all hazardous materials shall be minimized, and non-hazardous materials shall be substituted for hazardous materials at the converter station to the extent practicable. Small-quantity chemicals used for maintenance tasks shall be kept in appropriate inflammable material or corrosive material storage lockers. Bulk chemicals shall be stored in ASTs, and all other chemicals shall be stored in their original shipping containers. Incompatible materials shall be stored in separate storage containment areas. Chemical storage areas and transfer areas shall be equipped with secondary containment sufficient in size to contain the volume of the largest container or tank, including an allowance for rainwater. Areas susceptible to potential leaks and/or spills shall be paved and bermed or otherwise secondarily contained. Specifically, the transformers and the diesel ASTs would have secondary containment. Periodic inspections shall be conducted to ensure that all containers are secure and properly	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	marked. Piping and tanks will be protected from potential traffic hazards by concrete or other barriers. Hazardous materials will be delivered to the converter station periodically. Transportation of these materials shall comply with all applicable regulations of the U.S. Department of Transportation, the EPA, DTSC, the California Highway Patrol, and the State Fire Marshal. An HMBP shall be prepared prior to delivery of specified hazardous materials to the converter station in conformance with Title 19 of the California Code of Regulations (CCR) and California Health and Safety Code Section 25504. The HMBP requires facilities to develop the following information: • Facility map showing locations of hazardous materials and emergency response equipment • Hazardous materials inventory, including MSDSs for all hazardous materials stored and used onsite • Emergency contact information • Emergency response plans and procedures • Emergency notification procedures • Emergency response training for all employees	

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
HAZ-9: Operations-phase Waste Streams. Improper storage and disposal of operational wastes could result in a potentially significant environmental impact.	**HAZ-9: Manage Waste Generation, Storage, and Disposal During Operations Phase.** Before facility start-up, an application shall be made to DTSC for a hazardous waste generator number. The facility shall not treat, store, or dispose of hazardous waste in a manner that will cause the facility to be characterized as a treatment, storage and disposal facility (TSDF). A detailed waste management plan shall be prepared prior to start-up to ensure proper storage, labeling, packaging, record keeping, manifesting, minimization, and disposal of all hazardous materials and wastes. The waste management plan will include: • A description of each hazardous waste stream • Handling, transport, treatment, and disposal procedures for each waste • Preparedness, prevention, contingency, and emergency procedures • Personnel training Scrap materials such as paper, packing materials, glass, metal, and plastic shall be segregated and managed for recycling. Non-recyclable inert wastes shall be stored in covered trash bins in accordance with local ordinances and picked up by an authorized local trash hauler on a regular basis for transport and disposal in suitable landfill. Skimmed oil collected from equipment drains and other liquids from equipment shall be transported by an authorized carrier to a certified recycling facility.	Less than significant
HAZ-10: Operations-phase Accidental Spills. Non-compliance with regulatory requirements associated with storage, use, and containment of hazardous materials and/or petroleum hydrocarbons could result in accidental spills. The impact from accidental spills of these materials is considered potentially significant.	**HAZ-10: Operations-phase Spill Prevention, Controls, and Countermeasures.** The following shall be implemented during operations: • All workers shall be adequately trained to recognize the hazards associated with accidental spills. Training shall include ensuring that personnel who maintain the facility are adequately trained to recognize the hazards associated with such spills. Personnel who maintain the facility will be trained in the use of fire suppression equipment, evacuation, notification, and other defensive emergency response	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	procedures. Maintenance personnel will also be trained in hazardous materials and hazardous waste awareness, handling, and management, as required for their level of responsibility. • The proper use of safety procedures and development and implementation of a project-specific SPCC Plan will help prevent such incidents. The SPCC Plan will include information on spill response procedures and fuel storage. • An MSDS will be kept onsite for each onsite chemical. • The programs to be implemented to protect worker health and safety shall also benefit public safety. Facility design shall include redundant controls and monitoring systems to minimize the potential for conditions in which accidental spills could occur. Potential public health impacts associated with facilities operation will be mitigated by development and implementation of Emergency Response Plans, an SPCC Plan, secondary containment structures for oils and other hazardous materials, safety programs, and employee training.	
HAZ-11: Operations-phase Fire and Explosion Risk. Non-compliance with regulatory requirements associated with storage, use, and containment of flammable materials could result in a fire or explosion. The impact of a fire or explosion is considered potentially significant. If the onsite fire protection equipment could not address the fire, outside agencies would need to be called. This impact is considered potentially significant.	**HAZ-11: Reduction of Fire and Explosion Risk and Emergency Support During Operations Phase.** The flashpoints of transformer oil and diesel fuel are 295°F and 100°F, respectively, and the auto ignition points are 484°F and 494°F, respectively (Sax, 1992; MSDS for transformer oil; MSDS for diesel fuel). The National Fire Prevention Association (NFPA) assigns lubricating oils a fire hazard rating of 1, meaning that the materials "must be preheated before ignition can occur. Materials of these types require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur" (Siemens, 2006). The converter station shall have onsite fire protection systems (including emergency backup systems). During the detailed design phase of the proposed Project, potential fire protection designs and systems shall be reviewed with local agencies to finalize design details.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
	In general, the fire protection system shall consist of automatic detection and firefighting equipment. The fire detection control panel will be located in the control room and will be connected to the control and protection system for remote annunciation. The fire alarm will be initiated automatically by smoke, heat, or flame detectors, or manually by push-button. A combination of detectors will be used, including infrared and ultraviolet detectors, ionization and optical smoke detectors, and rate-of-rise temperature-sensitive detectors, depending on the equipment and/or space being monitored. Audible alarms and flashing lights will be activated in the event of a fire. The equipment or area where the alarm is triggered will be indicated on the control panel. The firefighting equipment would initiate automatically, using water sprays and curtains or an appropriate gas-extinguishing agent. Fire detection and automatic firefighting equipment will be connected to a power supply within the fire-detection control panel, which will be connected to the mains via a power supply/battery charger unit with an internal 24-volt battery. A pump house shall be included within the facility with 2 diesel fire-water pumps, each 225 kW. The fire-water pump and backup emergency lighting will be electrically powered by a diesel-powered generator capable of operating at full standby without refueling for 96 hours, as required in a seismically active area.	
HAZ-12: Impacts from Seismic Activity. Failure to abide by the building code for Seismic Zone 4 could lead to damage to the facility and resulting spills of hazardous materials. This impact could be potentially significant.	**HAZ-12: Manage Seismic Activity.** To minimize seismic damage to the facility and the resulting hazardous materials spills, the designers and construction contractor shall follow the Uniform Building Code for Seismic Zone 4. This action would reduce Impact HAZ-12 to a less-than-significant level.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
San Francisco HWC (Mitigated) Converter Station Site		
PALEO-1: Disturbance of Fossil Resources. There are no known significant fossil resources at this location. However, excavations associated with construction have the potential to penetrate into undisturbed *Qal* sediments, which could contain significant fossil resources. This impact would be considered potentially significant.	**PALEO-1: Potential Fossil Resources Protection.** The following measures shall be implemented: • Pre-construction meetings shall be held with key construction personnel to provide brief discussions pertaining to paleontological resource significance, visual identification, and discovery notification procedures. • Proposed construction areas containing geological units designated with a potentially moderate or high sensitivity rating shall be monitored by a professional paleontologist during construction, to insure that subsurface paleontological resources are adequately protected. • If unique paleontological resources are discovered, all significant fossil material shall be collected, prepared, identified, and curated, and then placed into a state-designated scientific repository. • Salvage operations shall be conducted in accordance with professional paleontological (e.g., SVP) standards.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
AIR-1: Fugitive Dust Emissions. The fugitive dust emissions impact (Impact AIR-1) described in Section 4.2.3.2.1 of the Draft EIR applies to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site. The Project proposes to use fugitive dust suppression with water and other methods to control construction-related emissions. The use of chemical additives is not planned. Controlled worst-case fugitive dust is estimated to be 39 pounds per day; 0.43 tons per month; and 3.4 tons over the 27- to 30-month construction period for the Pittsburg site. Without fugitive dust control measures the impact is considered to be potentially significant.	**AIR-1: Fugitive Dust Controls.** Mitigation Measure AIR-1 described in Section 4.2.3.2.1 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant
AIR-2: Equipment Exhaust Emissions. The equipment exhaust emissions impact (Impact AIR-2) described in Section 4.2.3.2.1 of the Draft EIR applies to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site. See Table 4.2-13 for emissions estimates for this site. Without mitigation measures this impact is considered to be potentially significant.	**AIR-2: Exhaust Controls.** Mitigation Measure AIR-2 described in Section 4.2.3.2.1 of the Draft EIR shall be applied to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant
GEO-1: Soil Erosion and Compaction. The soil erosion and compaction impact (Impact GEO-1) described in Section 4.3.3.2.1 of the Draft EIR applies to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**GEO-1: Design Project for Erosion Control.** Mitigation Measure GEO-1 described in Section 4.3.3.2.1 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
GEO-3: Strong Ground Shaking. The strong ground shaking impact (Impact GEO-2) described in Section 4.3.3.2.2 of the Draft EIR applies at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**GEO-3: Design to Seismic Design Requirements.** Mitigation Measure GEO-3 described in Section 4.3.3.2.2 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant
GEO-4: Liquefaction. The liquefaction impact (Impact GEO-4) described in Section 4.3.3.2.2 of the Draft EIR applies to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**GEO-4: Design Project for Liquefiable Deposits**. Mitigation Measure GEO-4 described in Section 4.3.3.2.2 of the Draft EIR shall be applied to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant
GEO-5: Shrink-Swell/Subsidence. The proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site is potentially underlain with expansive soils, which requires specific attention during grading to avoid future heaving and cracking of overlying materials. The potential for damage due to shrink-swell/subsidence to site facilities is potentially significant.	**GEO-5: Design Project for Shrink-Swell/Subsidence.** A program of site-specific exploratory borings and accompanying laboratory testing shall be required to delineate any potentially expansive materials underneath the proposed Project facility sites and to evaluate the potential for site subsidence and identify and implement appropriate design measures (e.g., pile supports or replacement of undesirable materials) in accordance with applicable codes.	Less than significant
WATER-1: Erosion and Contaminated Runoff. The erosion control and runoff impact (Impact WATER-1) described in Section 4.4.3.2.1 of the Draft EIR applies at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**WATER-1: Erosion Control and Contaminant Source Control.** Mitigation Measure WATER-1 described in Section 4.4.3.2.1 of the Draft EIR shall be applied for the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant
WATER-2: Surface Water Quality Impacts from HDD. Impact WATER-2 described in Section 4.4.3.2.1 of the Draft EIR applies at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**WATER-2: Spill Prevention and Control Plan for HDD.** Mitigation Measure WATER-2 described in Section 4.4.3.2.1 of the Draft EIR shall be applied for the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
WATER-3: Groundwater Quality Impacts from HDD. HDD could have significant water quality impacts through loss of drilling fluids that would increase suspended material in groundwater. This would be considered a potentially significant impact.	**WATER-3: Use of Pilot Hole and Reaming.** HDD shall be performed using a pilot hole plus reaming technique to minimize the potential for impacts to groundwater. To prevent significant water quality impacts, drilling muds shall consist of naturally occurring materials such as water and bentonite clay, plus inert, non-toxic polymers. Both the drilling technique and early detection and response shall be used to minimize release of fluids to the environment. HDD shall start with completion of a small-diameter pilot hole. The pilot hole is gradually enlarged using reaming. This technique acts to prevent sudden loss of large volumes of drilling fluids. Early detection and rapid response shall be implemented to minimize loss of drilling fluids. In the event loss of drilling fluids is detected, natural LCMs such as cotton dust, cottonseed hulls, wood fiber, mica, and cedar fiber shall be added to the drilling fluid. Alternative actions that shall be considered and implemented, as required, include reduction in drilling pressure, thickening of the fluid mixture, and construction of spill control structures, pits, and silt fences onshore, or silt curtains offshore.	Less than significant
WATER-8: Flooding. The northwest corner of the Pittsburg West Tenth Street Converter Station Alternative 1 site is located within the 100-year flood zone.	**WATER-8: Flood Mitigation.** Design the site to adequately minimize risk from 100-year flood. Typical measures that shall be incorporated into the project design include: • Ensure that pad elevations on newly constructed habitable buildings are a minimum of 1 foot above the 100-year floodplain, as determined by FEMA • Reduce the risk of localized and downstream flooding and runoff through the use of high infiltration measures, including the maximization of permeable landscape	Less than significant
TRAFFIC-1: Cumulative Traffic Impacts. The Cumulative Traffic Impacts (Impact TRAFFIC-1) on the regional roadway system described in Section 4.10.3.2.1 of the Draft EIR applies to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**TRAFFIC-1: Coordination to Reduce Cumulative Traffic Impacts.** Mitigation Measure TRAFFIC-1 described in Section 4.10.3.2.1 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site. No other significant cumulative transportation-related impacts would be expected to occur on local roads.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
TRAFFIC-2: Oversized Loads. The Oversized Loads impact (Impact TRAFFIC-2) described in Section 4.10.3.2.1 of the Draft EIR applies to the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**TRAFFIC-2: Coordination of Oversized Loads.** Mitigation Measure TRAFFIC-2 described in Section 4.10.3.2.1 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant
NOISE-1: Converter Station Operations Sound Levels. Sound levels from the operation of the West Tenth Street Alternative 1 (E/W) Converter Station would range from 77 to 79 dBA L_{dn} at the property lines, which exceeds the Pittsburg 75 dBA L_{dn} requirement. This is considered a potentially significant impact.	**NOISE-1: Noise Barrier Installation for Converter Station.** An acoustical barrier approximately 10 feet high would be erected around a portion of the converter station and an acoustical barrier approximately 13 feet high would be erected around a portion of the emergency generator. If final design determined that an acoustical barrier were unnecessary, it shall not be required.	Less than significant
PS-1: Construction-related Fire Hazards. The construction-related fire hazards impact (Impact PS-1) discussed in Section 4.12.3.2.1 of the Draft EIR applies at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**PS-1: Fire Water Service.** Mitigation Measure PS-1 discussed in Section 4.12.3.2.1 of the Draft EIR shall be conducted at this site.	Less than significant
PS-2: Existing Underground Utilities. The underground utilities impact (Impact PS-2) discussed in Section 4.12.3.2.1 of the Draft EIR applies at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**PS-2: Utility Survey.** Mitigation Measure PS-2 described in Section 4.12.3.2.1 of the Draft EIR shall be conducted at this site.	Less than significant
PS-3: Operations Fire Hazards. The operations fire hazards impact (Impact PS-3) discussed in Section 4.12.3.2.2 of the Draft EIR applies at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	**PS-3: Operations Fire Prevention**. Mitigation Measure PS-3 discussed in Section 4.12.3.3.2 of the Draft EIR shall be conducted at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
VIS-1: Converter Station Domination of View. The Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station would be visible from West Tenth Street. Since the architectural design character of the building and the general character of proposed lighting have not been identified in detail, there is the possibility of generating significant visual impacts based upon the potential of the Project to dominate the scene or become obtrusive on views from West Tenth Street. While this impact has been classified as less than significant, without design controls it could still be adverse. This adversity can be lessened through the application of mitigation measures VIS-1a and VIS-1b.	**VIS-1a: Plan Submittal Requirements for Building Materials and Colors.** Mitigation Measure VIS-1a described in Section 4.13.3.2 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site. Architectural design and site plans, plus a color and material palette, shall be reviewed and approved by the Pittsburg Planning Commission. Final architectural plans and conditions of approval shall be reviewed and signed off by the appropriate planning and building officials prior to operation of the Project. **VIS-1b: Plan Submittal Requirements for Landscaping.** Mitigation Measure VIS-1b described in Section 4.13.3.2 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site. Landscape design plans shall be reviewed and approved by the Pittsburg Planning Commission. Final landscape plans shall be reviewed and signed off by the appropriate planning and engineering officials prior to operation of the Project.	Less than significant
VIS-2: Converter Station will Create Substantial Light and Glare. There is potential for the Project to cast more ambient light into the immediate area than the existing conditions. There is also the possibility that the luminaries of some of the lighting fixtures may be seen directly by travelers along the Pittsburg-Antioch Highway which through the abrupt contrast of the fixtures' light with the surrounding general darkness, may create the effect of glare. While this impact has been classified as less than significant, without design controls it may still be adverse. This adversity can be lessened through the application of Mitigation Measure VIS-2.	**VIS-2: Plan Submittal Requirements for Lighting.** Mitigation Measure VIS-2 described in Section 4.13.3.2 of the Draft EIR shall be applied at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site. Lighting plans shall be reviewed and approved by the Pittsburg Planning Commission. Final lighting plans shall be reviewed and signed off by the appropriate planning and building officials prior to operation of the Project.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
HAZ-1: Removal of Potentially Hazardous Building Materials Resulting from Demolition. Existing structures on the converter station site contain or potentially contain ACMs and LBP. Improper removal or remediation of these materials could result in a potentially significant environmental impact.	**HAZ-1: Complete an ACM Abatement Plan and an LBP Abatement Plan.** Phase II ACM and LBP surveys on the converter station site shall be conducted to fill data gaps and to support development of worker safety procedures, in accordance with regulatory requirements to protect construction workers and the public. The ACM and LBP Abatement Plans shall be completed in compliance with applicable regulations based on the historical and newly acquired ACM and LBP data. If ACM and LBP were confirmed to be present in concentrations above regulatory limits, the Project proponent shall use certified asbestos and lead-based paint removal workers, conduct dust monitoring, and dispose of generated wastes offsite. A site Health and Safety Plan shall also be prepared for this work.	Less than significant
HAZ-2: Soil Removal. Soils removed during construction of the converter station and cable routes could be contaminated. Improper sampling, handling, analyzing, or characterizing of the soils could result in a potentially significant environmental impact.	**HAZ-2: Soil Removal Protocols.** Previously uncharacterized soils that are stained or odiferous shall be segregated on plastic, sampled, and characterized for onsite use or offsite disposal. The Soil and Groundwater Management Plans shall detail storage, transportation, and disposal options for soil and groundwater excavated/extracted during the converter station construction. The plans shall also specify dust monitoring needs for soil excavation and management. Previously characterized hazardous soils shall be loaded onto trucks for offsite disposal. Hazardous soil disposal requires that hazardous waste manifests accompany the waste. Hazardous waste transporters shall be required to haul hazardous soils to a hazardous waste landfill that can properly accept them. The personnel handling the hazardous soils are required to have met the OSHA hazardous work operations training requirements. A Health and Safety Plan shall be prepared for this work. Previously characterized non-hazardous soils shall be stockpiled for onsite or offsite reuse or offsite disposal, as needed.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
HAZ-3: Construction-phase Hazardous Materials Use. Hazardous materials would be used during construction activities. Misuse, inadequate storage, or improper disposal of these materials could result in a significant environmental impact.	**HAZ-3: Reduction of Hazards During Construction Phase.** The hazards presented by the use of hazardous materials during the construction phase are well understood, and the appropriate management controls to mitigate potential impacts shall be implemented. These controls include: 1) developing required management plans; 2) secondary containment; 3) separate storage of incompatible materials; and 4) proper training of personnel. Additionally, construction personnel shall be trained in safety and defensive emergency response procedures. Construction personnel shall also receive hazardous waste-related training that focuses on the recognition of potentially contaminated soil and/or groundwater that may be encountered during subsurface excavations for foundations or pipeline/cable trenches. If such contaminated soil or groundwater is suspected, contingency procedures shall be followed to protect worker safety and public health. All vehicles and construction equipment shall be inspected to ensure that no fluids are leaking (e.g., oil, hydraulic fluid, lubricants, or brake fluid) and that all fuels and fluids are stored in proper, clearly labeled containers. Hazardous materials that must be disposed of will be disposed of as hazardous waste in accordance with the appropriate regulations for storage, transportation, and disposal of hazardous waste.	Less than significant
HAZ-4: Construction-phase Waste Streams. Improper storage and disposal of solid waste and hazardous construction wastes could result in a potentially significant environmental impact.	**HAZ-4: Management of Construction-phase Waste Streams.** The onsite management and offsite disposal procedures of solid wastes (including potentially contaminated soil) shall be detailed in a Solid Waste Management Plan for the Project. Waste shall be stockpiled temporarily before disposal offsite. The local fire departments and emergency management teams shall be provided a list of the waste material expected to be generated and stored onsite.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
	Hazardous wastes generated during construction shall be collected in hazardous waste accumulation containers near the point of generation and moved daily to the construction contractor's 90-day hazardous waste storage area at the converter station site. The accumulated waste shall be delivered to an authorized waste management facility. The exact volume of hazardous wastes to be generated at the converter station site cannot be estimated at this time, but the estimated amount of excavated soil that would need to be disposed of offsite is estimated at approximately 15,000 cubic yards for this converter station site. Even if this entire amount of excavated soil would need to be disposed of as hazardous waste, it would not exceed a significant portion of the available hazardous waste landfill capacity in California. The capacity details of various landfills for both non-hazardous and hazardous waste are detailed in Table 4.14-5, above. The capacity and estimates for daily volumes of waste received were verified, as detailed in the personal communications provided in the references for this section. Management of these wastes shall be the responsibility of the construction contractor(s). Typical management practices required for contractor waste include recycling when possible, proper storage of waste and debris, including covering daily to prevent wind dispersion, and weekly pickup of waste with disposal of non-hazardous wastes at local Class III landfills.	
HAZ-5: Construction-phase Accidental Spills. An accidental spill or a release of hazardous materials could occur during construction. This impact is considered potentially significant.	**HAZ-5: Construction-phase Spill Prevention, Control, and Countermeasures.** The following shall be implemented both to prevent spills from occurring and to minimize impacts in the event that they do occur: • All spills shall be cleaned up quickly and all workers shall be adequately trained to recognize the hazards associated with such spills. • A Spill Prevention, Control, and Countermeasure (SPCC) Plan for the converter station shall be prepared in accordance with federal and state regulations. This plan	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
	must be prepared if petroleum products are stored onsite in ASTs with a capacity that equals or exceeds 55 gallons for a single tank or equals or exceeds 1,320 gallons for more than one tank. The SPCC Plan must be prepared before the delivery of petroleum products to the site. The SPCC Plan shall include information on spill response procedures and fuel storage. • A Hazardous Materials Business Plan shall be prepared to detail locations and volumes of hazardous materials kept on site. Copies of the HMBP shall be provided to the local Fire Department as provided by the regulations. • Material Safety Data Sheets (MSDSs) for each chemical used during construction shall be kept onsite. Construction employees shall be informed of the location and content of the MSDSs, as required by OSHA's Hazard Communication Standard, Title 29 of the Code of Federal Regulations (CFR) Section 1910.1200. • In case of an accident, the CCCFPD shall be notified as the first responder. All other federal, state, and local notification requirements shall be followed for any release that exceeds the reportable quantity or threatens to have a significant impact. • The Project shall comply with all transportation requirements for hazardous materials on state highways. These requirements apply to both hazardous materials coming onto the sites and hazardous wastes leaving the sites. • All vehicles and construction equipment shall be inspected to ensure that there are no leaking fluids (e.g., oil, hydraulic, lubricants, or brake fluid) and that all fuels and fluids are stored in proper, labeled containers. Any observation of spills, leaking fluids, or improperly stored fluids shall trigger the issuance of "stop work" notice until the problem is resolved, including the removal of any soil contaminated by vehicle fluids.	

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
HAZ-6: Construction-phase Dust and Volatilization of Contaminants. Excavation of contaminated soil and the generation of hazardous waste soils could result in construction dust and volatilization of contaminants that pose environmental and human health risks, particularly to construction workers. This impact is considered potentially significant.	**HAZ-6: Reduction of Construction Dust and Volatilization of Contaminants.** Dust control measures (i.e., keeping the soil wet during excavation) shall be implemented during excavation and construction activities, and dust monitoring shall be performed. Suspected contaminated soil that is stockpiled on the sites shall be covered daily with plastic to prevent volatilization of contaminants and to control dust. Contaminated soil may also be loaded directly onto trucks for transport to an appropriate offsite disposal facility. The loaded soils shall be properly covered and manifested as necessary. Dust monitoring shall be performed during excavation and loading of hazardous soils. The accumulated waste shall then be delivered to an authorized waste management facility. Dust monitoring shall confirm that the dust control measures are effectively protecting site workers and the public.	Less than significant
HAZ-7: Contaminated Groundwater. The converter station site may have contaminated groundwater. This groundwater may be encountered during excavation, construction dewatering, or other subgrade activities. Control or remediation of the site groundwater may be a requirement for redevelopment of the property by the lead regulatory agency for the proposed Project. Failure to properly treat and/or dispose of water collected during dewatering activities or to control the contaminated groundwater flow could result in a potentially significant impact to the site or to downgradient sites and/or water bodies.	**HAZ-7: Contaminated Groundwater Control.** If groundwater is encountered during construction at the converter station site, the water shall be collected onsite in a tank or tanks, sampled, and analyzed. Based on the analytical data, the water shall be characterized for disposal by one of the following methods: • Used onsite for dust control. • Treated onsite and discharged under the authority of a general National Pollutant Discharge Elimination System (NPDES) permit. (Treatment options would include, but are not limited to, filtration or filtration and treatment by granular-activated carbon [GAC]. Treatment residuals would be sampled, analyzed, characterized, and disposed of offsite in compliance with applicable regulations.) • Disposed of offsite at a commercial water treatment facility in compliance with applicable regulations.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
	If groundwater was encountered at the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site and it was found to be contaminated, it is possible that the Regional Water Quality Control Board would require groundwater control as part of the development plan for the Project on the site. Contamination at the Pittsburg West Tenth Street Alternative 1 (E/W) site, if any, would likely be caused by offsite sources which would probably not require onsite remedial action. Potential groundwater-remedial strategies would depend on a number of factors including: site contaminants, evaluation of impacts to human health and the environment, and evaluation of the technical merits of available remedial strategies. Based on these factors the final selection would be negotiated between the RWQCB and TBC. Potential remedial options provided herein are for informational purposes only. Potential groundwater control methodologies include installing a slurry wall around a portion or the entire contaminated site combined with groundwater pump and treatment and discharge of treated groundwater to a storm drain/sewer system under the authority of an NPDES permit. Other alternative technologies include in-situ biological treatment and in-situ oxidation or reduction, depending on the site-specific contaminants and hydrogeological conditions.	
HAZ-8: Operations-phase Hazardous Materials Usage. Hazardous materials shall be used during operations and maintenance activities. Misuse, inadequate storage, or improper disposal of these materials could result in a potentially significant environmental impact.	**HAZ-8: Control of Operations-phase Hazardous Materials.** A Hazardous Materials Business Plan (HMBP) shall be developed and implemented prior to turnover of site management from the construction contractor to the operating company. All hazardous materials shall be handled and stored in accordance with applicable codes and regulations. Storage quantities of all hazardous materials shall be minimized, and non-hazardous materials shall be substituted for hazardous materials at the converter station to the extent practicable. Small-quantity chemicals used for maintenance tasks shall be kept in appropriate inflammable material or corrosive material storage lockers. Bulk chemicals shall be stored in ASTs, and all other chemicals shall be stored in their original shipping containers. Incompatible materials shall be stored in separate storage containment areas. Chemical storage areas and transfer areas shall be equipped with	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
	secondary containment sufficient in size to contain the volume of the largest container or tank, including an allowance for rainwater. Areas susceptible to potential leaks and/or spills shall be paved and bermed or otherwise secondarily contained. Specifically, the transformers and the diesel ASTs would have secondary containment. Periodic inspections shall be conducted to ensure that all containers are secure and properly marked. Piping and tanks will be protected from potential traffic hazards by concrete or other barriers. Hazardous materials will be delivered to the converter station periodically. Transportation of these materials shall comply with all applicable regulations of the U.S. Department of Transportation, the EPA, DTSC, the California Highway Patrol, and the State Fire Marshal. An HMBP shall be prepared prior to delivery of specified hazardous materials to the converter station in conformance with Title 19 of the California Code of Regulations (CCR) and California Health and Safety Code Section 25504. The HMBP requires facilities to develop the following information: • Facility map showing locations of hazardous materials and emergency response equipment • Hazardous materials inventory, including MSDSs for all hazardous materials stored and used onsite • Emergency contact information • Emergency response plans and procedures • Emergency notification procedures • Emergency response training for all employees	

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
HAZ-9: Operations-phase Waste Streams. Improper storage and disposal of operational wastes could result in a significant environmental impact. This impact is considered potentially significant.	**HAZ-9: Manage Waste Generation, Storage, and Disposal During Operations Phase.** Before facility start-up, an application shall be made to DTSC for a hazardous waste generator number. The facility shall not treat, store, or dispose of hazardous waste in a manner that will cause the facility to be characterized as a treatment, storage and disposal facility (TSDF). A detailed waste management plan shall be prepared prior to start-up to ensure proper storage, labeling, packaging, record keeping, manifesting, minimization, and disposal of all hazardous materials and wastes. The waste management plan will include: • A description of each hazardous waste stream • Handling, transport, treatment, and disposal procedures for each waste • Preparedness, prevention, contingency, and emergency procedures • Personnel training Scrap materials such as paper, packing materials, glass, metal, and plastic shall be segregated and managed for recycling. Non-recyclable inert wastes shall be stored in covered trash bins in accordance with local ordinances and picked up by an authorized local trash hauler on a regular basis for transport and disposal in suitable landfill. Skimmed oil collected from equipment drains and other liquids from equipment shall be transported by an authorized carrier to a certified recycling facility.	Less than significant
HAZ-10: Operations-phase Accidental Spills. Non-compliance with regulatory requirements associated with storage, use, and containment of hazardous materials and/or petroleum hydrocarbons could result in accidental spills. The impact from accidental spills of these materials is considered potentially significant.	**HAZ-10: Operations-phase Spill Prevention, Controls, and Countermeasures.** The following shall be implemented during operations: • All workers shall be adequately trained to recognize the hazards associated with accidental spills. Training shall include ensuring that personnel who maintain the facility are adequately trained to recognize the hazards associated with such spills. Personnel who maintain the facility will be trained in the use of fire suppression	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
	equipment, evacuation, notification, and other defensive emergency response procedures. Maintenance personnel will also be trained in hazardous materials and hazardous waste awareness, handling, and management as required for their level of responsibility. • The proper use of safety procedures and development and implementation of a project-specific SPCC Plan will help prevent such incidents. The SPCC Plan will include information on spill response procedures and fuel storage. • An MSDS will be kept onsite for each onsite chemical. • The programs to be implemented to protect worker health and safety shall also benefit public safety. Facility design shall include redundant controls and monitoring systems to minimize the potential for conditions in which accidental spills could occur. Potential public health impacts associated with facilities operation will be mitigated by development and implementation of Emergency Response Plans, an SPCC Plan, secondary containment structures for oils and other hazardous materials, safety programs, and employee training.	
HAZ-11: Operations-phase Fire and Explosion Risk. Non-compliance with regulatory requirements associated with storage, use, and containment of flammable materials could result in a fire or explosion. If the onsite fire protection equipment could not address the fire, outside agencies would need to be called. This impact is considered potentially significant. The impact of a fire or explosion is considered potentially significant.	**HAZ-11: Reduction of Fire and Explosion Risk and Emergency Support During Operations Phase.** The flashpoints of transformer oil and diesel fuel are 295°F and 100°F, respectively, and the auto ignition points are 484°F and 494°F, respectively (Sax, 1992; MSDS for transformer oil; MSDS for diesel fuel). The National Fire Prevention Association (NFPA) assigns lubricating oils a fire hazard rating of 1, meaning that the materials "must be preheated before ignition can occur. Materials of these types require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur" (Siemens, 2006). The converter station shall have onsite fire protection systems (including emergency backup systems). During the detailed design phase of the proposed Project, potential fire	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station Site		
	protection designs and systems shall be reviewed with local agencies to finalize design details. In general, the fire protection system shall consist of automatic detection and firefighting equipment. The fire detection control panel shall be located in the control room and shall be connected to the control and protection system for remote annunciation. The fire alarm shall be initiated automatically by smoke, heat, or flame detectors; or manually by push-button. A combination of detectors shall be used, including infrared and ultraviolet detectors, ionization and optical smoke detectors, and rate-of-rise temperature-sensitive detectors, depending on the equipment and/or space being monitored. Audible alarms and flashing lights shall be activated in the event of a fire. The equipment or area where the alarm is triggered shall be indicated on the control panel. The firefighting equipment would initiate automatically, using water sprays and curtains or an appropriate gas-extinguishing agent. Fire detection and automatic firefighting equipment shall be connected to a power supply within the fire-detection control panel, which will be connected to the mains via a power supply/battery charger unit with an internal 24-volt battery. A pump house shall be included within the facility with 2 diesel fire-water pumps, each 225 kW. The fire-water pump and backup emergency lighting shall be electrically powered by a diesel-powered generator capable of operating at full standby without refueling for 96 hours, as required in a seismically active area.	
HAZ-12: Impacts from Seismic Activity. Failure to abide by the building code for Seismic Zone 4 could lead to damage to the facilities and resulting spills of hazardous materials. This impact could be potentially significant.	**HAZ-12: Manage Seismic Activity.** To minimize seismic damage to the facilities with resulting hazardous materials spills, the designers and construction contractor shall follow the Uniform Building Code for Seismic Zone 4. This action would reduce Impact HAZ-12 to a less-than-significant level.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Offshore Cable Route		
AIR-3: Marine Construction – Criteria Pollutants. Based on Project marine emissions rates in comparison to background levels, the air quality impacts of criteria pollutant emissions of the marine construction phase are considered to be potentially significant. Based on Project marine emissions rates in comparison to background levels, the air quality impacts of criteria pollutant emissions of the marine construction phase are considered to be potentially significant.	**AIR-3: Marine Vessel Emission Controls.** The following shall be implemented to control emissions from vessels owned by Prysmian: • Use California diesel, Purinox, biodiesel, or other fuel (whichever is feasible and would result in lowest emissions) • Minimize diesel engine fuel usage as much as possible • Use shore-side power when docked instead of running engines, where feasible	Less than significant
AIR-4: Marine Construction – Toxic Air Contaminants. Although there are no established impact significance criteria set forth by BAAQMD, the diesel PM emissions from marine construction may be potentially significant.	**AIR-4: Implement Mitigation AIR-3.** Implement Mitigation Measure AIR-3.	Less than significant
WATER-5: Water Quality Impacts from Cable Laying Operation. Nearshore and offshore sediment in the Potrero area is contaminated with elevated levels of PAHs. Disturbance of these sediments could result in substantial water quality impacts. This would be considered a potentially significant impact.	**WATER-5: Avoidance of Sediment Contamination.** To avoid potential known nearshore and offshore sediment contamination, the HDD shall be completed as far offshore as is feasible and remote from RMP station CB012S near Potrero Point in San Francisco. Hydroplow or equivalent technology activities shall also avoid known contamination in the area of station CB012S. Confirmation sediment sampling shall be performed at the location where the HDD emerges into the Bay and the results would be considered and addressed prior to commencement of construction near this location.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Offshore Cable Route		
WATER-7: Water Quality Impacts from Vessel Fuel Spills. Water quality degradation from vessel fuel spills would likely not be significant in light of its low probability and the past record. However, a potentially significant spill could still occur. This event would constitute a potentially significant impact.	**WATER-7: Vessel Fuel Spill Response Plan.** All vessel operators associated with the proposed Project shall update their contingency plans and continue to use emergency response services for pollution incidents. Review of updates and modifications to plans shall be done under the USCG's regular oversight of oil spill contingency plans. The work of updating and expanding the spill response plans shall be based on NOAA's Environmental Sensitivity Index (ESI), which involves the systematic compilation in a standardized format of information related to coastal shoreline sensitivity, biological resources, and human uses.	Less than significant
CUL-3: Offshore Cable Route Archaeological Resources. Submerged and buried archaeological resources have been identified along the offshore DC cable route. Disturbance of these historical resources is considered a potentially significant impact.	**CUL-3a: Archaeological Resources Geophysical Survey.** A geophysical remote-sensing survey shall be conducted along the offshore cable route to detect any potential submerged or sub-bottom archaeological resources. Depending on the geographic or bathymetric setting, an appropriate remote-sensing field survey could include deployment of a side scan sonar, sub-bottom profiler, and magnetometer to help detect these resources. The results of the geophysical survey will be reviewed by a qualified marine archaeologist and a report documenting these efforts and interpreting the results shall be produced. **CUL-3b: Archaeological Resources Avoidance.** Potential submerged and/or buried archaeological resources detected through the geophysical survey shall be avoided unless they can satisfactorily be determined to not represent archaeological resources (e.g., modern debris, existing infrastructure) as documented in the technical report. **CUL-3c: Archaeological Resources Supplemental Underwater Investigation.** If it is infeasible to avoid potential submerged and/or buried archaeological resources, follow-up diver survey or Remote Operated Vehicle investigations might be required to positively identify the targets. If targets are determined to be archaeological resources, they should be evaluated against the NRHP/CRHR significance criteria. If the resources are not eligible for the NRHP/CRHR, then no further consideration of these resources is required. If the resources are eligible for the NRHP/CRHR, Data Recovery (Mitigation Measure CUL-1b) may be required.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Offshore Cable Route		
LU-4: Increased Vessel Traffic. Project construction activities would temporarily increase vessel traffic in the Bay. Recreational users of the Bay could experience a temporary increased risk from additional vessel traffic. This impact is considered to be potentially significant.	**LU-4a: Vessel Crew Procedures.** Marine crews shall watch for navigational hazards (i.e., during periods of high use by recreational boaters including windsurfers within the vicinity of selected terminal locations; during periods of high recreational use, such as weekends or race events; or when weather hazards exist) to reduce the risk of incidents involving construction vessels and recreational users in the Bay. **LU-4b: Coast Guard Coordination.** Construction crew management shall coordinate construction activities with the USCG Safety Branch to ensure that no marine recreational events conflicts arise. The Project coordinator would include information to the USCG which would issue a Local Notice to Mariners. In addition, each affected harbor district will be made aware of the timing of water-based Project activities such as the cable laying operations. Applicable navigation rules will be enforced including the Cable Act of 1992 (47 CFR §76) which states that other vessels must maintain a 1.15 mile (1-nm) separation from a vessel laying or repairing an undersea cable.	Less than significant
LU-5: Potential Conflict with Local Plans and Policies. Cable installation is not expected to conflict with local jurisdictions plans or policies. Based on available feedback, no apparent conflict in land use plans or policies would occur with installation of the submarine cable. However, Contra Costa County has indicated that their agency would incur some level of responsibility and could require relocation of utilities where necessary. In addition, the City of Martinez requires a Conditional Use Permit for installation of the offshore cable. Not obtaining appropriate planning permits or coordinating with local agencies would be considered a potentially significant impact.	**LU-5: Local Plans and Policies Coordination.** The Project proponent shall coordinate with the City of Martinez and Contra Costa County to provide adequate notification and gain the appropriate permits and authorization required for installation of the submarine cable.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Potentially Significant Impact	Proposed Mitigation Measure(s)	Resulting Level of Significance
Offshore Cable Route		
MTRANS-1: Vessel Navigation Hazards. For the duration of construction, the vessels engaged in cable laying would present a potential hazard to navigation on the Bay. The cable-laying vessels themselves would be "restricted in their ability to maneuver." This means that the nature of the vessels themselves or of their operations limits their ability to take actions to avoid collisions that would be expected of otherwise fully maneuverable vessels. Vessels are by definition restricted in their ability to maneuver when engaged in lying, servicing, or picking up a navigational mark, submarine cable, or pipeline. Statutory navigation rules define the responsibilities of vessels restricted in their ability to maneuver, and of other vessels operating in their vicinity, all aimed at preventing collisions or other incidents. Non-compliance with these rules would be considered to result in a potentially significant impact.	**MTRANS-1a: Project Registration, Information and Pilotage.** Large construction vessels like the C/S Giulio Verne and any support vessels shall be required to notify the VTS at the beginning and end of each transit, and would be monitored continuously. The USCG would also notify operators of vessels in the area of the construction activities via Notices to Mariners. To ensure safe entrance into the Bay, all ships operating under foreign registry, like the Giulio Verne, are required to have a San Francisco Bar Pilot navigate the ship into the Bay. **MTRANS-1b: Compliance with Navigation Rules.** The vessels involved in cable laying shall be required to identify themselves and operate in accordance with the COLREGS. The applicable navigation rules for San Francisco Bay shall regulate the cable laying operations and are designed to prevent collisions. Within the Bay, the operators of all vessels engaged in the Project shall have the legal responsibility to preclude hazardous situations, according to the applicable navigation rules **MTRANS-1c: Precautionary Area.** A safety precautionary area shall be established around the construction vessels, and will be identified via the USCG Notice to Mariners to make vessels operating in the area aware of Project activities. All cable-laying vessels shall also operate in accordance with the applicable navigation rules including the Cable Act of 1992. **MTRANS-1d: Publication of Cable Location.** The planned location of the cable has been reviewed with the US Army Corps of Engineers, at local bottom depths as indicated by soundings on current navigation charts. The project proponent/construction contractor shall document the specific as-built location of the submarine cable for its entire length and shall provide GPS coordinates for critical waypoints of the cable alignment as required by the USACE and NOAA for inclusion on San Francisco Bay navigational charts and in the applicable volume(s) of the U.S. Coast Pilot. All cable-laying vessels shall also operate in accordance with the applicable navigation rules including the Cable Act of 1992.	Less than significant

TABLE 1-1 (CONTINUED) [1,2]
SUMMARY OF POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

[1] Note: the impacts and mitigation measures presented in this table reflect mitigating refinements made to the Project between the Draft and Final EIRs.

[2] The following acronyms were used in the table above and are defined herein:

ACM:	Asbestos-containing materials
ASTs:	Above-ground storage tanks
BAAQMD:	Bay Area Air Quality Management District
Caltrans:	California Department of Transportation
CCCFPD:	Contra Costa County Fire Protection District
COLREGS:	International Rules for Preventing Collision at Sea
DTSC:	Department of Toxic Substances Control
FEMA:	Federal Emergency Management Agency
LBM:	Lead-based paint
MUNI:	San Francisco Municipal Railway
NAHC:	Native American Heritage Commission
NOAA:	National Oceanic and Atmospheric Administration
NPDES:	National Pollutant Discharge Elimination System
NRHP/CRHR:	National Register of Historic Places/California Register of Historic Places
OSHA:	Occupational Health and Safety Administration
PAHs:	Polyaromatic Hydrocarbons
ppm:	parts per million
RMP:	Regional Monitoring Program
RWQCB:	Regional Water Quality Control Board
SHPO:	State Historic Preservation Officer
SVP:	Society of Vertebrate Paleontology
TPH:	Total petroleum hydrocarbons
USACE:	United States Army Corps of Engineers
USCG:	United States Coast Guard
VTS:	Vessel Traffic Services

3.1 INTRODUCTION

This section of the Final EIR describes the Trans Bay Cable Project (Project) as now proposed by Trans Bay Cable LLC (an affiliate of Babcock & Brown, which is a Sydney, Australia-based company with its major overseas office in San Francisco), in cooperation with the City of Pittsburg and Pittsburg Power Company (a municipal utility). Babcock & Brown would provide the financing for the Project. The Project is intended to be a cost-effective, energy-efficient solution addressing San Francisco's need for additional energy, while improving transmission grid reliability and load serving capability. The following discussion summarizes the Project as currently proposed. Refer to Appendix A of the Draft EIR for more information regarding Project component design, construction activities, operation and maintenance procedures, public safety, and alternatives considered. This section is intended to replace Section 3.0 provided in the Draft EIR.

The Project as proposed would involve the installation of a submarine High Voltage Direct Current (HVDC) transmission cable and associated onshore facilities that would transmit electrical power and provide a dedicated connection between the East Bay near Pittsburg (which currently has transmission grid congestion and is fed by sufficient generating and transmission capacity) and the electrical transmission and distribution facilities serving the northern San Francisco peninsula. Figure 3-1 illustrates the general location of the facilities and the route of the transmission cable system. Use of a submarine HVDC cable allows for transmission of power over a very long distance with minimal energy loss.

Existing electrical power at a Pacific Gas and Electric Company (PG&E) substation near Pittsburg is provided as alternating current (AC). The proposed Project would involve drawing AC power from this existing Pittsburg PG&E substation and converting it to direct current (DC) at a proposed converter station in Pittsburg. The DC power would then be transmitted approximately 53 miles through a proposed submarine and buried onshore HVDC cable installed undersea beneath Suisun Bay, the Carquinez Straits, San Pablo Bay, and San Francisco Bay to a proposed converter station in San Francisco, where it would be converted back to AC power. This AC power would then be transmitted to the existing Potrero PG&E substation for release to the electrical grid.

As discussed previously in Section 1.1 (Introduction), two primary refinements to the proposed Project are considered in this Final EIR relative to the description of the proposed Project presented in the Draft EIR as issued in May of 2006. These two refinements are intended to avoid potentially significant Project impacts to cultural/historic resources in San Francisco and avoid or minimize potentially significant impacts to biological resources and water resources in Pittsburg. As summarized in Section 1.0 of this Final EIR, the proposed Project would not result in any potentially significant impacts that were not addressed in the Draft EIR, and no unavoidable adverse significant impacts would occur. These refinements

are also intended, in part to address various comments received on the Draft EIR (refer to Section 12.0 of this Final EIR for more information).

In San Francisco, the previously proposed San Francisco HWC Converter Station site layout as assessed in the Draft EIR has been shifted to the western portion of the overall HWC site as a mitigating action to completely avoid the need to demolish two historic buildings on the eastern portion of the overall HWC site. The shifted site is referred to as the "HWC (Mitigated)" site in this Final EIR. Demolition of the two historic buildings on the eastern portion of the overall HWC site was identified as an unavoidable adverse significant impact in the Draft EIR and is not applicable to the HWC (Mitigated) site. The shifted layout is also located further away from the Bay and would not preclude or interfere with the possible future construction of a Bay Trail segment along the portion of the Bay waterfront to the east. The shifted layout is located between the western boundary of the HWC site assessed in the Draft EIR and Illinois Street. The previously proposed HWC site layout as assessed in the Draft EIR has been deleted from further consideration in this Final EIR.

In Pittsburg, the previously proposed Standard Oil Converter Station site and associated ancillary facilities have been deleted from further consideration and been replaced with the Pittsburg West Tenth Street Alternative 1 (E/W) site that was analyzed in Sections 5.4 and A-8.2.3.1 of the Draft EIR. As discussed in Section 6.3 (Environmentally Superior Alternative) of the Draft EIR, the proposed West Tenth Street Alternative 1 site would avoid various potentially significant impacts associated with the previously proposed Pittsburg Standard Oil site (and associated onshore/offshore AC/DC cable routes and access road over Kirker Creek), including those to sensitive biological resources and water quality associated with dredging at two locations in New York Slough. The balance of this project description addresses the refined Trans Bay Cable Project.

3.2 PROJECT OBJECTIVES

The California Independent System Operator (CAISO) is a not-for-profit public benefit corporation that acts as the impartial operator of the state's wholesale power grid, maintaining reliability and directing the electricity traffic on the transmission grid that connects energy suppliers with the energy providers that serve over 30,000,000 Californians. The CAISO management and Board of Governors, in their decision of September 8, 2005, determined that the Trans Bay Cable Project is required to ensure reliable operation of the transmission system serving the San Francisco Bay Area. In keeping with the CAISO determination, the basic objectives of the Trans Bay Cable Project are discussed in greater detail in Section 2.3 of the Draft EIR.

3.3 PROJECT COMPONENTS

The proposed Project consists of the following major components:

- Approximately 0.65 mile of new single-circuit, three-phase 230 kilovolt (kV) AC buried onshore cable that would connect the proposed Pittsburg West Tenth Street Alternative 1 Converter Station with the existing PG&E Pittsburg substation
- A 5.8-acre site in Pittsburg, with a proposed converter station which would convert AC power from the grid to DC power for transmission through the submarine HVDC cable
- Approximately 53 miles of submarine and buried onshore HVDC cable transmitting up to 400 megawatts (MW) of high-voltage DC electrical power from the proposed Pittsburg West Tenth Street Alternative 1 Converter Station to the proposed San Francisco HWC (Mitigated) Converter Station
- A 5.0-acre site in San Francisco (HWC Mitigated), with a proposed converter station which would convert the DC power back to AC power for distribution to the grid
- Approximately 0.1 mile of new double-circuit, three-phase 115 kV AC underground cable connecting the proposed San Francisco HWC (Mitigated) Converter Station and the existing PG&E Potrero substation

3.4 CONSTRUCTION

The proposed Project has major components in three distinct locations:

- San Francisco: converter station, onshore HVDC cable, AC cable, and construction laydown area (Pier 94/96)
- Pittsburg: converter station, onshore HVDC and AC cable routes, and construction laydown areas (on Mirant Pittsburg property)
- The submarine HVDC cable that would run through San Francisco Bay and adjoining waterways

Overall Project construction would be expected to take approximately 27 to 30 months from the Notice to Proceed, including approximately 4 to 5 months to install the submarine cable, and 3 to 6 months for demolition of existing structures on the two proposed converter station sites. Construction activities at the converter station sites would overlap and would include grading and site preparation, foundation construction, erection of major equipment and structures, and installation of electrical and control systems. Connection of HVAC and HVDC transmission cables, switchyards, and substations would also occur. A general overview of the sites in San Francisco and Pittsburg and the interconnecting submarine cable is presented on Figures 3-1 and 3-2.

3.4.1 Construction in San Francisco

The proposed 5.0-acre converter station site in San Francisco is known as the HWC (Mitigated) site, and is located on 23rd Street, southwest of the existing Mirant Power Plant,

south of the PG&E Potrero substation, and approximately 200 feet west of San Francisco Bay (refer to Figure 3-3). The site is currently developed and occupied by two businesses (Airgas and DHL) at 525 23rd Street. The existing buildings would need to be demolished during site preparation. The site is currently zoned Major Industrial, which permits the proposed use. The site is located on fill material and currently contains subsurface contamination (soil and groundwater). Planned remediation prior to construction of the converter station is discussed in Section 4.A.14, Hazardous Materials and Waste Management, of this Final EIR.

An aerial view of the existing HWC (Mitigated) site is shown on Figure 3-3 of the Final EIR, with the proposed converter station site boundary overlaid. The converter station buildings would occupy approximately 23,000 square feet at the site, and range in height up to 64 feet. Outdoor air-cooled radiators, transformers, AC switchgear, filters, and other equipment would occupy the balance of the site. The site would receive architecturally appropriate treatments to the buildings and the sound walls on the west, north, and south site perimeters in areas that are visible to the public. Access to the site would be via 23rd Street, and no new offsite road construction would be required. The proposed HWC (Mitigated) Converter Station layout, elevation view, and two photosimulations are shown on Final EIR Figures 3-4 through 3-7.

The proposed onshore route for the HVDC entry into the San Francisco Converter Station from San Francisco Bay runs west along 23rd Street before turning south to enter the DC hall at the proposed converter station site (refer to Figure 3-3). To avoid aquatic habitat and protect the cable at the shore crossing, the proposed cables would enter the Bay floor through casings placed by horizontal directional drilling (HDD). The casings would terminate offshore, and burial in the Bay floor would begin at the exit of the casings (refer to Figure 3-8 of the Final EIR).

The double-circuit 115 kV HVAC interconnecting cable would exit the proposed San Francisco Converter Station from the north side and cross 23rd Street approximately 300 feet from the easterly line of Illinois Street, and then extend northward along the eastern boundary of the existing PG&E Potrero substation, where it would enter the substation and connect with the electrical grid (refer to Figure 3-3 of the Final EIR).

The proposed construction laydown area for the San Francisco site is south of the HWC site off of Cargo Way at Pier 94/96. This laydown area was identified as an alternate in the Draft EIR. The laydown area at Pier 94/96 is owned by the Port of San Francisco and designated as the “Pier 94/96” site. The area would be devoted to equipment and materials laydown, storage, parking of construction equipment, small fabrication areas, and office trailers supporting construction at the San Francisco converter station site. Access to the proposed laydown area would be via Cargo Way. The site has no standing buildings or structures, and lies on land that was reclaimed from San Francisco Bay early in the twentieth century. The

previously proposed (Draft EIR) laydown area at the Western Pacific site has been removed from consideration due to space constraints with pending development at this site.

3.4.2 Construction in San Francisco Bay and Adjoining Waterways

The submarine and onshore cable portion of the proposed Project would consist of an HVDC transmission cable system that would run approximately 53 miles from the now proposed HWC (Mitigated) Converter Station site in San Francisco to the West Tenth Street Alternative 1 Converter Station site in Pittsburg, California (refer to Figure 3-1 and Map A.2-1 which has been revised and incorporated into Section 3.0 of this Final EIR). The proposed HVDC transmission cable system would include a high voltage transmission cable, a separate medium voltage (MV) metallic return cable, and a fiber optic communication cable (refer to Figure 3-9 of this Final EIR).

The proposed submarine cable would extend from San Francisco to Pittsburg below the floor of San Francisco Bay, San Pablo Bay, the Carquinez Strait, and Suisun Bay. The cable route was selected to avoid shipping channels, anchorages, dredge disposal areas, Regional Water Quality Control Board-listed toxic hotspot areas, and other known obstacles.

The submarine cable would be put in place using Prysmian (or equivalent) installation technology. Cable lay would be performed using a combination of the cable ship (C/S) Giulio Verne (or comparable vessel) and a barge equipped to lay the cable. The southern portion of the submarine cable would be installed using the Giulio Verne, and the eastern portion would be installed using a barge.

The cable would be buried in a bundled configuration (as shown on Figure 3-10 of this Final EIR) using the Hydroplow burial machine (or equivalent technology) towed by either the C/S Giulio Verne or by the barge. The working principle for the Hydroplow is to gently fluidize the seabed materials by the use of water jets in a narrow path and to a typical target depth of 3 to 6 feet, with the potential for local burial to greater depths if required, without displacing the majority of the material and minimizing the suspension of sediment in surrounding waters. The method effectively places cables at a consistent required depth of embedment in jettable bottom conditions.

3.4.3 Construction in Pittsburg

The now proposed 5.8-acre converter station site in the City of Pittsburg is the Pittsburg West Tenth Street Alternative 1 site which was evaluated as an alternative in the Draft EIR. The formerly proposed Standard Oil site and associated ancillary facilities (i.e., AC/DC cable routes, construction laydown areas, and access road) have been deleted from consideration in this Final EIR.

The Pittsburg West Tenth Street Converter Station Alternative 1 (E/W) site is located north of West Tenth Street and west of Beacon Street in close proximity to the PG&E 230 kV substation (refer to Figures 3-1 and 3-11 of this Final EIR). Use of this site would require leasing or procuring and reconfiguring several parcels in the northwest quadrant of the overall West Tenth Street group of parcels. Existing development on the West Tenth Street site includes light industrial businesses. The Alternative 1 site is in proximity to a new residential community on the south side of West Tenth Street. The City of Pittsburg is in the process of amending the existing CS-O (1171) zoning district (Service Commercial with Limited Overlay [Ordinance No. 00-1171]) for a group of parcels. The affected zoning district includes Assessor Parcels 085-270-016, 085-270-018, 085-270-019, 085-270-020, 085-270-022, 085-270-025, 085-270-026, 085-270-029, 085-270-032, 085-270-035, 085-270-036, 085-270-038, 085-270-039, and 085-270-040) and encompasses an area larger than that required for the converter station layout under consideration for the Pittsburg West Tenth Street Converter Station Alternative 1 site. The details of the proposed Overlay Zoning Amendment would be as follows with respect to allowable uses, setbacks, and height limitation:

> *"Utility, Major – L39" with the additional land use regulations: "L39 Limited, as a permitted use, to electrical substations of 50 megawatts or less, or AC/DC power converter stations with electrical transformers. Any structures must be located a minimum of 35 feet from the right-of-way of West Tenth Street and a minimum of 600 feet from the right-of-way of Beacon Street, and with the maximum height of any building not to exceed 65 feet and/or any ancillary structure/tower not to exceed 80 feet in height. The site perimeter must be planted with a substantial screen of evergreen trees and other landscaping in order to minimize the impact of the size, height and bulk of the structures."*

This revised text to the City of Pittsburg Zoning Ordinance is based on a Zoning Amendment proposed by the City in order to satisfy the needs of the Project proponent. The language above does not apply to land use on West Tenth Street as it exists today.

The Pittsburg West Tenth Street Converter Station Alternative 1 location (including ancillary facilities), layout under consideration, elevation views, and a photosimulation are presented on Figures 3-11 through 3-14 of this Final EIR. This site includes a proposed permanent access road that would connect to West Tenth Street (refer to Figure 3-12 of this Final EIR). Construction traffic would access this site via the existing access road to the Mirant Pittsburg Power Plant north of West Tenth Street on the west side of the site.

An aerial view of the existing West Tenth Street Alternative 1 (E/W) site is shown on Figure 3-11 of this Final EIR. The converter station buildings would occupy approximately 23,000 square feet at the site, and range in height up to 64 feet. Outdoor air-cooled radiators, transformers, AC switchgear, filters, and other equipment would occupy the balance of the

site. The site would receive an architecturally appropriate treatment in areas that are visible to the public.

The proposed construction laydown areas for the Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site are located on the adjacent Mirant Pittsburg property north of the site (refer to Figure 3-11 of this Final EIR). The area would be devoted to equipment and materials laydown, storage, parking of construction equipment, small fabrication areas, and office trailers supporting construction of the Pittsburg converter station.

For the most part, the AC and DC cable routes for the now proposed Pittsburg West Tenth Street Converter Station Alternative 1 (E/W) site would be located on the Mirant Pittsburg Power Plant property. The AC cable would start from the north side of this proposed converter station site, enter the Mirant Pittsburg Power Plant property, travel north-northwest through the southern tank farm along Mirant's access road, loop east, and connect to the PG&E switchyard (refer to Figure 3-11 of this Final EIR).

The DC cable route would follow the AC cable route for most of the land portion of the distance between the proposed West Tenth Street Converter Station Alternative 1 (E/W) site and the DC cable entry point into Suisin Bay. At the point where the AC cable diverges to the PG&E switchyard, the DC cable would continue to the northeast to the edge of the Mirant Pittsburg Power Plant property before turning northwest into Suisin Bay. The transition from onshore to offshore would be completed via HDD (refer to Figure 3-15 of this Final EIR).

3.5 OPERATION

It is currently anticipated that the Project would become operational as early as 2009. The HVDC system transmission control activities would be performed under the direction of the CAISO. The HVDC technology proposed for the Project is highly reliable and requires minimal maintenance. The converter stations at each end of the submarine cable route (in San Francisco and Pittsburg) would normally operate with a minimal staff and/or be remotely operated. Personnel would support the stations by performing periodic inspections and routine maintenance.

The converter stations would use proven AC/DC conversion technology of thyristor valves, allowing the rapid control of power transfers and a fast response to changing system conditions. All critical auxiliary equipment, controls, protections, metering, and communications would use redundant systems to maximize system availability and reliability.

Automatic computer control systems would adjust operating parameters to maintain system operation within input settings directed by the CAISO. The fiber optic communications component of the submarine cable would allow direct communication between computer

control systems at both of the converter stations. This would facilitate rapid response to changes in the AC transmission grid, converter station equipment, and/or the HVDC cable. The operators and/or computer systems would alert needed staff in the event that an incident requiring attention was detected.

At the commencement of system commercial operation, maintenance procedures and critical spare parts would be in place to ensure that reasonably foreseeable problems with the cable or converter stations could be remedied quickly.

3.5.1 Converter Station Maintenance

The proposed electrical equipment and electronic controls at the converter stations would be expected to require a minimal amount of routine maintenance on a periodic basis. Planned routine maintenance activities include: general visual inspections for signs of external damage, leakage, and overheating; checks of insulating fluids levels and properties; lubrication of cooling fans; and electrical checks that are beyond those performed automatically by the station computer systems. Some of the proposed equipment would be expected to operate indefinitely, without maintenance, while other components have limited life expectancies and would require periodic service or replacement. Approximately 5 planned outage days would be required every year.

The station control systems would be designed to automatically alert on-call personnel if problems were detected with the cable or converter stations. Contractual arrangements would be in place for specialized services that may be required to perform repairs on short notice.

3.5.2 Cable Repair

The proposed transmission cable is expected to require no scheduled maintenance for the proposed operational life of the Project (at least 40 years). If substantial damage to the cable were to occur, the repair might require a new section of cable to be added to the cable by splicing. A spare length of cable would be stowed on a boat or barge moored at the Pittsburg Marina or other suitable local facility, or in a nearby onshore storage area, specifically for making emergency repairs. Contractual arrangements would be in place for specialized services that may be required.

3.6 DECOMMISSIONING

Once the Project had reached the end of its useful life, Project facilities would be decommissioned in accordance with applicable regulations in place at that time. It is currently envisioned that the submarine and onshore-buried cable segments would be abandoned in place, that the converter stations in San Francisco and Pittsburg would be removed, and that those sites would be prepared for the subsequent land use appropriate for each site at that point in time.

0 1 2 3 4 5 Miles
0 1 2 3 4 5 Kilometers
1 inch equals 3 miles 1:190,080
NAD 1983 UTM Zone 10N

PROPOSED 400 MW DC CABLE ROUTE

EXPANDED STUDY CORRIDOR TO ALLOW FLEXIBILITY FOR BART CROSSING

PG&E POTRERO SUBSTATION

MIRANT ALTERNATIVE

SHEEDY ALTERNATIVE

PROPOSED SF CONVERTER STATION, HWC (MITIGATED)

PG&E PITTSBURG SUBSTATION

PROPOSED WEST TENTH STREET ALTERNATIVE

MIRANT ALTERNATIVE

PETALUMA POINT* · MARE ISLAND* · BENICIA* · VINE HILL* · HONKER BAY* · ANTIOCH NORTH*

NOVATO* · Novato · Vallejo · Benicia · Rodeo · Crockett · Hercules · Pinole · Martinez · West Pittsburg · Pittsburg · Antioch · Oakley · Brentwood

Sonoma County · Solano County · Marin County · Contra Costa County · Sacramento County

SAN PABLO BAY · SUISUN BAY · JOICE ISLAND ST GAME REFUGE

Concord Naval Weapons Station · Benicia SRA · Carquinez Strait Shoreline · Point Pinole Regional Shoreline · China Camp SP · Lucas Valley-Marinwood · Santa Venetia · Fairfax · San Anselmo · Ross · Kentfield · Larkspur · Corte Madera · Mill Valley · Strawberry · Tamalpais-Homestead Valley · Mount Tamalpais SP · Tiburon · Belvedere · Angel Island SP · Sausalito · POINT BONITA* · Golden Gate NRA

SAN RAFAEL* · SAN QUENTIN* · Richmond · San Rafael · RICHMOND* · Tara Hills · Bayview-Montalvin · El Sobrante · San Pablo · East Richmond Heights · Wildcat Canyon Regional Park · Miller/Knox Regional Park · El Cerrito · Kensington · Albany · Berkeley · Emeryville · East Shore State Park (SS) · SAN FRANCISCO NORTH* · SAN FRANCISCO BAY

BRIONES VALLEY* · WALNUT CREEK* · Pacheco · Concord · CLAYTON* · Clayton · Pleasant Hill · Briones Regional Park · John Muir NHS · Mount Diablo SP · Lafayette · Orinda · Lafayette Reservoir Rec Area · Walnut Creek · Tilden Regional Park · LAS TRAMPAS RIDGE* · Alamo · Moraga Town · LAS TRAMPAS REGIONAL WILDERNESS · Danville · Blackhawk · Castro Valley · DUBLIN* · San Ramon

ANTIOCH SOUTH* · BLACK DIAMOND MINES REG PRESER · BROWNS ISLAND · WINTER I · Sacramento County · Contra Costa County

OAKLAND WEST* · OAKLAND EAST* · Oakland · TREASURE ISLAND NAVAL STA · OAKLAND ARMY BASE · OAKLAND NAVAL SUPPLY CTR · ALAMEDA NAVAL AIR STA · Piedmont · Redwood Regional Park · ANTHONY CHABOT REGIONAL PARK · Golden Gate NRA · San Francisco County · Marin County · Alameda County · San Mateo County

SAN FRANCISCO SOUTH* · HUNTERS POINT* · SAN LEANDRO* · HAYWARD* · Daly City · Brisbane · San Leandro · Ashland

DC 10 · DC 20 · DC 30 · DC 40 · DC 50 · DC 52.7 · DC 0

Legend

- 7.5 Minute USGS Quad Index
- Existing Substations
- Existing Transmission Line: 115 kV; 230 kV; 500 kV
- DC 0 — -Proposed 400 MW High Voltage Direct Current Cable Route -10 Milepost/Endpoint -Yellow Study Corridor (Width 500 m - 250 m Each Side of DC Routes within Water Body)
- Alternate 400 MW High Voltage Direct Current Cable Route
- Proposed Alternating Current Cable Route (San Francisco 115 kV/Pittsburg 230 kV)
- Interstate; US Route; State Route; Other Roads; Railroad; BART (Bay Area Rapid Transit)
- County Boundary
- City Limits/ Census Designated Place
- Department of Defense; Local or State Park; National Park

SOURCE: U.S. Geological Survey National Elevation Dataset (NED) 1 arc second, Platts PowerMap 1st Quarter 2003 release, California Resources Agency Legacy Project 2005, Census TIGER® 2000 Data, ESRI Data & Maps 2003 CD-ROM.

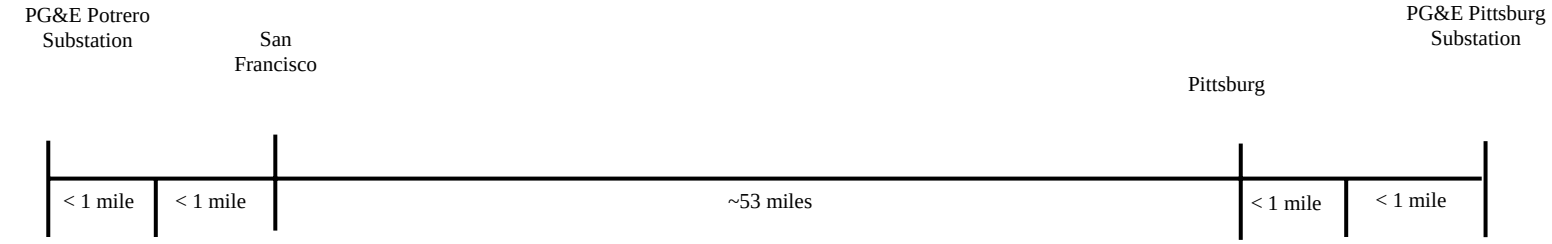
TRANS BAY CABLE PROJECT EIR	Figure 3-1. GENERAL LOCATION MAP	Final EIR	2006

T:\Trans_Bay_Cable_Project_EIR\deliverables\FinalEIR\Figure 3-1 GENERAL LOCATION MAP.mxd

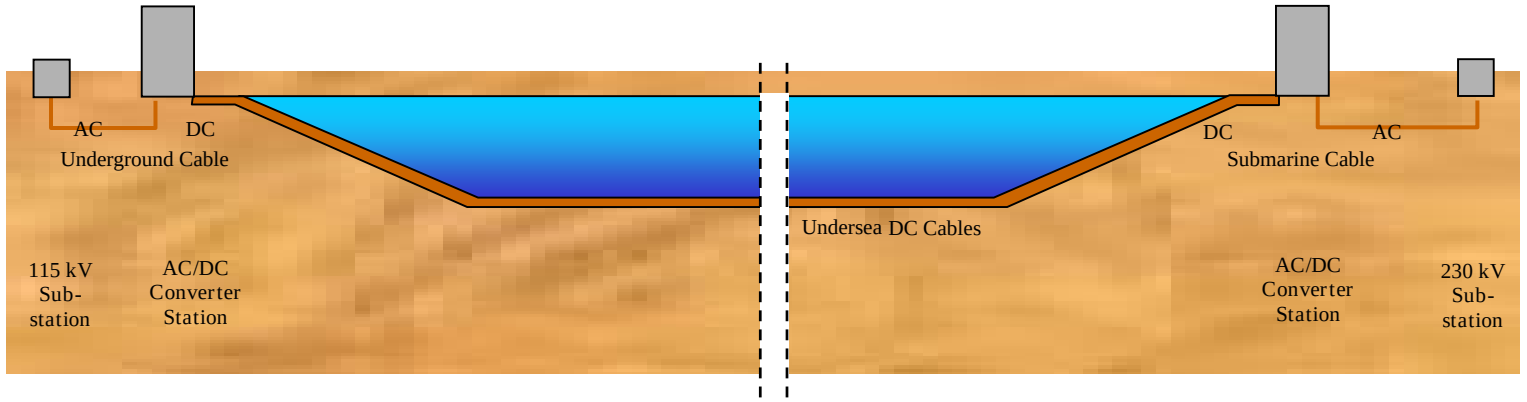
T/Ladd/TransBayCable/10-06Deliverable/106-008A(rev9-06)

System Data:

Transmission Capacity: 400 MW
DC Voltage: 400 kV DC

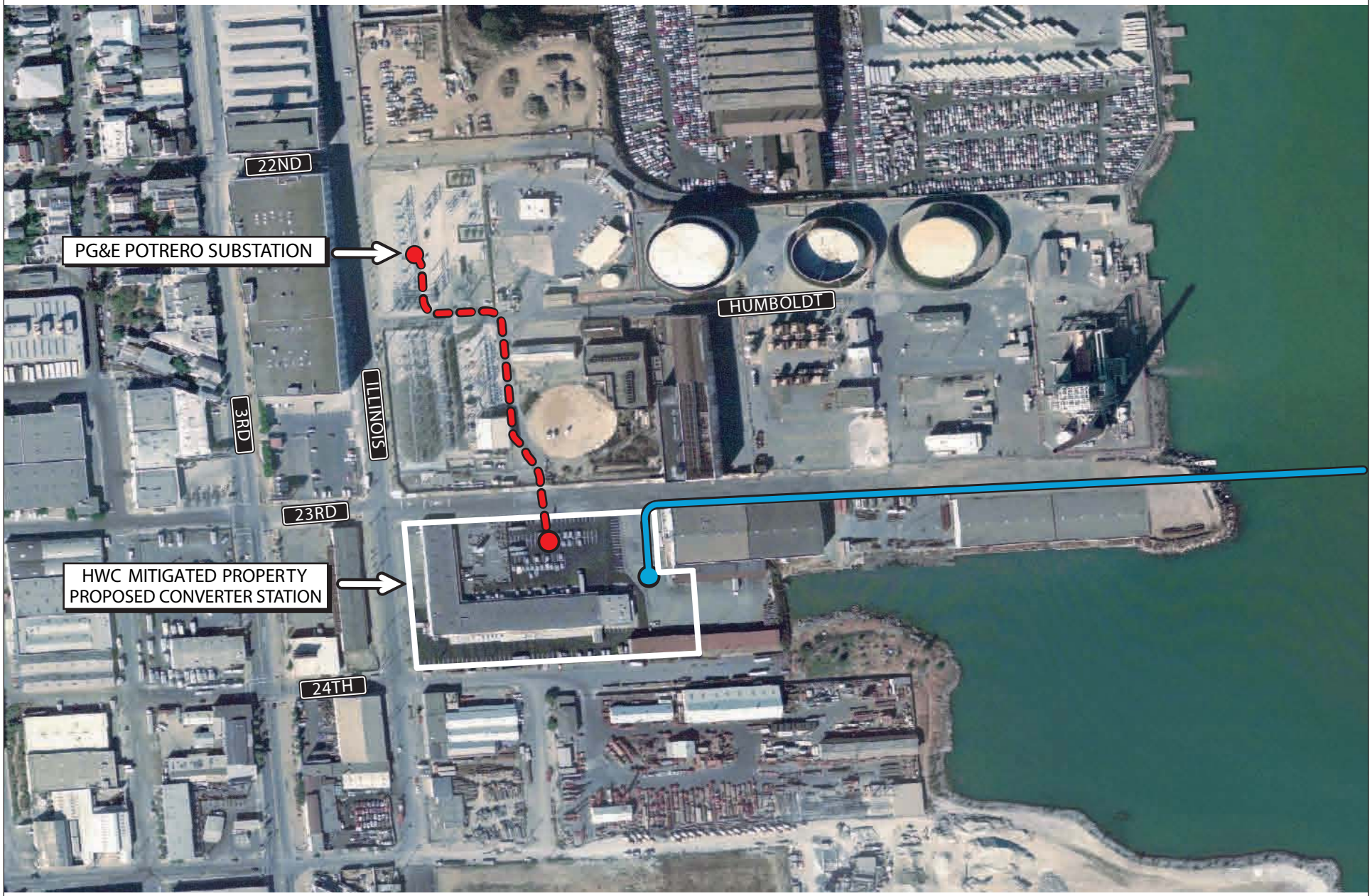


San Francisco – San Pablo – Suisun Bays



TRANS BAY CABLE PROJECT EIR	Figure 3-2. TRANS BAY CABLE INTERCONNECTIONS	Final EIR 2006

T/Ladd/TransBayCable/8-06Deliverable/1205-314(rev8-06)



Legend

AC cable

DC cable

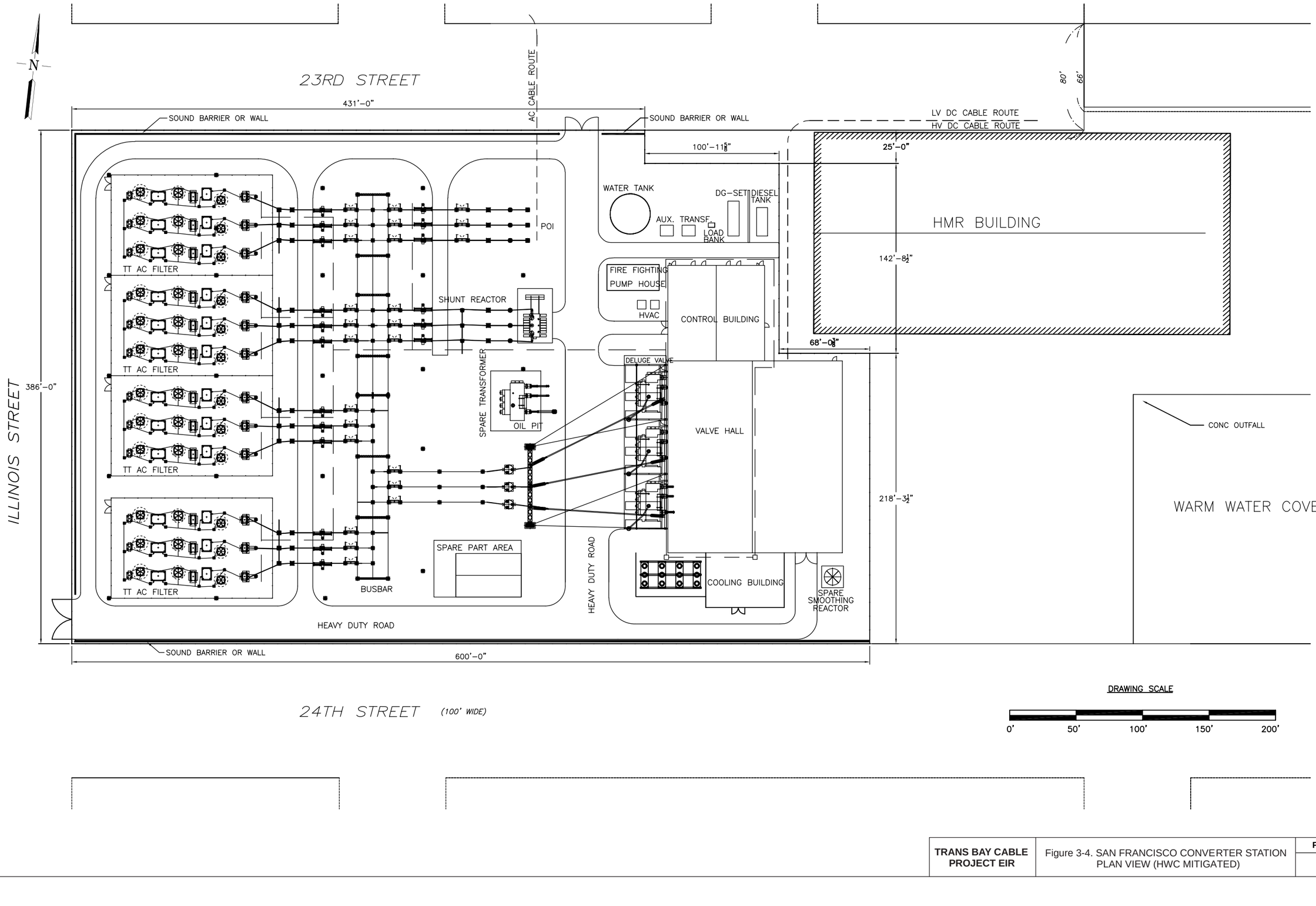
N

0 75' 150'

1" = 300'

TRANS BAY CABLE PROJECT EIR	Figure 3-3. SAN FRANCISCO CONVERTER STATION SITE (HWC MITIGATED)	**Final EIR** 2006

T/Ladd/TransBayCable/10-06Deliverable/1205-318 (rev9-06)

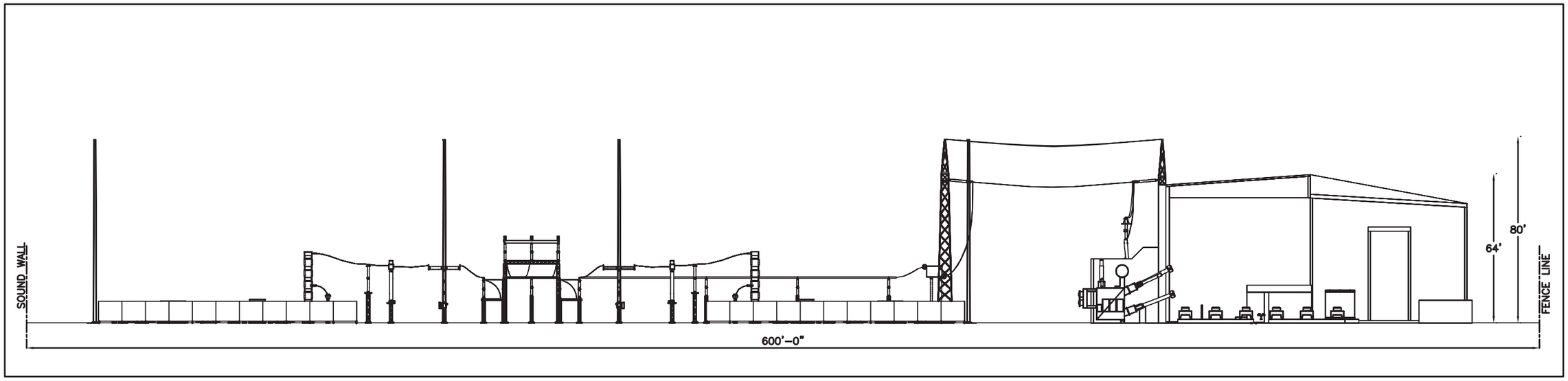


DRAWING SCALE

0' 50' 100' 150' 200'

TRANS BAY CABLE PROJECT EIR	Figure 3-4. SAN FRANCISCO CONVERTER STATION PLAN VIEW (HWC MITIGATED)	Final EIR 2006

T/Ladd/TransBayCable/8-06Deliverable/1205-344(rev8-06)



ELEVATION VIEW
(FACING NORTH)

DRAWING SCALE

0" 25' 50' 75' 100'

TRANS BAY CABLE PROJECT EIR	Figure 3-5. SAN FRANCISCO CONVERTER STATION ELEVATION VIEW (HWC MITIGATED)	**Final EIR** 2006

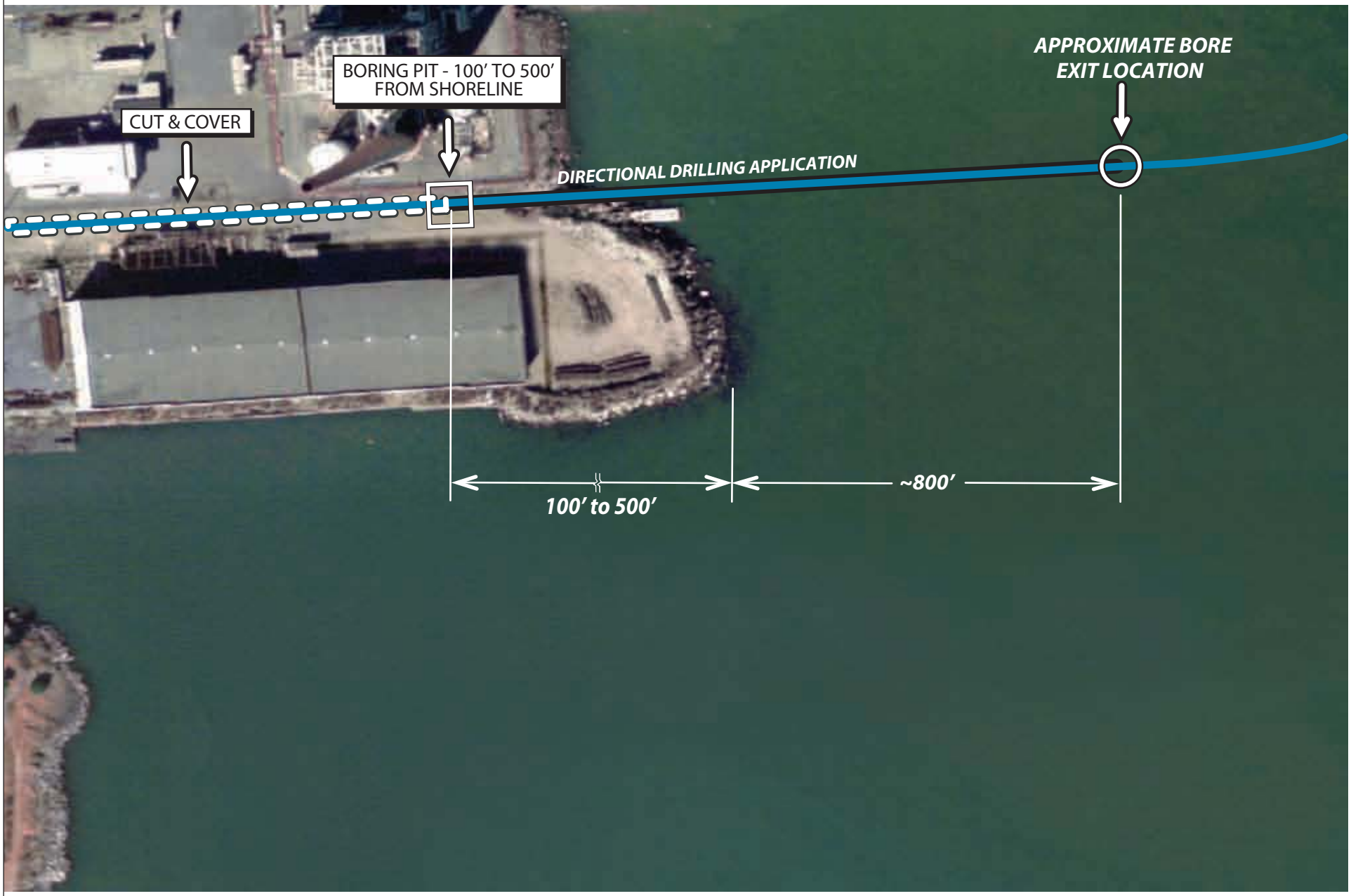
T/Ladd/TransBayCable/10-06Deliverable/106-014(rev9-06)

TRANS BAY CABLE PROJECT EIR	Figure 3-6. PHOTOSIMULATION OF SAN FRANCISO CONVERTER STATION (HWC MITIGATED SITE - VIEW FROM POTRERO HILL)	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/106-014(rev8-06)

TRANS BAY CABLE PROJECT EIR	Figure 3-7. PHOTOSIMULATION OF SAN FRANCISO CONVERTER STATION (HWC MITIGATED SITE - VIEW FROM 24th AND ILLINOIS)	**Final EIR** 2006

T/Ladd/TransBayCable/8-06 Deliverable/1205-338(rev8-06)



Legend

DC cable

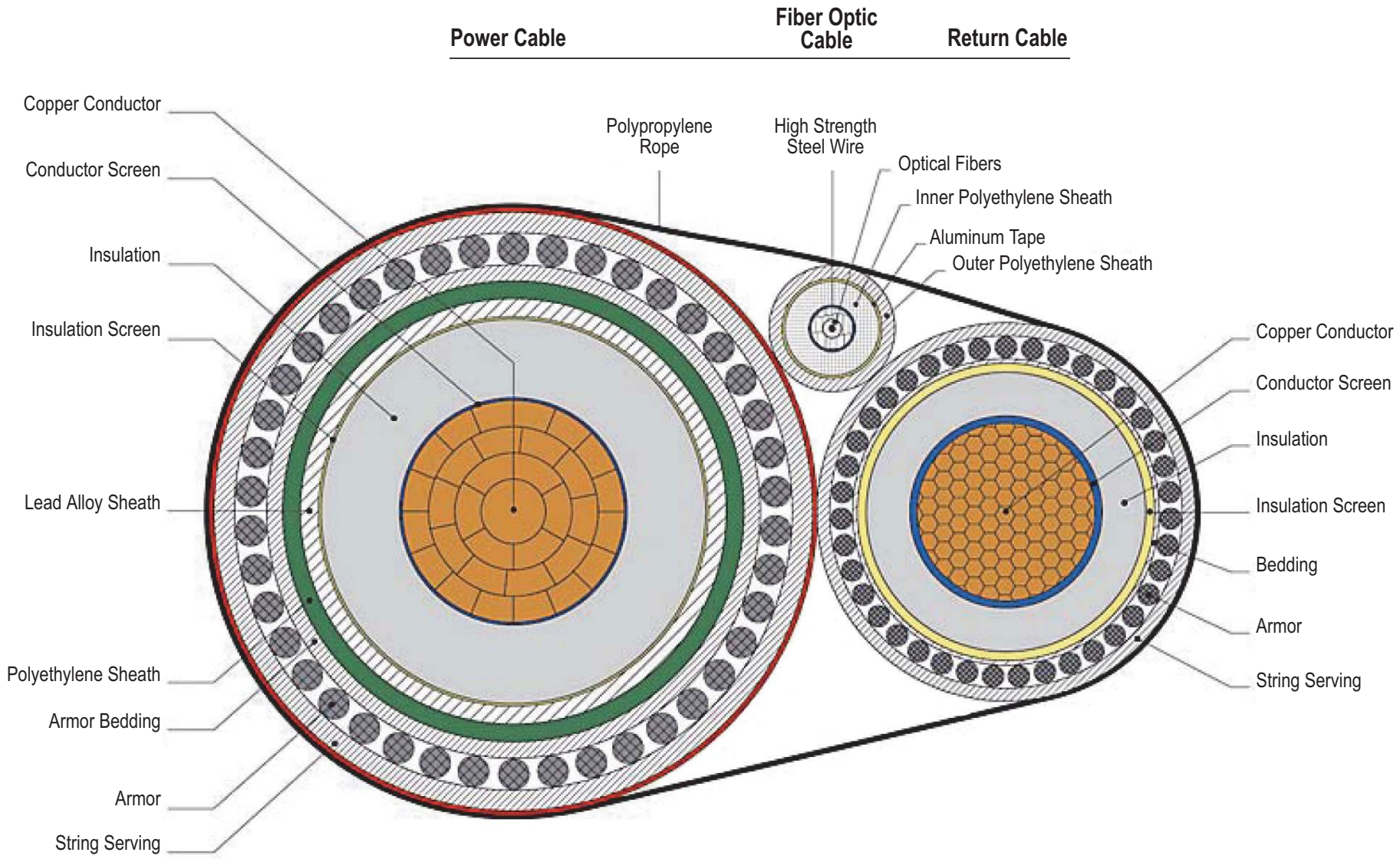
N

0 40 80

1" = 150′

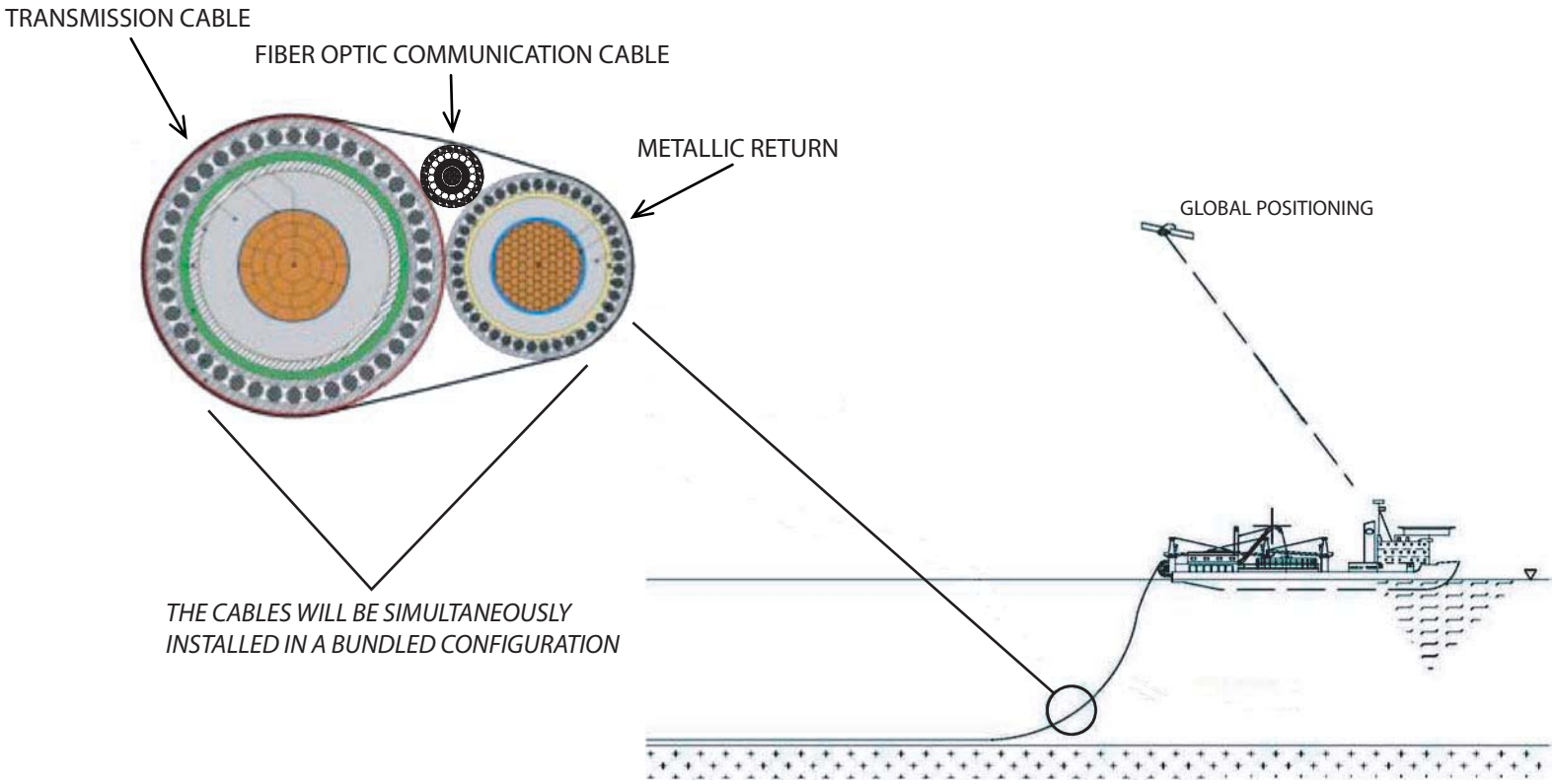
TRANS BAY CABLE PROJECT EIR	Figure 3-8. SAN FRANCISCO CONVERTER STATION (HWC MITIGATED) HDD LOCATION	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/106-009A(rev8-06)



TRANS BAY CABLE PROJECT EIR	Figure 3-9. TYPICAL CONFIGURATION FOR SUBMARINE CABLE	Final EIR 2006

T/Ladd/TransBayCable/8-06Deliverable/106-025A(rev8-06)

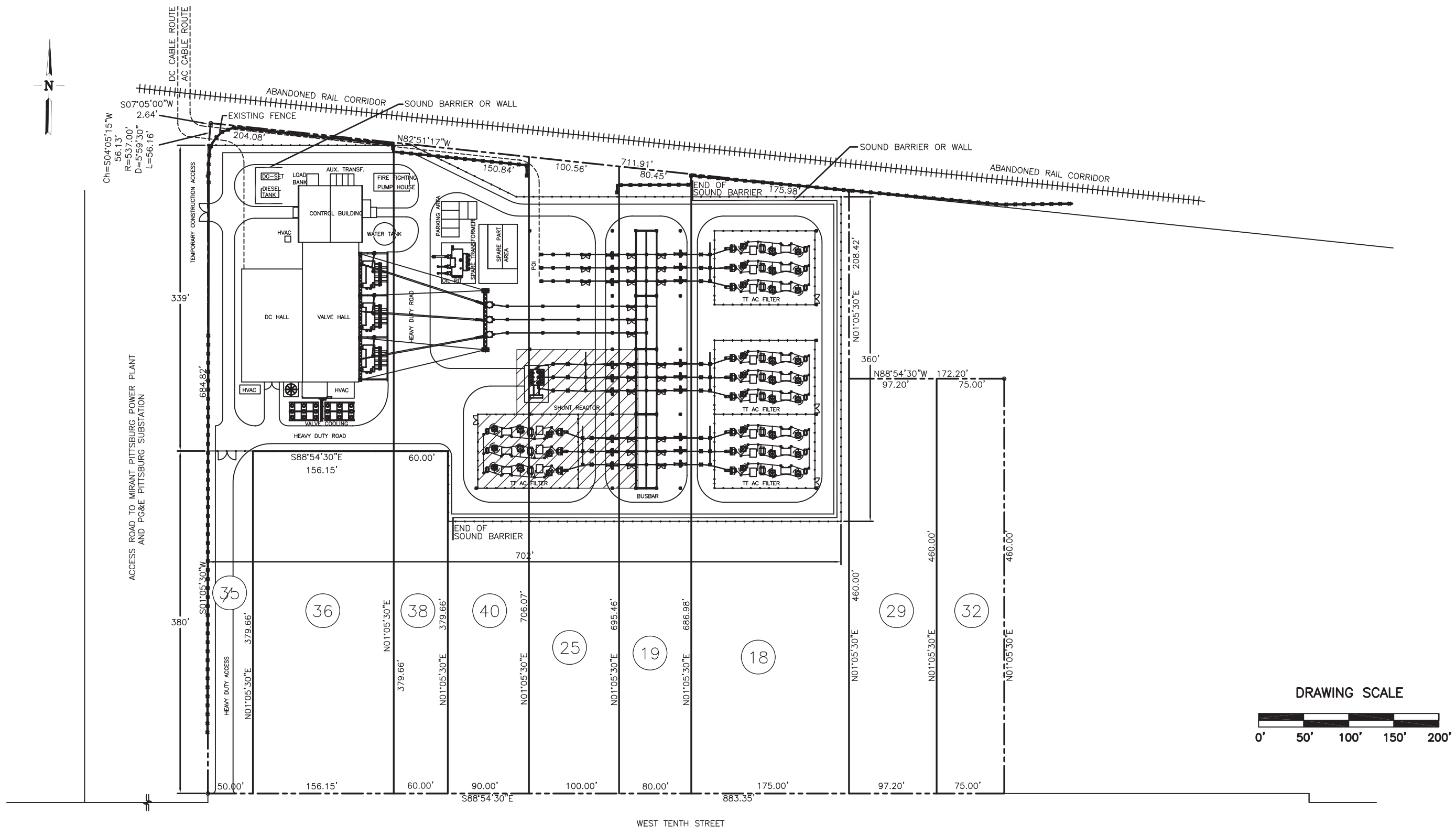


TRANS BAY CABLE PROJECT EIR	Figure 3-10. SIMULTANEOUS CABLE LAY AND BURIAL OPERATION	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/106-043A(rev8-06)

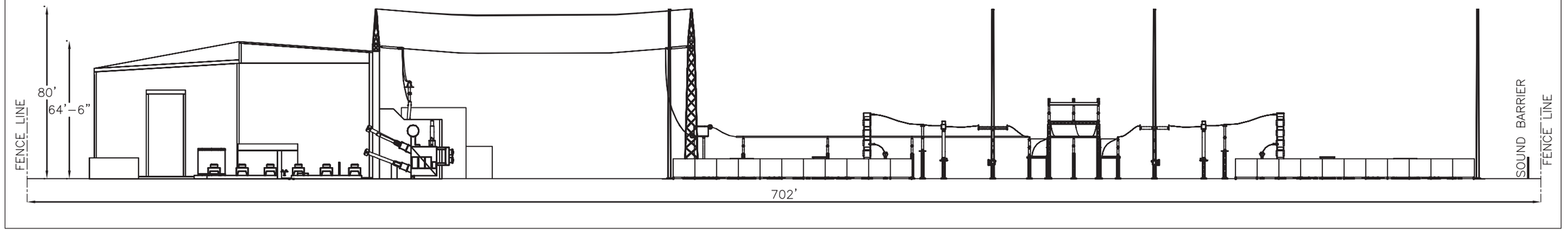
TRANS BAY CABLE PROJECT EIR	Figure 3-11. PITTSBURG CONVERTER STATION SITE (WEST TENTH STREET - ALTERNATIVE 1 [E/W])	Final EIR 2006

T/Ladd/TransBayCable/8-06Deliverable/1205-354(rev8-06)



TRANS BAY CABLE PROJECT EIR	Figure 3-12. PITTSBURG CONVERTER STATION PLAN VIEW (WEST TENTH STREET ALTERNATIVE 1 [E/W])	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/1205-355(rev8-06)



ELEVATION VIEW
(FACING NORTH)

DRAWING SCALE

0" 25' 50' 75' 100'

TRANS BAY CABLE PROJECT EIR	Figure 3-13. PITTSBURG CONVERTER STATION ELEVATION VIEW (WEST TENTH STREET - ALTERNATIVE 1 [E/W])	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/106-048(rev8-06)

TRANS BAY CABLE PROJECT EIR	Figure 3-14. PHOTOSIMULATION OF PITTSBURG CONVERTER STATION (WEST TENTH STREET - ALTERNATIVE 1 [E/W])	**Final EIR** 2006

T/Ladd/TransBayCable/10-06Deliverable/106-031(rev10-06)

Legend

DC cable

N

0 50' 100'
1" = 200'

TRANS BAY CABLE PROJECT EIR	Figure 3-15. PG&E PITTSBURG SWITCHYARD HDD LOCATION	**Final EIR** 2006

4.A SAN FRANCISCO HWC (MITIGATED) CONVERTER STATION

4.A.1 Introduction

As discussed in Sections 1.0 and 3.0 of this Final EIR, the previously proposed San Francisco HWC Converter Station site layout as assessed in the Draft EIR has been shifted to the western portion of the overall HWC site as a mitigating action to completely avoid the need to demolish two historic buildings on the eastern portion of the overall HWC site. The shifted site layout ("HWC [Mitigated]" site) is also further away from the Bay and would not preclude or interfere with the possible future construction of a Bay Trail segment along the portion of the waterfront to the east. The HWC (Mitigated) site layout would also avoid impacts to any portion of the historic Station A Complex on the adjacent Mirant property to the north associated with the alternating current (AC) cable interconnection to the Pacific Gas and Electric Company (PG&E) Potrero Substation. Accordingly, the previously proposed HWC converter station site layout assessed in the Draft EIR has been deleted from further consideration and has been replaced by the HWC (Mitigated) site layout.

The San Francisco HWC (Mitigated) Converter Station site is located on fill at the southeastern corner of the 23rd and Illinois streets intersection. The site is bounded completely by industrial land uses. The Mirant Potrero Power Plant and PG&E Potrero Substation are directly northeast and north of the site, respectively. The AC cable would traverse 23rd Street and the Mirant Potrero Power Plant property into the PG&E substation and the DC cable would run east-west along 23rd Street. San Francisco Bay is located approximately 200 feet east of the site. The San Francisco HWC (Mitigated) site (refer to Figure 3-3) is located directly west of the previously proposed HWC site as assessed in the Draft EIR and is within the Central Waterfront area of San Francisco.

The overall HWC site is comprised of the buildings at 435, 525, and 555 23rd Street, and is bounded on the north by 23rd Street and the Mirant Potrero Power Plant, on the east by a small, undeveloped parcel owned by the Port of San Francisco and by San Francisco Bay, on the south by 24th Street, and on the west by Illinois Street. The HWC (Mitigated) site is located on the portion of the overall HWC property at 525 23rd Street which is currently occupied jointly by DHL and Airgas. The existing building (non-historic) on the HWC (Mitigated) site would need to be demolished to accommodate the proposed converter station at this location. The entire site is currently either covered with buildings or pavement. The site is known to have subsurface contamination (soil and groundwater) from historic activities and uses (refer to Section 4.A.14 for more information).

4.A.2 Air Quality

4.A.2.1 Environmental Setting

The environmental setting for air quality associated with the San Francisco HWC (Mitigated) Converter Station site in San Francisco is as described in Section 4.2.1 of the Draft EIR for the previously proposed HWC site.

4.A.2.2 Environmental Impacts

The thresholds of significance, identification of potentially significant impacts, mitigation measure requirements, and residual impact findings for the San Francisco HWC (Mitigated) Converter Station site layout in San Francisco are as described in Section 4.2.3 of the Draft EIR for the previously proposed San Francisco HWC site. Potentially significant air quality impacts associated with installation of the offshore DC cable route (refer to Section 4.2.3.4 of the Draft EIR and Table 1-1 in this Final EIR) apply to the San Francisco HWC (Mitigated) Converter Station. With implementation of the following mitigation measures, potentially significant impacts would be reduced to less-than-significant levels for the San Francisco HWC (Mitigated) Converter Station:

- Mitigation Measure AIR-1 (Fugitive Dust Controls) for Impact AIR-1 (Fugitive Dust Emissions)
- Mitigation Measure AIR-2 (Exhaust Controls) for Impact AIR-2 (Equipment Exhaust Emissions)

4.A.3 Geologic Resources and Soils

Background geological resources and soils data for the San Francisco HWC (Mitigated) Converter Station site are as presented in Section 4.3 of the Draft EIR for the previously proposed HWC site. This background information is also applicable to the San Francisco HWC (Mitigated) Converter Station site. Site-specific environmental setting and impact discussions for the HWC (Mitigated) site are presented below.

4.A.3.1 Environmental Setting

4.A.3.1.1 Site Geology. The San Francisco HWC (Mitigated) Converter Station site is shown on Figure 3-3 of this Final EIR and is located directly adjacent to and west of the previously proposed HWC site shown on Figure 4.3-3 of the Draft EIR. The geology of the San Francisco area, including the HWC (Mitigated) site, is shown on Figure 4.3-3 of the Draft EIR. Soil types are shown on Figure 4.3-4 of the Draft EIR. The site is underlain primarily by artificial fill over reclaimed tidal flats featuring Bay Mud and estuarine deposits.

The artificial fill consist of gravels, sands, and clays. Serpentine bedrock may be present at depth although the mapped location of the ridge is to the east of the site.

***Geologic Resources*.** The San Francisco HWC (Mitigated) Converter Station site does not have any identified unique geologic features or resources. Paleontological resources are discussed in Section 4.A.15 of this Final EIR.

***Faults*.** No active or potentially active faults have been identified on the HWC (Mitigated) site. Figure 4.3-2 of the Draft EIR illustrates the major Quaternary faults in the site region. The closest known active faults are the San Andreas fault (9.5 miles to the west) and the Hayward fault (12 miles to the east). Table 4.3-1 of the Draft EIR presents maximum earthquake magnitude estimates and indicates the closest distance from each fault to the previously proposed HWC site, which is also applicable to the HWC (Mitigated) site. Each fault zone is described in detail in Section 4.3.1.2 of the Draft EIR.

4.A.3.2 Environmental Impacts

The thresholds of significance, identification of potentially significant impacts, mitigation measure requirements, and residual impact findings for the San Francisco HWC (Mitigated) Converter Station site are as described in Section 4.3.3 of the Draft EIR for the formerly proposed HWC site. With implementation of the following mitigation measures, potential environmental impacts associated with the HWC (Mitigated) site would be reduced to a less-than-significant level:

- Mitigation Measure GEO-1 (Design Project for Erosion Control) for Impact GEO-1 (Soil Erosion and Compaction)
- Mitigation Measure GEO-2 (Controls for Excavation of Serpentine) for Impact GEO-2 (Asbestos-containing Serpentine)
- Mitigation Measure GEO-3 (Design to Seismic Design Requirements) for Impact GEO-3 (Strong Ground Shaking)
- Mitigation Measure GEO-4 (Design Project for Liquefiable Deposits) for Impact GEO-4 (Liquefaction)
- Mitigation Measure GEO-5 (Design Project for Shrink-Swell/Subsidence) for Impact GEO-5 (Shrink-Swell/Subsidence)

4.A.4 Water Resources and Quality

4.A.4.1 Environmental Setting

The San Francisco HWC (Mitigated) Converter Station site is shown on Figure 3-3. The converter station site is located approximately 200 feet west of the Bay. There is no surface water on the site. Stormwater from the site is currently directed to the San Francisco combined stormwater and sanitary sewer system. As described in Section 4.4.1.5 (Drainage and Flooding) of the Draft EIR, the majority of San Francisco is served by a combined storm sewer system, where storm water, along with residential and commercial sewage, is directed to three wastewater treatment plants prior to being released to San Francisco Bay or the Pacific Ocean.

Based on the results of the Phase II investigation conducted at this site, site contaminants are generally similar to those described for the eastern portion of the overall HWC site as discussed in Section 4.14 of the Draft EIR. Groundwater was encountered at a depth of approximately 10-15 feet below ground surface (bgs). The pH of the groundwater is close to 7 or neutral. The groundwater is impacted with a variety of site contaminants as follows: heavy metals, heavy petroleum hydrocarbons, gasoline constituents including benzene, cyanide, and polynuclear aromatic hydrocarbons (PAHs). The groundwater does not exceed the hazardous waste criteria, but no fish bio-assay tests were conducted. It is unlikely that the groundwater is hazardous. The groundwater is not impacted with polychlorinated biphenyls or hexavalent chromium. The groundwater flow direction on the overall HWC site is split, probably because of the subterranean ridge that runs under the eastern portion of the overall HWC site. The groundwater flow direction on the HWC (Mitigated) site is to the southwest. In the eastern portion of the overall HWC site the groundwater flow direction varies from the southeast to the northeast. Refer to Section 4.A.14 for more information regarding groundwater conditions at the HWC (Mitigated) site.

The San Francisco HWC (Mitigated) Converter Station site is not located within the 100-year flood zone.

4.A.4.2 Environmental Impacts

The thresholds of significance, identification of potentially significant impacts, mitigation measure requirements, and residual impact findings for the San Francisco HWC (Mitigated) Converter Station site are generally as described in Section 4.4.3 of the Draft EIR for the previously proposed HWC site. Groundwater collected during groundwater dewatering during construction at the HWC (Mitigated) site (e.g., under the transformer bay where the planned excavation depth of approximately 15 feet would likely extend below the groundwater level of 10-15 feet bgs) would require treatment, follow-on sampling and

analysis, and evaluation before it could be discharged to the combined San Francisco storm/sanitary sewer. Alternatively the groundwater could be sent offsite for treatment and disposal at a commercial water treatment facility. Refer to Section 4.A.14 (Hazardous Materials and Waste Management) for more information about potential contaminated groundwater-related impacts and associated mitigation (HAZ-7).

With implementation of the following mitigation measures, potential environmental impacts associated with the HWC (Mitigated) site would be reduced to a less-than-significant level:

- Mitigation Measure WATER-1 (Erosion Control and Contaminant Source Control) for Impact WATER-1 (Erosion and Contaminated Runoff)
- Mitigation Measure WATER-2 (Spill Prevention and Control Plan for HDD) for Impact WATER-2 (Surface Water Quality Impacts from HDD)
- Mitigation Measure WATER-3 (Use of Pilot Hole and Reaming) for Impact WATER-3 (Groundwater Quality Impacts from HDD)

4.A.5 Terrestrial Biological Resources

4.A.5.1 Environmental Setting

The HWC (Mitigated) site is located adjacent to and west of the previously proposed HWC site. The environmental setting for this site is consistent with the previously proposed HWC site, as described in Section 4.5 of the Draft EIR.

4.A.5.2 Environmental Impacts

This area is dominated by previously developed and industrialized landscapes described in Section 4.5 of the Draft EIR as Disturbed/Developed habitats. No potential impacts to natural communities, wetlands, or special-status species would be expected from development of the HWC (Mitigated) site.

4.A.6 Marine Biological Resources

4.A.6.1 Environmental Setting

Background information, including evaluation of marine biological resources with a review of special-status species with the potential to occur in the Project area, as well as the regulatory framework, are provided in Section 4.6 of the Draft EIR.

4.A.6.2 Environmental Impacts

The potential environmental impacts to marine biological resources associated with the San Francisco HWC (Mitigated) Converter Station and associated submarine High Voltage Direct Current (HVDC) cable system route in the Bay are as described in Section 4.6.3 of the Draft EIR. In summary, no potentially significant impacts to marine biological resources have been identified.

4.A.7 Cultural Resources

4.A.7.1 Environmental Setting

4.A.7.1.1 Archaeological Resources. Archival research indicates that the San Francisco HWC (Mitigated) Converter Station site (refer to Figure 3-3) is located in an area of potential archaeological sensitivity. Prior to the reclamation efforts initiated in the latter half of the 19th century, Potrero Point, upon which the HWC (Mitigated) parcel is situated, extended into the waters of San Francisco Bay from just south of 24th Street to 23rd Street and east to Delaware Street (U.S. Coastal Survey [USCS], 1852).

Although this places the San Francisco HWC (Mitigated) Converter Station site on lands once submerged beneath San Francisco Bay, the portion of this property where the converter station layout is now proposed was once bisected by the Tubbs Cordage Company ropewalk. A ropewalk consists of a long narrow building where strands of yarn were manually twisted into ropes.

The San Francisco Cordage Manufactory was constructed on the block bounded by present day Indiana, Tennessee, Tubbs, and 22nd Streets by Alfred and Hiram Tubbs in 1856. Subsequently renamed the Tubbs Cordage Company, the facility included a ropewalk which at its longest reached a length of over 1,500 feet. Over much of its length, the ropewalk rested on piers just above the waters of the Bay. As mentioned above, strands of yarn were manually twisted into ropes atop the length of the ropewalk. Ropes manufactured in this process were considered superior to those manufactured in the then newly invented machine twisting process. Ropes manufactured at the Tubbs facility were utilized by California's burgeoning shipping and mining industries (Wirth Associates, 1979a:6-8, 96; 1979b:36-37).

The ropewalk is depicted on the USCS Maps of 1859, 1869, and 1884, extending southeastward into the Bay from roughly today's Kentucky Street just north of the intersection with 23rd Street. Based on a review of the Sanborn Map of 1914, it appears that the historic feature bisected what is now the western portion of the overall HWC property at the corner of Illinois and 23rd Street and passed through the parcel at a bearing of roughly 110 degrees.

Although the Sanborn Map of 1914 still depicts a portion of the ropewalk allowing for an accurate delineation of its route, by this date the feature is no longer depicted as extending over open water across the current Project area. The area is instead solid ground with the ropewalk terminating at Kentucky. This configuration of the ropewalk is still depicted on the Sanborn Map of 1952.

In addition to the archaeological inventory, boring logs of a recent soil-sampling program (URS, 2006) at the HWC (Mitigated) site were examined. These logs reveal that the current HWC (Mitigated) site is underlain by upwards of 20 feet of fill material. The fill, primarily sand or sandy soils, becomes coarser with depth and contains brick, gravel, concrete, wood, and other rubble down to depths of 20 feet below ground surface. Underlying the initial fill material is silty sand with gravel that also contains occasional brick and concrete fragments. Intact structural remains were not observed in any of the borings. The assortment of constituents observed in the fill is a common occurrence in San Francisco. It has been reported that a wide variety of material was used in the historical filling of the waters off San Francisco. Although sand was the primary constituent (Dow, 1973), household trash and structural debris was commonly deposited in the bay as fill material. For example, Captain Fred Klebingat (quoted in Olmstead et al., 1977:128) observed some of the materials used as fill for the area south of Folsom Street. He stated that they "dumped rubbish from buildings," including pulverized bricks and old concrete. He also witnessed the dumping of a cargo of hay bales and sacks of cement off the five-masted schooner *W.H. Marston*, as well as animal remains.

4.A.7.1.2 Historic Architectural Resources. The San Francisco HWC (Mitigated) Converter Station site completely avoids the historic buildings (two Western Sugar Refinery warehouses) on the eastern portion of the overall HWC property. The previously proposed HWC converter station layout would have required demolition of these two historic structures which would be considered an unavoidable adverse significant impact. In addition, the AC cable route to the PG&E Potrero Substation that was associated with the previously proposed HWC site would have resulted in an unavoidable adverse significant impact on the historic Station A Complex on the adjacent Mirant property. The onshore AC cable route associated with the HWC (Mitigated) site completely avoids this impact as well. The onshore AC cable route between the HWC (Mitigated) site and the PG&E Potrero Substation (refer to Figure 3-3 of this Final EIR) does traverse an area of potential archaeological sensitivity, including the portion on the Mirant property. The HWC (Mitigated) site contains buildings constructed after 1961 that have served various types of warehouse and transshipment purposes since that time. Their simple, one-story, utilitarian construction is typical of mid-20th century ground freight warehousing and shipping facilities. The buildings are less than 50 years old and as such, do not require further study or historical evaluation, nor are they considered historical resources for the purposes of the California Environmental Quality Act (CEQA). The land surrounding the San Francisco HWC (Mitigated) Converter Station site

underwent a great deal of change during the 1950s and 1960s, further altering the setting of the site. These changes included construction of a shipping warehouse across Illinois Street to the west, closure of the manufactured gas facility to the north, and extensive construction and remodeling of the PG&E power plant property (Station A) to the north through 1983, when Station A was removed from service. The former sugar refinery to the east and north of the HWC (Mitigated) site was closed in 1949 and nearly all of its facilities were also removed during this time.

In conclusion, there are no historic architectural resources present within the footprint of the San Francisco HWC (Mitigated) Converter Station site or the proposed AC cable route to the PG&E Potrero Substation.

4.A.7.2 Environmental Impacts

4.A.7.2.1 Archaeological Resources. It is unknown whether or not the ropewalk described above was left intact during reclamation efforts. During San Francisco's reclamation efforts of the mid- to late-19th century, wharves were commonly used as platforms from which to dump fill material. It is in this manner that the numerous wharves that once extended out into Yerba Buena Cove became entombed along with ships, barges, and other vessels that were moored alongside. As such, it is possible that remnants of the Tubbs Cordage Company ropewalk might lay buried within the site of the San Francisco HWC (Mitigated) Converter Station site.

Given the potential archaeological sensitivity within the confines of the San Francisco HWC (Mitigated) Converter Station site and along the proposed AC cable route to the PG&E Potrero Substation, it is possible that with Project implementation on this site and AC cable route, archaeological resources might be exposed during construction activities. The same potentially significant impact on archaeological resources described in the Draft EIR is applicable to a portion of the HWC (Mitigated) site. With implementation of the following mitigation measures which are the same as those specified for the HWC site previously proposed on the eastern portion of the property (refer to Section 4.7.3.2.1 of the Draft EIR for more information), potential environmental impacts to archaeological resources would be reduced to less-than-significant levels for this Project site:

- Mitigation Measure CUL-1a (Archaeological Resource Testing), Mitigation Measure CUL-1b (Archaeological Resource Data Recovery) and Mitigation Measure CUL-1c (Archaeological Resource Construction Monitoring) for Impact CUL-1 (Disturbance of Archaeological Resources)

4.A.7.2.2 Historic Architectural Resources. Construction of the San Francisco HWC (Mitigated) Converter Station would not cause a significant adverse change because this site

contains no historical resources. Construction of the San Francisco HWC (Mitigated) Converter Station would not cause direct or indirect significant adverse change to nearby resources or potential resources. This construction would not require demolition or physical alteration of historical resources, or any of the potential contributing elements of nearby historic district(s). The introduction of the proposed converter station facilities would be consistent with the types of industries that have operated in this area for nearly 130 years. In fact, this part of the Central Waterfront has long been utilized for various energy-related uses, including massive multi-story manufactured gas storage tanks (no longer extant), and a multi-story electric power generation plant. The remaining nearby historical resources (the Station A complex and the sugar warehouses) were constructed and operated in an area that was already surrounded by large-scale industrial utilitarian buildings and structures when they were completed. Construction of the San Francisco HWC (Mitigated) Converter Station site, therefore, would not cause a significant adverse indirect change to the sugar warehouses, or the Station A complex as individual historical resources. Nor would this action cause a significant adverse indirect change to the potential historic district(s) because it would not impair the ability of the potential district(s) to convey historic significance. This activity would not materially impair the significance of the potential district(s) and the impact to the potential historic district(s) would be less than significant.

Given the above, there are no historic architectural mitigation measures proposed for the San Francisco HWC (Mitigated) Converter Station site or associated onshore AC cable route to the PG&E Potrero Substation.

4.A.7.3 References Cited

Dow, Gerald Robert. 1973. Bay Fill in San Francisco: A History of Change. Unpublished M.A. Thesis, San Francisco State University.

Olmstead, R., N. Olmstead, and A. Pastron. 1977. Channel Outfalls Consolidation Project. Report submitted to the San Francisco Wastewater Management Program.

URS. 2006. Phase II Soil and Groundwater Site Investigation Report for HWC (Mitigated) Site, Western Portion of the Harrigan Weidenmuller Company Property at 435, 525, and 555 23rd Street, San Francisco, California. September.

Wirth Associates, Inc. 1979a. Potrero 7: Phase I Cultural Resources Overview and Inventory. Submitted to Pacific Gas and Electric Company, San Francisco.

1979b. Potrero 7: Phase II Archaeological Test Excavations. Submitted to Pacific Gas and Electric Company, San Francisco.

4.A.8 Land Use and Recreation

4.A.8.1 Environmental Setting

The proposed San Francisco HWC (Mitigated) Converter Station site and onshore AC/DC cable routes are collectively referred to as the San Francisco HWC (Mitigated) site in this section, unless otherwise noted.

4.A.8.1.1 Existing Land Uses. The San Francisco HWC (Mitigated) site is located at the southeastern corner of the 23rd and Illinois streets intersection. The site is bounded completely by industrial land uses. The Mirant Potrero Power Plant and PG&E Potrero Substation are directly northeast and north of the site, respectively. The AC cable would traverse 23rd Street and the Mirant Potrero Power Plant property into the PG&E substation and the DC cable would run east-west along 23rd Street. San Francisco Bay is located approximately 200 feet east of the site. The San Francisco HWC (Mitigated) site is located directly west of the previously proposed HWC site as assessed in the Draft EIR, and within the Central Waterfront area of San Francisco. Existing land uses within this area are described further in Section 4.8.1 of the Draft EIR.

4.A.8.1.2 Potentially Sensitive Land Uses. Table 4.A.8-1 lists potentially sensitive land uses near the San Francisco HWC (Mitigated) site. The current routing of the Bay Trail along Illinois Street is located directly adjacent to the HWC site, and Warm Water Cove Park is located approximately 200 feet east of the site. The nearest residences are located approximately 480 feet from the west edge of the alternative San Francisco HWC (Mitigated) Converter Station site. A church is located about 1,000 feet northwest of the HWC (Mitigated) Converter Station site. Additional potentially sensitive land uses within the area are consistent with those associated with the previously proposed HWC site, as discussed in Section 4.8.1 of the Draft EIR.

4.A.8.1.3 Zoning Designations. The San Francisco HWC (Mitigated) site is zoned M-2 Heavy Industrial. Permitted uses and development standards (including height restrictions and exemptions) are consistent with those associated with the previously proposed HWC site, as discussed in Section 4.8.1 of the Draft EIR.

4.A.8.1.4 Land Use Trends. Land use trends for the San Francisco HWC (Mitigated) site are consistent with the previously proposed HWC site, as discussed in Section 4.8.1 of the Draft EIR.

4.A.8.2 Environmental Impacts

The San Francisco HWC (Mitigated) Converter Station would not result in potentially significant impacts related to land use or recreation. The San Francisco HWC (Mitigated)

TABLE 4.A.8-1
POTENTIALLY SENSITIVE LAND USES NEAR
SAN FRANCISCO HWC (MITIGATED) CONVERTER STATION SITE

Land Use	Location	Approximate Distance From Alternative San Francisco Mirant Converter Station Sites (Feet)
Residential	West of Third Street	480
Warm Water Cove Park	East terminus of 23rd Street	200
St. Stephen Baptist Church	800 22nd Street	1,000
Irving M Scott School	1060 Tennessee Street	1,200
Daniel Webster Elementary	465 Missouri Street	3,000
Aquatic Vista Park and Public Viewing Area	East Terminus of 17th Street	3,300
Potrero Hill Recreation Center (Park)	801 Arkansas Street	2,600
St. Teresa's Church	390 Missouri Street	3,000
Potrero Library	1616 20th Street	3,000
King Starr Elementary	1215 Carolina Street	3,400
India Basin Shoreline Park	East terminus of Cargo Way	6,000
Bay Trail	Along Illinois & 3rd Street	Adjacent

Converter Station site is completely bounded by industrial land uses. The Mirant Potrero Power Plant and PG&E substation are directly north and northeast of the site. The San Francisco HWC (Mitigated) Converter Station site represents further development of an area committed to industrial use rather than the introduction of industry to a non-industrial area.

The San Francisco HWC (Mitigated) Converter Station site is located within the same planning subarea (Central Waterfront) and zoning district (M-2) as the previously considered HWC site in the Draft EIR. Land use plans and policies pertaining to the San Francisco HWC (Mitigated) site are consistent with the previously considered HWC site. As such, public access to the shoreline and open space is emphasized. The HWC site is located adjacent to the Bay Trail, which is shown on Figure 4.8-1 of the Draft EIR. Temporary impacts to the Bay Trail are expected during construction, as discussed in Section 4.10, Traffic and Transportation, of the Draft EIR. Temporary impacts to the Bay Trail from construction would be mitigated by Mitigation Measure TRAFFIC-3. No permanent impacts to the Bay Trail are expected with operating the converter station at the HWC (Mitigated) site. Public access to the shoreline is provided by Warm Water Cove Park situated 200 feet east of the San Francisco HWC (Mitigated) site. Operations of the HWC (Mitigated) Converter Station would not affect public access to Warm Water Cove Park or lessen recreational opportunities along the Bay Trail.

As discussed for the previously considered HWC site, the Central Waterfront Area Plan stipulates maintaining and improving existing recreational improvements at Warm Water Cove and expanding to the north side of the cove as opportunities arise. The policy requires that public access be provided along the north side of the cove and a fishing quay be constructed at the Bay. The San Francisco HWC (Mitigated) Converter Station would not be affected by this policy, as the site is farther west of Warm Water Cove Park than the previously considered HWC site. The HWC (Mitigated) site is currently zoned Heavy Industrial and the converter station is consistent with permitted uses within this district.

The San Francisco HWC (Mitigated) Converter Station would be consistent with the existing uses of the site and surrounding area. The nearest residential development near the San Francisco HWC (Mitigated) site is approximately 480 feet to the northwest of the site. The San Francisco HWC (Mitigated) Converter Station would not require displacement of housing and would not have significant land use impacts on the community.

Established uses surrounding the alternative San Francisco HWC (Mitigated) Converter Station site are primarily industrial. Potentially sensitive land uses in the area include Warm Water Cove Park located 200 feet east and a church situated approximately 1,000 feet northwest of the site. The Potrero Power Plant and PG&E substation are directly northeast and north of the site. Pier 70 to the north and Pier 80 to the south are actively used for dry dock and container terminals.

Proposed future development plans outlined in the Draft Central Waterfront Neighborhood Plan would rezone the HWC (Mitigated) Converter Station site from M-2 to PDR (Production, Distribution & Repair) and the converter station is consistent with uses within the proposed PDR district. The Plan would also rezone the area west of Illinois Street, directly across the street from the HWC (Mitigated) site, from M-2 to mixed use residential. Although future residences may be located directly across the street from the converter station following commencement of operation of the facility, the Draft Plan specifically prohibits residential development on PDR districts and the HWC (Mitigated) site would be bounded on the north, east, and south by PDR districts. The character of the site would not change given that the site would continue to be industrial in nature and primarily bound by industrial properties. The Plan had not been finalized or approved at the time this Final EIR was prepared, and no specific development plans have been brought forward at this time. Thus, assessing potential conflicts requires a degree of speculation. Notwithstanding, potential noise and visual impacts to possible future residences are discussed in Section 12.0 (Response to Comments) of this Final EIR.

4.A.9 Marine Transportation and Commercial Fishing

The San Francisco HWC (Mitigated) Converter Station would not impact marine transportation or commercial fishing.

4.A.10 Traffic and Transportation

4.A.10.1 Environmental Setting

The environmental setting for traffic and transportation for the San Francisco HWC (Mitigated) Converter Station site is consistent with the discussion presented for the previously proposed San Francisco HWC Converter Station site in Section 4.10.1 of the Draft EIR.

4.A.10.2 Environmental Impacts

The thresholds of significance, identification of potentially significant impacts, mitigation measure requirements, and residual impact findings for the San Francisco HWC (Mitigated) Converter Station site are as described in Section 4.10.3 of the Draft EIR.

4.A.10.2.1 Construction-related Impacts. Construction traffic impacts discussed for the previously proposed HWC Converter Station site (and laydown areas) in Section 4.10.3.2.1 of the Draft EIR are also applicable to the HWC (Mitigated) Converter Station.

Since this site is directly adjacent to the previously proposed HWC Project site in San Francisco and the local streets used for Project-related truck deliveries and work trips would remain the same, the construction-related transit, bicycle, pedestrian, rail, and parking impacts would be the same as described for the previously proposed HWC site.

With implementation of the following mitigation measures, potential traffic-related environmental impacts associated with the HWC (Mitigated) site would be reduced to a less-than-significant level:

- Mitigation Measure TRAFFIC-1 (Coordination to Reduce Cumulative Traffic Impacts) for Impact TRAFFIC-1 (Cumulative Traffic Impacts)
- Mitigation Measure TRAFFIC-2 (Coordination of Oversized Loads) for Impact TRAFFIC-2 (Oversized Loads)
- Mitigation Measure TRAFFIC-3 (Signage for Temporary Street Closures) for Impact TRAFFIC-3 (Temporary Street Closures)

- Mitigation Measure TRAFFIC-4 (Reducing Impact on the Movement of MUNI Light Rail Vehicles into and out of the Metro East Maintenance Facility) for Impact TRAFFIC-4 (Impacts on Metro East Light Rail Facility)

4.A.10.2.2 Operations-related Impacts. No operations-related impacts to traffic or transportation have been identified.

4.A.11 Noise and Vibration

4.A.11.1 Environmental Setting

The San Francisco HWC (Mitigated) Converter Station site is directly adjacent to and west of the previously proposed HWC site assessed in Section 4.11 of the Draft EIR. Descriptions of the land use surrounding the site are the same as identified for the previously proposed HWC site. Ambient noise measurement locations utilized to assess the HWC (Mitigated) site are the same as those presented in Section 4.11 of the Draft EIR for the previously proposed HWC site. The results of the ambient noise measurements are summarized in Table 4.11-2 of the Draft EIR. The measurement locations are shown on Figure 4.11-1 of the Draft EIR.

Sensitive receptors in the HWC (Mitigated) site Project area are the same as those identified for the previously proposed HWC site in Section 4.11 of the Draft EIR. They consist of multi-family residences approximately 480 feet west at 2638 3rd Street in between 22nd and 23rd Streets and multi-family residences approximately 1,150 west at 1423 Indiana Street. No residences have a direct line-of-sight to the Project due to intervening three- and four-story commercial buildings in between the residences and the site. In addition, both residences are within 500 feet of Interstate 280 to the west.

4.A.11.2 Environmental Impacts

4.A.11.2.1 Construction-related Impacts. Scheduled construction hours at the San Francisco HWC (Mitigated) Converter Station would be the same as those given for the previously proposed HWC Project site in Section 4.11 of the Draft EIR. The anticipated noise sources would be the same as those outlined for the previously proposed HWC site in the Draft EIR.

Acoustical calculations were performed to estimate noise from construction activities at the closest residences with the same methodology as described for the previously proposed HWC site. The closest offsite residential uses to the San Francisco (Mitigated) Converter Station site consist of multi-family residences approximately 480 feet west and 1,150 feet to the west. Average construction sound levels at the closest residences to the San Francisco HWC (Mitigated) Converter Station construction site would be 69 and 62 dBA (A-weighted sound level), respectively, as summarized in Table 4.A.11-1. Because of the intermittent nature of

construction work and the intervening buildings, it is unlikely that noise from construction would be audible at the residences, much less increase the existing noise levels by 5 dBA; therefore, there would be no significant impact. During this time period, construction activity would be required to comply with the City's noise ordinance criteria (80 dBA at 100 feet) and would result in a less-than-significant impact.

***Pile Driving*.** Calculations were performed to estimate sound levels from pile driving at the receptors. Direct line-of-sight sound levels at the residences were calculated to be 85 dBA maximum sound level (L_{max}) (80 dBA equivalent sound level [L_{eq}]) at the residences 480 feet west and 78 dBA L_{max} (73 dBA L_{eq}) at the residences 1,150 feet west. Due to the intervening buildings, received sound levels at the receptors would be substantially less than predicted, although it is likely that noise from the pile driving would still be audible at the receptors. Section 4.11.3.1.1 of the Draft EIR details pile driving restrictions to be followed in San Francisco. Pile driving would be required to comply with these requirements and would result in a less-than-significant impact.

TABLE 4.A.11-1
CALCULATED SOUND LEVELS FROM CONSTRUCTION OF THE SAN FRANCISCO HWC (MITIGATED) CONVERTER STATION (dBA)

Converter Station Site	Receptor Description	Distance to Receptors (Ft)	Calculated Sound Level from Construction (dBA)	Calculated Sound Level from Pile Driving (dBA)	
				L_{max}	L_{eq}
San Francisco HWC (Mitigated)	Multi-family residences (2638 3rd Street)	480	69	85	80
	Multi-family residences (1423 Indiana Street)	1150	62	78	73

Calculations were performed to estimate vibration from pile driving activities at the closest residences, as detailed in Section 4.11.1.2 of the Draft EIR. Vibration from pile driving was assumed to have point source propagation characteristics. Vibration levels for impact pile drivers are typically 0.644 inches/second peak particle velocity (PPV) at 25 feet (FTA 1995). Under normal propagation conditions, vibration levels at the closest residences 480 feet from the pile driving would be 0.008 in/sec, which is well below the FTA threshold of 0.20 in/sec; resulting in a less-than-significant impact.

***Construction Traffic*.** Construction traffic impacts discussed for the previously proposed San Francisco HWC Converter Station site in Section 4.11.3.1.1 of the Draft EIR are also applicable to the San Francisco HWC (Mitigated) Converter Station site.

4.A.11.2.2 Operations-related Impacts. Calculations were performed using linear octave band sound power levels as inputs from each noise source with the same equipment as the previously proposed HWC Converter Station. As shown on Figures 3-4 and 3-5 of this Final EIR, the proposed Project design for the San Francisco HWC (Mitigated) Converter Station includes an approximately 12- to 14-foot-tall sound wall around the northern, western, and southern boundaries. A noise analysis was conducted for the HWC (Mitigated) site, and the results are summarized here and provided in Appendix H of this Final EIR.

As summarized in Table 4.A.11-2, hourly average sound levels from the San Francisco HWC (Mitigated) Converter Station layout would range from 63 dBA L_{eq} on the western property line to 71 dBA L_{eq} at the northern and southern property lines. Because sound levels are below the San Francisco 75 dBA L_{eq} requirement, there would not be a significant impact.

The L_{dn} are used by the State of California to define acceptable land use compatibility with respect to noise. Because of the time-of-day penalties associated with the L_{dn} descriptor, the L_{eq} for a continuously operating sound source during a 24-hour period will be numerically less. Thus, for a noise source operating continuously for periods of 24 hours, the L_{eq} will be

TABLE 4.A.11-2
CALCULATED SOUND LEVELS FROM OPERATION OF THE SAN FRANCISCO HWC (MITIGATED) CONVERTER STATION (dBA)

Converter Station Site	Receptor Description	Calculated Sound Level (dBA)		Calculated Sound Level (dBA) With Proposed Sound Wall	
San Francisco HWC (Mitigated)	North Property Line	71 L_{eq} (1 hr)	77 L_{dn}	71 L_{eq} (1 hr)	77 L_{dn}
	South Property Line	71 L_{eq} (1 hr)	77 L_{dn}	71 L_{eq} (1 hr)	77 L_{dn}
	East Property Line	69 L_{eq} (1 hr)	75 L_{dn}	65 L_{eq} (1 hr)	71 L_{dn}
	West Property Line	72 L_{eq} (1 hr)	78 L_{dn}	63 L_{eq} (1 hr)	69 L_{dn}

6 dB lower than the L_{dn} value. Thus, the San Francisco noise ordinance requirement of 75 dBA L_{eq} (1 hr) at the property lines would be equivalent to 81 dBA L_{dn}.

4.A.11.2.3 Cumulative Impacts. The proposed San Francisco HWC (Mitigated) Converter Station site is located on the east side of Illinois Street between 23rd and 24th streets. As discussed in Section 7.2.3.4 (Central Waterfront Neighborhood Plan [Plan]) of the Draft EIR, the City and County of San Francisco is considering rezoning the location of the overall HWC site to PDR (Production, Distribution & Repair). In addition, the draft Plan envisions rezoning the west side of Illinois Street to mixed use residential. The compatibility (including

operational noise impacts) of the proposed HWC (Mitigated) layout with the possible future mixed use residential development across Illinois Street is discussed in the Response to Comments in Section 12.0 of this Final EIR.

4.A.12 Public Services and Utilities

4.A.12.1 Environmental Setting

The public services and utilities discussions for the San Francisco HWC (Mitigated) Converter Station site and onshore cable routes are consistent with those for the previously proposed HWC site addressed in Section 4.12.1 of the Draft EIR.

4.A.12.2 Environmental Impacts

Potential impacts to public services and utilities from construction of the San Francisco HWC (Mitigated) Converter Station are consistent with the impacts discussed in Section 4.12.3 of the Draft EIR for the previously proposed HWC site. Mitigation measures include development of a Construction Fire Prevention and Protection Program and an Operations Fire Prevention and Protection Program. Furthermore, a survey shall be conducted prior to any excavation work at the converter station site or associated DC and AC cable routes to prevent conflict or disruption of existing underground utilities. With implementation of the following mitigation measures, potential environmental impacts would be reduced to less-than-significant levels for the San Francisco HWC (Mitigated) Converter Station site.

- Mitigation Measure PS-1 (Construction Fire Prevention) for Impact PS-1 (Construction-related Fire Hazards)
- Mitigation Measure PS-2 (Utility Survey) for Impact PS-2 (Existing Onshore Underground Utilities)
- Mitigation Measure PS-3 (Operations Fire Prevention) for Impact PS-3 (Operations Fire Hazards)

4.A.13 Visual Resources/Aesthetics

This section addresses the visual resources environmental baseline conditions and the potential for the proposed San Francisco HWC (Mitigated) Converter Station to cause significant visual impacts on those resources in the San Francisco study area.

4A.13.1 Environmental Setting

4.A.13.1.1 Concepts and Terminology. The concepts and terminology that comprise the visual resources analysis for the proposed HWC (Mitigated) site are as discussed in Section

4.13.1.1 of the Draft EIR, and include the concepts of Visual Quality, Viewer Sensitivity, Viewer Exposure, etc.

4.A.13.1.2 Methodology Overview. The methodology utilized in analyzing the HWC (Mitigated) site is the same as identified in Section 4.13.1.2 of the Draft EIR, and retains the use of Key Observation Points (KOPs) and simulations to analyze potential Project impacts.

Project Setting.

San Francisco HWC (Mitigated) Converter Station. The proposed HWC (Mitigated) Converter Station site would occupy an approximately 5-acre site between 23rd Street and 24th Street fronting on Illinois Street. The existing HMR warehouse structure to the east would remain. The proposed site is currently occupied by the large "L" shaped Airgas and DHL building and related warehouses and parking lots both adjacent to Illinois Street and to the rear that would need to be demolished for implementation of the HWC (Mitigated) converter station.

The KOPs selected for this assessment in San Francisco are shown on Map 4.13-1 of the Draft EIR. The same KOPs utilized for the Project analysis are retained but the actual views have been shifted to include the altered Project location which is west and somewhat south of the previously proposed Project site. A new KOP has been added at the intersection of Illinois Street and 24th Street (KOP-SF-6).

The San Francisco HWC (Mitigated) Converter Station site is visible from Illinois Street and when viewing down both 23rd and 24th streets. All views are within the context of the existing Mirant Power Plant, the adjacent PG&E substation or the Sheedy construction site (see Context photographs 1 through 4, Figures 4.13-1 and -2 of the Draft EIR, and Figures 4.A.13-1 and 4.A.13-4 of this Final EIR). This is an existing industrial area both in terms of the visual context and the type of traffic traversing the area. The converter station site is also visible from the Potrero housing projects approximately 0.5 mile to the west. While the facility would be visible from a more birds-eye view, again it would be seen in the context of the larger industrial activity of the area and the primary focus of any viewer would be toward San Francisco Bay in the background (see Photo 5, Figure 4.13-3 in the Draft EIR). The third viewing area is from Warm Water Cove Park which is located approximately 200 feet east of the San Francisco HWC (Mitigated) Converter Station site. Existing views from this area are toward the Bay to the east and the existing industrial structures to the north, west, and south. In this context, the existing buildings to the west would be demolished and replaced by the proposed San Francisco HWC (Mitigated) Converter Station (see Baseline Photo A of KOP SF-3 shifted, Figure 4.A.13-3). The onshore AC cable connections would be from the proposed converter station site to the existing PG&E Potrero Substation and would not involve significant visual disturbance to this area. Similarly, the offshore HVDC cable

connection would be underground from the proposed HWC (Mitigated) site into San Francisco Bay and would not involve significant areas of additional disturbance. The proposed laydown area (Pier 94/96) is currently used for truck parking and Port-related activities and would not require any construction that would affect the visual character of the area.

***Visual Quality*.** The proposed San Francisco HWC (Mitigated) Converter Station site lacks visual coherence and harmony. While the Airgas/DHL structure is relatively cleanlined, it is large and exists within an atmosphere that is visually cluttered by the juxtaposition of materials storage, graffiti, uneven pavement, and overhead wires. There are no immediate natural landforms except for the water of Warm Water Cove which is degraded by debris, decaying docks, and industrial fences. San Francisco Bay at this location does not play a significant visual role when viewing the site from adjacent roads or even Warm Water Cove viewing toward the Project area. The visual quality of the site is classified as Low.

***Viewer Sensitivity*.** This concern may also be categorized as the reason people would visit the area. In this case the area is industrial. Those that work there would have low expectations of the area in terms of its scenic content. City of San Francisco traffic counts along Illinois Street taken in September 2003 at 22nd Street show an Average Daily Traffic (ADT) of 2,285 trips per day. The duration of travelers' view of the site would range in the area of 10 to 15 seconds given the frontage along Illinois Street. Warm Water Cove Park users may be there in part for the view of the water. However, the converter station site, which is to the west, does not really affect views of the cove or Bay. Given the overall context, viewer sensitivity is rated Low.

In addition to travelers, there are those that live in trailers parked along some of the streets or in homeless encampments. In addition to those living and working in the immediate area, there are those residents living in the housing project on Potrero Hill. Here the view is more expansive and does include San Francisco Bay (Photo A, Figure 4.A.13-2). For these residents, the sensitivity level would be Moderate, not as high as other portions of San Francisco with views of the Bay unaffected by heavy industrial structures in the foreground. The overall viewer sensitivity level is classified as Low to Moderate.

Therefore, the visual susceptibility index (meaning the probability that a given landscape will demonstrate a noticeable visual impact with Project implementation) is Low. Put another way, any proposed facility would have a low probability of disrupting the existing visual resources of the area as seen from roads and public places.

4.A.13.2 Regulatory Setting

With the exception of CEQA, there are no specific regulations by federal or state agencies that apply to this area.

The overall applicability of various visual resource-related laws, ordinances, regulations, and standards is presented in Table 4.13-1 of the Draft EIR. In summary, those of relevance are as follows: The proposed San Francisco HWC (Mitigated) Converter Station site is zoned M-2 with certain height restrictions as outlined in the 40-X bulk district. However, the project is exempt from these restrictions under section 260 (b) (1) (M). Refer to Table 4.13-1 of the Draft EIR for more information.

4.A.13.3 Environmental Impacts

The thresholds of significance for the HWC (Mitigated) site are the same as identified in the analysis for the previously proposed HWC site in Section 4.13 of the Draft EIR.

The Environmental Setting presented above assesses the *susceptibility* of the site to potential impacts that might be generated by the HWC (Mitigated) site. In this section, the applicant-proposed design is simulated into the baseline photographs and evaluated for its severity. The Impact Severity of the Project from each KOP is determined based upon the same criteria as the previously proposed Project site. Does the project:

- Block a scenic vista
- Dominate the view or become obtrusive in the scene
- Appear to be out of character with the adjacent landscape whether it is urban or rural
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

The response to these criteria determines the Impact Severity of a project. The integration of these two summary criteria determines the final impact. The impacts below are evaluated for the HWC (Mitigated) site from the four applicable KOPs. Where appropriate, relevant mitigation measures are identified and numbered in sequence.

Construction-related impacts include the process of erecting the converter station and related cable and infrastructure connections, which is projected to take 27 to 30 months. While there would be moving equipment and erecting cranes which certainly would be visible from the adjacent KOPs, these visual impacts are classified as short term and, therefore, less than significant and no mitigation is required.

Operations-related impacts are defined as those impacts that would be visible while the converter station is in operation and visible over the lifetime of the structure. The potential for impacts is discussed on a KOP-by-KOP basis.

4.A.13.3.1 San Francisco HWC (Mitigated) Converter Station. The proposed San Francisco HWC (Mitigated) Converter Station site is located on an approximately 5-acre site on the east of Illinois Street between 23rd and 24th streets. Use of this site as proposed would require removal of the existing Airgas/DHL warehouse and office structures. The most visible component would be the valve and DC hall structure, which has a ridgeline 64 feet in height and a building floor area of approximately 23,000 square feet. The electric switchyard includes a series of metal poles approximately 80 feet in height, which would be most visible from Illinois Street. An articulated 12- to 14-foot-high screening wall with vines (similar to those utilized by the California Department of Transportation (Caltrans) in the San Francisco Bay area) is included as visual screening along the Illinois, 23rd and 24th street frontages back to the main structures.

The proposed converter station is located within an M-2 zone which allows an exemption to the 40-foot height limitation. There is also potential concern about shadows cast by plant components into Warm Water Cove. However, in this case with the demolition of the existing warehouse and the additional half block setback for the new structure, the shadow conditions on the cove are improved over the present condition.

KOP SF-1: 23rd Street at Illinois Street. From this location, the visual changes include the replacement of the large white masonry warehouse (Airgas/DHL) by the switchyard in the foreground and the valve and DC hall structure in the background. The 80-foot-high metal poles and portions of the switchgear are visible above the screening wall (Photo B, Figure 4.A.13-1). From this KOP, while the visual character is more cluttered than the existing condition, the Project structures would be neither out of scale with the adjacent buildings nor would they unfavorably contrast with the surrounding context; no scenic vista would be obscured. The Impact Severity is classified as Low.

Since the Impact Susceptibility for the area is also Low, the resulting impact per the guidance provided in Table 4.13-2 of the Draft EIR would be less-than-significant for this KOP.

KOP SF-2: Potrero Hill. There are glimpsed views of the Project site for residents of the housing projects on Potrero Hill. However, as can be seen (Photo B, Figure 4.A.13-2), the view is relatively distant and the converter station would replace structures of a similar size and character. The new structures would not project to a height that would significantly obscure views of the San Francisco Bay. They are neither out of scale nor unfavorably contrasting. The Impact Severity is classified as Low. Since the Impact Susceptibility for the area is Low to Moderate, the resulting impact would be less than significant.

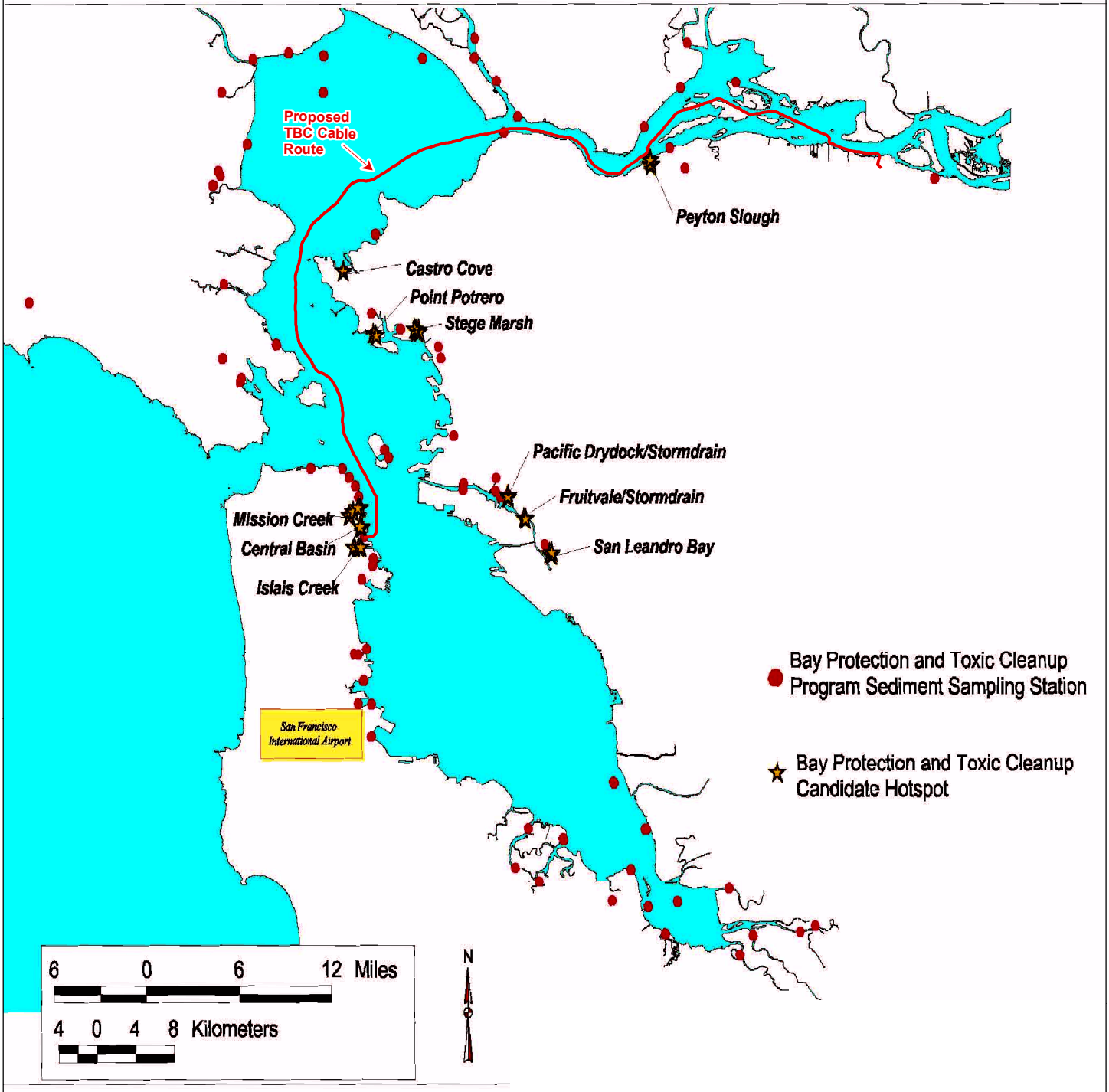
KOP SF-3: Warm Water Cove Park. The replacement of the existing warehouse structures by the Project structures, generally of the same scale, would result in less visual clutter but would introduce a greater building mass near the west end of Warm Water Cove. (Photo B, Figure 4.A.13-3). While a portion of the view west towards Potrero Hill would be blocked, this is not considered a significant scenic vista. The increased visual impact of the building mass is considered somewhat offset by the reduced clutter and removal of the existing structures and related storage yards. The Impact Severity is classified as Moderate. The Impact Susceptibility for the area is also Moderate given that the views are from Warm Water Cove, a public place. The resulting impact would be considered adverse but less than significant.

KOP SF-5: 24th Street at Illinois Street. From this location, the visual change would be the replacement of the large white Airgas/DHL warehouse office structure with the switchyard in the foreground and the converter station valve and DC hall structure in the background to the east. The 80-foot-high metal poles are visible at the top portions of some of the switchgear above the screen wall (Photo B, Figure 4.A.13-4). The existing PG&E Potrero Substation is visible north of 23rd Street on the left portion of the photo. From this KOP, the Project structure would be neither out of scale with the adjacent buildings nor would it unfavorably contrast with the surrounding context; no scenic vista would be obscured. The Impact Severity is classified as Low. The frontage along 24th Street to Warm Water Cove Park is classified as an improvement on the existing condition. Since the Impact Susceptibility for the area is also Low, the resulting impact per Table 4.13-2 of the Draft EIR would be less than significant for this KOP.

Impact VIS-1A: HWC (Mitigated) Converter Station Domination of View. Since the architectural design character of the building and the general character of proposed landscaping have not been identified in detail, there is the possibility of generating potentially significant visual impacts based upon the potential of the Project to dominate the scene or become obtrusive on views from Warm Water Cove Park. This condition may also be true of the landscape screening wall proposed along Illinois, 23rd, and 24th streets.

While this impact has been classified as less than significant without design controls, it may still be adverse. This adversity can be lessened through the application of Mitigation Measures VIS-1a and VIS-1b.

Mitigation Measure VIS-1Aa: Plan Submittal Requirements for Building Materials and Colors. All major Project features, including buildings, structures, fencing, and sign backgrounds (excluding electric switch gear and related wires and cables, etc. which shall be galvanized gray as shown in the simulations) shall be painted with neutral tan or gray colors that will minimize the size and height of the facility, blend with adjacent structures, and be compatible with natural landscapes where applicable. A specific painting plan shall be



[1] Source: As addapted from RWQCB. 1999. Bay Protection and Toxic Cleanup Program, Final Toxic Hotspot Cleanup Plan. March 1999.

[2] Note: The candidate Toxic hotspot locations depicted on this figure are exaggerated in size for graphic purposes; the actual areas (e.g., Central Basin) are limited to the nearshore edges of the Bay. The proposed HDD installation of the submarine cable from the Potrero landfall would extend approximately 800 feet offshore which is beyond the potentially contaminated zone.

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TRANS BAY CABLE PROJECT EIR	Figure 4.4-1A. RWQCB IDENTIFIED TOXIC HOT SPOTS IN THE BAY (1999)[1, 2]	**Final EIR** 2006

developed for approval by the agency with local jurisdiction to ensure that the proposed colors do not unduly contrast with the surrounding landscape colors. All treatments shall be in non-reflective colors. The painting plan shall be submitted sufficiently early to ensure that any pre-colored buildings, structures, and linear facilities shall have colors approved and included in bid specifications for such buildings or structures.

Implementation Responsibility: Project proponent

Requirements and Timing: Architectural design plans shall be prepared by professionals qualified in the designated field of expertise; plans and revised design shall be submitted prior to final planning approval to ensure that the identified mitigation measure is satisfied

Monitoring Requirements: City of Pittsburg, in consultation with the City and County of San Francisco, to monitor and ensure compliance

Mitigation Measure VIS-1Ab: Plan Submittal Requirements for Landscaping. A specific landscaping plan shall be prepared showing the location of proposed landscaping, the varieties and sizes of plants to be planted, and the proposed time of maturity for each species. Plants shall be selected from the approved species list prepared by the agencies with jurisdiction. As practical, given space limitations, plant street trees along Illinois and 24th streets to make these frontages more pedestrian-friendly. It is recognized that there is not adequate space for a full planter along these frontages. Planting additional trees along the western portion of Warm Water Cove within the park would also reduce the visual impact of the structure.

Implementation Responsibility: Project proponent

Requirements and Timing: Landscaping plans shall be prepared by professionals qualified in the designated field of expertise; plans and revised design shall be submitted prior to final planning approval to ensure that the identified mitigation measure is satisfied

Monitoring Requirements: City of Pittsburg, in consultation with the City and County of San Francisco, to monitor and ensure compliance

Resulting Level of Significance. Application of Mitigation Measures VIS-1Aa and VIS-1Ab would further reduce Impact VIS-1A.

T/Ladd/TransBayCable/8-06Deliverable/806-220A

A Baseline view as seen from KOP SF-1 toward HWC (Mitigated) converter station site

B Simulation of proposed Project (HWC Mitigated) as seen from KOP SF-1 (23rd and Illinois Streets)

TRANS BAY CABLE PROJECT EIR	Figure 4.A.13-1. KOP SF-1 PHOTOS A/B	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/806-221

A Baseline view from KOP SF-2 toward HWC (Mitigated) converter station site

B Simulation of the proposed Project (HWC Mitigated) as seen from KOP SF-2 (Potrero Hill)

TRANS BAY CABLE PROJECT EIR	Figure 4.A.13-2. KOP SF-2 PHOTOS A/B	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/806-222

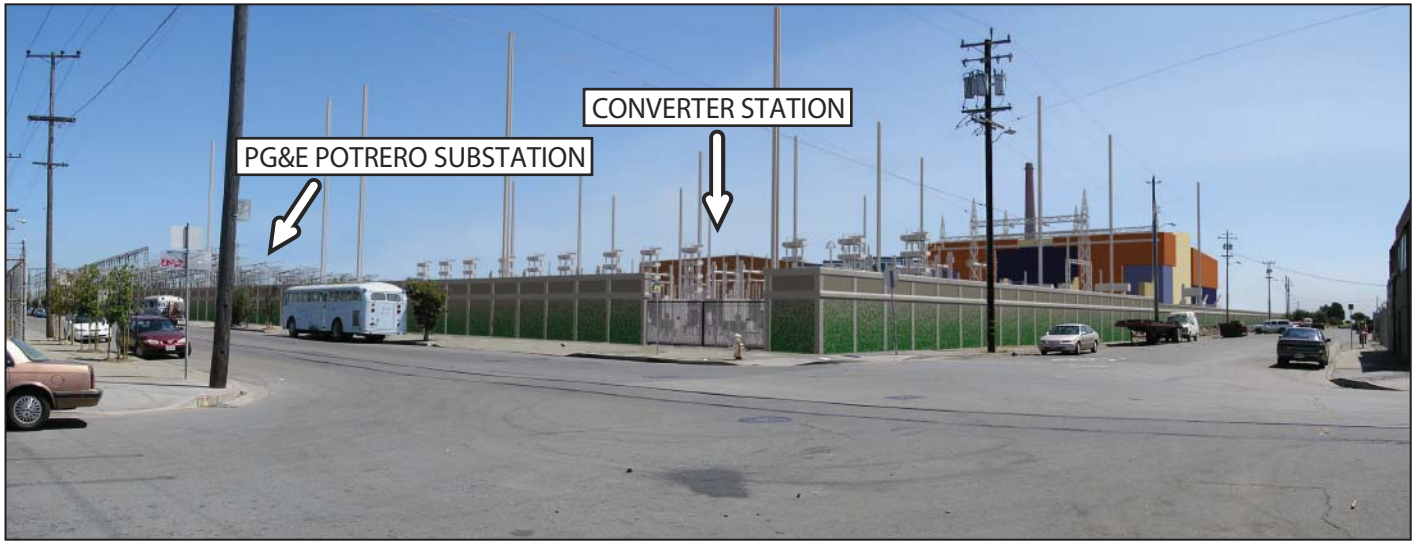
A Baseline view as seen from KOP SF-3 toward HWC (Mitigated) converter station site

B Simulation of proposed Project (HWC Mitigated) as seen from KOP SF-3 (Warm Water Cove Park/Bay)

TRANS BAY CABLE PROJECT EIR	Figure 4.A.13-3. KOP SF-3 PHOTOS A/B	**Final EIR** 2006

T/Ladd/TransBayCable/8-06Deliverable/806-223

A Baseline view as seen from KOP SF-5 toward HWC (Mitigated) converter station site



B Simulation of proposed Project (HWC Mitigated) as seen from KOP SF-5 (24th and Illinois Streets)

TRANS BAY CABLE PROJECT EIR	Figure 4.A.13-4. KOP SF-5 PHOTOS A/B	**Final EIR** 2006

Impact VIS-2: Converter Station Will Create Substantial Light and Glare. There is potential for the Project to cast more ambient light into the immediate area than the existing conditions. There is also the possibility that the luminaries of some of the lighting fixtures may be seen directly by either residents of Potrero Hill or visitors to Warm Water Cove Park, which through the abrupt contrast of the fixtures' light with the surrounding general darkness, may create the effect of glare. While this impact has been classified as less than significant, without design controls it may still be adverse. This adversity can be lessened through the application of Mitigation Measure VIS-2.

Mitigation Measure VIS-2: Plan Submittal Requirements for Lighting. Except as required by security and worker-safety requirements, night lighting shall be hooded to direct illumination downward and inward toward the areas to be illuminated in order to minimize nighttime light and glare, backscatter to the nighttime sky, and visibility of lighting to public viewing areas. A specific lighting plan consistent with operational and safety needs and limiting the general lighting levels to a maximum reasonable level shall be submitted to each agency with jurisdiction for approval. The plan shall include provisions for timed and/or motion detection-controlled switches.

Implementation Responsibility: Project proponent

Requirements and Timing: A lighting plan shall be prepared by professionals qualified in the designated field of expertise; lighting plans and revised design shall be submitted prior to final planning approval

Monitoring Requirements: City of Pittsburg, in consultation with the City and County of San Francisco, to monitor and ensure compliance

Resulting Level of Significance. Application of Mitigation Measure VIS-2 would further reduce Impact VIS-2.

4.A.13.4 Cumulative Impacts

The proposed San Francisco HWC (Mitigated) Converter Station site is located on the east side of Illinois Street between 23rd and 24th streets. As discussed in Section 7.2.3.4 (Central Waterfront Neighborhood Plan [Plan]) of the Draft EIR, the City and County of San Francisco is considering rezoning the location of the overall HWC site to PDR (Production, Distribution & Repair). In addition, the draft Plan envisions rezoning the west side of Illinois Street to mixed use residential. The compatibility (including potential visual impacts) of the proposed HWC (Mitigated) layout with the possible future mixed use residential development across Illinois Street is assessed in Section 12.0 (Response to Comments) of this Final EIR.

4.A.14 Hazardous Materials and Waste Management

4.A.14.1 Environmental Setting

The overall HWC site is comprised of the buildings at 435, 525, and 555 23rd Street, and is bounded on the north by 23rd Street and the Mirant Potrero Power Plant, on the east by a small-undeveloped parcel owned by the Port of San Francisco and by San Francisco Bay, on the south by 24th Street, and on the west by Illinois Street, as described in Section 4.14 of the Draft EIR. The HWC (Mitigated) site is located on the portion of the overall HWC property at 525 23rd Street.

Currently, the property at 435 23rd Street is occupied by HMR Global Recycling (HMR), at 525 23rd Street is occupied jointly by DHL and Airgas, and at 555 23rd Street is an empty warehouse formerly occupied by the San Francisco Municipal Railroad (MUNI). A metal clad, roofed, open-sided storage shed is located on the south-central portion of the HWC site. The shed is approximately 230 feet long. Approximately 190 feet of the 230-foot-long shed is occupied by HMR and the other approximately 40 feet of the western portion of the structure is occupied by DHL. The two areas of the shed are separated by a chain link fence. HMR uses its portion of the shed to store computers, monitors, and other equipment on shrink-wrapped pallets for offsite shipment. DHL uses its portion of the shed to store excess packing materials and vehicle maintenance tools. There is a large parking area to the north and west of the "L"-shaped, DHL and Airgas building. Airgas stores gases in pressurized cylinders and has minimal parking spaces open for customers in its portion of the parking lot. The parking lot in front of DHL on the north side of the site is used for employee and customer parking and the parking of DHL company trucks and vans. A chain link fence separates the two parking lots. Two smaller parking areas connected by a driveway are located to the south and west of HMR. These parking areas are for customer and employee parking and parking company vehicles. The HMR parking areas are separated from the DHL parking lot by a chain link fence.

The proposed San Francisco HWC (Mitigated) Converter Station site would include the DHL and Airgas jointly occupied building and associated large parking lot, the two small parking lots to the south and west of HMR, and approximately half of the open-sided, metal clad storage shed (refer to Figure 3-3).

The proposed and alternative AC and DC cable routes associated with the proposed HWC (Mitigated) site are shown on Figure 3-3. The proposed underground direct current (DC) cable to the HWC (Mitigated) site would come from a location approximately 800 feet offshore in San Francisco Bay to the eastern end of 23rd Street via an underground conduit installed with HDD or similar underground drilling methods. A drilling pit would be installed in the southern 23rd Street ROW at a location 100-500 feet from the Bay to install the conduit

for the cable. The purpose of using the underground drilling methods is to minimize contact with potentially contaminated nearshore Bay sediments. From the HDD drilling pit the cable would be installed using traditional trenching methods along the southern 23rd Street ROW in a westerly direction to the northeast corner of the HWC (Mitigated) site. From the northeast corner of the converter station site the cable route would be trenched south to the connection point in the converter station. Excavated HDD drilling pit spoils, HDD drilling mud/drilling spoils, and soils excavated during cable route trenching that were not used in refilling the cable trench would be characterized and disposed of offsite in compliance with applicable regulations.

The proposed underground AC cable route from the HWC (Mitigated) site to the PG&E Potrero substation switchyard would start near the middle of the proposed HWC West Converter Station site on the north side and run northwest across 23rd Street and onto the Mirant Potrero site, turn north along the property boundary between the Mirant Potrero site and the PG&E substation, turn west into the PG&E substation, and turn north to the connection with the PG&E substation (Figure 3-3). The AC cable would be installed by traditional trenching and backfill methods. Excess excavated soils that could not be returned to the cable trench would be characterized and disposed of offsite in compliance with applicable regulations.

According to the Environmental Data Resources, Inc. (EDR), report prepared for the Phase I Environmental Site Assessment (ESA) for the entire HWC site (EDR, 2005; URS, 2005a), no sensitive receptors (e.g., schools, hospitals, day-care facilities, or long-term health care facilities) are located within a 0.25-mile radius of the site. The closest park to the HWC site is Warm Water Cove Park, which is located southeast of the site.

The Phase I ESA identified Recognized Environmental Conditions (RECs) for the HWC (Mitigated) site that are provided in the Draft EIR and the Phase I conducted for the HWC Site.

Additionally, a Phase II investigation was recently performed at the HWC (Mitigated) site (URS, 2006). Twenty borings were advanced on the HWC (Mitigated) site to a depth of 20 feet below ground surface (bgs) for the Phase II Soil and Groundwater Investigation. These borings were advanced to conduct soil sampling for the purpose of characterizing the soil for disposal and onsite use, groundwater sampling to evaluate groundwater quality, and to evaluate groundwater flow direction. Transducers and data loggers were left in five of the temporary wells installed on the site for one week to evaluate groundwater flow direction.

The results of the Phase II investigation report can be summarized as follows:

- The HWC (Mitigated) site soils and groundwater are generally contaminated in some areas with a combination of heavy petroleum hydrocarbons, heavy metals, and polynuclear aromatic hydrocarbons (PAHs). The likely sources of these contaminants are: leaking aboveground storage tanks (ASTs), leaking underground storage tanks (USTs), possibly onsite migration from the Mirant site, and the use of contaminated fill onsite. Volatile organic compounds (VOCs) were found only in one soil boring location, SB-6; the likely source of the benzene is one or more leaking underground gasoline storage tanks. The AC cable route is likely impacted by the same contaminants related to the Mirant site.
- No Resource Conservation and Recovery Act (RCRA) federal wastes were found on-site.
- In many areas on the HWC (Mitigated) site, particularly in the first 15 feet bgs, the total metal concentrations and/or leachable metal concentrations in soil exceed the California hazardous waste criteria. These soils must be managed and disposed of as hazardous waste, if disposed of in California. The management requirements for these soils include the following: personnel must be hazardous-waste-operations (HAZWOPER) trained to work with these soils, the soils must be manifested as hazardous wastes, a licensed hazardous waste transporter must be used, loads must be kept covered during transport, and residual soil on track tires must be controlled to prevent tracking soil offsite. During excavation of these soils, air monitoring would need to be conducted for all personnel involved in the operation and at the property perimeter to demonstrate that the dust control measures are effective and for liability purposes. Alternatively, these soils may be disposed of as non-hazardous waste if disposed of outside of California, but in this case the soils must still be managed as hazardous waste while in California.
- In many areas at the HWC (Mitigated) site, particularly in the first 15 feet bgs, the concentrations of total petroleum hydrocarbons (TPH) as diesel and/or motor oil exceed 10,000 milligrams per kilogram (mg/kg). Soils with TPH concentrations that exceed 10,000 mg/kg must be tested with the fish bioassay test for characterization for disposal as non-hazardous waste in a Class II landfill or as California hazardous waste in a Class I hazardous waste landfill. Soils with TPH concentrations that exceed 10,000 mg/kg will likely fail the fish bioassay test and would require disposal as California hazardous waste.
- In many areas of the HWC (Mitigated) site, the concentrations of PAHs exceed 1,000 mg/kg. Although PAHs are not regulated directly (i.e., 1,000 mg/kg is not a regulatory criterion), in combination with high TPH concentrations, high PAH concentrations could contribute to fish bioassay toxicity. PAH concentrations of 500 mg/kg or greater are used by some landfills as an indicator that the soil must be tested for fish bioassay toxicity. Some PAHs (e.g., naphthalene, which is a major constituent of one type of mothballs) have an odor. Soil excavation of PAH-contaminated soils could result in temporary local

odors, but the construction contractor would be required to follow the requirements of the Bay Area Air Quality Management District (BAAQMD).

- Portions of the HWC (Mitigated) site soils do not exceed the hazardous waste criteria, and these soils could be disposed of in a Class II landfill. Due to the heterogeneity of the site soil contaminants, extensive on-site sampling and expedited analysis is recommended to confirm proper disposition of the soils in a Class II landfill.
- Groundwater at the site is impacted with the following site contaminants: TPHs, PAHs, and metals. Groundwater extracted for construction dewatering or other purposes would require treatment and confirming analyses before discharge to either a storm drain or the sanitary sewer.
- The level of total dissolved solids (TDS) in the site groundwater is high, approaching 3,000 milligrams per liter (mg/L), particularly near the proposed transformer bay location. A TDS concentration of 3,000 mg/L is the maximum concentration limit for potable water (State Water Resources Control Board, 1988).
- The groundwater gradients for the HWC (Mitigated) site were evaluated by the use of surveyed temporary wells, vented pressure transducers, and data loggers. A subterranean serpentine-rock ridge runs diagonally from the northwest to the southeast in the eastern portion of the overall HWC site and east of the HWC (Mitigated) site. Based on the results of the Phase II evaluation, the groundwater gradient on the HWC (Mitigated) portion of the overall HWC site is toward the southwest at 0.013 feet per foot. The data collected as part of the Phase II investigation indicate that the groundwater flow on the HWC (Mitigated) site is not connected to the groundwater flow on the eastern portion of the overall HWC East site. The groundwater elevations onsite are influenced by daily tidal fluctuations. The tidal influence is greatest at the monitored locations nearest San Francisco Bay.
- The 525 23rd Street building that is shared by DHL and Airgas was constructed using asbestos-containing materials and lead-based paint.
- One of 26 soils samples tested for asbestos had a concentration higher than 1%. The California asbestos hazardous waste criterion is 1% friable asbestos.

4.A.14.2 Environmental Impacts

The thresholds of significance, identification of potentially significant impacts, mitigation measure requirements, and residual impact findings for the HWC (Mitigated) site are as described in Section 4.14.3 of the Draft EIR for the previously proposed San Francisco HWC site. With implementation of the following mitigation measures, potential environmental

impacts would be reduced to less-than-significant levels for the HWC (Mitigated) Converter Station site:

- Mitigation Measure HAZ-1 (Complete an ACM Abatement Plan and an LBP Abatement Plan) for Impact HAZ-1 (Removal of Potentially Hazardous Building Materials Resulting from Demolition)
- Mitigation Measure HAZ-2 (Soil Removal Protocols) for Impact HAZ-2 (Soil Removal)
- Mitigation Measure HAZ-3 (Reduction of Hazards During Construction Phase) for Impact HAZ-3 (Construction-phase Hazardous Materials Use)
- Mitigation Measure HAZ-4 (Management of Construction-phase Waste Streams) for Impact HAZ-4 (Construction-phase Waste Streams)
- Mitigation Measure HAZ-5 (Construction-phase Spill Prevention, Control, and Countermeasure) for Impact HAZ-5 (Construction-phase Accidental Spills)
- Mitigation Measure HAZ-6 (Reduction of Construction Dust and Volatilization of Contaminants) for Impact HAZ-6 (Construction-phase Dust and Volatilization of Contaminants)
- Mitigation Measure HAZ-7 (Contaminated Groundwater Control) for Impact HAZ-7 (Contaminated Groundwater)
- Mitigation Measure HAZ-8 (Control of Operations-phase Hazardous Materials) for Impact HAZ-8 (Operations-phase Hazardous Materials Usage)
- Mitigation Measure HAZ-9 (Manage Waste Generation, Storage, and Disposal During Operations Phase) for Impact HAZ-9 (Operations-phase Waste Streams)
- Mitigation Measure HAZ-10 (Operations-phase Spill Prevention, Control, and Countermeasure) for Impact HAZ-10 (Operations-phase Accidental Spills)
- Mitigation Measure HAZ-11 (Reduction of Fire and Explosion Risk and Emergency Support During Operations Phase) for Impact HAZ-11 (Operations-phase Fire and Explosion Risk)
- Mitigation Measure HAZ-12 (Manage Seismic Activity) for Impact HAZ-12 (Impacts from Seismic Activity)

4.A.14.3 References

State Water Resources Control Board. 1988. Resolution 88-63, Sources of Drinking Water.

URS. 2006. Phase II Soil and Groundwater Site Investigation Report for HWC (Mitigated) Site, Western Portion of the Harrigan Weidenmuller Company Property at 435, 525, and 555 23rd Street, San Francisco, California. September.

4.A.15 Paleontological Resources

4.A.15.1 Environmental Setting

No fossil localities have been identified within the footprint of the San Francisco HWC (Mitigated) Converter Station site or the associated AC/DC cable routes. The proposed HWC (Mitigated) Converter Station site is assigned a high sensitivity rating, since excavations have the potential to penetrate into undisturbed *Qal* sediments which could contain significant fossil resources (refer to Figure 4.15-1 in the Draft EIR). The cable routes are assigned a low sensitivity rating, since typical excavations are not expected to penetrate into undisturbed *Qal* sediments where there would be a potential for significant paleontological resources.

4.A.15.2 Environmental Impacts

No fossil localities have been identified within the footprint of this Project component. However, construction excavations have the potential to penetrate into undisturbed Quaternary alluvium (*Qal)* sediments which have the potential to contain significant fossil resources. This would be a potentially significant impact.

The thresholds of significance, identification of potentially significant impacts, mitigation measure requirements, and residual impact findings for the proposed San Francisco HWC (Mitigated) Converter Station site are as described in Section 4.15.3 of the Draft EIR for the previously proposed HWC site. With implementation of the following mitigation measure, potential environmental impacts to paleontological resources associated with the HWC (Mitigated) site would be reduced to a less-than-significant level.

- Mitigation Measure PALEO-1 (Potential Fossil Resources Protection) for Impact PALEO-1 (Distribution of Fossil Resources)

6.1 INTRODUCTION

This section provides a summary comparison of potentially significant impacts for the proposed Project and Project Alternatives, including ancillary facilities. Refer to Section 4.0 (Proposed Project) and Section 5.0 (Project Alternatives) of the Draft EIR as well as Sections 1.0 and 4.A of this Final EIR for more information regarding specific impacts and proposed mitigation measures. The "No Project Alternative" is also included for comparison purposes. Refer to Section A.8.3 in Appendix A of the Draft EIR and Sections 1.0 and 3.0 of this Final EIR for a discussion of alternatives that were considered but eliminated from further consideration, including the rationale for elimination. This section is intended to replace Section 6.0 provided in the Draft EIR.

As discussed previously in Sections 1.0, 3.0, and 4.A of this Final EIR, the proposed Trans Bay Cable Project now consists of the proposed San Francisco HWC (Mitigated) Converter Station site, the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site, onshore AC cables, and the proposed HVDC submarine cable. The previously proposed San Francisco HWC site layout and the Pittsburg Standard Oil Converter Station site, including ancillary facilities as evaluated in the Draft EIR, have been eliminated from further consideration in the Final EIR. The comparison of alternatives presented herein reflects these Project refinements.

The proposed Project and Project Alternatives considered in this comparison of potentially significant impacts are as follows:

- Proposed San Francisco HWC (Mitigated) Converter Station
- Proposed Pittsburg West Tenth Street Converter Station (Alternative 1 [E/W])
- Proposed Offshore DC Cable Route
- San Francisco Mirant Converter Station Alternative (three site layouts)
- San Francisco Sheedy Converter Station Alternative
- Pittsburg West Tenth Street Converter Station (Alternative 2 [N/S])
- Pittsburg Mirant Converter Station Alternative
- No Project Alternative

6.2 COMPARISON OF ALTERNATIVES

The potentially significant impact findings (including potential impacts, proposed mitigation measures, and residual impact findings) for the proposed and alternative Project components are summarized in Table 6-1.

As shown in Table 6-1, the identified potentially significant impacts, mitigation measures, and residual impact findings for the proposed and alternative converter station sites (including ancillary facilities) in San Francisco and Pittsburg are very similar, except as noted in Section 6.3. The identified potentially significant impacts associated with the submarine cable installation in the Bay are essentially the same for all converter station sites.

6.2.1 San Francisco Converter Stations

- The alternative San Francisco Mirant Converter Station (three layouts) site(s) would result in unavoidable adverse significant impacts associated with the required demolition of historic architectural resources (Impact CUL-2), whereas the proposed San Francisco HWC (Mitigated) Converter Station and alternative San Francisco Sheedy Converter Station would not.
- The alternative San Francisco Sheedy Converter Station would involve a potentially significant impact associated with potential conflicts with possible future improvements to public access to San Francisco Bay (Impact LU-1), whereas the proposed San Francisco HWC (Mitigated) Converter Station and alternative San Francisco Mirant Converter Station (three site layouts) would not; with implementation of Mitigation Measure LU-1, this potentially significant impact would be reduced to a less-than-significant level.
- Potential environmental impacts associated with the offshore submarine HVDC cable for the proposed HWC (Mitigated) and alternative Mirant and Sheedy converter station sites are the same and, with implementation of mitigation measures, all identified potentially significant impacts would be reduced to less-than-significant levels.

6.2.2 Pittsburg Converter Stations

- The proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station as well as the Pittsburg Mirant site would not result in any unavoidable adverse significant environmental impacts, whereas the Pittsburg West Tenth Street Alternative 2 would result in unavoidable significant adverse construction/pile driving noise (Impact NOISE-2) and long-term visual impacts (Impact VIS-5).
- The northwest portion of the proposed Pittsburg West Tenth Street Alternative 1 (E/W) site and the entire Pittsburg Mirant site are within the 100-year flood zone (Impact WATER-8) while the Pittsburg West Tenth Street Alternative 2 (N/S) site is not.

6.2.3 No Project Alternative

As shown in Table 6-1, the No Project Alternative would avoid the potential environmental impacts of the proposed Trans Bay Cable Project, including those associated with the identified Project Alternatives.

The No Project Alternative would involve taking no action to provide additional electrical transmission capacity to San Francisco (i.e., status quo). Under the No Project Alternative, the potential environmental impacts and benefits of the proposed Trans Bay Cable Project would not occur as a direct consequence of Project implementation. However, the No Project Alternative is incapable of meeting the Project goals and objectives, or the CAISO's objectives for solving the near-term and long-term electrical supply and reliability issues in San Francisco and the northern Peninsula area. Another potential consequence of the No Project Alternative would be the lost potential to save an estimated 20 MW of electrical power that is currently expended in line losses, which would be avoided by the proposed Project. In summary, the No Project Alternative does not constitute a reasonable alternative to the proposed HVDC Project.

6.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project Alternative would result in the fewest environmental effects. However, the No Project Alternative would not meet the Project/CAISO goals and is not considered to be a reasonable or feasible alternative. Numerous "non-Project" alternatives were also considered, as discussed in Section A.8.3 in Appendix A of the Draft EIR. None of the various alternatives evaluated are considered to be capable of meeting all of the Project objectives and the related screening criteria for "feasibility" and "environmental impacts avoidance and minimization." Therefore, none of the potential non-Project alternatives were retained for further consideration in this EIR.

The Trans Bay Cable Project Alternatives are considered by the City of Pittsburg to be the only feasible alternative for meeting the Project and CAISO objectives at this point in time.

It is difficult to determine, however, which of the Trans Bay Cable Project converter station site alternatives in San Francisco and Pittsburg is clearly the environmentally superior alternative as, with few exceptions, the sites are very similar to each other in terms of potential impacts. The proposed San Francisco HWC (Mitigated) Converter Station site and the San Francisco Sheedy Converter Station Alternative would avoid the unavoidable adverse significant impact to historic architectural resources associated with the alternative San Francisco Mirant sites. However, Mirant tentatively plans to demolish the buildings considered to be historic (i.e., Station A Complex) on the San Francisco Mirant property due to their deteriorated condition and seismic safety concerns. Locating the proposed Trans Bay Cable Project San Francisco converter station on any one of the three alternative Mirant site layouts would consolidate the electrical station facilities (i.e., PG&E Potrero Substation and the Trans Bay Cable San Francisco converter station) at one location and would avoid potential conflicts with possible future improvements to public access to San Francisco Bay (Impact LU-1) associated with the Sheedy alternative. In addition, the required electrical interconnection (115 kV AC) between the Sheedy Converter Station site and the PG&E Potrero Substation is problematic due to potential conflicts with existing underground

utilities along Illinois Street. No one site in San Francisco is clearly environmentally superior to another. The proposed HWC (Mitigated) site has no identified unavoidable adverse significant impacts and this is the only site in San Francisco for which the Project proponent has site control, thus the HWC (Mitigated) site is the only feasible site at the time this Final EIR was prepared.

Of the proposed and alternative converter station sites in Pittsburg (including ancillary facilities), it is also difficult to determine the clearly environmentally superior alternative. Due to the unavoidable adverse significant noise and visual impacts associated with the Pittsburg West Tenth Street Alternative 2 site, this alternative site is the least preferable from an environmental impact perspective. Accordingly, the proposed Pittsburg West Tenth Street Alternative 1 (E/W) and Pittsburg Mirant alternative sites are considered to be environmentally superior to the Pittsburg West Tenth Street Alternative 2 site. It is not possible to clearly differentiate the environmentally superior alternative in Pittsburg between the West Tenth Street Alternative 1 site and the Pittsburg Mirant site. However, since the Project proponent does not have site control at the Pittsburg Mirant site, the Pittsburg West Tenth Street Alternative 1 (E/W) site is the only environmentally acceptable and feasible site at the time this Final EIR was prepared.

TABLE 6-1[1, 2]
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
Air Quality									
AIR-1: Fugitive Dust Emissions									
	AIR-1: Fugitive Dust Controls	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
AIR-2: Equipment Exhaust Emissions									
	AIR-2: Exhaust Controls	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
AIR-3: Marine Construction – Criteria Pollutants									
	AIR-3: Marine Vessel Emission Controls			X					
	Resulting Level of Significance			LTS					
AIR-4: Marine Construction – Toxic Air Contaminants									
	AIR-4: Implement Mitigation Measure AIR-3			X					
	Resulting Level of Significance			LTS					
Geologic Resources and Soils									
GEO-1: Soil Erosion and Compaction									
	GEO-1: Design Project for Erosion Control	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
GEO-2: Asbestos-containing Serpentine									
	GEO-2: Controls for Excavation of Serpentine	X			X	X			
	Resulting Level of Significance	LTS			LTS	LTS			
GEO-3: Strong Ground Shaking									
	GEO-3: Design to Seismic Design Requirements	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
GEO-4: Liquefaction									
	GEO-4: Design Project for Liquefiable Deposits	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
GEO-5: Shrink-Swell/Subsidence									
	GEO-5: Design Project for Shrink-Swell/Subsidence	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
Water Resources and Quality									
WATER-1: Erosion and Contaminated Runoff									
	WATER-1: Erosion Control and Contaminant Source Control	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
WATER-2: Surface Water Quality Impacts from HDD									
	WATER-2: Spill Prevention and Control Plan for HDD	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
WATER-3: Groundwater Quality Impacts from HDD									
	WATER-3: Use of Pilot Hole and Reaming	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
WATER-5. Water Quality Impacts from Cable Laying Operation									
	WATER-5: Avoidance of Sediment Contamination			X					
	Resulting Level of Significance			LTS					

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
WATER-7: Water Quality Impacts from Vessel Fuel Spills									
	WATER-7: Vessel Fuel Spill Response Plan			X					
	Resulting Level of Significance			LTS					
WATER-8: Flooding									
	WATER-8: Flood Mitigation		X					X	
	Resulting Level of Significance		LTS					LTS	
Terrestrial Biological Resources									
TBIO-3: Disturbance or Fill of Wetlands and Streams									
	TBIO-3e: Implement HDD or Comparable Technology Techniques to Avoid Impacts to Wetlands						X		
	Resulting Level of Significance						LTS		

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
TBIO-4: Potential Impacts to Giant Garter Snake and Western Pond Turtle									
	TBIO-4a: Avoidance of Habitat and Timing of Construction						**X**		
	TBIO-4b: Worker Training for Giant Garter Snake and Western Pond Turtle						**X**		
	TBIO-4c: Biological Monitoring for Giant Garter Snake and Western Pond Turtle						**X**		
	TBIO-4d: Avoiding Impacts to Wetlands and Habitat						**X**		
	Resulting Level of Significance						LTS		
Marine Biological Resources									
No potentially significant impacts									

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
Cultural Resources									
CUL-1: Disturbance of Archaeological Resources									
	CUL-1a: Archeological Resource Testing	**X**			**X**				
	CUL-1b: Archaeological Resource Data Recovery	**X**			**X**				
	CUL-1c: Archaeological Resource Construction Monitoring	**X**			**X**				
	Resulting Level of Significance	LTS			LTS				
CUL-2: Demolition of Historic Architectural Resources									
	CUL-2a: Recording Architectural Resources				**X**				
	CUL-2b: Architectural Resource Interpretive Display and/or Interpretive Material				**X**				
	CUL-2c: Architectural Resource Salvage Opportunities				**X**				
	CUL-2d: Coordination with Central Waterfront Historic Preservation				**X**				
	Resulting Level of Significance				**RS**				

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
CUL-3: Offshore Cable Route Archaeological Resources									
	CUL-3a: Archaeological Resources Geophysical Survey			X					
	CUL-3b: Archaeological Resources Avoidance			X					
	CUL-3c: Archaeological Resources Supplemental Underwater Investigation			X					
	Resulting Level of Significance			LTS					
Land Use and Recreation									
LU-1: Potential Conflict with Public Access Improvements									
	LU-1: Public Access					X			
	Resulting Level of Significance					LTS			
LU-4: Increased Vessel Traffic									
	LU-4a: Vessel Crew Procedures			X					
	LU-4b: Coast Guard Coordination			X					
	Resulting Level of Significance			LTS					

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
LU-5: Potential Conflict with Local Plans and Policies									
	LU-5: Local Plans and Policies Coordination			X					
	Resulting Level of Significance			LTS					
Commercial Fishing and Marine Transportation									
MTRANS-1: Vessel Navigation Hazards									
	MTRANS-1a: Project Registration, Information and Pilotage			X					
	MTRANS-1b: Compliance with Navigation Rules			X					
	MTRANS-1c: Precautionary Area			X					
	MTRANS-1d: Publication of Cable Location			X					
	Resulting Level of Significance			LTS					
MTRANS-2: Interference with Commercial Fishing Operations									
	MTRANS-2a: Commercial Fishing Avoidance			X					
	MTRANS-2b: Project Information			X					
	Resulting Level of Significance			LTS					

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
MTRANS-3: Interference with Commercial Sport Fishing Operations									
	MTRANS-3a: Commercial Sport Fishing Avoidance			X					
	MTRANS-3b: Project Information			X					
	Resulting Level of Significance			LTS					
Traffic and Transportation									
TRAFFIC-1: Cumulative Traffic Impacts									
	TRAFFIC-1: Coordination to Reduce Cumulative Traffic Impacts	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
TRAFFIC-2: Oversized Loads									
	TRAFFIC-2: Coordination of Oversized Loads	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
TRAFFIC-3: Temporary Street Closures Affecting Traffic, Bicycle, and Pedestrian Circulation									
	TRAFFIC-3: Signage for Temporary Street Closures	X			X	X			
	Resulting Level of Significance	LTS			LTS	LTS			

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
TRAFFIC-4: Impacts on Metro East Light Rail Facility									
	TRAFFIC-4: Reducing Impact on the Movement of MUNI Light Rail Vehicles into and out of the Metro East Maintenance Facility	**X**			**X**	**X**			
	Resulting Level of Significance	LTS			LTS	LTS			
Noise and Vibration									
NOISE-1: Converter Station Operations Sound Levels									
	NOISE-1: Noise Barrier Installation for Converter Station		**X**				**X**	**X**	
	Resulting Level of Significance		LTS				LTS	LTS	
NOISE-2: Construction Sound Level									
	NOISE-2: Construction Noise Control Measures						**X**		
	Resulting Level of Significance						**RS**		
Public Services and Utilities									
PS-1: Construction Fire Hazards									
	PS-1: Construction Fire Prevention	**X**	**X**		**X**	**X**	**X**	**X**	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
PS-2: Existing Onshore Underground Utilities									
	PS-2: Utility Survey	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
PS-3: Operations Fire Hazards									
	PS-3: Operations Fire Prevention	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
PS-4: Water Service									
	PS-4: Water Service							X	
	Resulting Level of Significance							LTS	
Visual Resources									
VIS-1: Converter Station Domination of View									
	VIS-1a: Plan Submittal Requirements for Building Materials and Colors	X	X			X		X	
	VIS-1b: Plan Submittal Requirements for Landscaping	X	X			X		X	
	Resulting Level of Significance	LTS	LTS			LTS		LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
VIS-2: Converter Station Will Create Substantial Light and Glare									
	VIS-2: Plan Submittal Requirements for Lighting	**X**	**X**		**X**	**X**	**X**		
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS		
VIS-3: Creation of Visual Clutter									
	VIS-3: Landscaping Plan	**X**							
	Resulting Level of Significance	LTS							
VIS-4: Converter Station Domination of Entrance to Warm Water Cove Park									
	VIS-4a: Landscaping					**X**			
	VIS-4b: Common Fence Design					**X**			
	VIS-4c: Street Lighting along 24th Street					**X**			
	Resulting Level of Significance					LTS			
VIS-5: Converter Station Domination of View									
	VIS-5a: Street Yard Setback						**X**		
	VIS-5b: Street Yard Landscape						**X**		
	VIS-5c: Architectural Design and Building Colors						**X**		
	Resulting Level of Significance						**RS**		

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
Hazardous Materials and Waste Management									
HAZ-1: Removal of Potentially Hazardous Building Materials Resulting from Demolition									
	HAZ-1: Complete an ACM Abatement Plan and an LBP Abatement Plan	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-2: Soil Removal									
	HAZ-2: Soil Removal Protocols	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-3: Construction-phase Hazardous Materials Use									
	HAZ-3: Reduction of Hazards During Construction Phase	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-4: Construction-phase Waste Streams									
	HAZ-4: Management of Construction-phase Waste Streams	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
HAZ-5: Construction-phase Accidental Spills									
	HAZ-5: Construction-phase Spill Prevention, Control, and Countermeasure	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-6: Construction-phase Dust and Volatilization of Contaminants									
	HAZ-6: Reduction of Construction Dust and Volatilization of Contaminants	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-7: Contaminated Groundwater									
	HAZ-7: Contaminated Groundwater Control	X			X	X			
	Resulting Level of Significance	LTS			LTS	LTS			
HAZ-8: Operations-phase Hazardous Materials Usage									
	HAZ-8: Control of Operations-phase Hazardous Materials	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
HAZ-9: Operations-phase Waste Streams									
	HAZ-9: Manage Waste Generation, Storage and Disposal During Operations Phase	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-10: Operations-phase Accidental Spills									
	HAZ-10: Operations-phase Spill Prevention, Control, and Countermeasure	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-11: Operations-phase Fire and Explosion Risk									
	HAZ-11: Reduction of Fire and Explosion Risk and Emergency Support During Operations Phase	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	
HAZ-12: Impacts from Seismic Activity									
	HAZ-12: Manage Seismic Activity	X	X		X	X	X	X	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

TABLE 6-1[1, 2] (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure	Proposed San Francisco HWC (Mitigated) Converter Station	Proposed Pittsburg West Tenth Street Alternative 1 Converter Station	Proposed Offshore DC Cable Route	San Francisco Mirant Converter Station Alternative	San Francisco Sheedy Converter Station Alternative	Pittsburg West Tenth Street Converter Station (Alternative 2)	Pittsburg Mirant Converter Station Alternative	No Project Alternative
Paleontological Resources									
PALEO-1: Disturbance of Fossil Resources									
	PALEO-1: Potential Fossil Resources Protection	**X**	**X**		**X**	**X**	**X**	**X**	
	Resulting Level of Significance	LTS	LTS		LTS	LTS	LTS	LTS	

1 **X** = Applicable; Blank = Not Applicable; LTS = Less than Significant; **RS = Residual Significant Impact**.

2 Note: The impacts and mitigation measures presented in this table reflect mitigating refinements made to the Project between the Draft and Final EIRs.

9.1 INTRODUCTION

This section of the Final EIR discusses unavoidable significant adverse impacts that would be expected to occur if the proposed Trans Bay Cable Project (Project) as now proposed, including alternatives, was implemented. Unavoidable significant adverse impacts are those which cannot be reduced to a less-than-significant level. Approval and implementation of a project that involves unmitigable significant impacts typically requires a Statement of Overriding Considerations by the Lead Agency for CEQA compliance (i.e., City of Pittsburg for this Project). Unavoidable significant adverse impact findings are summarized in the following sections, by proposed converter station site, and alternative converter station site, as applicable.

9.2 PROPOSED PROJECT

As discussed previously in Sections 1.0, 3.0, and 4.A of this Final EIR, the proposed Trans Bay Cable Project now consists of the proposed San Francisco HWC (Mitigated) Converter Station Site, the proposed Pittsburg West Tenth Street Alternative 1 (E/W) Converter Station site, onshore AC cables, and the proposed HVDC submarine cable. The previously proposed San Francisco HWC site layout and the Pittsburg Standard Oil Converter Station site, including ancillary facilities as evaluated in the Draft EIR, have been eliminated from further consideration in this Final EIR. The findings presented herein reflect these refinements to the proposed Project.

No unavoidable adverse significant impacts have been identified for the now proposed Project, including the HWC (Mitigated) site, the Pittsburg West Tenth Street Alternative 1 (E/W) site, and/or the submarine cable.

9.3 PROJECT ALTERNATIVES

9.3.1 San Francisco Mirant Converter Station Alternative

9.3.1.1 Cultural Resources

See Section 4.7.1.2.1, Cultural Resources of the Draft EIR, for details regarding the nature of buildings addressed in the following impact discussions.

Impact CUL-2: Disturbance of Historical Architectural Resources. The construction of the converter station would require demolition of historical resources. This action would cause a significant adverse change to these historical resources under CEQA. This is considered a significant impact.

Mitigation Measure CUL-2a: Recording Architectural Resources. Recording would ensure a permanent record of the present appearance and context of the historical resources.

Under this mitigation proposal, the Project proponent would ensure that the historical resources to be demolished would be recorded to Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) standards prior to any construction activities. The HABS/HAER documentation would be filed with the State Historic Preservation Officer (SHPO), the HABS/HAER collection in the Library of Congress, the University of California Bancroft Library, the San Francisco Landmarks Preservation Advisory Board files at the San Francisco Planning Department, the Foundation for San Francisco's Architectural Heritage (FSFAH), and the San Francisco Public Library.

Although recording eliminates one adverse impact of demolition (the loss of historical information), it does not prevent the physical loss of historically significant resources. Therefore, additional mitigation measures should be developed and could include Mitigation Measures CUL-2b, CUL-2c, and CUL-2d.

Mitigation Measure CUL-2b: Architectural Resource Interpretive Display and/or Interpretive Material. The Project proponent would develop a display or interpretive material for public exhibition and dispersal. The display or interpretive material, such as a printed brochure, could be based on the photographs produced in the HABS/HAER documentation, and the historic archival research previously prepared for the resources in and near the Project. This display and/or interpretive material would be provided to the City of San Francisco.

Mitigation Measure CUL-2c: Architectural Resource Salvage Opportunities. After recording and at least 30 days prior to demolition, the interested parties would have the opportunity to salvage architectural elements for re-use or curation. Items selected would be removed in a manner that minimizes damage to those items.

Resulting Level of Significance. Mitigation Measures CUL-2a through 2c are intended to be part of the overall consideration of impacts to historical resources as part of this Project. While implementation of Mitigation Measures CUL-2a through CUL-2c would lessen Project impacts, demolition of historical resources is a significant adverse change that cannot be mitigated to a less-than-significant level. These proposed mitigation options, therefore, will be discussed and refined by the Project proponent and other responsible agencies in conjunction with preparation of a Statement of Overriding Considerations. Mitigation measures will be set forth in the Mitigation Monitoring Reporting Program (MMRP), which will include input from other responsible agencies.

Mitigation Measure CUL-2d: Coordination with Central Waterfront Historic Preservation. The Project proponent and other interested parties would identify a historic preservation project taking place within the potential Central Waterfront Historic District adjacent to, or historically related to the Station A complex and would coordinate the contribution of one or more of the other mitigation measures listed above to the goals of the

identified preservation project. One or more of the products of the first three mitigation measures – HABS/HAER recordation (CUL-2a), the development of interpretive or display material (CUL-2b), and/or architectural salvage (CUL-2c) – would be selected in cooperation with the interested parties. The resulting documentation, interpretive material, and/or salvaged architectural items would be provided to the interested parties and/or proponents of the identified preservation project.

Implementation Responsibility: Project proponent

Requirements and Timing: Upon completion of Mitigation Measures CUL-2a, CUL-2b, and CUL-2c

Monitoring Requirements: City of Pittsburg, in consultation with City and County of San Francisco, to monitor and ensure compliance

Resulting Level of Significance. Mitigation Measures CUL-2a through CUL-2d are intended to be part of the overall consideration of impacts to historical resources as part of this Project. While implementation of Mitigation Measures CUL-2a through CUL-2d would lessen project impacts, demolition of historical resources is a significant adverse impact that cannot be mitigated to a less-than-significant level.

9.3.2 Pittsburg West Tenth Street Converter Station Alternative 2 (N/S)

9.3.2.1 Noise and Vibration

Impact NOISE-2: Construction Sound Levels. The construction sound levels hazard (Impact NOISE-2) described in Section 5.5.11.2.1 of the Draft EIR applies to the Pittsburg West Tenth Street Converter Station Alternative 2 site. Sound levels from pile driving at the Pittsburg West Tenth Street Alternative 2 site would be 95 dBA L_{max} (90 dBA L_{eq}) at the residences 150 feet south. Although Pittsburg does not restrict sound levels from pile driving, the FTA recommends that hourly sound levels of 90 dBA from pile driving be considered a significant impact at residences (FTA, 1995).

Mitigation Measure NOISE-2: Construction Noise Control Measures. Mitigation Measure NOISE-2 described in Section 5.5.11.2.1 of the Draft EIR shall be applied to the Pittsburg West Tenth Street Converter Station Alternative 2 site.

Implementation Responsibility: Project proponent/construction contractor

Requirements and Timing: Submit plans and obtain approval from City of Pittsburg Planning Department during Design Review

Monitoring Requirements: City of Pittsburg to monitor and ensure compliance

Resulting Level of Significance. The City of Pittsburg noise ordinance prohibits pile driving between the hours of 10 p.m. and 7 a.m. While implementation of Mitigation Measure NOISE-2 would lessen noise impacts from pile driving at the sensitive receptors (residences) in proximity to this site, this impact cannot be reduced to a less-than-significant level. Accordingly, a Statement of Overriding Considerations would be required for this impact.

9.3.2.2 Visual Resources

Impact VIS-5: Converter Station Domination of View. This impact is similar to Impact VIS-1 described in the Draft EIR for the other converter station sites under consideration. However, given the size and height of the converter station at the West Tenth Street Converter Station Alternative 2 (N/S), the Project would generate a potentially significant impact and more intensive mitigation would be required. While in this circumstance it is not possible to reduce the impact to a less-than-significant level, CEQA does call for identification of mitigation measures which may reduce the adversity of the impact. This design effort would be concerned with the selection of appropriate architectural design and building colors as well as the landscape design in the street yard setback area.

Mitigation Measure VIS 5a: West Tenth Street Converter Station Alternative 2: Street Yard Setback. The Project proponent shall work with the City of Pittsburg to rezone the property to provide a front yard setback of 35 feet and increase the height restriction to 65 feet for all buildings and 80 feet for ancillary structures.

Implementation Responsibility: Project proponent

Requirements and Timing: Comply with setback and height limitations in final design plans and obtain approvals prior to construction

Monitoring Requirements: City of Pittsburg to monitor and ensure compliance

Mitigation Measure VIS 5b: Street Yard Landscape. The Project proponent shall work with the City of Pittsburg to provide a secure and extensive landscape plan for the street yard along the frontage of West Tenth Street to partially reduce the adverse and significant visual impact of the converter station at this location. Specific elements in this plan include:

- Multiple layers of vegetative screening shall be selected from the City of Pittsburg-approved planting list. This screening shall be generally located to create the visual effect simulated in Photo C, Figure 5.5-2 of the Draft EIR. The intent is to soften and obscure the physical form and mass of the DC/valve hall as seen from residences across the street and travelers along West Tenth Street, not completely screen the structure. Various heights, colors, and textures of vegetation shall be selected and the trees shall be clustered to avoid the effect of a rigid soldier row. The tree selection shall include species which would be expected to reach 45 feet in height within five years.

- The perimeter security fence/wall shall be set back from the rear of the sidewalk by a minimum of 15 feet. Chain link fencing shall not be used. If fencing is selected then it shall be of wrought iron or steel pickets. If a solid wall is preferred, the surface material shall be a split face block or stucco compatible with the residential development across West Tenth Street. No visible barbed wire shall be allowed to meet security requirements.

Implementation Responsibility: Project proponent

Requirements and Timing: All plans shall be prepared by professionals qualified in the designated field of expertise; plans and revised design shall be submitted prior to final planning approval to ensure that the identified mitigation measure is satisfied

Monitoring Requirements: City of Pittsburg to monitor and ensure compliance

Mitigation Measure VIS-5c: Architectural Design and Building Colors. The Project proponent shall work with the City of Pittsburg to design a structure that is compatible in materials with the neighborhood and select colors that will minimize visual impacts with the adjacent community. While this effort will partially reduce the adverse and significant impact of the converter station at this location, the significant impact would remain. Specific elements in this plan shall include:

- Work with the City of Pittsburg architectural review process to select a building design that effectively reduces the street façade to the minimum consistent with the technical requirements of the equipment housed within the structures
- Select building surface materials, such as stucco, that are compatible with the adjacent community
- Select muted light colors that will minimize apparent bulk and height of the DC/valve hall and other structures

Implementation Responsibility: Project proponent

Requirements and Timing: All plans shall be prepared by professionals qualified in the designated field of expertise; plans and revised design shall be submitted prior to final planning approval to ensure that the identified mitigation measure is satisfied

Monitoring Requirements: City of Pittsburg to monitor and ensure compliance

Resulting Level of Significance. Application of Mitigation Measures VIS-5a, 5b, and 5c would help reduce the Impact VIS-5, but would not mitigate the impact to a less-than-

significant level. Accordingly, a Statement of Overriding Considerations would be required for this impact.

No other unavoidable significant adverse impacts have been identified for the Project alternatives under consideration in this Final EIR.

12.1 INTRODUCTION

This section of the Final EIR presents the comments and responses for the Draft EIR for the proposed Trans Bay Cable Project that was issued on May 10, 2006.

The comment letters received on the Draft EIR are numbered 1-26 and the individual comments identified within each letter are also numbered. The comments are delineated by vertical lines in the margins of the letters (for example, Comment 2-1 is the first comment of Letter No. 2) with each separate comment designated by the letter and comment number. The responses to comments are presented in sequential order following each comment letter.

Additionally, oral comments were received on the Draft EIR at two public meetings which were held at the Potrero Hills Neighborhood House in San Francisco on June 8, 2006 and the Pittsburg City Council Chambers on June 14, 2006. These comments are designated by the prefixes PM1 and PM2 for the meetings held in San Francisco and Pittsburg, respectively, and are presented and responded to herein. Transcripts from each of the two public meetings are included herein and the individual comments have been delineated and responses are provided as described previously for the written comment letters.

Table 12-1 summarizes the comments received on the Draft EIR. Where appropriate, the text in the Draft EIR has been revised in response to comments received on the Draft EIR. The individual comment responses indicate if the comment resulted in a text revision to the Draft EIR. Refer to Section 13.0 of this Final EIR for applicable text revisions to the Draft EIR.

The written comment letters and responses, and the public meeting transcripts and responses follow Table 12-1.

TABLE 12-1
SUMMARY OF COMMENTS
RECEIVED ON THE DRAFT EIR
FOR THE PROPOSED TRANS BAY CABLE PROJECT

Date	Commenter/Affiliation	Comment Item ID	Number of Comments Identified
Written Letters and E-mails			
5/24/06	John Pulliam, Contra Costa County Public Works Dept.	1	1
6/14/06	Mike Lengyel	2	1
10/11/05	Mike Lengyel	2	1
7/8/01	Mike Lengyel	2	1
6/1906	Steven Moss, SF Community Power Cooperative	3	7
6/22/06	Steven Moss, SF Community Power Cooperative	4	1
6/20/06	Janie Layton, Bay Area Rapid Transit (BART)	5	8
6/21/06	Timothy Sable, CA Department of Transportation	6	6
6/22/06	Linda Fiack, Delta Protection Commission	7	5
6/22/06	Marina Brand, CA State Lands Commission	8	12
6/23/06	Mark Piros, Department of Toxic Substances Control	9	8
6/26/06	B. Blevins, CA Energy Commission	10	64
6/26/06	Sean Gallagher, CA Public Utilities Commission	11	2
6/26/06	Sejal Choksi, San Francisco Baykeeper	12	6
12/16/04	Avi Ringer, San Francisco Baykeeper	13	18
6/26/06	Nina Oshinsky/City of Antioch	14	3
6/26/06	Joe Boss, Dogpatch Neighborhood	15	4
6/26/06	Jeffrey Russell, Mirant California, LLC	16	11
6/26/06	Kristina Lawson, Miller, Starr & Regalia	17	2
6/27/06	Richard Nagasaki, Chevron Shipping Co., LLC	18	2
6/26/06	Jaime Michaels, Bay Conservation and Development Commission (BCDC)	19	25
7/10/06	Maureen Gaffney, Association of Bay Area Governments	20	1
7/10/06	Karen Goodson Pierce, BVHP Health and Environmental Assessment Task Force	21	1
7/10/06	Paula Fernandez, City and County of San Francisco (CCSF)	22	105
7/10/06	Ton Radulovich, Livable City	23	1
7/11/06	Isabel Wade, San Francisco Neighborhood Parks Association	24	1
7/27/06	Wil Bruhns, SF Bay Regional Water Quality Control Board	25	3
7/9/06	Darren Stroud, Valero Refining Company, CA	26	24

TABLE 12-1 (CONTINUED)
SUMMARY OF COMMENTS
RECEIVED ON THE DRAFT EIR
FOR THE PROPOSED TRANS BAY CABLE PROJECT

Date	Commenter/Affiliation	Comment Item ID	Number of Comments Identified
Oral Comments at Public Meeting In San Francisco at Potrero Hills Neighborhood House (6/8/06)			
6/8/06	Steven Moss, SF Community Power Cooperative	PM1:1	4
6/8/06	Michael Theriault, SF Building and Construction Trades Council	PM1:2	1
6/8/06	David Fierberg	PM1:3	5
6/8/06	Mark Klaiman	PM1:4	4
6/8/06	Joe Boss	PM1:5	1
Oral Comments at Public Meeting in Pittsburg at City Council Chambers (6/14/06)			
6/14/06	Greg Freere, Contra Costa Building and Construction Trades Council	PM2:1	3
	David Fierberg	PM2:2	3
	Mike Lengyel	PM2:3	2
	Kristina Lawson, Miller, Starr & Regalia	PM2:4	1

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COMMENT LETTERS AND RESPONSES (1-26)

PUBLIC MEETING TRANSCRIPTS AND RESPONSES (SF AND PITTSBURG)

Contra
Costa
County

Public Works Department

255 Glacier Drive
Martinez, CA 94553-4825
Telephone: (925) 313-2000
FAX: (925) 313-2333
Web site: www.co.contra-costa.ca.us/depart/pw

Maurice M. Shiu
Public Works Director

R. Mitch Avalon
Deputy Director

Heather J. Ballenger
Deputy Director

Julia R. Bueren
Deputy Director

Patricia R. McNamee
Deputy Director

1

May 24, 2006

Ken Strelo
Planning Department
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

RE: Trans Bay Cable Project Draft EIR

Dear Mr. Strelo:

We have received the Draft Environmental Impact Report (EIR) for the Proposed Trans Bay Cable Project. The County Public Works Department has the following comment concerning this EIR:

> Should any of the truck routes change--especially those that would consist of over-sized loads--such that they utilize County roads, the project will need to coordinate with Contra Costa County Public Works Department. Depending on the potential impacts to County roads, additional mitigation measures may be necessary. 1-1

Thank you for the opportunity to provide input. Please contact me at (925) 313-2165 if you have any questions.

RECEIVED
MAY 26 2006
PLANNING DIVISION
PLANNING AND BUILDING DEPT
CITY OF PITTSBURG

Very truly yours,

John Pulliam
Civil Engineer
Transportation Engineering

JP:JP:tr
G:\TransEng\EIR\Pittsburg\Trans Bay Cable EIR comments 05-24-06.doc

RESPONSE TO COMMENTS

Comment Number	Response
1-1	Comments noted. The Proposed/Alternative Trans Bay Cable (TBC) Project would not involve use of Contra Costa County roads. As requested, the City of Pittsburg will notify CCCPWD of any Project changes that would necessitate use of roads under the jurisdiction of Contra Costa County.

June 14, 2006

Trans Bay Cable Project
Draft Environmental Impact Report
Pittsburg City Hall
65 Civic Avenue
Pittsburg, CA 94565

Re: Trans Bay mitigation for power plant air pollution

Dear Sirs:

As a mitigation for the concentration of power plants in this area that would use this cable to deliver power to San Francisco for 40 years, please earmark a portion of the cable revenues or surcharge to a local health fund to reduce the toll from asthma, lung cancer and other pollution-affected ailments. 2-1A

Mike Lengyel
Pittsburg

Oct. 11, 2005

Trans Bay Cable Project
Informational Session
The Pittsburg Yacht Club
2 Marina Blvd.
Pittsburg, CA 94565

Dear Sirs:

Here are several questions on which information would be appreciated:

1. If the project will redistribute air emissions from San Francisco to Pittsburg, will the project sponsors contribute to identifying and lessening lung-related disease in Pittsburg/Bay Point?

2-1B

2. What are the identities, capacities and annual pollution loads of the power generating facilities feeding the Pittsburg substation?

3. Does the cable project have the potential to induce further power generating facilities in the local area?

Thank you for your consideration

Mike Lengyel

Mike Lengyel
545 Central Ave.
Pittsburg CA 94565

6/14/06
Resubmitted to Trans Bay Cable as reason of need for surcharge on transmission for Health fund -

July 8, 2001

Gov. Gray Davis
State Capitol Building
Sacramento, CA 95814
Fax 1-916-445-4633

Re: North City Health Monitoring Project in Pittsburg

Dear Gov. Davis:

A newspaper says you are coming to our city tomorrow to open the Los Medanos Energy Center (LMEC). Please lower your eyes from the 150-high stacks of this big power plant to the nearby neighborhoods, all less than a mile away, and imagine the people and particularly the children who live there.

Nearby are newer neighborhoods such as the Village at New York Landing and Bay Harbor Park, and a large older neighborhood, the Central Addition, where I live, and where Janay Adams, 8 years old, also lives, on East 12 Street, according to a local newspaper.

This sweet child has leukemia and kidney cancer. Children are the most vulnerable to pollution and have the most to lose.

2-1C

The power plant you are coming to open is one of six power plants within a two-mile radius. This unprecedented concentration of power plants in one tiny area cries out for special long-term health monitoring.

I implore you to endorse the concept and help implement it.

The North City Health Monitoring Project envisions surveying illnesses within two miles of LMEC (thus taking in all six power plants) for at least 25 years; providing the public with continuous real time data on air conditions from local monitoring stations via computer, and placing a computer server for air and health data storage and access at the Los Medanos Healthcare District in Pittsburg or at another appropriate agency.

In recent weeks the concept has been pitched to the California Energy Commission, Calpine, the Contra Costa Board of Supervisors and the Los Medanos Healthcare District Board. It would be a powerful and helpful gesture by you to acknowledge local health concerns while electrifying the grid so that fears could be allayed or problems detected in time.

These six local power plants will be able to generate about 3,500 megawatts of electricity for Northern California (enough to power 3.5 million homes, under the approximate formula of one megawatt electrifying 1,000 homes)

The six power plants also will be permitted to generate more than 6,000 tons of various air pollutants each year.

A new industrial truck road will add diesel exhaust to the mix, and a nearby park and greenbelt will be irrigated with reclaimed sewage water

The six local power plants, operators and reported megawatt capacity (MW) are:

LMEC, Calpine, 750 E. 3rd St., 559 MW; Delta Energy Center, Calpine, 1090 Arcy Lane, 880 MW (under construction); Dow "peaker" plant, Calpine, foot of Loveridge Road, 67 MW; Pittsburg Power Plant, Mirant, off West 10th Street, 2,022 MW, and two GWF plants at 895 E. 3rd St., 19 MW, and 1600-02 Loveridge Road, 17 MW.

The six local power plants, operators and reported megawatt capacity (MW) are:

LMEC, Calpine, 750 E. 3rd St., 559 MW; Delta Energy Center, Calpine, 1090 Arcy Lane, 880 MW (under construction); Dow "peaker" plant, Calpine, foot of Loveridge Road, 67 MW; Pittsburg Power Plant, Mirant, off West 10th Street, 2,022 MW, and two GWF plants at 895 E. 3rd St., 19 MW, and 1600-02 Loveridge Road, 17 MW.

2-1C

Four of the plants burn natural gas. The two GWF plants burn petroleum coke residue from oil refineries.

The New England Journal of Medicine reported Dec.14, 2000 that the level of fine particulate air pollution (PM10) was associated with rates of death in 20 U.S. cities, including San Jose and Oakland, from 1987-94.

Abt Associates, in an October 2000 nationwide study, found that 259 deaths each year in California are attributable to power plant particulates and that power plants and diesel engines make a large contribution to ambient particulate matter and the associated health risks. (Both studies are available at the LMEC file at the CEC and on the Internet.)

There is a gap between regulation and reality that health monitoring could help bridge so that children such as Janay Adams are not put at such terrible risk. Please direct an assistant or agency to help implement the concept. Tomorrow's event then may truly be a celebration for young and old, far and near.

Sincerely, Mike Lengyel

Mike Lengyel
545 Central Avenue
Pittsburg, CA 94565
Email: mlengyel@msn.com

CC Assemblyman Joe Canciamilla
Jeri Scott, CEC, 98-AFC-1C
News Group A
Attachment

RESPONSE TO COMMENTS

Comment Number	Response
2-1A	Comment noted. The proposed TBC Project is a transmission project, not a generation project, and is not affiliated with any present or future generation project. The electricity that would be transported through the proposed cable would come via the Pacific Gas and Electric Company (PG&E) Pittsburg Substation, which is fed by a variety of already-permitted sources depending on the supply and demand in the regional electrical grid at any one point in time. The sources likely include fossil fuel-fired power plants, hydropower, wind, solar, and geothermal as dispatched by the CA Independent System Operator (CAISO). The proposed TBC Project does not have the technical, legal, or regulatory authority to control the type or source of electrical power that is or would be fed into the PG&E Pittsburg Substation and the cable once the Project became operational. The power generation sources that feed the electrical grid in the Bay area, including the PG&E Pittsburg Substation, have all been permitted by applicable regulatory agencies; emissions, as applicable, have already been mitigated in accordance with regulatory requirements. There is sufficient generation in the electrical grid to provide the energy that would be transmitted by the Project. The TBC Project is not expected to encourage or facilitate any new generation projects. The Project is actually expected to reduce demand for generation because of an estimated 20 MW savings in transmission line losses as a result of the proposed Project.
2-1B	Refer to Response 2-1A.
2-1C	Refer to Response 2-1A.

SAN FRANCISCO COMMUNITY POWER COOPERATIVE

WORKING WITH THE COMMUNITY TO SAVE MONEY, ENERGY AND THE ENVIRONMENT

June 19, 2006

RECEIVED
JUN 21 2006
CITY OF PITTSBURG
PLANNING DEPARTMENT

Mr. Ken Strelo
Project Planner
Planning Department
City of Pittsburg
65 Civic Avenue
Pittsburg, California 94565

Re: Trans Bay Cable Project, Draft Environmental Impact Report (DEIR)

Dear Mr. Strelo:

San Francisco Community Power (SF Power) hereby submits the following comments on the above-cited DEIR:

(1) *The draft EIR's screening criteria are tautological.* For example, Screening Criteria Number 1, Project Objectives, indicates that a key objective is increasing transmission system reliability in San Francisco by providing an alternative transmission pathway into the area. This criteria by its very nature reduces the value of potentially more cost-effective and beneficial alternatives to meeting San Francisco's *energy* reliability needs. All else held constant, the impacted parties – San Francisco's residents and businesses – are indifferent as to whether electric system reliability is ensured through generation, transmission, or demand management approaches. These stakeholders simply want appropriate reliability levels. Further, on a megawatt per megawatt basis, multiple, dispersed, non-transmission approaches, such as distributed generation, would provide far more electric reliability capacity than large-scale single projects, such as the Trans Bay Cable (TBC). **3-1**

(2) *The draft EIR's "Alternatives Analysis" is inadequate*, as follows:

- *The draft EIR does not consider transmission alternatives, even though several transmission projects into San Francisco, which have the potential to provide additional capacity at lower cost and with greater benefits than the TBC, have been proposed.* For example, the California Independent System Operator (Cal-ISO) identified a number of transmission alternatives in its 2004-2006 transmission planning study process; and the San Francisco Public Utility Commission has likely examined potential **3-2**

673 KANSAS STREET SAN FRANCISCO, CA 94107 P: 415.643.9578 F: 415.643.9581
WWW.SFPOWER.ORG

3-2 transmission projects as part of its Community Choice Aggregation development plans.

- *The draft EIR does not seriously consider significant alternative in-City electricity capacity sources.* These notably include "distributed energy resources," such as enhanced energy efficiency measures; demand-response programs; load-shifting initiatives; micro-turbines; fuel cells, and small-scale storage devices (e.g., ice machines; compressors; batteries). Available evidence, and City and County of San Francisco energy policies, indicates that an additional 200 MW of DER-related capacity could be obtained by 2010, essentially eliminating the need for the TBC until 2018 or later.

3-3

- *The draft EIR provides an inadequate analysis of solar potential.* The document provides no analytic support for its assertions related to the amount of space required for photovoltaic (PV) facilities; excludes consideration of the large number of public and private sites that would be suitable locations for PV; and implies that solar generation's ability to produce electricity during daylight hours is a significant liability, when under any circumstances over the next decade the only plausible need for the TBC is during peak hours – exactly when solar is likely to be producing the greatest amount of electricity. The draft EIR also mysteriously asserts that solar would induce "the need for overhead or underground transmission interconnection to the electrical grid,"[1] when in fact this is only the case for large projects, and need not present a significant barrier.

3-4

- *The draft EIR provides no analytic basis for its elimination of demand management strategies as a viable alternative.* The draft EIR states that "the development of this [demand management] option is beyond the capability and control of the proponents of the proposed Project"[2] Yet the parties responsible for paying for the project – investor-owned utility ratepayers – are fully able to develop this option, through the same mechanism that will be used to finance the TBC – California Public Utility Commission-endorsed utility rates.[3] Likewise, the draft EIR asserts that "this alternative is likely not a feasible alternative to the Project because available energy savings from DMO programs are insufficient to supply necessary long-term needs" without presenting *any* evidence to support this statement, and with ample data available to indicate the contrary.

3-5

[1] Section A.8.3.5.13.
[2] A.8.3.5.15.
[3] Though the TBC escapes CPUC jurisdiction because of its location in a municipal utility's service territory. As a result, unlike virtually every other significant project paid for by California IOU ratepayers, the TBC will not be subjected to examination by any governmental agency that has at its core mission the protection of energy consumers from economically disadvantageous projects.

- *The draft EIR provides no basis for its elimination of distributed generation (DG) strategies as a viable option.* The draft EIR states that "…it is likely not yet technically feasible to construct and operate sufficient quantity [of DG] to meet project demand"[4] without providing *any* data related to how much demand might have to be met at what date by the TBC, DG, or other energy resources; or any indication that any of the voluminous data developed by the California Energy Commission and others related to DG's cost-effective potential to provide beneficial capacity have been examined. **3-6**

SF Power also notes that the DEIR indicates that the TBC would induce at least one unavoidable adverse impact – the demolition of historic resources in San Francisco (i.e., the last two remaining 1920s Western Sugar Refinery warehouses). These buildings are eligible for the California Register of Historical Resources, and are considered historic resources by the nearby Dogpatch neighborhood, which itself is a historic resource. The DEIR's proposed mitigation measures – taking photographs of the building – would provide virtually no actual mitigation. Photographic images or drawings cannot substitute for a tangible, usable historical asset. **3-7**

Sincerely,

Steven Moss
Executive Director

[4] A.8.3.5.15.

RESPONSE TO COMMENTS

Comment Number	Response
3-1	The proposed TBC Project is a result of an approximately 2-year-long process involving the California Independent System Operator's (CAISO's) San Francisco Stakeholder's Study Group (SFSSG) which identified and assessed various potential solutions to San Francisco's long-term energy and reliability needs. The CAISO SFSSG identified, and the CAISO Board of Governors approved (September 8, 2005), the Trans Bay Cable Project as being the preferred long-term transmission alternative to address the identified reliability concerns in northern San Mateo County and San Francisco beginning in 2012. Please refer to Draft EIR Section 2.0 and Appendix C for more information.
3-2	Section A.8.3 of the Draft EIR considers multiple transmission alternatives for meeting current and projected electricity needs in San Francisco. None of the various transmission alternatives assessed is considered to be capable of meeting all of the Project objectives and the related screening criteria for feasibility and environmental impacts avoidance.
3-3	The Project proponent and the City of Pittsburg are supportive of energy conservation and innovative energy production schemes, including those endorsed by the San Francisco Community Power Cooperative. However, these options are not considered to be capable of meeting the need and objectives of the proposed TBC Project as approved by the CAISO Board of Governors on September 8, 2005 and stated in the Draft EIR.
3-4	The Project proponent and the City of Pittsburg are supportive of renewable energy such as solar power. Section A.8.3.5.13 of the Draft EIR considers renewable energy resources, including solar, among other alternatives for meeting current and projected electricity needs in San Francisco. None of the various transmission alternatives is considered to be capable of meeting all of the Project objectives and the related screening criteria for feasibility and environmental impacts avoidance.
3-5	Demand management techniques consist of planning, implementing, and monitoring of electrical usage of consumers by electrical utilities to influence consumers' level of electrical usage and patterns. The Project proponent and the City of Pittsburg are supportive of this technique to reduce energy usage. However, the ability to implement this strategy is not under the purview of the Project proponent and is not considered to be capable of meeting the need and objectives of the proposed TBC Project as approved by the CAISO Board of Governors on September 8, 2005 and stated in the Draft EIR. Please refer to Section A.8.3.5.14 of the Draft EIR for more information.
3-6	As discussed in the Draft EIR Section A.8.3.5.15, the distributed generation alternative does not meet the specific Project objective of increasing transmission system reliability in San Francisco by providing an alternative transmission pathway into the area. In addition to the CAISO's approval of the Project, the California Energy Commission (CEC) has evaluated the TBC Project and is supportive of the Project as evidenced in their report, "Strategic Transmission Investment Plan" (November, 2005) (see page 87). A copy of the CEC's Strategic Investment Transmission Plan has been added to the Final EIR in Appendix C.

RESPONSE TO COMMENTS

Comment Number	Response
3-7	Comments noted. The Draft EIR recognizes the unavoidable adverse impacts that would occur to historic resources associated with implementation of the Project at the originally considered HWC site on the eastern portion of the overall HWC property in San Francisco. The Draft EIR presents three mitigation measures (i.e., Mitigation Measure CUL-2a, Recording Architectural Resources; CUL-2b, Architectural Resource Interpretive Display and/or Interpretive Material, and CUL-2c, Architectural Resource Salvage Opportunities). Partly in response to comments received from CCSF regarding potential historic resources impacts associated with development of the Project on the existing portion of the HWC property, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station layout to the west on the overall HWC property (HWC [Mitigated] site), thereby completely avoiding direct impacts to the two historic buildings on the eastern portion of the HWC property. Another advantage of the HWC (Mitigated) site is that it allows the proposed 115 kV interconnection to the PG&E Potrero substation to be installed without impacting the Station A complex on the adjacent Mirant Potrero property. This action would not directly or indirectly impact the potential historic district(s) located north of the HWC (Mitigated) site. Refer to Final EIR Section 4.A.7 and Section 3.0 for more information. In response to this comment, a fourth cultural mitigation measure has been added (CUL-2d, Central Waterfront Historic Preservation) and is only applicable to the San Francisco Mirant site alternative. Please refer to Section 13.0 of the Final EIR for applicable text revision.

SAN FRANCISCO COMMUNITY POWER COOPERATIVE

WORKING WITH THE COMMUNITY TO SAVE MONEY, ENERGY AND THE ENVIRONMENT

June 22, 2006

Mr. Ken Strelo
Project Planner
Planning Department
City of Pittsburg
65 Civic Avenue
Pittsburg, California 94565

Re: Trans Bay Cable (TBC) Project, Draft Environmental Impact Report (DEIR)

Dear Mr. Strelo:

I would like to add the following point to San Francisco Community Power's (SF Power) already submitted comments on the above-cited DEIR:

(3) *The draft EIR omits mention of the project's high potential of inducing another unavoidable adverse impact – loss of shoreline access.* It is quite likely that development of the TBC will act to permanently wall-off portions of the Pier 70 shoreline which might otherwise be developed as a pedestrian walkway, bike trail, or other recreational use. This impact is particularly notable given the City and County of San Francisco's long-term plan to develop Pier 70 as a mixed use resource that includes significant shoreline activities. **4-1**

Sincerely,

Steven Moss
Executive Director

673 KANSAS STREET SAN FRANCISCO, CA 94107 P: 415.643.9578 F: 415.643.9581
WWW.SFPOWER.ORG

RESPONSE TO COMMENTS

Comment Number	Response
4-1	Comment noted. The Draft EIR discusses this potentially significant impact to public access to the Bay associated with development of the San Francisco Converter Station at the HWC site in Section 4.8.3.2.2 (Impact LU-1, Potential Conflict with Public Access Improvements; and Mitigation Measure LU-1, Public Access). The Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station layout to the west on the overall HWC property (HWC [Mitigated]) site, thereby completely avoiding this potential impact to public access to the Bay.

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
300 Lakeside Drive, P.O. Box 12688
Oakland, CA 94604-2688
(510) 464-6000

5

RECEIVED

JUN 23 2006

CITY OF PITTSBURG

June 20, 2006

Joel Keller
PRESIDENT

Carole Ward Allen
VICE PRESIDENT

Thomas E. Margro
GENERAL MANAGER

DIRECTORS

Gail Murray
1ST DISTRICT

Joel Keller
2ND DISTRICT

Bob Franklin
3RD DISTRICT

Carole Ward Allen
4TH DISTRICT

Zoyd Luce
5TH DISTRICT

Thomas M. Blalock
6TH DISTRICT

Lynette Sweet
7TH DISTRICT

James Fang
8TH DISTRICT

Tom Radulovich
9TH DISTRICT

Mr. Ken Strelo
City of Pittsburg
Planning Department
Civic Center – 65 Civic Avenue
Pittsburg, CA 94565

RE: Trans Bay Cable Project Draft Environmental Impact Report (SCH# 2004082096)

Dear Mr. Strelo:

Thank you for providing the San Francisco Bay Area Rapid Transit District (BART) with the opportunity to review the environmental document for the City of Pittsburg's Trans Bay Cable Project. The project's approximate 57 mile High Voltage Direct Current (HVDC) utility transmission line that will run under the San Francisco Bay from Pittsburg to San Francisco will cross above the BART Transbay Tube (TBT) that runs under the Bay between Embarcadero and West Oakland Stations. BART's comments on the document are provided below.

Representatives from BART Maintenance & Engineering (M&E) and BART Earthquake Safety Program (ESP) met with Trans Bay Cable Project representatives on two occasions last year to discuss potential project impacts to the BART facilities, specifically, maintenance of the cathodic protection system of the Transbay Tube and the planned seismic retrofit of the Transbay Tube. However, we find that the draft environmental document does not fully address BART's concerns.

The Draft Environmental Impact Report (EIR) does not address the on-going maintenance of the Impressed Current Cathodic Protection of the Steel Skin of the TBT. Currently BART spends an average of about $1 million per year to repair / replace the cables, rectifiers and anodes due to consumption of the anode by the impressed current flow and by damage from the use of anchors by ships despite the TBT being marked as a "No Anchor Zone". Our experience for 30 years is that the anchor damage occurs at all locations along the tunnel and not just in the shallow water, although the latter is more common. During the meetings with the cable project representatives, BART requested that the HVDC cable cross the TBT approximately halfway between the anodes so that the electric charge on the TBT skin, which will be bled off the skin by the proximity of the HVDC cable, will be minimized and BART can keep the charge at an appropriate level to minimize the corrosion of the steel skin. 5-1

Testing in 1994 at approximately 20 locations showed that only 5% of the skin was corroded away in 25 years. Without adequate cathodic protection this rate will be much higher and failure of the skin in certain specific locations will occur long before the expected life of the tunnel has occurred. The cost of replacing the skin would be very high and possibly not even practical. The concrete of the tunnel would then be in salt water and be seriously damaged quite quickly.

5-1 The anodes are placed about 300 feet out roughly perpendicular (+ - 20 degrees) to the tunnel. If the HVDC cable crosses BART's cables then repair of the cables will be impossible as we would be unable to bring the one end of the cable to the surface to splice a section on. This is our normal way of repairing cable damage or replacing a consumed anode. In the deep water where the HVDC cable is proposed, the labor cost of each repair / replacement is between $20,000 to $40,000 per cable. If we can not lift the anode cable end up, a whole new cable would have to be installed crossing over the HVDC cable and the end inserted through the tunnel walls using a complex procedure which entails removing the sediment above the tunnel and threading the cable through a "water lock" to prevent water pouring in to the tunnel. This will likely cost about $100,000 per cable. Thus, it is a significant cost issue for BART M&E to have the HVDC cable crossing as far away from the anodes and their cables as possible.

5-2 The Draft EIR states that the installation of the HVDC cable will be done using a hydro-plow, which we agree is a good method. However, where the cable crosses the TBT this method may damage the skin of the TBT. BART has drawings of the tunnel construction but the depth of cover that is there today will certainly be different from the drawings and this should be addressed in the environmental document. Trans Bay Cable LLC is clearly aware of this, as they have submitted a permit application to BART to determine this.

5-3 The cable design, as shown in Section 3 on Figure 3-4, shows that the Armor (steel wire, presumably) around the positive and negative cables has an outer serving of "String". This is likely adequate for most of the route. However when there is a cable fault, the fault current will return in this Armor. With only a String Serving, much of the current will likely flow into the Steel Skin of the TBT and possibly damage it. Accordingly, BART requires that insulation be installed between the cable and the TBT for 50 feet on either side of the TBT to reduce the current in the TBT skin to a minimal amount. This was discussed in one of the meetings with the project proponents and they indicated that it would not be problem. So we are surprised this was not addressed in the Draft EIR.

5-4 As noted in the Draft EIR, implementation of BART's seismic retrofit of the TBT may or may not coincide with construction of the proposed cable installation in the area of the Transbay Tube. BART would like some discussion in the environmental document of the minimum safe distance from the cable for installation of earthquake retrofits (specifically stone columns, since the proposed crossing area appears to be within the zone where we will have to utilize stone columns). It has been pointed out that the cable needs to be located midway between two anodes; Earthquake Safety Program will need to install at least some stone columns between the anodes and the cable to avoid having too large a gap in the Tube retrofit treatment. We are trying to hold our retrofit "gaps" to no more than 80-100 feet, so the spacing between the cable and the adjacent anodes will be critical.

5-5 In addition to the recommendation that the cable be placed in a certain location, BART might consider an option of moving one or two anodes, at the Trans Bay Cable Project's expense. Moving the exit point from the TBT is not practical as BART would have to move the rectifier unit in the lower gallery, the water tight penetration of the tube for the cable, install new cable and anode. However, some relocation of the anode is certainly possible but would likely be limited to approximately 50 feet parallel to the TBT and the cable could also lengthened by 50 feet as well. The cost of such a move is pretty high, but it might not be so bad in the context of this very large project. BART will work with the Tranbay Cable Project staff to further define an adequate crossing location and a minimum separation distance between anode and cable.

BART is also a Rail Facility but this is not mentioned in Section 4.10.1.4 with the other rail facilities in the area. 5-6

The Trans Bay Cable Project will require a permit from BART to enter into construction within BART's right of way as well as an agreement to allow for long-term maintenance of the HVDC cable. 5-7

In summary, BART recognizes the need for this project and the concept of installing the cable over the BART Transbay Tube is not a problem, however, the above issues need to be recognized and addressed. 5-8

Please contact Mr. Tom Horton, Earthquake Safety Program Group Manager at (510) 287-4978 or Mr. Roger Avery, Manager, Mechanical and Electrical Engineering at (510) 464-6685 regarding BART's comments on the Transbay Cable Project.

Sincerely,

Janie L. Layton
BART Environmental Compliance
System Safety Department

cc: Tom Horton, BART
Roger Avery, BART
Les Freleigh, /BART

RESPONSE TO COMMENTS

Comment Number	Response
5-1	As noted in the comment letter, the Project proponent has met with BART representatives several times to discuss issues associated with the proposed Trans Bay Cable crossing of BART. In response to input from BART representatives the study corridor for the Trans Bay Cable location where it crosses BART was substantially widened (please refer to Map A.2-1, Sheet 1 of 10, in Appendix A of the Draft EIR and Section 3.0 of the Final EIR) to allow flexibility in the final siting of the crossing point. The Project proponent will continue to work with BART representatives to address BART's concerns, including the final selection of an appropriate crossing location and needed measures to protect the cathodic protection system for the steel skin on the BART tube in the Bay. The Project proponent understands the importance of avoiding impacts to the BART tube and will work with BART to develop measures that will avoid adverse impacts to the BART system. The final location of the submarine DC cable in the area of the BART tube will be determined in part by the location of the existing BART tube cathodic protection system. The cable will be buried a safe distance from anode beds and well above the top of the tube. BART has provided the Project proponent with maps showing the location of the tube and the anode beds. The BART tube cathodic protection system would remain intact and would continue to provide cathodic protection to the tube's steel skin.
5-2	Comments noted. Prior to construction of the Trans Bay Cable in the Bay, a detailed geophysical survey would be conducted. The geophysical survey will verify the estimated depth of cover over the BART tube in the study corridor. The information gained from the geophysical survey will be shared with BART representatives and an appropriate crossing location and cable-tube separation distance will be developed in consultation with BART representatives. The proposed submarine cable crossing of the BART tube is shown on Map A.2-1, Sheet 1 of 10, of the Final EIR. Based on data provided to the Project proponent by BART representatives, the depth of cover at the proposed crossing point is sufficient to safely accommodate appropriate separation between the cable and the BART tube.
5-3	Comment noted. The Project proponent is aware of BART's concern regarding potential Trans Bay Cable-related electrical current impacts to the protective steel skin over the BART tube. As part of the final engineering phase of the Project, the Project proponent will work with BART engineers to evaluate and determine if additional protection between the tube and the cable is appropriate.
5-4	Comment noted. The Project proponent is cognizant of BART's concern regarding potential Trans Bay Cable conflicts with BART's planned seismic retrofit project. As part of the final engineering phase of the Project, the Project proponent will work with BART engineers to precisely locate the Trans Bay Cable where it crosses the BART tube so as to maximize the spacing between the cable, BART's anodes, and BART's contemplated stone columns associated with the forthcoming seismic retrofit program. The cable routing study area in the location were the DC cable crosses the BART tube was expanded to accommodate optimal location of the cable. The Project proponent has met with BART, and their consultants on the tube's seismic retrofit project, to discuss the ongoing BART Program and the coordination that will be provided by both TBC and BART. Pending BART's review of detailed cable location plans and the ensuing coordination of detailed activities, the seismic retrofit program and the installation of the DC cable are considered compatible projects.

RESPONSE TO COMMENTS

Comment Number	Response
5-5	Comment noted. The Project proponent is aware that one or two anodes may need to be relocated to accommodate the Trans Bay Cable crossing of the BART tube and that there would be a cost associated with any such anode relocation that was directly attributable to the TBC Project. If one or two anodes require relocation as a direct result of cable-laying operations, it is reasonable that TBC would absorb the expense.
5-6	Comment noted. Section 4.10.1.4 of the Draft EIR has been revised to address BART as a regional passenger rail service in the Bay area. Please refer to the new Section 13.0 of the Final EIR for applicable text revision.
5-7	Comment noted. Table 2-1 (Potentially Required Permits and Approvals for the Trans Bay Cable Project) in the Draft EIR recognizes the need to obtain permits/approvals from BART for the Trans Bay Cable crossing of the BART tube in San Francisco Bay. There are no long-term periodic HVDC cable maintenance requirements. The only time a permit would be required was if there was a break in the HVDC cable which is considered to be an unlikely event.
5-8	Comment noted. The City of Pittsburg as CEQA Lead Agency appreciates BART's review of the Draft EIR as it relates to the proposed Trans Bay Cable crossing of the BART tube. The majority of BART's expressed concerns relate to engineering issues. The Project proponent will continue to work with BART representatives to address BART's concerns.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

June 26, 2006

RECEIVED
JUN 29 2006
PLANNING DIVISION
PLANNING AND BUILDING DEPT
CITY OF PITTSBURG

Ken Strelo
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565-3814

Subject: Trans Bay Cable Project
SCH#: 2004082096

Dear Ken Strelo:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on June 23, 2006, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2004082096
Project Title Trans Bay Cable Project
Lead Agency Pittsburg, City of

Type EIR Draft EIR

Description Installation of an approximately 57 - mile long high Voltage Direct Current cable below San Francisco Bay from a terminus in Pittsburg to a terminus in San Francisco, construction of an associated station in Pittsburg to convert High Voltage Alternating Current to High Voltage Direct Current for transmission through the cable and another station in San Francisco to cover High Voltage Direct Current received from the cable to High Voltage Alternating Current for use in the existing land-based transmission network via substation interconnections, and long-term operation of the cable and converter stations.

Lead Agency Contact

Name Ken Strelo
Agency City of Pittsburg
Phone 925.252.4920 **Fax**
email
Address 65 Civic Avenue
City Pittsburg **State** CA **Zip** 94565-3814

Project Location

County Contra Costa, San Francisco
City Pittsburg, San Francisco
Region
Cross Streets Pittsburg: Loveridge Road/Pittsburg-Antioch Highway; SF:23rd St./Illinois St.
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways SR4, I-280, 101, I-80
Airports
Railways Pittsburg: BNSF, UPRR
Waterways San Francisco Bay to New York Slough
Schools MDUSD, AUSD, PUSD, SFUSD
Land Use Pittsburg: "IG" General Industrial, San Francisco: "M-2" Heavy Industrial

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Public Services; Schools/Universities; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects; Other Issues

Reviewing Agencies Resources Agency; Department of Boating and Waterways; Department of Fish and Game, Region 3; Delta Protection Commission; Office of Historic Preservation; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Air Resources Board, Major Industrial Projects; Integrated Waste Management Board; Regional Water Quality Control Board, Region 2; Department of Toxic Substances Control; California Energy Commission; Native American Heritage Commission; Public Utilities Commission; State Lands Commission

Date Received 05/10/2006 **Start of Review** 05/10/2006 **End of Review** 06/23/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5505
FAX (510) 286-5559
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June 21, 2006

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CC-Various
SCH2004082096

Clear 6.23.06 C

Mr. Ken Strelo
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Strelo:

Trans Bay Cable Project – Draft Environmental Impact Report

Thank you for including the California Department of Transportation (Department) in the environmental review process for the Trans Bay Cable Project. We have reviewed the Draft Environmental Impact Report (DEIR) and have the following comments to offer:

Toll Bridges

1) The project sponsor needs to coordinate closely with the Department to ensure that their construction timeline does not interfere with demolition of the old Carquinez Bridge and the construction of the Benicia-Martinez Bridge. 6-1

2) Please provide information as to how close the new cable and trench will come to the four affected toll bridges footings and piers. We are concerned that the cable not infringe on the State's bridge scour protection system. Currently, there are submerged pier scour protection systems, such as riprap or large boulders, around most of the Richmond-San Rafael Bridge piers. To further protect the pier foundations, depending on the bay water current condition, the Department on occasion increases the amount of riprap. 6-2

3) As for the other toll bridges that the Trans Bay Cable would be crossing, such as the Benicia-Martinez, Carquinez, and Bay Bridge, there is a potential need to install this kind of protection system as well. We recommend that the Trans Bay Cable Project's sponsor coordinate closely with the Department so that our future bridge scour protection system and the Trans Bay Cable installations are not damaged. 6-3

6-4 4) In addition, any alternatives that may impact the State's facilities, including, but not limited to bridges, highways, appurtenant facilities, mitigation and restoration sites, public access facilities should be carefully coordinated with the Department. Any impacts to these facilities and uses should be avoided and minimized.

Encroachment Permit

6-5 An encroachment permit must be obtained for each crossing under the toll bridges. Since the project crosses the Bay Bridge, Richmond-San Rafael Bridge, Carquinez Bridge, and Benicia-Martinez Bridge, the project will require four separate encroachment permits for the final approval. See the following website link for more information: http://www.dot.ca.gov/hq/traffops/developserv/permits/

To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans (in metric units) which clearly indicate State Right of Way to:

Department of Transportation
Office of Permits
111 Grand Avenue, 6th Floor
Oakland, CA 94612

Environmental Planning – Biology

6-5 Please be aware that sediment disruption creates turbidity conditions that can affect species of concern during construction, such as eelgrass, Delta smelt and winter to spring spawning, herring and spawning season, and salmon winter, spring and fall spawning times. The Martinez Shoreline mitigation site appears to be in the 500-meter buffer zone.

We look forward in reviewing future environmental documents for this project. Please call Christian Bushong of my staff at (510) 286-5606 if you have any questions.

Sincerely,

TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

c: State Clearinghouse

RESPONSE TO COMMENTS

Comment Number	Response
6-1	The Project proponent will coordinate closely with the California Department of Transportation (Caltrans) representatives prior to installation of the proposed submarine cable to ensure that potential conflicts with Caltrans bridge projects do not occur. Installation of the proposed submarine cable is expected to require a total of 4 to 5 months in the Bay over its approximately 53-mile length. The cable will be installed in the Bay at a rate of 1 to 3 miles per day. The cable-laying operation under the Benicia-Martinez Bridge would be a matter of hours. Installation of the submarine cable is currently anticipated to begin in mid- to late-2008. The EIR for the Trans Bay Cable Project assumes that Caltrans projects involving demolition of the old Carquinez Bridge and the construction of the new Benicia-Martinez Bridge would be completed prior to installation of the cable in the Bay.
6-2	Comments noted. The Project proponent will coordinate closely with Caltrans representatives prior to installation of the proposed submarine cable to ensure that potential conflicts with Caltrans bridge piers and associated scour protection systems do not occur. The location of the cable will exceed the minimum Caltrans separation distance of 25 feet to the nearest bridge foundation or scour structures.
6-3	Refer to Response 6-2.
6-4	Comment noted. The proposed TBC Project does not include any alternatives with the potential to impact Caltrans facilities beyond those identified in the Draft EIR for the proposed Project (e.g., transport of oversize loads during the construction phase).
6-5	Comment noted. Table 2-1 (Potentially Required Permits and Approvals for the Trans Bay Cable Project) in the Draft EIR recognizes the potential need to obtain encroachment permits/approvals from Caltrans. The Encroachment Permit Application was submitted to the California Department of Transportation (Caltrans) in August 2006. The Project proponent will coordinate with Caltrans and obtain the required permits (e.g., encroachment and oversize load permits) from Caltrans prior to construction.
6-6	Comments noted. As discussed in Section 4.4 (Water Quality) of the Draft EIR, the cable-laying operation is expected to result in a very localized sediment plume that would not be expected to significantly impact water quality. Installation of the cable could potentially suspend approximately 6,220 to 12,440 cubic yards of sediment over the entire 53-mile submarine cable Project area. This would amount to about 117 to 235 cubic yards of suspended sediment material per mile. This amount of suspended material is small compared with the volume of sediment resuspended in the Bay by the tides or wind. The turbidity plume expected from this operation would be localized and small, and would be temporary. Fish species inhabiting the Bay and estuarine species such as delta smelt are well adapted to the natural condition of relatively high turbidity found in the Bay. It is expected that adult and juvenile fish would react to the temporary disturbance of the cable-laying operation similarly to other mobile organisms as described in Section 4.6.3.2.4 in the Draft EIR, that is, they would tend to exhibit behavioral avoidance of the immediate area of increased turbidity and activity during the cable-laying operation. Eelgrass beds have been specifically avoided in determining the cable route, thus the small amount localized suspended sediment increase is not expected to reach or impact eelgrass beds. Similarly, localized, temporary increases in suspended sediments are not expected to significantly impact the Martinez Shoreline mitigation site.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
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Sean Walsh
Director

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JUN 29 2006

CITY OF PITTSBURG
PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

June 26, 2006

Ken Strelo
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565-3814

Subject: Trans Bay Cable Project
SCH#: 2004082096

Dear Ken Strelo:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on June 23, 2006. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2004082096) when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

DELTA PROTECTION COMMISSION
14215 RIVER ROAD
P.O. BOX 530
WALNUT GROVE, CA 95690
Phone (916) 776-2290
FAX (916) 776-2293
E-Mail: dpc@citlink.net Home Page: www.delta.ca.gov

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STATE CLEARING HOUSE

June 22, 2006

Scott Morgan
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

SUBJECT: Draft Environmental Impact Report for Trans Bay Cable Project (SCH # 2004082096)

Dear Mr. Morgan,

The staff of the Delta Protection Commission (Commission) has reviewed the subject document dated May 10, 2006. From the information provided, staff has determined that components of the proposed project are located within both the Primary and Secondary Zones of the Legal Delta. Actions for approval or denial of projects in the Primary Zone are subject to appeal to the Commission for consistency with the Commission's Land Use & Resource Management Plan for the Primary Zone of the Delta (Management Plan), while actions in the Secondary Zone are not subject to appeal to the Commission. However, environmental analysis of the proposed project should address any potential impacts to the resources of the Primary Zone resulting from activities in the Secondary Zone and outside of the Legal Delta.

7-1 The Delta Protection Act (Act) was enacted in 1992 in recognition of the increasing threats to the resources of the Primary Zone of the Delta from urban and suburban encroachment having the potential to impact agriculture, wildlife habitat, and recreation uses. Pursuant to the Act, the Commission's Management Plan was completed and adopted by the Commission in 1995 (updated in 2002). Both documents are available for your reference at the Commission's website, www.delta.ca.gov.

The Management Plan sets out findings, policies, and recommendations resulting from background studies in the areas of environment, utilities and infrastructure, land use, agriculture, water, recreation and access, levees, and marine patrol/boater education/safety programs. As mandated by the Act, the policies of the Management Plan are incorporated in the General Plans of local entities having jurisdiction within the Primary Zone, including Contra Costa County.

7-2 Based on the information provided to the Commission, it appears that there is the potential for activities relative to the proposed project to impact the resources of the Primary Zone, particularly with respect to the following sections of the Management Plan:

Utilities & Infrastructure

- Policy 1: Impacts associated with construction of transmission lines and utilities can be mitigated by locating new construction in existing utility or transportation corridors, or along property lines, and by minimizing construction impacts. Before new transmission lines are constructed, the utility should determine if an existing line has available capacity. Pipelines in utility corridors or existing rights-of-way shall be buried to avoid adverse impacts to terrestrial wildlife. Utilities shall be designed and constructed to minimize any detrimental effect on levee integrity or maintenance. 7-2
- Policy 5: Surface transportation in the Delta can be dangerous and congested. Roads within the Delta shall be maintained to serve the existing agricultural uses and supporting commercial uses, recreational users, and Delta residents. 7-3
- Recommendation 5: CalTrans should designate, through appropriate signage, those roadways which are used to transport agricultural equipment and slow-moving vehicles.

Land Use

- Policy 3: New residential, recreational, commercial, or industrial development shall ensure that appropriate buffer areas are provided by those proposing new development to prevent conflicts between any proposed use and existing use. Buffers may include berms and vegetation, as well as setbacks of 500 to 1,000 feet. 7-4
- Recommendation 5: To the extent possible, any development in the Secondary Zone should include an appropriate buffer zone to prevent impacts of such development on the lands in the Primary Zone.

Water

- Policy 1: Local governments shall ensure that salinity in Delta waters allows full agricultural use of Delta agricultural lands, provide habitat for aquatic life, and meet requirements for drinking water and industrial uses.
- Recommendation 2: Delta water rights should be respected and protected. 7-5
- Recommendation 6: Water quality monitoring programs should measure Delta waters to ensure they meet water-contact recreation and other water quality standards.
- Recommendation 8: Water quality at Delta drinking water intakes should be maintained or enhanced.

Thank you for the opportunity to provide input into this process. Please contact me at (916) 776-2292 or lindadpc@citlink.net if you have any questions about the Commission or the comments provided herein.

Sincerely,

Linda Fiack
Executive Director

cc: Chair, Contra Costa County Board of Supervisors
Ken Strelo, City of Pittsburg

RESPONSE TO COMMENTS

Comment Number	Response
7-1	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates the Delta Protection Commission's review and comments on the Draft EIR for the proposed TBC Project. The City of Pittsburg recognizes that onshore and offshore components of the Project fall within Primary and Secondary Zones established by the Delta Protection Commission. The Commission established the Land Use and Resource Management Plan for the Primary Zone pursuant to the Delta Protection Act. The Delta Protection Commission is not a permitting agency; however, the Commission has appeal authority over local government actions for projects in the Primary Zone. Thus, if the Commission finds the local government action is not in conformance with the Act and Plan, the Commission will forward its findings to the local government for further review. The proposed Project conforms with the Land Use and Resource Management Plan. Please refer to Responses 7-2 through 7-5 for specific responses to each of the policies referenced in the comment letter.
7-2	Comment noted. The need and objectives of the proposed TBC Project are discussed in Section 2.0 of the Draft EIR. The proposed Project has been approved by the CAISO Board of Governors and is supported by the CEC (refer to Response 3-6 and Appendix C of this Final EIR. As discussed in Section A.8.3 of the Draft EIR, all alternative transmission routes involving existing utility corridors and/or existing rights-of-way were determined to be infeasible or incapable of meeting the Project's objectives. As proposed, the cable would be buried both onshore and offshore in the "Delta" portion of the proposed Project. The proposed Project would not affect any levees in the Delta. Accordingly, the proposed TBC Project is determined to be consistent with Policy 1 of the Commission's Management Plan.
7-3	Comments noted. The proposed Project is not expected to impact any roads in the "Delta". As discussed in Section 4.10 of the Draft EIR, Traffic and Transportation, the proposed Project would utilize State Highway 4 and local roadways in the City of Pittsburg on the eastern end of the Project in the general vicinity of the Delta. There does not appear to be any nexus between Policy 5 of the Commission's Management Plan and the proposed Trans Bay Cable Project. "Recommendation 5" as stated in the comment letter pertains to actions that should be taken by Caltrans and are unrelated to the proposed Project.
7-4	Comment noted. The portion of the proposed TBC Project in Pittsburg and Contra Costa County would conform with all applicable setback/buffer requirements of the local jurisdictions. Please refer to Sections 4.8, 5.4.8, 5.5.8, and 5.6.8 of the Draft EIR for more information.
7-5	Comments noted. The proposed TBC Project would not affect Policy 1 nor Recommendations 2, 6, and 8 (Water Quality) relative to salinity, water rights, or water quality in the Delta, thus the proposed TBC Project appears to be consistent with this policy and associated recommendations. Please refer to Draft EIR Section 4.4, Water Resources and Quality, for more information.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

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JUN 29 2006

CITY OF PITTSBURG
PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

June 26, 2006

Ken Strelo
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565-3814

Subject: Trans Bay Cable Project
SCH#: 2004082096

Dear Ken Strelo:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on June 23, 2006. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2004082096) when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
Relay Service From TDD Phone **1-800-735-2929**
from Voice Phone **1-800-735-2922**

Contact Phone: **(916) 574-1890**
Contact FAX: **(916) 574-1885**

June 22, 2006

File Ref: SCH# 2004082096

Ms. Nadell Gayou
The Resources Agency
901 P Street
Sacramento, CA 95814

City of Pittsburg
ATTN: Ken Strelo
65 Civic Avenue
Pittsburg, CA 94565

RECEIVED
PITTSBURG
PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

Dear Ms. Gayou and Mr. Strelo:

Subject: **Trans Bay Cable Draft Environmental Impact Report (EIR)**

Staff of the California State Lands Commission (CSLC) has received the above referenced draft EIR. Under the California Environmental Quality Act (CEQA), the City of Pittsburg is the Lead Agency and the CSLC is a Responsible and/or Trustee Agency for any and all projects which could directly or indirectly affect sovereign lands, their accompanying Public Trust resources or uses, and the public easement in navigable waters.

The State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes which include waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. The landward boundaries of the State's sovereign interests are generally based upon the ordinary high water marks of these waterways as they last naturally existed. Thus, such boundaries may not be readily apparent from present day site inspections. The State's sovereign interests are under the jurisdiction of the CSLC. An application has been received from Trans Bay Cable LLC, for this project.

RECEIVED
JUN 26 2006
CITY OF PITTSBURG
PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

General Comments:

1. Of particular concern are the wetland alterations mentioned under Impact TBIO-3 and the mitigation measure listed as TBIO-3d. In short, the potential alterations to and filling of wetland and stream areas are not adequately described. 8-2

2. In addition, the DEIR makes mention, in TBIO-2a and TBIO-3b, of temporary fencing used to protect sensitive areas as a mitigation measure, but the removal of said fencing is only implied. All temporary construction materials should be explicitly removed from around sensitive areas, leaving such areas in as close in condition as possible to what they were prior to arrival. 8-3

3. Also, in relation to the visual impact mitigation planned for the San Francisco and Pittsburg facilities (listed as VIS-1b, VIS-1c and VIS-3), the staff of the CSLC recommends the use of native or endemic plants for any planned landscaping. It is believed that the establishment even of small communities of native flora can provide a long-term enhancement to the general area. Over time, new sources of native seeds can help establish colonies in a wide area around their origin, and thus would help to enhance the general areas of these sites. 8-4

4. The Peaker Power Project needs to be described within the cumulative impacts section. It is already described in Section A.8.3.5.12 as a complementary project occurring within close proximity and timing to the Trans-Bay Cable project, and is also mentioned in the TRAFFIC-4 impact. No significant cumulative impacts are necessarily suspected, but the project and any reasonably foreseeable cumulative impacts must be described to a reasonable extent within section 7 of the DEIR. 8-5

5. There are two potential concerns that need to be addressed concerning the heat generated by the buried 400W cable. Though Section 4.6.3.3.2 is in most ways thorough, the equations there and in Appendix F do not take into account upward flow of heated water and assumes radiated heat is equivalent in all directions. The upward bias that should be represented may well be negligible, but should be examined. Additionally and possibly more critically, bacteria and similar organism populations may still be influenced by localized heat if water is exchanged between areas (that is, heated areas near the cable may become a breeding ground for simple organisms that may then migrate elsewhere). Again, chance of impact may still be negligible, but if there is any interchange between heated and unheated areas it bears serious consideration given the marine presence of potentially hazardous organisms such as cholera bacteria and toxic dinoflagellates. 8-6

6. There is also some concern regarding the toxic and hazardous substances likely to be encountered by workers during the project's implementation, listed most completely in Tables 4.14-1 and 4.14-2. As is, the DEIR does not fully address worker and public safety when the mitigation of toxics is discussed in that section. Proper safety equipment needs to be provided along with worker training, and particular care 8-7

must be taken if the hazards are such that certified personnel are required (OSHA or otherwise). Additionally, as an issue of jobsite safety, appropriate warning and hazard signs should be posted as a precaution both for workers and for the general public. 8-7

7. There are also some issues with the noise generated by the San Francisco facility during its operation, insofar as it is described within the DEIR. Although noise levels are demonstrated to be acceptable within an M-1 zone, no specific projection of ambient noise levels at nearby R zones is presented. This is surprising given the noise samples taken at ST-3 and ST-4 as listed on Table 4.11-2, which would imply that an impact of some amount is expected at nearby residential areas. If there would be no resultant change to noise levels at those locations, it needs to be explicitly shown how such a conclusion is reached, particularly to demonstrate that any and all overlapping local, State and Federal regulatory requirements are met. (For example, this may be as simple as showing by equation that an expectable noise at the property line will decay to allowed values before residential areas are reached, which the noise contour maps in Appendix G seem to indicate, but do not explicitly show). Also, the current use in a few places of an averaged statistic for day and night combined noise values should be avoided in favor of showing day, evening and night values separately, owing to the distinctions in regulatory levels at different times. 8-8

Specific Comments:

A brief review of the Trans Bay Cable Draft Environmental Impact Report by the CSLC engineering staff yields the additional following geotechnical and geophysical issues that require further clarification.

1. Page 4.3-6: Pittsburg-Kirby Hills Fault: Please expand the discussion by indicating the reason for the fault rupture hazard investigation conducted at Mariner Walk (1.1 miles west of Standard Oil site), and please indicate what observations were recorded. Does the field evidence indicate that the fault is inactive or was the evidence inconclusive? 8-9
2. Page 4.3-11: Offshore DC Cable Route: Proximity to mineral resources is not recognized. Is the cable route located within or adjacent to present or potential State-owned mineral resources (including sand and gravel deposits)? Please define mitigative measures to avoid State's potential loss of income and use of strategically located and valuable mineral resources. 8-10
3. Page 4.3-15: Mitigation Measure GEO-2:
    a. ...site would be reviewed *by a California Licensed Engineering Geologist* (please add) to identify areas.... 8-11
    b. The Asbestos Dust Mitigation Plan would address the following:
        i. *Identification, by a California Licensed Geologist, of asbestos-form minerals and particulate size that are expected to be present and asbestos-form minerals and particulate size actually encountered.* (Please add). 8-12

If there are any questions about the concerns listed in this letter, please contact Nanci Smith via email at smithn@slc.ca.gov or by telephone at (916) 574-1862. Thank you for reviewing our comments, and we look forward to the Trans Bay Cable final EIR.

Sincerely,

Marina R. Brand

Marina R. Brand, Assistant Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044

Nanci Smith, CSLC
Peter Strait, CSLC
Richard Greenwood, CSLC MRM Longbeach

RESPONSE TO COMMENTS

Comment Number	Response
8-1	Comment noted. The City of Pittsburg as CEQA Lead Agency appreciates the California State Lands Commission (SLC) review and comments on the Draft EIR for the proposed TBC Project, including those portions of the Project under the Commission's jurisdiction.
8-2	Comments noted. As discussed in Draft EIR Section 1.3.5, the Pittsburg Standard Oil Converter Station site and associated ancillary facilities is not the preferable site in Pittsburg from an environmental perspective. Accordingly, the Project proponent has specified the West Tenth Street Alternative 1 site as its proposed site. As noted in the Final EIR, the previously proposed Standard Oil Converter Station site and associated ancillary facilities has been dropped from further consideration. Therefore, the various environmental impact, mitigation, and permitting issues associated with the Standard Oil site are no longer applicable to the TBC Project. Potentially significant impact TBIO-3 and associated mitigation measure TBIO-3d as discussed in the Draft EIR only applied to the Standard Oil site.
8-3	Comments noted. Please refer to Response 8-2.
8-4	Comment noted. As discussed in Draft EIR Section 4.13.3, the specific landscaping plans and plants to be utilized for the converter station sites will be determined and submitted for review and approval by the local jurisdictions (i.e., City and County of San Francisco [CCSF] and City of Pittsburg) prior to final planning approvals. The selected landscaping plans and plant lists will take into consideration local agency requirements and preferences, visual screening feasibility, and site-specific space constraints.
8-5	Comment noted. The Draft EIR for the Trans Bay Cable Project addresses potential cumulative impacts with the proposed San Francisco Electric Reliability Project in Section 7.2.3.2.2. In summary, with implementation of required project-specific mitigation measures for both projects, no significant long-term cumulative impacts would be expected to occur.
8-6	This response addresses the comment that the analysis presented in Draft EIR Section 4.6.3.3.2 does not include the potential upward flow of heated water and assumes the heat is radiated uniformly in all directions. Heat was assumed to radiate from the cable equally in all directions. This is a reasonable assumption since the cable is assumed to have the same temperature throughout. However, the flow of heat was not assumed to travel equally in all directions as it would flow primarily upwards towards the cooler water of the Bay. The cable would heat up the water and soil surrounding the cable. In Section 4.6.3.3.2 of the Draft EIR a discussion is provided describing how heat would be conducted away from the cable causing a heating of the surrounding soil and possibly water in the Bay above the cable. Since warm water is less dense than cool water, heating of the water by the cable could cause the water to rise or flow upward due to the density difference. If water did flow upwards then this water would be replaced by cooler water sinking from the Bay. This phenomenon is termed free convection. Free convection can occur in groundwater when the buoyant forces are large enough to overcome the viscous forces due to the resistance to flow through the soil matrix. The Rayleigh Number (Ra) is a non-dimensional number similar to the Reynolds number that relates these forces to each other. For conditions where the Ra is less than a critical value heat flow is by conduction only (i.e., buoyant forces due to a temperature gradient are not sufficient to overcome viscous forces). For cases where the Ra is greater than the critical value, convection can occur. The critical value for the onset of convection is specific to the boundary conditions of the problem being studied. The critical Ra for the case of a buried heated cable in a semi-infinite media with a permeable upper boundary is unknown. However, the order of magnitude of the value may be similar to the critical value for other conditions. The critical Ra for the case of a finite media with a fixed temperature at impermeable upper and lower boundaries is about 40. For the case with fixed temperatures at a permeable upper layer and impermeable lower layer the critical value is 27.1 (Tan and

RESPONSE TO COMMENTS

Comment Number	Response

Torng, 1999). The same value holds for the case where one boundary has a constant heat flux instead of constant temperature. Based on these considerations, it can be expected that the critical Ra for the buried cable condition is on the order of 1 to 10.

For the case of a homogeneous isotropic porous medium the Ra is defined as (Pestov, 2000):

$$Ra = \frac{\rho g \beta \kappa H \Delta T}{\mu \alpha} \qquad (1)$$

where:

ρ = density of water (1022 kg/m^3)

β = thermal expansion coefficient (0.000214 /°C @ 15°C)

κ = intrinsic permeability of the porous media (m^2)

Intrinsic permeability is related to the hydraulic conductivity of the porous media by the Equation:

$\kappa = K_h \mu / \rho g$

μ = dynamic viscosity (0.001166 N/m^2)

α = thermal diffusivity (m^2/s)

The thermal diffusivity is calculated from the thermal conductivity using the following equation:

$\alpha = K_t / \rho cp$

K_h = hydraulic conductivity of the porous media (1x10^{-6} m/s, for silty, sandy soil; Bay mud would be much lower)

K_t = thermal conductivity of the porous media (1.5 W/mK)

Cp = specific heat capacity (3906 Ws/KgK)

The values assigned to the above parameters are the same as used in Section 4.6.3.3.2 of the Draft EIR. Using the above values the Ra is 0.146. This is likely below the critical Ra so little or no convective transport of heat is expected.

An estimate of the potential flow rate can still be made based on the Darcy's Law and the difference in hydraulic head due to the density differences between water near the cable and water near the surface. This would likely overestimate the actual flow rate as the water would cool as it rose towards the Bay. This calculation was made using the following assumptions:

- 40°C temperature difference between cable and Bay
- Salinity varies from 10 ppt to 30 ppt
- Depth to the cable is 4.5 feet
- Depth of the Bay is 30 feet

The hydraulic gradient due to the density difference between water around the cable and water in the Bay is then:

$$\frac{\Delta h}{\Delta L} = \frac{h_B}{h_p}\left(\frac{\rho_B}{\rho_p} - 1\right) \qquad (2)$$

RESPONSE TO COMMENTS

Comment Number	Response
	where: $\Delta h/\Delta L$ = hydraulic gradient = change in hydraulic head over distance L h_B = depth of Bay above pipe h_p = depth of pipe below bed of Bay ρ_B = density of Bay water ρ_p = density of water around cable Using this gradient in Darcy's Law the flow rate can be estimated as follows: $Q = AK_h\Delta h/\Delta L$ (3) Where: Q = flow rate in m^3/s A = area (m^2) Using the values for the parameters from above the estimated flow rate into the Bay is $1.35x10^{-4}$ gpm/ft^2. This flow rate, if it were to occur, would be imperceptible. Based on the calculation provided in Appendix F of the Draft EIR and in response to this comment, heat exchange in the Bay environment would not be significant. Toxic dinoflagellates that can occur in the Bay are planktonic forms and not benthic forms. Even if growth of these organisms were stimulated by warmer water, no heating of the Bay water would occur due to the Project. Some forms of cholera (*Vibrio cholerae*) have been found in Chesapeake Bay, and *Pasteurella multocida* which cause avian cholera, has been found in wetlands on the west coast. No studies were located with regard to the presence of cholera bacteria in San Francisco Bay sediments. Though deeper sediments may be slightly warmed by the operation of the cable, sediments would not be slightly warmed near the surface where this bacteria, if present, might be found. In summary, no Project-related impacts due to heat effects on toxic dinoflagellates, cholera bacteria, etc. would be expected to occur. **References:** Pestov, Irene. 2000 *Numerical Techniques for Simulating Groundwater Flow in the Presence of Temperature Gradients.* ANZIAM *(*Australian and New Zealand Industrial and Applied Mathematics, Division of Australian Mathematical Society) Vol 42. pp C1114-1136. Tan, Ka Kheng and SAM Torng. 1999. Simulation of the Onset of Transient Convection in Porous Media Under Fixed Surface Temperature Boundary Condition. Second International Conference on CFD in the Minerals and Process Industries CSIRO, Melbourne, Australia. 6-8 December 1999.
8-7	Comment noted. More specifically, these contaminants are addressed in the following Mitigation Measures. • HAZ-2: Soil Removal Protocols • HAZ-6: Construction-phase Dust and Volatilization of Contaminants • HAZ-7: Contaminated Groundwater Control At the time the Draft EIR was developed, no Phase II soil and groundwater investigations had been completed on either of the sites proposed at that time. Therefore, the site contaminants, concentration

RESPONSE TO COMMENTS

Comment Number	Response
	levels, areal extent, and depths were not known. The following worker and public safety precautions were discussed in the mitigation measures: dust control; dust control monitoring; offsite disposal of characterized soil in appropriate offsite locations; the need to cover contaminated soil piles and contaminated soil transport trucks; the transportation requirements for contaminated soils; the use of OSHA-trained personnel for hazardous waste handling; the use of hazardous waste transporters for hazardous waste transport, storage, sampling, and analysis of contaminated groundwater; the treatment of contaminated groundwater; and obtaining permits to dispose of treated groundwater. To address the issues that may come up as additional information on the site contaminants is developed, the Draft EIR mentioned other plans that might be needed in the future at each converter station site, including a Waste Management Plan for the excavated soil and groundwater collected as a result of groundwater dewatering during construction and a site-specific Health and Safety Plan. Each Health and Safety Plan would describe, among other things, the need for the persons managing the hazardous soils and other hazardous waste generated during construction to be trained in hazardous waste operations (i.e., HAZWOPER trained). Each Health and Safety Plan would also discuss the need to consult and have available the Material Safety Data Sheets (MSDSs) for the hazardous materials and waste encountered during construction and health and the need for safety signage for any hazardous materials storage or usage areas. Other plans may be needed for the remediation of contamination at each converter station site, including a Conceptual Site Model, a Remedial Action Plan, and a Remedial Design. These plans must be reviewed and approved by the appropriate regulatory agencies, such as the Regional Water Quality Control Board, the California Department of Toxic Substances Control, or a Local Oversight Program Agency. The City of Pittsburg, as the lead agency, together with the Project proponent responsible environmental agency, will oversee the development and implementation of these various plans and remediation strategies, as needed, and will ensure that adequate protection is being provided for site workers and the public.
8-8	Comments noted. As discussed in Section 4.11.2 of the Draft EIR, the City/County of San Francisco noise ordinance has established maximum hourly noise levels for fixed sources at the boundary of various land use zones. Therefore, operational noise impacts were assessed at the property lines of the converter stations. Because there are no residential land uses that share property lines with the proposed converter station, operational noise levels were not assessed at any residential receptors. However, as required by the applicable regulations, the Draft EIR addresses construction-related noise impacts at sensitive receptors in Section 4.11.3.2.1, including those at the closest sensitive receptors (residential areas) in SF in Section 4.11.3.2.1. In summary, no potentially significant construction-related noise impacts were identified for any of the converter station sites under consideration in San Francisco. Please refer to Section 4.A.11 of this Final EIR for an assessment of noise impacts associated with the HWC (Mitigated) site in San Francisco.
8-9	As discussed in Draft EIR Section 4.3.1.2.10 (Pittsburg-Kirby Hills Fault [PKHF]), a fault rupture hazard study was recently performed by Terrasearch to investigate the potential presence of, and hazard presented by, the PKHF to the planned Mariner Walk residential project in Pittsburg. As shown on the Draft EIR Figure 4.3-5, the Pittsburg-Kirby Hills Fault Zone is shown in proximity to the Pittsburg West Tenth Street and Pittsburg Mirant sites and associated cable routes. The mapped location is as per the City of Pittsburg General Plan and is based on previous studies by others which indicated that the fault

RESPONSE TO COMMENTS

Comment Number	Response
	was potentially present and active. Based on the more recent study by Terrasearch (2004) which included trenches and review of previous boring data in the area, no evidence of the presence of the Pittsburg-Kirby Hills Fault Zone was found and the authors of that study recommended that the fault be reclassified as inactive. Furthermore, the authors of that study recommended that it not be considered the controlling fault in the area from a hazard/design basis. Regardless, prior to final design of the TBC converter stations in San Francisco and Pittsburg, TBC Project-specific geotechnical studies would be performed to identify and address all of the onshore geologic hazards identified in Section 4.3.3 of the Draft EIR.
8-10	Project proponent representatives coordinated with SLC staff (as well as the U.S. Army Corps of Engineers [USACE] and the San Francisco Bar Pilots) in 2004 to identify potential land use conflicts/hazards prior to determining the submarine cable route. The proposed submarine cable route was selected to avoid various hazards/land use conflicts (e.g., anchorages, dredge locations, etc.), including State-owned mineral resource leases and mining areas. Therefore, no potential impacts would occur and no mitigation is warranted.
8-11	Comment noted. The text for Mitigation Measure GEO-2, Controls for Excavation of Serpentine, has been revised in the Final EIR as requested. Please refer to new Section 13.0 of the Final EIR for the applicable text revision.
8-12	Comment noted. The text for Mitigation Measure GEO-2, Controls for Excavation of Serpentine, has been revised in the Final EIR as requested. Please refer to new Section 13.0 of the Final EIR for applicable text revision.

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
700 Heinz Avenue
Berkeley, California 94710-2721

Arnold Schwarzenegger
Governor

June 23, 2006

Mr. Ken Strelo
City of Pittsburg
65 Civic Avenue
Pittsburg, California 94565

Dear Mr. Strelo:

The Department of Toxic Substances Control (DTSC) has reviewed the Draft Environmental Impact Report (EIR) of May 8, 2006 for the Proposed Trans Bay Cable Project (SCH #2004082096). As you may be aware, DTSC oversees hazardous substance cleanup and regulates hazardous waste pursuant to the California Health and Safety Code, Division 20, Chapters 6.5 and 6.8. As a potential Responsible Agency, DTSC is submitting comments to ensure that the California Environmental Quality Act (CEQA) documentation prepared for this project adequately addresses any management of hazardous waste and remediation of hazardous substance releases that might be required as part of the project.

The project involves installation of a submarine transmission cable and associated onshore facilities to provide a connection between electrical power resources in the East Bay near Pittsburg and distribution facilities in San Francisco. The Draft EIR discusses in Section 1.2.13 that development of the San Francisco HWC Converter Station site would require excavation and remediation of subsurface contaminated soil and groundwater. Development of the Pittsburg Standard Oil Converter Station site would involve excavation of potentially contaminated soil. The Draft EIR provides limited information about the scope of these activities and the contamination found at these sites in Table 1-1 under Potentially Significant Impacts and Proposed Mitigation Measures HAZ-2, HAZ-4, and HAZ-7. Section 1.2.13 indicates that substantial remediation would be required at the San Francisco HWC Converter Station site, and Proposed Mitigation Measure HAZ-4 states that the estimated amount of excavated soil that would need to be disposed offsite is 15,000 cubic yards. More information on the nature, levels, and extent of the contamination and the scope of remedial activities at both the San Francisco and Pittsburg sites needs to be provided for us to assess whether the proposed mitigation measures will adequately address the potentially significant impacts associated with the contaminated soil and groundwater. 9-1

9-2 Proposed Mitigation Measure HAZ-2 discusses how excavated soils will be managed during construction. This mitigation measure indicates that staining and odor will be used as a basis for identifying previously uncharacterized soils as potentially contaminated. However, contaminated soils may not have staining or odor, particularly those contaminated with metals. Laboratory analysis of soil samples should be performed for all areas where historical activities may have caused contamination.

9-3 Proposed Mitigation Measure HAZ-2 indicates that previously characterized non-hazardous soils shall be stockpiled for reuse or offsite disposal as needed. The human health risk or ecological risk-based criteria that would be used to determine whether soils can be reused without restrictions should be identified along with soil and groundwater cleanup levels that would be used in areas to be remediated. If there is

9-4 contamination by metals such as arsenic that occur naturally above human health risk-based screening levels for unrestricted land use, the background levels that would be used as the basis for reuse criteria or cleanup levels should be identified.

9-5 The potential human health risk from vapor intrusion into future buildings that are to be constructed should also be considered if volatile organic compounds are found in any of the project areas.

9-6 Proposed Mitigation Measure HAZ-2 discusses the Soil and Groundwater Management Plan and Health and Safety Plan. These documents would be prepared to address the storage, transportation, and disposal options for soil and groundwater and worker safety during converter station construction. If residual contaminated soil and groundwater are to remain in areas of the project site after construction, institutional controls such as environmental deed restrictions need to be put in place. These controls ensure the periodic inspection and maintenance of any barriers and ensure worker safety and the proper management of contaminated soil and groundwater during any future subsurface work.

9-7 Potential impacts associated with the remediation activities should also be addressed by the EIR. If the remediation activities include soil excavation, the EIR should include: (1) an assessment of air impacts and health impacts associated with the excavation activities; (2) identification of any applicable local standards which may be exceeded by the excavation activities, including dust and noise levels; (3) transportation impacts from the removal or remedial activities; and (4) risk of upset should there be an accident during cleanup.

9-8 DTSC can assist your agency in overseeing characterization and cleanup activities through our Voluntary Cleanup Program. A fact sheet describing this program is enclosed. We are aware that projects such as this one are typically on a compressed schedule, and in an effort to use the available review time efficiently, we request that

DTSC be included in any meetings where issues relevant to our statutory authority are discussed.

9-8

Please contact Eileen Belding at (510) 540-3844 if you have any questions regarding the content of this letter. Thank you in advance for your consideration of our comments.

Sincerely,

Mark Piros

Mark Piros, P.E., Unit Chief
Northern California - Coastal Cleanup Operations Branch

Enclosure

cc: without enclosure

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RESPONSE TO COMMENTS

Comment Number	Response
9-1	Comments noted. The Project proponent has dropped both the previously-proposed HWC site in San Francisco and the previously-proposed Standard Oil site in Pittsburg. The previously-proposed HWC site has been replaced by a new site, "HWC (Mitigated) site," and the Standard Oil site has been replaced by the now-preferred West Tenth Street, Alternative 1 site. Phase II site investigations have been completed for both the HWC (Mitigated) and West Tenth Street Alternative 1 sites. The results of the Phase II investigations for West Tenth Street, Alternative 1 are presented and considered in the Draft EIR, Section 5.4.14. The results of the Phase II investigations for the HWC (Mitigated) site are presented and considered in Section 4.A.14 of the Final EIR. Please refer to new Section 4.A.14 of the Final EIR for applicable information.
9-2	Intensive Phase II Soil and Groundwater Investigations have been performed at both of the selected converter station sites: the Pittsburg West Tenth Street Alternative 1 (East-West orientation) site and the San Francisco HWC (Mitigated) site. The West Tenth Street Phase II site investigation report was complete at the time the Draft EIR was published. The HWC (Mitigated) Phase II draft site investigation report was under development as the Draft EIR was being completed. These two Phase II reports include large amounts of analytical data on the soil at the West Tenth Street site (no groundwater was available to be collected at this site) and the soil and groundwater at the HWC (Mitigated) site. For each site, the data collected for the Phase II report were used to characterize the soil for onsite use, offsite use, or offsite disposal. Also, the Phase II report for the HWC (Mitigated) site contained information on groundwater quality that could be used to treat the site groundwater, if it is extracted as part of groundwater dewatering efforts during construction. Confirmation sampling and testing would be required as part of any soil excavation or groundwater collection and disposal efforts. Soil staining and odors were only mentioned with reference to uncharacterized soils as indicators that would initiate additional sampling and analytical testing. It is agreed that an examination of the degree of staining and odor is not sufficient to characterize soil for onsite use, offsite use, or offsite disposal. All soil and groundwater at both converter station sites would be sampled and analyzed, as needed to supplement existing data, for proper characterization.
9-3	The Project proposes to use the latest versions of the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs), the U.S. Environmental Protection Agency (USEPA) Region IX Preliminary Remediation Goals (PRGs), and naturally occurring background levels for evaluating offsite use or disposal for non-hazardous soils. URS may also recommend additional site-specific risk evaluation, depending on the site-specific circumstances. The use of the published ESLs and/or PRGs, naturally occurring background levels, and/or site-specific risk evaluation would be overseen by both the City of Pittsburg, as the lead CEQA agency, and the responsible environmental agency, such as the San Francisco Bay Regional Water Quality Control Board, the Department of Toxic Substances Control, and/or a Local Oversight Program Agency.
9-4	The levels of naturally occurring arsenic and other metals in soils were evaluated in the Phase II Soil and Groundwater Investigation reports for the converter station sites. A range of 5 to 20 mg/kg represent the natural background level for arsenic in soils. This range is accepted for the local area by the risk assessment community for establishing re-use and, possibly, disposal criteria for soil excavated from a site. The same process would be used for other metals in soils where the background levels exceed the regulatory criteria.

RESPONSE TO COMMENTS

Comment Number	Response
9-5	Vapor intrusion into the buildings on the converter station sites would have limited impact on the San Francisco HWC (Mitigated) site. The Phase II investigations of the proposed HWC (Mitigated) and the Pittsburg West Tenth Street converter station sites have not identified high concentrations of volatile compounds (the compounds likely to create vapor intrusion issues), such as solvents or gasoline, in the soils of either site. Rather, the petroleum hydrocarbons found on both sites are heavy-end products such as diesel and motor oil. The only exception is an area on the HWC (Mitigated) site that contains TPH-g concentrations of approximately 2,900 mg/kg. The polynuclear aromatic hydrocarbons (PAHs) found on the HWC (Mitigated) site are mostly heavier and less volatile than are the heavy petroleum hydrocarbons found on the site. A considerable portion of the upper soils, estimated at 15,000 cubic yards, at each converter station site will be excavated and disposed of offsite to make room for the building foundations and the secondary containment structures for the transformers. This would remove a portion of the contaminated soil from the site, thereby reducing the potential for vapor emission. These areas would then be capped by the building foundations and the secondary containment structures. The remainder of each site would be capped with additional soil and gravel (for the switchyard areas) or paved for the access roads. These construction activities would cap both of the converter station sites and break the exposure pathway by which the minor volatile emissions from the soils could impact human health or the environment. Also, on completion, the HWC (Mitigated) converter station site and the West Tenth Street site in Pittsburg are planned to be operated remotely, so no permanent staff would be present. Remote operation of the converter stations would further reduce the potential impact of site contaminants on site workers.
9-6	Institutional controls, such as deed restrictions, would be needed for the two proposed converter station sites to address the issue of long-term management of contaminated soils left in place. The Project proponent or its successors would be the long-term lessee at both sites, not the property owner. These agreements would be negotiated with the lead environmental agency for the sites' redevelopment and the property owner(s); TBC may also be a party to the deed restriction agreements for the converter station sites. The converter site operations are unlikely to cause additional impacts to either soil or groundwater at either converter station site.
9-7	The Draft EIR includes consideration of potential impacts associated with site remediation, including excavation and offsite disposal of up to 15,000 cubic yards of contaminated soil. The truck traffic associated with this activity is included in the Project description. The air quality analysis and noise assessment also consider the assumed level of soil excavation activities. The level of assumed soil excavation at the converter station sites in San Francisco requires compliance with the CCSF's Maher Ordinance in addition to other applicable regulations. Based on the results of the recently completed Phase II investigations for the now-proposed site in San Francisco (HWC [Mitigated]), more definitive information regarding the presence and characteristics of subsurface contamination at the site is available. Based on the results of the Phase II investigation that were completed for the Pittsburg West Tenth Street Alternative 1 (East/West) and the expected corresponding appropriate level of remediation, the assumptions, analyses, and impact findings in the Draft EIR are still considered valid. The City of Pittsburg is aware that the final details of the required remediation plans will not be known until the plans are submitted for review and approval by the relevant regulatory authorities. Please refer to new Final EIR Section 4.A.14 (HWC [Mitigated] site) for more information regarding the results of the Phase II investigations performed at the HWC (Mitigated) site and the currently-proposed levels of remediation.

RESPONSE TO COMMENTS

Comment Number	Response
9-8	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates the Department of Toxic Substances Control's (DTSC's) comments and offer of assistance. The City of Pittsburg will be sure to include the DTSC in any meetings regarding DTSC's statutory authority relative to this Project. Based on feedback received by the San Francisco Regional Water Quality Control Board (SFRWQCB), the City of Pittsburg understands that the SFRWQCB would continue to have jurisdiction over the HWC (Mitigated) site.

CALIFORNIA ENERGY COMMISSION
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June 26, 2006

Mr. Ken Strelo
City of Pittsburg
Planning Department
Civic Center - 65 Civic Avenue
Pittsburg, CA 94565

Re: Draft EIR for the Trans Bay Cable Project
SCH# 2004082096

Dear Mr. Strelo:

The staff of the California Energy Commission (Energy Commission) respectfully offers its comments on the Draft Environmental Impact Report (DEIR) prepared for the Proposed Trans Bay Cable Project. The comments reflect the Energy Commission's responsibility under the Warren-Alquist Act to ensure that the state develops adequate energy supplies while protecting public health and safety and the environment. Given the Energy Commission's role in licensing energy facilities, the staff has extensive experience in evaluating the environmental issues and concerns that arise when siting major energy facilities in the state. We draw on that experience, plus our understanding of the California Environmental Quality Act, in providing our comments.

10-1

As you may be aware, the Energy Commission recommended expeditious completion of the Trans Bay Cable Project in its 2005 Strategic Transmission Investment Plan. With that goal in mind, we offer these comments to assist the City of Pittsburg in preparing a final EIR that can be approved by the city in a timely manner and withstand any legal challenges while ensuring full compliance with the California Environmental Quality Act.

Enclosed are comments and suggestions regarding: Proposed Project and Need (Section 2.0); Air Quality (Section 4.2); Geologic Resources and Soil (Section 4.3); Water Resources and Quality (Section 4.4); Terrestrial Biological Resources (Section 4.5); Marine Biological Resources (Section 4.6); Cultural Resources (Section 4.7); Land Use and Recreation (Section 4.8); Public Services and Utilities (Section 4.12); Visual Resources/Aesthetics (Section 4.13); and Hazardous Materials and Waste Management (Section 4.14).

10-1 We wish to thank you for this opportunity to comment on this project and the DEIR. Should you have any questions regarding our comments, please call Mr. Terrence O'Brien, Deputy Director of the Systems Assessment & Facilities Siting Division, at (916) 654-3924, or Mr. Bill Pfanner, Energy Facilities Siting Project Manager, at (916) 654-4206.

Sincerely,

B. B. BLEVINS
Executive Director

Enclosure

PURPOSE AND NEED FOR THE PROJECT (SECTION 2.3)

In 2004 Senate Bill 1565 (Bowen, Chapter 692, Statutes of 2004) added section 25324 to the Public Resources Code (PRC) as follows:

> The [Energy] Commission, in consultation with the Public Utilities Commission, the California Independent System Operator, transmission owners, users, and consumers, shall adopt a strategic plan for the state's electric transmission grid using existing resources. The strategic plan shall identify and recommend actions required to implement investments needed to ensure reliability, relieve congestion, and meet future load growth in load and generation, including, but not limited to, renewable resources, energy efficiency, and other demand reduction measures.

With SB 1565 the Legislature acknowledged the importance of a state role in the transmission planning process and recognized the Energy Commission as the state agency best suited to undertake and accomplish this effort. The *Strategic Transmission Investment Plan*[1] (*Strategic Plan*) developed a blueprint for development of an efficient and reliable bulk transmission system for California. 10-2

The Energy Commission evaluated 21 transmission projects (originally assessed in the Energy Commission staff report entitled *Upgrading California's Electric Transmission System: Issues and Actions for 2005 and Beyond*[2]) as the starting point for inclusion in the Strategic Plan[3]. In addition to the criteria outlined in PRC section 25324, the Energy Commission used several other evaluation criteria to guide its selection of recommended transmission projects, including the following:

- The project could be on line within five years.
- Permit approval is pending.
- The project provides potential strategic benefits such as the following:
  - Insurance against contingencies during abnormal system conditions, such as low-probability but high-impact events.
  - Price stability and mitigation of market power.
  - Potential for increased reserve resource sharing.
  - Environmental benefits.

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[1] California Energy Commission, November 2005, *Strategic Transmission Investment Plan*, Sacramento CA, CEC 100-2005-006-CMF, [http://www.energy.ca.gov/2005publications/CEC-100-2005-006/CEC-100-2005-006-CMF.PDF].

[2] California Energy Commission, July 2005, *Upgrading California's Electric Transmission System: Issues and Actions for 2005 and Beyond*, Sacramento, CA, CEC 700-2005-018, [http://www.energy.ca.gov/2005publications/CEC-700-2005-018/CEC-700-2005-018.PDF].

[3] The 21 projects are described in Appendix F: Major Transmission Projects of *Upgrading California's Electric Transmission System: Issues and Actions for 2005 and Beyond*. The Trans-Bay DC Cable Project is identified as Project #3 (see pp. 176-177.)

- Reduction in infrastructure needs.
- Achievement of state policy objectives.[4]

Of the 21 projects screened using these criteria, seven projects (including the Trans-Bay DC Cable Project) passed the criteria and were reviewed further.

ASSESSMENT OF TRANS BAY CABLE PROJECT IN THE ENERGY COMMISSION'S *STRATEGIC PLAN*

Page 85-86 of the *Strategic Plan* describes the Trans Bay DC Cable Project as follows:

> The Trans Bay DC Cable Project, proposed by the City of Pittsburg and Trans Bay Cable LLC (TBC), a subsidiary of Babcock and Brown, would consist of an approximately 50-mile underwater DC cable connecting the Pittsburg Substation to the Potrero Substation in San Francisco. The proposed project would help ensure reliability, serve growing loads, and hasten retirement of aging generators in the San Francisco Peninsula area. The Trans Bay DC Cable Project would provide 400 MW of new import capacity into downtown San Francisco, eliminating the need for RMR contracts at the Hunters Point and Potrero Power Plants while ensuring electricity reliability beyond 2011. Along with other proposed strategies, the project has the potential to ensure the retirement of all older generation in San Francisco, resulting in significant environmental benefits.

10-2

The *Strategic Plan* notes that the California Independent System Operator (CA ISO) Board of Directors approved the Trans Bay DC Cable Project at its September 8, 2005 meeting. It also notes that the CA ISO staff asserted that the project is needed for reliability purposes beginning in 2012, but recommended the project for a 2009 in-service date because it would significantly reduce expected locational capacity requirements and the need for special protection schemes currently in place. Even though the advanced in-service date would result in a net cost to CA ISO ratepayers, the CA ISO staff viewed this "net cost" as an assurance cost for intangible benefits such as immediate increased reliability to the San Francisco Peninsula Area and the ability to respond to unforeseen load forecast errors.

Page 87 of the *Strategic Plan* describes the Energy Commission's support for the project as follows:

> The Energy Commission agrees with the CA ISO's assessment that the advanced in-service date provides insurance benefits that outweigh the net cost to CA ISO ratepayers. Therefore, the Energy Commission recommends that the Trans Bay DC Cable Project move forward expeditiously in order for the San Francisco Peninsula and the CA ISO control area to realize these reliability benefits.

[4] See pages 59-62 of the *Strategic Plan* for a more detailed discussion of the criteria.

PROJECT CONSISTENCY BETWEEN THE *STRATEGIC PLAN* AND THE DRAFT ENVIRONMENTAL IMPACT REPORT

From an electrical perspective, the project as described in the Draft EIR[5] appears to be materially consistent with the project described, evaluated, and recommended in the *Strategic Plan*.

As with the *Strategic Plan*, Section 6.2.3 (No Project Alternative) of the Draft EIR notes the connection between the Trans Bay DC Cable Project (along with other needed projects) and the ability to eliminate Reliability Must Run contracts for the Potrero and Hunters Point Power Plants:

> However, the No Project Alternative is incapable of meeting the Project goals and objectives, or the CAISO's objectives for solving the near-term and long-term electrical supply and reliability issues in San Francisco and the northern Peninsula area. One potential consequence of the No Project Alternative would be that the relatively inefficient and polluting Mirant Potrero and Hunters Point power plants may need to continue to run in the future to meet San Francisco's electrical supply needs (p. 6-3 of Draft EIR.)

10-2

In April 2006, PG&E energized both the Jefferson-Martin 230 kilovolt Transmission Line Project[6] and the Potrero-Hunters Point 115 kilovolt Cable Project[7]. These two projects were the final two of a total of nine projects that were necessary in order for PG&E to close the Hunters Point Power Plant. The closure of Hunters Point occurred on May 15, 2006[8].

Although the Trans Bay DC Cable Project was not required to be operational in order for PG&E to shut down the Hunters Point Power Plant, its operation by 2012 is essential in order to meet the longer-term reliability needs of the San Francisco Peninsula, given that the CA ISO will no longer have the Hunters Point Power Plant among its options for reliably meeting load in the future. The Energy Commission continues to recommend the Trans Bay DC Cable Project for an on-line date in 2009.

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[5] Draft EIR sections reviewed include Sections 1.1 (Executive Summary - Introduction), 1.3.3 (Executive Summary - No Project Alternative), 2.1 (Introduction - Overview), 2.3 (Purpose and Need for the Project), 3.2 (Project Objectives), 3.3 (Project Components), 3.4 (Construction), 3.5 (Operation), and 6.2.3 (No Project Alternative.)

[6] See: http://www.pge.com/field_work_projects/street_construction/jefferson_martin/

[7] See: http://www.pge.com/field_work_projects/street_construction/potrero_hunterspoint/

[8] See: http://www.pge.com/news/news_releases/q2_2006/060515b.html

AIR QUALITY (SECTION 4.2)

1. The Draft EIR's control measure AIR-1(Section 4.2.3.2.1) contains a list of practices that were designed to minimize the project's fugitive emissions. The Energy Commission staff recommends that the following practices be added into mitigation measure AIR-1 in the Final EIR to further minimize fugitive emissions from the project.

a. No vehicle shall exceed 10 miles per hour speed limit within the construction site.

b. The construction site entrance shall be posted with visible speed limit signs.

c. All construction vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering public roadways.

10-3

d. Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

e. All unpaved exits from the construction site shall be graveled to prevent track out to public roadways.

f. All construction vehicles shall enter the construction site through the graveled roadways, unless an alternative route has been submitted to and approved for use by the City.

g. At least the first 500 feet of any public roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways.

2. The DEIR's control measure AIR-2(Section 4.2.3.2.1) contains a list of practices that are designed to minimize the construction equipment exhaust emissions including the use of alternative fuel, minimizing idle, maintaining properly tuned equipment and limits on the hours of operation. Energy Commission staff believes that these identified practices are not adequately specific to ensure that the project's emissions would be mitigated to a level that is less than significant. We recommend that the following practices be added to the FEIR's mitigation measure AIR-2.

a) All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.

10-4

b) All diesel-fueled engines used in the construction of the facility shall have clearly visible tags showing that the engine meets the conditions set forth herein.

c) All construction diesel engines, which have a rating of 100 horse power (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1). In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" if, among other reasons:

(i) There is no available soot filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question; or

(ii) The construction equipment is intended to be on-site for ten (10) days or less.

(iii) The City may grant relief from this requirement if the construction contractor can demonstrate that they have made a good faith effort to comply with this requirement and that compliance is not possible.

d) The use of a soot filter may be terminated immediately if one of the following conditions exists, provided that the City is informed within ten (10) working days of the termination:

(i) The use of the soot filter is excessively reducing normal availability of the construction equipment due to increased time for maintenance, and/or reduced power output due to an excessive increase in backpressure. **10-4**

(ii) The soot filter is causing or is reasonably expected to cause significant engine damage.

(iii) The soot filter is causing or is reasonably expected to cause a significant risk to workers or the public.

(iv) Any other seriously detrimental cause which has the approval of the City prior to the termination being implemented.

e) All heavy earthmoving equipment and heavy duty construction related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

f) All diesel heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.

3. The DEIR's control measure AIR-3(Section 4.2.3.2.1) contains a list of practices that are designed to minimize the marine vessels' exhaust emissions including using alternative fuel, minimizing engine consumption rate, and using shore-site power when docked. Energy Commission staff recommends the addition of a record keeping provision in the FEIR, with the records to be submitted to the City on a monthly basis to ensure compliance with the proposed mitigation measure AIR-3. **10-5**

> Record Keeping: The project proponent shall maintain copies of all diesel, or alternative fuel purchase and shall provide such record to the City on a monthly basis.

GEOLOGIC HAZARDS AND RESOURCES (SECTION 4.3)

10-6 **4.** The geology of the San Francisco Bay Area is composed primarily of three different geologic provinces: the Salinian block, the Franciscan complex, and the Great Valley sequence. The Salinian block is bounded to the east by the San Andreas fault. The Franciscan complex is bounded to the west by the San Andreas fault and to the east by the Hayward fault. The Great Valley sequence is bounded to the west by the Hayward fault. In Section 4.3.1.1 of the DEIR, it is noted that the rocks of the Franciscan complex and Great Valley sequence are prone to landslides. The proposed cable route passes through the Carquinez Straight which is as narrow as approximately 2,650 feet and is bordered by cliffs up to approximately 200 feet in height; however, there is no additional discussion of potential impacts to the Trans Bay Cable from landslides. This topic should be addressed in more detail in the FEIR along with appropriate mitigation.

10-7 **5.** As noted in Section 4.3.1.2, the proposed Trans Bay Cable will cross traces of both the Hayward-Rodgers Creek fault and the Pittsburg-Kirby Hills Fault Zone. The Hayward fault is considered to be the most likely source of the next major earthquake in the San Francisco Bay Area. Ground rupture along this fault could impact buried utilities. Section 4.3.3.4.2 and Section A.5.2.2 discuss this condition; however, only a cursory discussion and mitigation plan is provided. Additional information regarding the potential for ground rupture to affect cable operation and mitigation alternatives should be provided in the FEIR.

10-8 **6.** Tsunamis and seiches are earthquake-induced waves, which inundate low-lying areas adjacent to large bodies of water. The project is located in the San Francisco Bay Area, in the immediate vicinity of the Pacific Ocean; however, no information is presented with respect to the potential for tsunamis and seiches to affect the project, in particular the terminus facilities. The potential for tsunamis and seiches to affect the project should be discussed in the FEIR along with the options for preventing inundation of the terminus facilities and other project features.

WATER RESOURCES AND QUALITY (SECTION 4.4)

7. Section 4.4.1.3.1, page 4.4-7: Toxic hot spots were identified in San Francisco Bay by the Regional Water Quality Control Board's (RWQCB's) Bay Protection and Toxic Cleanup Program. The DEIR states that the cable alignment and proposed route was at least partially determined by an interest in avoiding the location of these toxic hot spots. A map providing the locations of these toxic hot spots in relation to the proposed cable route should be provided in the FEIR. 10-9

8. Section 4.4.1.3.1 page 4.4-6 though 4.4.8: The laboratory results of sediment sampling conducted along the proposed cable installation route are discussed in this section. Metals were the most common contaminants of concern, with poly-aromatic hydrocarbons also encountered. These contaminants of concern were compared to ecological risk screening levels. The DEIR does not quantify water quality parameters that could be exceeded by the suspension of contaminated sediments in the water column during dredging and/or hydro-plowing activities. The FEIR should quantify water quality parameters of constituents of concern that will be generated during construction activities occurring in the San Francisco Bay and associated channels. These parameters (including turbidity) should be compared with those allowed in the RWQCB's San Francisco Basin Plan and other pertinent regulatory and guidance documents prepared to protect water quality in San Francisco Bay. The generation of suspended solids, turbidity, and associated contaminants of concern should be calculated to estimate the potential for water quality degradation on a per day basis. 10-10

9. Section 4.4.3.4.1 page 4.4-28: The DEIR states that the project's hydro-plow operations will produce a light sediment plume, with a localized increase in turbidity; with perhaps 10 percent to 20 percent of the displaced sediment going into suspension.

It is unclear from the DEIR how the percentage of sediment that would go into suspension was estimated. An anecdotal account of similar projects producing similar amounts of sediment was given. A description of soils collected along the proposed cable route suggests that mostly fine silts and clays, along with organic material, will be encountered during hydro-plowing and dredging operations. These fine soils normally stay in suspension in the water column; therefore it is uncertain if the DEIR estimate of 10 percent to 20 percent is reasonable. Appropriate geotechnical testing and assessment of sediment samples collected from the proposed cable route should be conducted in the FEIR to calculate suspended sediment volumes that can be expected during construction operations involving hydro-plowing and dredging. 10-11

10. Section 4.4.3.4.1 page 4.4-30: Water quality impacts of turbidity from the hydro-plow are compared favorably in the EIR with tide and storm events. However, Energy Commission staff believes that it is misleading to compare turbidity generated from sediment disturbance associated with construction activities and turbidity generated from sediment disturbance associated with a natural event. The FEIR should address contaminants contained in sediments and prepare an evaluation based on their degradation to water quality; not on an in-situ ecological risk screening level. 10-12

10-13

11. Section 4.4.3.4.1 page 4.4-31: Mitigation Measure Water 5 - Avoidance of Sediment Contamination. Near-shore and offshore sediment is contaminated in the bay, in the vicinity of, and potentially at the proposed cable project location. Proposed mitigation includes collecting soil samples from the area where horizontal directional drilling (HDD) emerges from the Bay; Poly Aromatic Hydrocarbon (PAH) contaminated sediment has been identified in this area. If contamination is found, then sediment would be addressed. It is unclear how contaminated sediment would be addressed from this mitigation, or what concentrations of contaminants would trigger a response action. Energy Commission staff suggests that a performance standard for sediment mitigation be established for this mitigation measure and that potential response action(s) be proposed in the event that sample contaminant concentrations exceed performance standards.

10-14

12. Potential disposal area(s) for dredged sediments should be established prior to the start of construction activities. The DEIR states that the disposal of dredged material can result in a significant degradation to water quality. Although the EIR states that insignificant water quality impacts will result from suspended sediments generated from hydro-plowing based on existing sediment data, it defers analysis of potential impacts to water quality and potential disposal areas to a later date. No analyses of water quality impacts from dredging and disposal of dredged material can be conducted based on the information provided. This information should be included in the FEIR.

TERRESTRIAL BIOLOGY (SECTION 4.5)

EXECUTIVE SUMMARY (SECTION 1)

13. The Executive Summary, page 1-6, states that construction of the Pittsburg Standard Oil Converter Station and associated project areas have the potential to significantly impact wetlands and waters of the United States. The U.S. Army Corps of Engineers (USACE) requires that permits (e.g. pursuant to Section 404 of Clean Water Act) be obtained if a project proposes to impact navigable waters or fill "other waters of the U.S." including wetlands. Mitigation Measure **TBIO-3** in the summary table on pages 1-43 and 1-44 does not address any USACE permitting requirements for impacts to Kirker Creek and potential fill of wetlands in the laydown area. Mitigation Measure **TBIO-3b** states that an informal jurisdictional delineation survey will be performed to mark wetland and stream boundaries, but it does not specify that a wetland delineation report and permit application will be submitted to the USACE for verification. The FEIR should discuss the project's USACE permit process and schedule. 10-15

TERRESTRIAL BIOLOGY (SECTION 4.5)

14. The Project Area Setting, section 4.5.1.1, describes the general habitat types and biological resources associated with the various onshore project areas. The reader is referred to Map A.2-1, which is a large-scale overview of the entire project area. The DEIR lacks any detailed maps showing the location and extent of the habitats referenced in the text. It is difficult for the reader to visualize where and how the project will avoid certain sensitive resources without a terrestrial biological resources map. Maps similar to those in section 4.6, at approximately 1:6,000 scale of the affected terrestrial areas with existing habitat types mapped and project footprint and California Natural Diversity Data Base (CNDDB) overlays, should be considered for the FEIR. In the text, the FEIR should be more explicit on the extent of habitat types that occur in the project area (i.e., provide acreages of plant communities listed). 10-16

15. Several of the mitigation measures (e.g. **TBIO-1a**, **TBIO-2a**) in the Terrestrial Biology section and the Executive Summary include the placement of hay bundles to avoid impacts to wetland habitats. This is an important component, but hay has the potential to carry an abundance of weedy species' seed, which can become established and degrade the quality of seasonally wet habitats. Wetland protection measures should stipulate that the supplier certify hay bundles are weed-free prior to installation. 10-17

16. The Regulatory Setting, section 4.5.2, describes federal and state regulations, which apply to terrestrial biological resources in the project area. This section is appropriate; however, it lacks any local laws, ordinances, regulations, and standards that may also apply. For example, the following local planning documents contain policies and objectives that are generally applicable to terrestrial biological resources in the project area: *Sustainability Plan for the City and County of San Francisco, City and County of San Francisco General Plan, San Francisco Bay Plan* (under the McAteer-Petris Act and Bay Conservation and Development Commission jurisdiction). The discussion of potential impacts to natural communities and wildlife habitat on page 4.5-11 mentions the *East Contra Costa Habitat Conservation Plan and Natural* 10-18

10-18 *Communities Conservation Plan*. This discussion should be expanded and added to the Regulatory Setting section along with the aforementioned local planning documents and it should also address the project's adherence to the plans' policies.

10-19 **17.** The discussion of construction-related impacts at the Pittsburg Standard Oil Converter Station, section 4.5.3.3.1, pages 4.5-11, states that there may be indirect impacts to northern claypan vernal pools, a wetland community. On page 4.5-12, the discussion continues to explain potential adverse impacts to known occurrences of vernal pool fairy shrimp, vernal pool tadpole shrimp, and California linderiella fairy shrimp, as well as other special-status invertebrates with potential to occur. This section states that the United States Fish and Wildlife Service (USFWS) often considers any ground-disturbing activities within 250 feet of vernal pools as likely to have indirect impacts and those within 50 feet as direct impacts. Impact **TBIO-1** (trenching near pools) is considered a potentially significant impact. However, because the USFWS guidelines and the buffers (8 feet and 15 feet) provided in Mitigation Measure **TBIO-1a** appear incompatible, this impact should be considered significant. Please consider the adequacy of this mitigation measure in the FEIR. In addition, consultation with USFWS may be necessary to determine if there is a potential for "take" of these special-status invertebrates.

10-20 **18.** Mitigation Measure **TBIO-2b** (monitoring requirements for salt marsh species), on page 4.5-15, states "biological monitors shall be authorized to require remedial protective measures in the field." Please list examples of appropriate remedial measures for each salt marsh species of concern or include any available species-specific mitigation guidelines available from the appropriate regulatory agency. These should be consistent with USFWS and California Department of Fish and Game (CDFG) protocols.

10-21 **19.** Mitigation Measure **TBIO-2d** (halting work to remove endangered species), on page 4.5-16, states that salt marsh harvest mice discovered in the project area will be captured by a biologist for relocation off-site. If this proposed mitigation measure has been determined to be appropriate by the regulatory agencies (USFWS and CDFG), then the FEIR needs to identify one or more possible relocation sites that would provide suitable habitat.

10-22 **20.** Impact **TBIO-3**, on page 4.5-18, discusses the potential for disturbance or fill of potentially jurisdictional wetlands and streams. Although Mitigation Measure **TBIO-3a**, on page 4.5-19, notes that hydraulic directional drilling will be used to avoid impacts to Kirker Creek and associated floodplain wetlands, the extent of non-streamside wetlands to be impacted or avoided is unclear. In addition, the mitigation makes no mention of permitting requirements of the USACE, which regulates impacts to navigable waters or fill of "other waters of the U.S." including wetlands. Mitigation Measure **TBIO-3b** states that an informal jurisdictional delineation survey will be performed to mark wetland and stream boundaries, but it does not specify that a delineation report and permit application will be submitted to the USACE for verification. These would need to be filed with the USACE prior to any impacts, and wetland boundaries based on USACE jurisdiction would be determined through the permitting process. In addition, a drilling distance of a minimum of 15 feet below Kirker Creek is cited to avoid "frac-out." A plan outlining remedial measures in the case of a "frac-out" should be developed in the FEIR

and included as part of this mitigation to avoid potential impacts to sensitive biological resources and water quality. 10-22

21. Mitigation Measure **TBIO-3c**, on page 4.5-20, addresses impacts to wetlands and a vernal pool, which are habitat for federally endangered vernal pool crustaceans. As written, the measure postpones the development of appropriate mitigation measures in consultation with USFWS until after disturbance of the habitat occurs. "Take" of listed species could occur without appropriate avoidance and mitigation measures in place prior to potential impacts. As written, it appears that there is a reasonable likelihood that these habitats may be disturbed. The Energy Commission staff recommends an informal consultation with USFWS to inform them of the potential impacts, assess the potential for "take" and need for associated permits, and determine whether the currently proposed mitigation is appropriate. 10-23

22. Mitigation Measure **TBIO-6b**, on page 4.5-28, addresses impacts to rare plant populations. It specifies salvage of plants as a last resort option. This is an important point to include, but this option should also call for the designation of a conservation easement to ensure that the "adjacent potential habitat that will remain undisturbed" is protected in perpetuity. 10-24

TERRESTRIAL BIOLOGY (SECTION 5.5.5)

23. Impact **TBIO-3**, on page 5.5-5, discusses the potential for disturbance or fill of potentially jurisdictional wetlands and streams. Although Mitigation Measure **TBIO-3e** notes that hydraulic directional drilling will be used to avoid impacts to wetlands, the extent of wetlands to be impacted or avoided is unclear. In addition, the mitigation discussion does not mention permitting requirements of the USACE, which regulates impacts to navigable waters or fill of "other waters of the U.S." including wetlands. A wetland delineation report and permit application would need to be filed with the USACE prior to any impacts, and wetland boundaries based on USACE jurisdiction would be determined through the permitting process. In addition, a drilling distance of a minimum of 15 feet below wetlands is cited to avoid "frac-out." A plan outlining remedial measures in the case of a "frac-out" should be developed in the FEIR and included as part of this mitigation to avoid potential impacts to sensitive biological resources and water quality. (Also see comment 20 above) 10-25

SUPPLEMENTAL BIOLOGICAL INFORMATION (APPENDIX F)

24. The List of Potentially Affected Species does not consider potential for impacts to the Suisun song sparrow (*Melospiza melodia maxillaris*), which is tracked as a special-status bird in the California Department of Fish and Game's Natural Diversity Data Base. The nearest occurrence is a non-specific location near Pittsburg and is historical. Nonetheless, the FEIR should address its potential to occur in the project area. 10-26

25. The California Native Plant Society has recently changed the status of bearded popcorn-flower (*Plagiobothrys hystriculus*) to List 1B due to its recent rediscovery in the Montezuma Hills area. The status of this plant should be updated in the FEIR's List of Potentially Affected Species, and its potential to occur in the project area should be re-evaluated. 10-27

MARINE BIOLOGICAL RESOURCES (SECTION 4.6)

10-28 **26.** Section 4.6.1.1.1, page 4.6-2: The bay flats serve many important functions in the San Francisco Bay, including protection of the shoreline from wave energy and sedimentation, habitat for many invertebrates, and crucial roosting and foraging areas for many shorebird species. The DEIR does not adequately address potential impacts to bay flats and the species that inhabit those areas. The FEIR should be more explicit in describing what is being done to avoid or mitigate impacts to the bay flats biological community and the species that are supported there.

10-29 **27.** Section 4.6.1.2.2, page 4.6-4: The DEIR discussed several federal- and state-listed threatened fish species (Appendix F). Although their potential to occur is considered low in the project vicinity, the DEIR did not address any avoidance or mitigation measures. A large influx of fresh water to the Bay in 2006 could have altered species compositions; therefore, probability of occurrence of sensitive species in the project vicinity may have changed. Any harm to a listed species could be considered a significant impact. The FEIR should be more explicit regarding the measures or actions that will be taken if these listed species are encountered during project construction.

10-30 **28.** Section 4.6.1.2.2, page 4.6-4 (Appendix F): Pacific herring (*Clupea pallasii*) is the largest commercial fishery in the San Francisco Bay, with the Bay providing the only significant spawning area south of Puget Sound. Although the preferred spawning habitat is eelgrass beds, Pacific herring can utilize other substrates and structures found in the intertidal and nearshore environments. The marine habitat around the Potrero Power Plant could provide suitable spawning habitat for Pacific herring. The FEIR should be more explicit in its discussion of any protective measures that may be implemented to protect potential critical spawning habitat for herring.

10-31 **29.** Section 4.6.1.2.4, page 4.6-5: The San Francisco Bay provides valuable habitat to many federal- and state-listed threatened marine bird species. The DEIR does not address any protective measures that may be required for these species. Although the potential to occur in the project area is low, the DEIR did not address any avoidance or mitigation measures. The FEIR should be more explicit on what measures or actions would be taken if these listed species are encountered during project construction.

10-32 **30.** Section 4.6.1.2.5, page 4.6-9: The FEIR did not adequately address eelgrass bed distribution in the San Francisco Bay. Upon review of Figure 4.6-2, it is unclear if eelgrass beds are present east of San Pablo Bay. Although the proposed project may not adversely affect eelgrass beds, the FEIR should be more explicit in detailing eelgrass distribution in San Francisco Bay, describing what measures would be taken if eelgrass beds cannot be avoided, and what would be done to mitigate any temporary or permanent impacts to marine biological resources.

10-33 **31.** Section 4.6.1.3.1, page 4.6-11: The delta smelt (*Hypomesus transpacificus*) is a federal- and state-listed threatened species found in the Suisun Bay and Pittsburg vicinity. Their freshwater breeding habitat (submerged and inshore plants, primarily in sandy and hard-bottom substrates) is designated as a federally-listed threatened critical habitat. The DEIR does not adequately discuss any potential impacts to this species or its habitat in the project vicinity. The FEIR should be more explicit in its discussion of

any protective measures that could be implemented to protect delta smelt and its breeding habitat. 10-33

32. Section 4.6.2.1., page 4.6-13: The marine biological resources section describes federal regulations that are applicable to the proposed project. However, the DEIR does not specifically address what regulations are applicable to the proposed project area and whether or not any specific mitigation measures are proposed. The DEIR should be more explicit in describing what regulations exist for the San Francisco Bay area that would affect marine biological resources and if any mitigation or recommendations are required. The FEIR should also be explicit in describing any federal or state consultations for the project that would be applicable to marine biological resources. 10-34

33. Section 4.6.2.1.2, page 4.6-13: Sections 10 and 404 of the Federal Clean Water Act regulate the disposal of dredged materials and navigation of U.S. waters by the U.S. Army Corps of Engineers (USACE). Any dredge or fill activities required for project implementation would require a permit issued from the USACE. The DEIR does not describe any communication with USACE, or any other agencies, in regards to mitigation measures that may be required to protect species and their habitat. The FEIR should be more explicit in describing agency consultations and any mitigation measures that may be required by the agencies. 10-35

34. Section 4.6.3.2.3, page 4.6-16: While discussing cable installation utilizing a hydroplow, the DEIR does not adequately address any protective measures that could be implemented to decrease impacts to filter feeding organisms or fishes that may inhabit the impacted area. The FEIR should be more explicit in describing any protective measures that could be implemented or why they are not necessary. 10-36

35. Section 4.6.3.2.6, page 4.6-17: While discussing dredging activities, the DEIR did not adequately address all impacts to marine species. Because the San Francisco Bay has been invaded by numerous aggressive exotic species, dredging could provide an opportunity for some of these species to colonize the dredged area and preclude native species. Turbidity created by the re-suspension of sediments can also bury sessile organisms, reduce light levels for photosynthesis of algae, clog gills and feeding structures, and re-suspend contaminated sediments. The FEIR should be more explicit in addressing any additional measures that could be implemented (e.g., silt screens) to help decrease adverse impacts to sensitive benthic and fish species. 10-37

36. The San Francisco Bay is contaminated and the re-suspension of previously contaminated sediments could negatively impact water quality and marine biological resources. Any additional mercury introduction through re-suspension of sediments can have devastating effects on marine organisms through bioaccumulation. The FEIR should be more explicit on quantifying levels of contaminants that could be introduced from cable installation and its potential impact on marine species. 10-38

37. Section 4.4.1.3.1, page 4.4-7: According to the DEIR, the offshore cable route was designed to avoid known toxic hot spots, yet no map is available showing proximity of the proposed cable route to the toxic hot spots. The FEIR should be more explicit on those locations and provide a map of those spots in order to address the proximity of potential impacts on marine biological resources. (Also see comment 7 above) 10-39

10-40

38. The project description describes the submarine portion of the project as the laying of a cable in the bay sediments. On maps contained in Appendix G, Figure 2, there are several areas marked as "POTENTIAL SPLICE LOCATION". There is no description of the splice locations in either the Project Description or the Marine Biological Resources sections. The FEIR should be more explicit in describing the nature and size of the splice and/or splice box, and the potential impacts, if any, on marine species.

CULTURAL RESOURCES (SECTION 4.7)

EXECUTIVE SUMMARY (SECTION 1.0)

39. On page 1-61, Table 1-1 of the Executive Summary states that there would be dredging at two locations just north of Pittsburg in the New York Slough portion of Suisun Bay. The Water Resources and Quality section indicates on page 4.4-15 that a Clean Water Act Section 404 permit from the Unites States Army Corp of Engineers (USACE) would be required. This is not included in the Executive Summary. There is no mention in the cultural portion of the Executive Summary, pages 1-7 and 1-8, that there would be involvement by the USACE and that federal regulations, 36 CFR Part 800, would be applicable to the project. There should be more clear disclosure of all agencies and regulation involved in this project. 10-41

PROJECT DESCRIPTION (SECTION 3.0)

40. The Project Description, page 3-4, describes the submarine portion of the project as the laying of a cable in the bay sediments. On maps contained in Appendix G, Figure 2 there are several areas marked as "POTENTIAL SPLICE LOCATION". There is no description of the splice locations in either the Project Description or the Cultural Resources sections. Please discuss whether a splice requires a small enlargement of the cable or whether a splice box is required. Specifics on the size of a splice and/or splice box, whichever is required, is needed for a complete analysis. Staff finds that without a clear description of what is required for a "SPLICE LOCATION", it is not possible to reach a conclusion on the impacts of this portion of the project. 10-42

CULTURAL RESOURCES (SECTION 4.7)

41. Page 4.7-2 indicates that a geophysical survey of the underwater portion of the project has not been conducted. The DEIR indicates that underwater remote sensing would be completed when engineering plans have "moved beyond the conceptual stage." The record search included a 500-meter wide study area. An underwater survey of this area would supplement the record search, which provides evidence of one or more shipwrecks in or near the project area. Such a survey is strongly encouraged, prior to certification of the EIR, to determine if there are potentially significant resources within the proposed project impact area. Following the underwater remote sensing, subsequent interpretation of those results and/or diving would be required to assess significance of the resource. If the portion of the project subject to lease from the State Lands Commission (SLC) has a potential to affect historical resources listed in or potentially eligible for inclusion in the National Register of Historic Places or registered as or eligible for registration as a state historical landmark, the SLC should submit documentation of the project to the State Historic Preservation Office (SHPO) for comment (PRC 5024(f)). A complete survey and assessment of significance of the resources, would better inform decision makers about the impacts of this portion of the project. 10-43

42. The discussion of the historical buildings at Potrero Point indicates that the buildings are considered historical either as a separate resource complex or as a contributor to a potential district, pages 4.7-5 and 4.7-6. Some of these buildings were 10-44

identified by the City and County of San Francisco's expert witnesses in hearings on the Potrero Power Plant Unit 7 Project (00-AFC-4) as contributors to a larger historic district. There is no discussion of the larger district and the impact the project would have to that historic district separate from the impacts to the individually eligible buildings. There needs to be a clear discussion of all the historical resources that would be impacted, the criteria under which the resource is eligible, the impacts, and whether the eligibility of each of the resources would be materially impaired by the proposed project. In addition, the discussion of the resources is insufficient to determine required mitigation measures in section 4.7.3.2.1.

10-44

43. Page 4.7-6 notes that the west boundary of the site is adjacent to the spur lines of the Burlington Northern Santa Fe (BNSF) railroad and the alignment of the former Pittsburg Railroad. This section of the analysis indicates that the railroad lines have been "extensively refurbished and upgraded." This observation has not addressed the historic significance of the resource and may be irrelevant. The integrity should be addressed after the significance is established and the character defining attributes are defined. Upgrades and maintenance may have little effect on the integrity and eligibility of the resources.

10-45

The DPR records that are contained in Appendix G include the Primary form, a Linear form and a Location Map form. Although these are linear resources, they are structures and as such the Building, Object, Structure form must be used. This form contains an evaluative section that needs to clearly detail the significance of the resource. Without providing the appropriate record forms for the resources, determining the significance of the resources and their character defining elements, it is not possible to reach any conclusions on the impacts of the western terminus portion of the project.

10-46

44. In the section listing federal regulations, 36 CFR 800 is listed twice. Those regulations were last amended on August 5, 2004. The list needs to indicate the latest version of the regulations that would apply to the project and which federal agency is involved in the project that would make these regulations appropriate to list.

10-47

45. On page 4.7-12 the DEIR discusses mitigation measures that include testing for archeological resources. Testing for presence/absence of resources needs to be done, if feasible, prior to the completion of the environmental document. If resources are identified then the resource needs to be evaluated to determine if it meets the eligibility requirements for the California Register of Historic Resources (CRHR). Once the Lead Agency has evaluated the resources, the mitigation measure can specify whether additional data recovery or other mitigation would be required. A complete survey and assessment of significance of the resources, completed prior to certification of the FEIR, would better inform decision makers about the impacts of this portion of the project. In addition, such additional information would allow mitigation measures to be specific based on the resources identified and assessed.

10-48

46. Under Implementation Responsibilities on page 4.7-13 for both Mitigation Measures **CUL-1a** and **CUL-1b** there are references to consultation with the SHPO. The mitigation measure instead needs to identify what actions the Lead Agency is requiring of the applicant for the project.

10-49

47. Pages 4.7-14 and 4.7-15 discuss mitigation measures for the loss of historical architectural resources. These resources include some resources that are individually

10-50

eligible for the CRHR, some that are contributors to a historic district and some that are both individually eligible and contributors to a district. Some mitigation measures may be applicable to some of the resources and not others. This section, and section 9.2, should clearly state which mitigation measures apply to which resources. Please specify whether the mitigation measures apply to the sugar warehouses, the compressor house and meter house, the Station A complex and the larger potential industrial historic district. The application of the mitigation measures is not clear. This section needs to specify what mitigation is being applied to each of the resources. 10-50

48. Operations-related Impacts are discussed on page 4.7-16. The statement about impacts appears correct. However, if repairs or replacements are needed to portions of the project, there could be additional ground-disturbance and impacts to resources. Impacts that could take place during maintenance of the facilities. 10-51

49. The section regarding the Pittsburg site on page 4.7-16 which discusses the historic architectural resources and impacts is premature. The resources involved in this portion of the project have not been adequately evaluated (see comment 43). Portions of the Central Pacific Rail Road (CPRR) have been designated State Landmarks, found eligible for the National Register and determined to meet the requirements for eligibility to the CRHR. Without determining the significance of the resources and their character defining elements, it is not possible to reach a conclusion regarding the impacts of this portion of the project and appropriate mitigation measures if there are historical resources that would be impacted. 10-52

50. Mitigation measures **CUL-3a** and **CUL-3b** should be determined before the certification of the FEIR. Surveys should be done prior to the completion of the environmental document. If resources are identified, then the resource would need to be evaluated to determine if it meets the eligibility requirements for the CRHR. If eligible resources are within the portion of the project subject to lease from the SLC, the SLC should submit documentation to the SHPO for comment (PRC 5024(f)). For portions of the underwater portion of the project not subject to lease by the SLC, the Lead Agency should evaluate the resources. Then mitigation measures can specify whether additional data recovery or other mitigation would be required. A complete survey and assessment of significance of the resources, completed prior to certification of the FEIR, would better inform decision makers of the impacts of this portion of the project. Such additional information would allow mitigation measures to be specific. 10-53

51. On page 4.7-18, the discussion of Requirements and Timing for **CUL-3c** discusses consultation with the SHPO. There is no regulatory authority for the SHPO to consult with a qualified marine archaeologist. The SLC is required to provide the SHPO with documentation of any project with the potential to affect historic resources, in accordance with PRC 5024(f). Under Monitoring Requirements, there is no regulatory authority for the City of Pittsburg to consult with the SHPO to monitor and ensure compliance. The regulatory authority of each agency involved needs to be clearly stated and applied in mitigation measures in a manner consistent with state laws and regulations. 10-54

52. Operations-related Impacts are discussed on page 4.7-18. The statement about impacts appears correct. However, if repairs or replacements are needed for portions of the project, there could be additional ground-disturbance and impacts to resources. Impacts that could take place during maintenance of the facilities should be assessed. 10-55

CUMULATIVE IMPACTS (SECTION 7.0)

53. The cumulative impacts section only addresses shipping lanes, marine water quality and marine biological resources. It also must address cumulative impacts to cultural resources. For example, the Carquinez Bridge Replacement Project (I-80) removes a bridge that is eligible for the National Register of Historic Places. Mare Island may also be losing historic buildings or structures that are eligible for the National Register. The cumulative effect of removal of the eligible CPRR resource at the Pittsburg site and the resources at Potrero Point needs to be addressed in this section. In summary, cultural impacts are not considered in the cumulative impacts section and it is incomplete.

10-56

UNAVOIDABLE ADVERSE SIGNIFICANT IMPACTS (SECTION 9.2)

54. The discussion of the historical buildings at Potrero Point indicates that the buildings are considered historical either as a separate resource complex or as a contributor to a potential district, pages 9-1 and 9-2. Some of these buildings were identified by the City and County of San Francisco's expert witnesses in hearings on the Mirant case as contributors of a larger historic district. There is no discussion of the larger district and the impact the project would have to that historic district separate from the impacts to the individually eligible buildings. There needs to be a clear discussion of all the historical resources that would be impacted, the criteria under which the resource is eligible, the impacts, and whether the eligibility of each of the resources would be materially impaired by the proposed project. The discussion of the resources is insufficient to determine required mitigation measures in section 9.2.1.1. (Also see comment 42 above)

10-57

LAND USE (SECTION 4.8)

55. Section 4.8.1.1.4, page 4.8-4 Land Use Trends. The DEIR discusses an expected increase in housing units within the Central Waterfront Planning area, but does not fully analyze the housing trends in the area. Residential uses have encroached in the area of the proposed San Francisco Converter Station to the extent that live/work units are allowed in most areas of the city regardless of zoning. Many live/work units have been approved in the vicinity of the Potrero Power Plant site in recent years. These dwellings are being allowed in full knowledge of the industrial and port nature of the existing land uses.

According to the San Francisco Planning Department, since 1990 more than 1,400 residential lofts have been built in San Francisco. As of April 1999, the Dogpatch neighborhood (within 400 yards of the Potrero power plant) alone had 813 live/work units either proposed or under construction. 10-58

The DEIR does not adequately acknowledge or address the substantial increase in housing and live/work units in the project vicinity over the past decade. The historic industrial character of the Central Waterfront is changing to a mixture of industrial, commercial, residential, and live-work uses. The analysis of the proposed converter station impacts in the Potrero area should recognize the diversity of uses in the area, especially the residential aspects of existing live-work developments in the immediate vicinity. Furthermore, extensive mixed-use development is proceeding in nearby Mission Bay, but is not fully addressed in cumulative land use analysis of the DEIR.

The FEIR Land Use section should provide a complete representation of the Central Waterfront area, the Mission Bay development to the north of the project site, and the Hunters Point Naval Shipyard Superfund clean-up and redevelopment project. Providing a discussion of the surrounding area will allow full evaluation of the project's construction impacts on current land use and housing trends in southeast San Francisco.

56. Section 4.8.3.2.2, Page 4.8-24- Impacts, LU-1: Potential Conflict with Public Access Improvements. The DEIR indicates that the San Francisco Converter Station site would be directly adjacent to the waterfront and would not improve public access to the Bay, and identifies this as a potential significant impact. The proposed mitigation is to work with the San Francisco Bay Conservation and Development Commission (BCDC) to obtain necessary permits, including any conditions to provide Bay access in the vicinity of the project site. 10-59

Possible mitigation could include the project proponent contributing resources to enhance and maintain existing public access and open space areas (i.e., expansion of the existing Warm Water Cove Park located to the south of the proposed Converter Station, or to provide an elevated platform to allow public views of the bay).

PUBLIC SERVICES AND UTILITIES (SECTION 4.12)

10-60 **57.** The Public Services and Utilities, section 1.2.11, page 1-12, second paragraph, identifies a PS-4. This paragraph states there is ". . . a potentially significant impact related to the current lack of a fire hydrant within 1,500 feet of the site (Impact PS-4). With implementation of proposed Mitigation Measure PS-4, this potentially significant impact would be reduced to a less-than-significant level." PS-4: Water Service is discussed in the DEIR on page 4.12-14 but is not shown in TABLE 1-1. The FEIR should be revised to include PS-4 and its mitigation.

VISUAL RESOURCES/AESTHETICS (SECTION 4.13)

58. In the VISUAL RESOURCES/AESTHETCS, section 4.13.3.2 San Francisco HWC Converter Station, page 4.13-11, last sentence states "*At this time, no supplemental planting or architectural design has been proposed as part of the San Francisco HWC Converter Station.*" A similar statement is also found in section 4.13.3.3 Pittsburg Standard Oil Converter Station on page 4.13-15 which states "*At this time, no supplemental planting or architectural design has been proposed as part of the Project.*" However, the applicant has proposed mitigation measures described on pages 4.13-13 through 15, and pages 4.13-17 through 19 which include the submittal of a landscaping plan, and architectural design review being conducted by the cities of San Francisco and Pittsburg. 10-61

The FEIR should be revised to clearly state that the project will provide mitigation for potential visual impacts, including a landscape plan review and architectural design review by the cities of San Francisco and Pittsburg.

WASTE MANAGEMENT (SECTION 4.14)

10-62 **59.** The Hazardous Materials and Waste Management, section 4.14 of the DEIR, states that the generation and handling of dredge spoils is presented in the Water Resources and Quality section 4.4. However no mention is made of disposal of the dredge material in section 4.4. The FEIR should present dredge spoil disposal alternatives, including potential disposal locations, based on the probable range of contaminants that are anticipated to be contained in the dredge material.

10-63 **60.** Site Conditions: San Francisco HWC Converter Station, section 4.14.1.1 of the DEIR, presents information on potential hazardous waste that may be encountered at the site during construction activities. This information was obtained from historic (not project site specific) Phase I and Phase II environmental assessments at and near the vicinity of the subject property. The use of historical rather than current environmental assessments that were conducted at and in the vicinity of the subject property does not provide adequate environmental characterization to provide human health or ecological risk assessment cleanup standards for the site. Without cleanup standards, the ultimate method of cleanup at the site that will be conducted would be highly speculative. The FEIR should contain a site specific (with information gathered no more than 3 years ago) Phase I and Phase II environmental assessments. The results of these assessments should be used to create a human health and ecological risk assessment, the results of which should also be presented in the FEIR. Any environmental assessment should also include any related cable route.

10-64 **61.** Site Conditions: Pittsburg Standard Oil Converter Station, section 4.14.1.2 of the DEIR, presents information on potential hazardous waste that may be encountered at the site during construction activities. This information was obtained from a Phase I environmental assessment conducted at the subject property. The use of a Phase I environmental assessment does not provide adequate environmental characterization for determining human health or ecological risk assessment cleanup standards that would be appropriate for the site. Without cleanup standards, the ultimate method of cleanup at the site that will be conducted would be highly speculative. The FEIR should contain a site specific Phase II environmental assessment. The results of this assessment should be used to create a human health and ecological risk assessment, the results of which should also be presented in the FEIR. Any environmental assessment should also include any related cable route.

RESPONSE TO COMMENTS

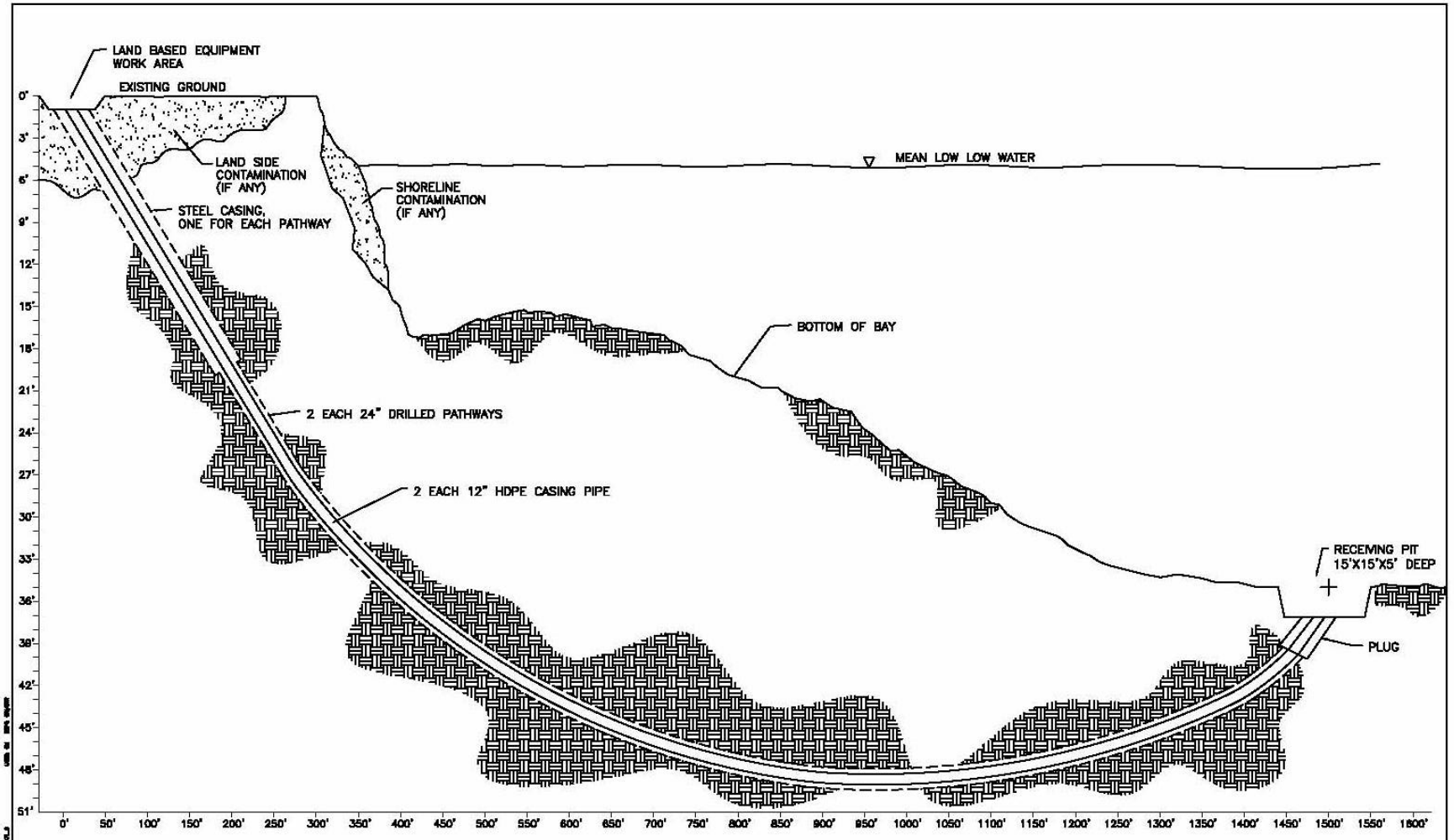
Comment Number	Response
10-1	Comments noted. The City of Pittsburg acknowledges the CEC's support of the TBC Project as stated in the Commission's 2005 Strategic Transmission Investment Plan and appreciates the Commission's thorough review of the Draft EIR.
10-2	Comments noted. The City of Pittsburg acknowledges the CEC's analysis and support of the TBC Project for an online date of 2009 as stated in the Commission's 2005 Strategic Transmission Investment Plan. A copy of the Commission's 2005 Strategic Transmission Investment Plan has been added to Appendix C. Please refer to revised Appendix C of the Final EIR for the applicable revision/addition.
10-3	Comments noted. The CEC'S recommended 7 additional mitigation measures for fugitive dust have been added to Mitigation Measure AIR-1, Fugitive Dust Controls. Please refer to new Section 13.0 and Table 1-1 of the Final EIR for the applicable text revision.
10-4	Comments noted. The CEC'S recommended 6 additional mitigation measures for equipment exhaust emissions have been added to Mitigation Measure AIR-2, Exhaust Controls. Please refer to new Section 13.0 and Table 1-1 of the Final EIR for the applicable text revision.
10-5	Comments noted. The Commission's recommended addition of a Record Keeping requirement to Mitigation Measure AIR-3, Marine Vessel Emission Controls, has been added. Please refer to new Section 13.0 of the Final EIR for the applicable text revision.
10-6	Comments noted. The text in Section 4.3 of the Draft EIR has been revised in response to this comment. Please refer to new Section 13.0 of the Final EIR for the applicable text revision. It should be noted that this potential hazard is not considered to be significant due to the anticipated installation of the submarine cable at least 500 feet from shore in this area and the fact that the cable would be buried at a typical target depth of 3 to 6 feet. In the unlikely event that the submarine cable were damaged by a landslide, the cable would be quickly repaired and put back in service.
10-7	Comments noted. Section 4.3 of the Draft EIR identifies and recognizes the potential ground rupture hazard to the submarine cable associated with the Hayward-Rodgers Creek and/or the Pittsburg-Kirby Hills faults. In the event of a seismic event large enough to cause surface rupture along the submarine cable route, the cable could be damaged along with much of the infrastructure in the Bay area. There is no feasible mitigation to prevent this hazard for a cable of this type. However, in the event the cable was damaged from such an event over the life of the Project, the cable would be quickly repaired and put back in service.
10-8	Comments noted. Because of its location, a tsunami entering San Francisco Bay has the potential to cause minor runup in the site vicinity. Runup for the 100-year tsunami recurrence-interval is estimated to be 5.5 feet at the HWC (Mitigated) site, which is at an elevation of approximately 13 feet. Therefore, tsunami-related flooding is extremely unlikely to be a problem for the San Francisco converter station. Based on the elevation of the San Francisco converter station site, runup from a seiche event is also very unlikely to impact the site. The proposed Pittsburg West Tenth Street Alternative 1 Converter Station site would not be impacted by a tsunami or a seiche in the Bay due to its further inland location and its approximate elevation of 7 feet.
10-9	Comment noted. The requested toxic hot spots map showing the relationship of known toxic hot spots identified by the Regional Water Quality Control Board's (RWQCB) Bay Protection and Toxic Cleanup Program and the proposed TBC submarine cable route is presented on Figure 4.4-1A of the Final EIR in Section 13.0. Sediment toxic hot spots are typically associated with historic manufacturing and town gas operations located along the Bay shoreline. As can be seen by review of Figure 4.4-1A in the Final EIR, the proposed cable route clearly avoids all identified toxic hot spot areas in the Bay.

RESPONSE TO COMMENTS

Comment Number	Response
10-10	Comments noted. The Hydroplow and HDD operations are not expected to cause exceedances of water quality parameters as presented in the RWQCB's SF Basin Plan. The majority of the cable alignment is in deep water well away from historic shoreline operations. The sediment survey presented in Appendix E of the Draft EIR did not encounter any contamination along the cable alignment. The use of HDD at the shoreline crossing near the San Francisco converter station has been proposed specifically to avoid any shoreline contamination. Use of the technique will allow the cable to enter the Bay at a depth of approximately 30-35 feet (below mean lower low water [MLLW]), offshore of known shoreline contamination. Previous studies of sediments in the vicinity of the Potrero power plant have detected highest sediment contamination at the northeast corner of the power plant site and in surface sediments near the Unit 3 outfall. The Potrero shoreline crossing, south of these locations and offshore of any known contamination, is designed to ensure that shoreline contaminants are not introduced to the Bay. The following is a summary of the protocol that would be followed to perform the cable installation using HDD. The use of two (2) HDDs would provide pathways from the water to the land, for the DC cables and fiber optic cable, without disturbing the shoreline or near shore environment (refer to the attached figure for a graphic representation of the HDD operation). The installation of both HDDs will employ the following steps and will start in a single landside work area and enter the Bay in the same water side receiving pit. The second HDD and casing installation will be begun after the first HDD and casing are installed. 1. Mobilize two drill rigs including land-based drilling equipment and barge-mounted drilling equipment at the site. 2. Excavate a receiving pit approximately 15 feet by 15 feet by 5 feet deep (i.e., less than 50 cubic yards) at the location where the cable would enter the Bay floor. 3. Excavate a landside work area, approximately 10 feet by 10 feet by 3 feet deep, at the location were the cable would daylight on the land side. 4. Install/drive two (2) steel casings in the landside work area, at the appropriate angle to isolate the existing site earth material from the material being removed during drilling. The length of the casing would be sufficient to isolate and prevent migration of potentially present landside contamination. The steel casing would also provide the stating point for the directional drilling. 5. Material would be excavated from inside the landside steel casing using augers and would be collected, classified, and properly disposed. 6. Starting from within the casing, an approximately 10-inch diameter pilot hole would be drilled, from the landside work area to the receiving pit where the cable would enter the Bay floor. A bentonite clay and water drilling solution would be circulated to remove the excavated earth material from the pathway. The10-inch diameter drill bit and drill pipe would enter the Bay in the receiving pit and would stop several feet above the bottom of the pit. The drill bit would be pushed the final distance into the receiving pit. 7. Using divers, a cable would be connected from the exposed drill bit and drill pipe to the barge mounted drilling equipment, and the drill pipe would be pulled to the barge. 8. Using the land-based drilling equipment, the pilot hole would be enlarged with an approximate 24-inch diameter cutter head. A bentonite clay and water drilling solution would be circulated to remove the excavated earth material from the pathway. The excavated material would be collected from the landside work area and removed for proper disposal.

RESPONSE TO COMMENTS

Comment Number	Response
	9. The advancement of the 24-inch diameter reamer would be stopped at a distance on the order of 30 to 50 feet prior to entering the receiving pit such that a plug of soil remained along the pilot hole pathway and the Bay floor. 10. The 24-inch drill bit would be retracted and the 12-inch HDPE casing pipe would be connected to a smaller, approximately 18-inch diameter reamer. The front end on the casing pipe would be closed using a pipe cap. 11. The barge-based equipment would pull the 18-inch reamer and 12-inch diameter casing pipe through the pathway to the landside end of the plug. At this point, circulation of the bentonite clay and water drilling fluid would be idled. 12. The barge equipment would pull the reamer and 12-inch diameter casing pipe through the plug into the receiving pit. 13. The annular space around the casing pipe would be self sealing due to the soft, plastic composition of Bay muds. The drill pipe, reamer, and swivel would be disconnected from the casing pipe and retracted to the barge. The cap on the end of the pipe would remain in place until it was time to install the DC and fiber optic cables. In summary, the proposed HDD installation method described above for the Project would preclude the possibility for potentially contaminated soil and groundwater near the Bay shoreline to be introduced into the Bay associated with HDD cable installation.
10-11	Comment noted. The 10 to 20% estimate of dispersed sediment is based on operator experience and observation during placement of power cables and optical fiber cable using the Hydroplow technology. The installation of a very similar submarine DC cable in New York State as part of the Neptune Project cited a 30% sediment dispersal rate (Cape Wind Energy Project DEIS, Appendix 5.2C, www.nae.usace.army.mil/projects/ma/ccwf/deis.htm). For the TBC Project, the estimated cable burial rate is approximately I mile per day, or 0.061 feet (0.73 inches) per second. As the rate of advance of the Hydroplow equipment is slow, the rate of dispersed sediment production is also low. If 20% of the fluidized sediment is dispersed, a volume of 0.07 cubic feet per second or 9.8 cubic yards per hour of sediment will be dispersed. If 30% of the fluidized sediment is dispersed, a volume of 0.11 cubic feet per second or 14.7 cubic yards per hour will be dispersed. These are small volumes of sediment. The sediment dispersal rate is a function of the sediment type, flow rate, and water pressure. The water flow rate and pressure in the Hydroplow stinger can be adjusted based on actual site conditions. The results of the detailed geophysical/geotechnical survey will be used to determine the optimal flow rate and water pressure.
10-12	Comment noted. The targeted burial depth is 3 to 6 feet below the Bay bottom. Assuming a 6-foot burial depth, between 0.6 and 1.2 cubic feet of sediment would be ejected per lineal foot of cable. Assuming the cable would be laid at an average rate of 1 mile per day over a 24-hour working day yields a burial rate of 220 lineal feet per hour, or 0.06 feet per second. Therefore, every second, approximately 0.07 cubic feet (or the volume of a 5 x 5 x 5 inch cube) of sediment would be introduced to the water column. A volume of 1 cubic foot of sediment would be introduced into the water column in approximately 16 seconds. These are extremely small sediment volumes. Bay mud is approximately 50% water by weight which means 1 cubic foot of sediment contains approximately 50 lbs (23 kg) of material. This is the same amount of suspended sediment contained in a cube of water 16 feet on each side during a typical windy day on the Bay (assuming a typical suspended sediment concentration of 200 mg/L).



PATCH SERVICES

TRANS BAY CABLE LLC

TRANS BAY CABLE
HORIZONTAL DIRECTIONAL DRILLING
INSTALLATION PROTOCOL

D-2804-2071

RESPONSE TO COMMENTS

Comment Number	Response
10-13	Comment noted. The offshore completion of the HDD cable installation would be contained so that sediment could not enter the water column. Please see Response to 10-10 for more information. No nearshore construction activities would occur associated with the submarine cable installation since the cable would be installed via horizontal directional drilling (in conduit to preclude frac-out and contain cuttings for onshore retrieval, testing, and appropriate disposal) from shore to a distance of approximately 800 feet offshore regardless of which alternative was selected. No potentially significant Project impacts are anticipated and no additional mitigation is warranted.
10-14	The proposed Project no longer includes dredging in the Bay or connecting waterways (i.e., New York Slough near Pittsburg) associated with the Standard Oil site, including ancillary facilities, as that site has been withdrawn from consideration and it was the only Project component analyzed in the Draft EIR that had a related dredging component. Therefore, the Project no longer has a dredging or dredged material disposal component in New York Slough and no associated water quality or biological impacts would occur. Two small excavations (each less than 50 cubic yards) are planned in association with HDD activities (see Response to Comment 10-10).
10-15	As discussed in Sections 1.0 and 3.0 of this Final EIR, the Standard Oil site including ancillary facilities has been withdrawn from consideration, thus the potential wetland impacts analyzed in the Draft EIR for this site would not occur. As noted in Draft EIR Table 2-1, the proposed installation of the submarine cable in the bottom of the Bay would require an individual permit or general permits from the USACE pursuant to the USACE Regulatory Program for authorizing actions under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. The Project proponent has coordinated with the USACE regarding the proposed Project and plans to submit permit applications to the USACE in the near future. It is anticipated that the USACE permitting process, including consultations with other federal agencies (e.g., National Oceanic and Atmospheric Administration [NOAA] Fisheries and U.S. Fish and Wildlife Service [USFWS]), will take 4 to 6 months.
10-16	As discussed in previous comment responses, the Standard Oil site including ancillary facilities has been withdrawn from consideration, thus the potential impacts and relevance of sensitive habitats and species occurrences are no longer applicable. As discussed in Draft EIR Sections 4.5 and 5.2 through 5.6, and also in the new Section 4.A of the Final EIR, the other converter station sites under consideration occur on Disturbed/Developed properties and would not be expected to impact terrestrial biological resources.
10-17	As discussed in previous comment responses, the Standard Oil site including ancillary facilities has been withdrawn from consideration, thus the potential impacts, mitigation, and relevance of sensitive vernal pool, saltmarsh, other wetland habitats and/or rare plant and species occurrences are no longer applicable to the Project.
10-18	Neither of the proposed converter station sites or associated ancillary facilities under consideration in the Final EIR would result in potentially significant impacts to terrestrial biological resources due to the pre-disturbed/developed nature of the sites. Therefore, the additional plans mentioned in this comment have no applicability to the TBC Project.
10-19	Please refer to Response 10-17.
10-20	Please refer to Response 10-17.
10-21	Please refer to Response 10-17.
10-22	Please refer to Response 10-15.

RESPONSE TO COMMENTS

Comment Number	Response
10-23	Please refer to Response 10-17.
10-24	Refer to Response 10-17.
10-25	Comments noted. The alternative to which this comment applies, the Pittsburg West Tenth Street Alternative 2 converter station site and ancillary facilities, has two identified unavoidable adverse significant impacts (construction noise and visual resources) as summarized in Draft EIR Sections 1.3.5, 5.5.5, and 6.3. Therefore, the City of Pittsburg and the Project proponent currently do not expect to utilize this alternative. Were this alternative to be selected, the minor wetland area north of the site (estimated at approximately 30 feet in width) would be crossed by the AC and DC cables associated with this alternative using jack-and-bore auger technique. This technique would preclude the potential for frac-out and associated impacts.
10-26	Comment noted. As discussed previously, the formerly proposed Pittsburg Standard Oil Converter Station site, including ancillary facilities such as onshore cable routes, has been deleted from further consideration. The remaining converter station sites in Pittsburg including the now proposed West Tenth Street Alternative 1 site and ancillary facilities, do not have suitable habitat for the Suisin song sparrow and no Project-related impacts would be expected to occur to this specie.
10-27	Comment noted. Please refer to new Section 13.0 of the Final EIR for revisions to Appendix F (List of Potentially Affected Species, page 15) related to the CNPS status of the bearded popcorn-flower.
10-28	Comments noted. As shown on Figure 4.6-2 of the Draft EIR, the proposed submarine cable route does not cross any intertidal mudflats; it is located in deeper water. No Project-related impacts to intertidal mudflats are anticipated and no additional mitigation is warranted.
10-29	Information on life history and habitat requirements of special status species are described in Section 4.6.1.3 of the Draft EIR. As discussed in Section 4.4 (Water Quality) of the Draft EIR, the cable-laying operation would result in a very localized sediment plume that is not expected to significantly impact water quality. Installation of the cable could potentially suspend approximately 6,220 to 12,440 cubic yards of sediment over the entire 53-mile Project area. This would amount to about 117 to 235 cubic yards of suspend material per mile. This amount of suspended material is small compared with the volume of sediment naturally resuspended on a regular basis in the Bay by the tides or wind. Listed fish species were not addressed separately in the impacts section of the Draft EIR, however, all fish species inhabiting the Bay including listed species such as delta smelt are well adapted to the natural condition of relatively high turbidity. It is expected that adult and juvenile delta smelt would react to the temporary disturbance of the cable laying operation similarly to other mobile organisms as described in Section 4.6.3.2.4 in the Draft EIR, that is, they would tend to exhibit temporary behavioral avoidance of the immediate area of increased turbidity and activity during the cable laying operation. Impacts to fish, including listed species, are not expected to be significant. In addition, as discussed in the Draft EIR, installation would be conducted within Environmental Work Windows outlined in the Long Term Management Strategy (LTMS) for bay dredging and disposal, recognized by agencies such as NOAA Fisheries. The work windows would provide for protection of listed salmonids and a number of other species such as Pacific herring and Dungeness crab.
10-30	Comments noted. As shown on Draft EIR Figure 4.6-1, the range of Pacific herring spawning grounds includes the nearshore area off of Potrero Point in San Francisco. As shown on Figure 4.6-2 of the Draft EIR, the proposed submarine cable route avoids eelgrass bed areas in the Bay by a wide margin.

RESPONSE TO COMMENTS

Comment Number	Response
	Construction of onshore Project facilities in San Francisco would have no potential to impact this locally important commercial fishery. In addition, no nearshore construction activities would occur associated with the submarine cable installation since the cable would be installed via horizontal directional drilling (in conduit to preclude frac-out and contain cuttings for onshore retrieval, testing, and appropriate disposal) from shore to a distance of approximately 800 feet offshore regardless of which alternative was selected. No potentially significant Project impacts to Pacific herring are anticipated and no additional mitigation is warranted.
10-31	Cable installation is not expected to have a significant impact on marine birds, including listed species, thus no mitigation measures are required. Listed bird species which may forage on the open Bay include the California brown pelican and the California least tern. The brown pelican forages over large areas of the Bay. Typically, least terns forage within 2 miles of their nesting colony, allowing them to alternate between feeding and protecting their nests. The largest least tern nesting colony in the Bay is at the former Alameda Naval Air Station, more than 2 miles from the southern end of the cable-laying operation. Installation of the cable would involve movement of a cargo size ship or work barges over the cable route. Most of the cable route is in open water near the main channel of the Bay (see Figure 1-1 of the EIR). The installation activity would be temporary in any given area of the Bay and would not be substantially different than regular shipping activity that occurs throughout north San Francisco Bay on a daily basis. While foraging by these species could not occur at the specific location of the cable-laying ship, adjacent open water would always be available. No foraging habitat would be permanently lost.
10-32	Comments noted. Draft EIR Figure 4.6-2 accurately reflects the location of eelgrass beds which occur in the San Francisco Bay and San Pablo Bay portions of the general Project area. This figure is based on data from the most recent source: The Baywide Eelgrass Inventory and Habitat Management Research Program (Merkel and Associates, 2004), a joint effort of the California Department of Transportation (Caltrans) and National Marine Fisheries Service (NOAA Fisheries). As shown, the proposed submarine cable route, including 500-meter-wide study corridor, does not traverse near any of the mapped eelgrass bed locations. Accordingly, no impacts to eelgrass beds are expected and no mitigation is warranted. There are no eelgrass beds located east of Point Pinole, thus Figure 4.6-2 of the Draft EIR is limited to the applicable portion of the cable route where eelgrass beds are actually present. The text in Final EIR Section 4.6.1.2.5 has been revised in response to this comment to clarify the geographical extent of eelgrass beds in the Project area. Please refer to new Section 13.0 of the Final EIR for the applicable text revision. Reference: Merkel and Associates. 2004. Baywide Eelgrass Inventory and Habitat Management Research Program. Prepared in cooperation with NOAA Fisheries and Caltrans. October.
10-33	Information on life history and habitat requirements of the delta smelt are described in Section 4.6.1.3 of the Draft EIR. Delta smelt (and other listed fish species) were not addressed separately in the impacts section of the Draft EIR. As discussed in Draft EIR Section 4.4 (Water Quality), the cable-laying operation would result in a very localized sediment plume that is not expected to significantly impact water quality. Installation of the cable could potentially suspend approximately 6,220 to 12,440 cubic yards of sediment over the entire 53-mile project area. This would amount to about 117 to 235 cubic yards of suspend material per mile. This amount of suspended material is small compared with the volume of sediment resuspended in the Bay by the tides or wind. Fish species inhabiting the Bay and estuarine species such as delta smelt are well adapted to the natural condition of relatively high turbidity. It is expected that adult and juvenile delta smelt would react to the temporary disturbance of the cable-laying operation similarly to

RESPONSE TO COMMENTS

Comment Number	Response
	other mobile organisms as described in Section 4.6.3.2.4 in the Draft EIR, that is, they would tend to exhibit behavioral avoidance of the immediate area of increased turbidity and activity during the cable-laying operation. As described in the Draft EIR, during spawning, the delta smelt prefers freshwater habitats. Delta smelt begin a diffuse, gradual migration to upstream spawning areas in September or October. Delta smelt spawn from February to July in side channels and sloughs in the upper delta and in the Sacramento River north of Rio Vista. Spawning is not likely to occur in the open water areas traversed by the Trans Bay Cable, thus no impacts to spawning habitat are expected.
10-34	All of the regulations described in Section 4.6.2 of the Draft EIR apply to San Francisco Bay biological resources and the Project proponent and agencies involved would need to comply with the requirements of each. The Project will require a number of permits and consultations with various agencies. For example, the Project will require a permit from the USACE under Section 404 of the Clean Water Act. During this process, the USACE will need to consult with other Federal agencies, including NOAA Fisheries (consultation on listed species and Essential Fish Habitat) and the U.S. Fish and Wildlife Service (consultation on listed species). The Marine Mammal Protection Act is described in Section 4.6.2 of the Draft EIR and would apply to the Project with regard to disturbance to marine mammals, generally from underwater sound. It is possible that the Project may require an Incidental Harassment Authorization from NOAA Fisheries. During processing of the environmental permits for the Project any additional avoidance or mitigation measures or restrictions stipulated by the agencies would be made conditions of the environmental permits and would be required to be carried out.
10-35	Prior to preparation of the Draft EIR, representatives of the City of Pittsburg, the Project proponent, and the EIR consultant (URS Corporation) met with numerous regulatory agencies including: USACE, NOAA Fisheries, U.S. Coast Guard, SLC, the Bay Conservation and Development Commission (BCDC), Regional Water Quality Control Board, CCSF, Port of San Francisco, and the Bay Area Air Quality Management District (BAAQMD). The aforementioned agencies indicated they might comment on the Draft EIR and that they may stipulate conditions in their respective permits for the Project based in part on the findings in the Draft EIR. In general, all of the agencies explained their potential jurisdiction, any potential concerns or issues they might have had regarding the Project, etc. The results of these informal agency meetings are considered in the scope of the Draft EIR, as appropriate. Refer to Section 10.3 of the Draft EIR for a list of agencies, organizations, and other entities that were consulted during preparation of the Draft EIR. In summary, no mitigation measures beyond those specified in the Draft EIR were recommended by agencies with regulatory authority over this Project prior to issuance of the Draft EIR on May 10, 2006.
10-36	As discussed in Section 4.4 (Water Quality) of the Draft EIR, the cable-laying operation would result in a very localized sediment plume that is not expected to significantly impact water quality. Installation of the cable could potentially suspend approximately 6,220 to 12,440 cubic yards of sediment over the entire 53-mile Project area. This would amount to about 117 to 235 cubic yards of suspend material per mile. This amount of suspended material is small compared with the volume of sediment resuspended in the Bay by the tides or wind. Fish species and filter feeding invertebrates inhabiting the Bay and estuarine species such as delta smelt are well adapted to the natural conditions of relatively high turbidity in the Bay. As described in the Draft EIR, it is expected that adult and juvenile fish would react to the temporary disturbance of the cable-laying operation by exhibiting behavioral avoidance of the immediate area of increased turbidity and activity during the cable-laying operation. As described in Section 4.6.2.5 of the

RESPONSE TO COMMENTS

Comment Number	Response
	Draft EIR, there would be some loss of benthic organisms in the immediate vicinity of the disturbance, followed by re colonization of the disturbed areas. These impacts were considered adverse, but not significant and as such, no mitigation measures are warranted.
10-37	Please refer to Response 10-14.
10-38	Please refer to Responses 10-10, 10-12, and 10-29.
10-39	Please refer to Response 10-9.
10-40	Comment noted. The potential splice locations are shown on Map A.2-1, Sheets 5 of 10 (approximate milepost [MP] 22.1), 6 of 10 (MP 26.5), and 7 of 10 (MP 38.5). The actual need for, and specific locations of, cable splices will be determined during final engineering following completion of the forthcoming geophysical survey. It is currently anticipated that up to three cable splices may be required, two in the relatively shallow water where the cable route crosses Pinole Shoals, and another in the Carquinez Strait area where it is anticipated there would be a transition from utilization of a cable-laying ship (to west) to a cable-laying barge (east to Pittsburg). The splice operation involves precise welding of the individual cable strands and must be performed on the ship and/or barge, as applicable, and would not involve a splice box on the Bay floor. The splice would be approximately the same diameter as the balance of the cable bundle (i.e., approximately 10 to 12 inches in diameter). No potential impacts to marine organisms associated with the splice operation or the splice itself would be expected to occur. Since there are no anticipated splice-specific impacts to marine organisms, additional discussion in Section 4.6 is not warranted.
10-41	The executive summary has been revised to reflect the requirement for a USACE 404 permit and the nexus with 36 CFR 800.The text in Sections 1.2.3 and 1.2.6 of the Final EIR has been revised in response to this comment.
10-42	Please refer to Response 10-40.
10-43	The geophysical survey (Mitigation Measure CUL-3a) will be completed prior to final engineering, however, the Project proponent has indicated that it is not feasible to complete the survey prior to issuance of the Final EIR. Mitigation Measure CUL-3b provides for avoidance of any submerged archaeological resources found during the geophysical survey. The cable route study corridor is 500 meters wide and provides ample room to make minor adjustments to the cable route prior to construction to avoid any archaeological resources found during the forthcoming survey.
10-44	As discussed in Response 3-7, the Draft EIR recognizes the unavoidable adverse impacts that could occur to contributing elements of the potential historic districts associated with implementation of the Project at the HWC site in San Francisco. The Draft EIR presents mitigation measures to address these impacts. Furthermore, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). The HWC (Mitigated) site completely avoids direct impacts to the two historic buildings on the eastern portion of the HWC property. This action would not directly or indirectly impact the potential historic district(s) or contributing elements of potential historic district(s) located north of the HWC site. Refer to Section 4.A.7 of the Final EIR for more information.

RESPONSE TO COMMENTS

Comment Number	Response
10-45	Comments noted. As discussed in previous comment responses, the Standard Oil site, including ancillary facilities, has been withdrawn from consideration, thus the potential impacts and relevance of the cultural resources/historic attributes of the adjacent rail facilities are no longer applicable.
10-46	Refer to Response 10-45.
10-47	Text from Section 4.7.2.1 of the Draft EIR has been revised in response to this comment. Please refer to new Section 13.0 of the Final EIR for applicable text revision.
10-48	At this point in time, the Project proponent does not have site control of the parcel in question (i.e., Mirant Potrero). Furthermore, the parcel contains structural development that would need to be removed in order to access proposed construction areas. As such, it is infeasible to implement Mitigation Measure CUL-1a (Archaeological Resource Testing) prior to completion of the environmental document.
10-49	If archaeological testing and possible data recovery are required, the Project proponent will coordinate with the City of Pittsburg and the CCSF to ensure appropriate steps are taken to satisfy these mitigation measures. This coordination could also involve the USACE and the State Historic Preservation Office should the USACE conclude the subject area identified for testing or data recovery is within the jurisdictional footprint of the USACE's 404 permit, thus creating a nexus with Section 106 of the National Historic Preservation Act.
10-50	Comments noted. As stated in the prelude (*Historical Architectural Resources*) to Mitigation Measure(s) CUL-2 (Disturbance of Historical Architectural Resources), these measures apply to construction of the San Francisco HWC Converter Station which would involve demolition of historical resources. It should be noted that, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site) , thereby completely avoiding direct impacts to the two historic buildings on the eastern portion of the HWC property. Another advantage of the HWC (Mitigated) site is that it allows the proposed 115 kV interconnection to the PG&E Potrero substation to be installed without impacting the Station A Complex on the adjacent Mirant Potrero property. This action would not directly or indirectly impact the potential historic district(s) located north of the HWC site. Refer to Section 4.A.7 of the Final EIR for more information. The mitigation measures presented in the Draft EIR that would be undertaken to address the San Francisco Mirant alternative to the proposed Project have been expanded and clarified. The Draft EIR presents three mitigation measures (i.e., Mitigation Measure CUL-2a, Recording Architectural Resources; CUL-2b, Architectural Resource Interpretive Display and/or Interpretive Material; and CUL-2c, Architectural Resource Salvage Opportunities). Mitigation Measure CUL-2d (Central Waterfront Historic Preservation) has been added to the Final EIR. Please refer to Section 13.0 of the Final EIR for the applicable text revision.
10-51	Comments noted. Maintenance activities associated with the converter stations and ancillary facilities are not anticipated to involve ground disturbance and, if ground disturbance was required, it is anticipated that it would only occur in areas that had been previously disturbed and/or cleared from a cultural resource perspective.
10-52	Comments noted. As discussed in previous comment responses, the Standard Oil site including ancillary facilities has been removed from further consideration, thus the potential historic significance of railroad facilities in this area is no longer germane to the proposed TBC Project.

RESPONSE TO COMMENTS

Comment Number	Response
10-53	Please refer to Response 10-43.
10-54	If unavoidable marine archaeological resources were encountered, the Project proponent would coordinate with the City of Pittsburg, the CCSF (if the resources were on submarine lands under its authority), and the SLC to ensure appropriate steps were taken to satisfy these mitigation measures. California Public Resources Code 6313 also requires the SLC to coordinate with the State Historic Preservation Office. Additionally, it is likely the USACE (and the State Historic Preservation Office) would be involved should the USACE include the subject area identified for testing or data recovery as within its jurisdictional footprint of the USACE's 404 permit, thus creating a nexus with Section 106 of the National Historic Preservation Act.
10-55	Comments noted. No planned maintenance activities are associated with the proposed submarine cable. If maintenance activities required ground disturbance (e.g., to repair a cable break), it is anticipated that it would only occur in areas that had been previously disturbed and/or cleared from a cultural resource (e.g., shipwreck) perspective.
10-56	Comments noted. The Standard Oil site in Pittsburg has been removed from further consideration. Further, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). The potential impacts to historic resources associated with the Project are no longer applicable. Because the proposed project would cause no significant adverse change to historical resources, there would be no significant cumulative adverse change to these resources. Additionally, the potential for cumulative impacts with other projects such as the Carquinez Bridge Replacement Project (I-80) are not applicable.
10-57	The text in Section 9.2 of the Draft EIR has been clarified with respect to potential Project impacts to the larger historic context of the Potrero area in San Francisco. Please refer to new Section 13.0 of the Final EIR for the applicable text revision. Please refer also to Responses 10-44 and 10-50.
10-58	Comments noted. The proposed and alternative San Francisco converter station sites are located within the M-2 zoning district, and the converter station is consistent with uses permitted within that zoning district. Section 4.8.1.1.4 of the Draft EIR acknowledges that the housing deficit in the City of San Francisco has led to increased development pressure in traditionally industrial sectors, including the Central Waterfront District. As discussed in Sections 4.8.2.3.4 and 7.2.3.4 of the Draft EIR, the City and County of San Francisco has released the Draft Central Waterfront Neighborhood Plan, which acknowledges this increased development pressure and sets several goals to maintain the established mixed-use character of the District. The Draft Plan proposes to rezone large areas of the Central Waterfront District as production, distribution and repair (PDR). The PDR district would be designed to protect existing activities and encourage new PDR activities. The proposed and alternative San Francisco converter station sites are all located on areas proposed to be re-zoned PDR. The converter station would be consistent with uses allowed within the PDR district. The PDR district would not allow the wide range of activities in the current M-2 district and would prohibit new housing. Thus, while it is acknowledged that residential and mixed uses are increasing in the area, including the Mission Bay and Hunters Point redevelopment projects, rezoning proposed in the Draft Plan establishes the protection of PDR activities and specifically prohibits residential uses to limit further encroachment on PDR uses. Please refer to Section 4.A.8 of the Final EIR for more information.

RESPONSE TO COMMENTS

Comment Number	Response
10-59	Comments noted. As noted in Response 4-1, the Project proponent has negotiated with the landowner at the HWC site and now proposes as a mitigating alternative to construct the San Francisco Converter Station on the western portion of the overall HWC property ("HWC [Mitigated] site"), thereby completely avoiding this potential impact to public access to the Bay. Therefore, no mitigation is warranted.
10-60	This comment is in error. Potential Impact PS-4, Water Service, and the associated Mitigation Measure PS-4, is included in Table 1-1 of the Draft EIR on p. 1-49. It should be noted that this potential impact applies to the Pittsburg Standard Oil and Pittsburg Mirant sites. The Standard Oil site has been removed from further consideration. This potential impact does not apply to the either of the Pittsburg West Tenth Street sites, or to any San Francisco sites.
10-61	Comments noted. The Draft EIR is correct as written. The proposed Project does not include specific planting or architectural design plans for the sites under consideration in San Francisco. However, the City of Pittsburg as CEQA Lead Agency and the Project proponent fully understand that landscaping and architectural design for converter station facilities in San Francisco (and Pittsburg) will be required, thus Mitigation Measures VIS-1, VIS-2, and VIS-3 shall be required of the Project proponent as clearly presented in the Draft EIR. The plan requirements for building materials and colors, lighting, and landscaping for the selected site in San Francisco will be prepared and approved in coordination with the City and County of San Francisco as stated in the mitigation measures.
10-62	Comments noted. As discussed in Section 4.4.3.4.1 of the Draft EIR, material that would be dredged in New York Slough associated with the Standard Oil site was expected to be acceptable for replacement in the dredged area following cable installation. This preliminary conclusion was based on site-specific sediment sampling that was performed (refer to Section 4.4 and Appendix E of the Draft EIR). However, the Standard Oil site has been withdrawn from further consideration and since dredging was only associated with the submarine cable installation for this site, dredging issues in New York Slough are no longer applicable to the Project.
10-63	Comments noted. The results of the Phase I and II investigations for the now-proposed HWC (Mitigated) site are presented in Section 4.A.14 of the Final EIR. Section 4.A.14 also addresses remediation and associated issues for the HWC (Mitigated) site.
10-64	TBC is no longer considering the Standard Oil site as either the primary or an alternative site for the Pittsburg converter station. Therefore, no Phase II investigation is needed for this site. The now-preferred Pittsburg converter station site is the West Tenth Street Alternative 1 (East/West configuration) site. A Phase II Soil and Groundwater Investigation has been conducted for this site, and the results are discussed in the Draft EIR.

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
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June 26, 2006

Ken Strelo
City of Pittsburg
Planning Department
Civic Center
65 Civic Avenues
Pittsburgh, CA 94565

Dear Mr. Strelo:

The California Public Utilities Commission (CPUC) reviewed the Tran Bay Cable Project Draft Environmental Impact Report (SCH# 2004082096). In reviewing the Public Services and the Public Safety Sections of the draft EIR we did not see any analysis of the construction impacts where the Trans Bay cable crosses the BART Trans Bay tube. The construction description for the cable mentions trenching, burying the cable, and plate coverings, but does not have any discussion on how that will be handled as the cable crosses under the BART tube. Given the age of the BART tube it seems that there should be mitigation measures to assure public safety during construction. **11-1**

Under project alternatives the only overhead transmission land route assumes that the high voltage AC cable routes through the BART Tran Bay tube making that alternative unacceptable. Did the City consider routing the AC cable under the bay from Oakland to San Francisco as an alternative? **11-2**

Very truly yours,

Sean Gallagher, Director
CPUC Energy Division

Cc: Michael Peevey- President CPUC
Steve Larson-Executive Director CPUC
Paul Clanon-Deputy Executive Director CPUC
Ken Lewis-Program Manager CPUC

RESPONSE TO COMMENTS

Comment Number	Response
11-1	The City of Pittsburg as CEQA Lead Agency appreciates the California Public Utilities Commission review of the Draft EIR for the proposed TBC Project, including the concern expressed regarding potential Project-related effects on the BART tube where the proposed submarine cable would cross. Please refer to Responses 5-1 through 5-5 that address BART's comments on the Draft EIR.
11-2	The alternatives analysis presented in Draft EIR Section A.8 does consider the possibility of laying a submarine cable between Oakland and San Francisco under the Moraga-Potrero 230 kV AC/HVDC alternative (refer to Section A.8.3.5.5 of the Draft EIR), and the Moraga-Embarcadero 230 kV AC alternative (Section A.8.3.5.6 of the Draft EIR). Both of these alternatives, and variations thereof, would require use of a combination of utility, BART, and/or highway corridors, including the possibility of crossing the Bay from Oakland to San Francisco by laying a submarine cable. None of the alternatives considered, with the exception of the proposed TBC Project, is considered capable of meeting all of the screening criteria presented in Draft EIR Section A.8.3.

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Defending Our Waters—from the High Sierra to the Golden Gate

June 26, 2006

Ken Strelo, Project Planner
City Of Pittsburg Planning Department, Civic Center
65 Civic Avenue
Pittsburg, CA 94565

RE: Trans Bay Cable Project, Draft Environmental Impact Report

Dear Mr. Strelo:

Thank you for this opportunity to provide comments. As you may be aware, Baykeeper (formerly Waterkeepers Northern California) met with representatives of Babcock & Brown in 2004 to review plans for the Trans Bay Cable proposal. At that time, Baykeeper staff expressed significant concerns regarding the disturbance of Bay sediment in pursuit of this project and the impact these activities will inevitably have on water quality in the Bay. A copy of the December 16, 2004 letter sent to Babcock & Brown is attached. Our concerns have not changed given the draft environmental report now out for review. At this time, Baykeeper remains concerned about the impacts from the proposed project and does not believe the environmental assessment completed pursuant to the California Environmental Quality Act (CEQA) is sufficient. We urge you to more carefully consider the water quality impacts that will result from the Trans Bay project and to more adequately mitigate these impacts, especially as related to Bay sediment and polluted runoff. **12-1**

Baykeeper and Clean Water Action believe that it is likely that many of the activities related to this project will result in violations of water quality standards, provide substantial additional sources of polluted runoff, and otherwise substantially degrade water quality in the Bay and its tributaries. Below are a few detailed comments on the Draft EIR on behalf of Baykeeper and Clean Water Action:

1. Of the pollutants that are known to contaminate the Bay and its tributaries, the report fails to specifically look at dioxins. Baykeeper believes it is essential for any proposed dredging project to consider this pollutant carefully. The project proponents should also ensure that the Draft EIR adequately reviews all other Bay pollutants by reviewing the list created under section 303(d) of the Clean Water Act and making sure none of these pollutants are present at high levels along the proposed route nor would be increased by construction runoff. **12-2**

2. While it is important to look at mercury levels in the sediment, methyl mercury is the pollutant of greater concern and it is unclear as to whether the report considers this type of mercury specifically. Churning up Bay sediment could convert mercury into methyl mercury or otherwise make it more bioavailable for uptake in the food chain. **12-3**

3. Simply comparing sediment levels to NOAA standards to determine toxicity is insufficient. Adequate monitoring must be undertaken to ensure that the proposed project and dredging **12-4**

WATERKEEPER® ALLIANCE FOUNDING MEMBER

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activities do not result in exceedances of water quality standards. This is especially important in 303(d) impaired waterways. The Draft EIR should specifically identify the impaired waters (such as the Bay and Kirker Creek) and ensure that the proposed project will not result in water quality violations due to sediment disturbance and/or stormwater runoff.

12-4

4. Baykeeper and Clean Water Action believe that 27 core samples are insufficient to represent the quality of Bay sediment for purposes of such an invasive project as the Trans Bay Cable project. Additionally, the map shows that these samples were taken at fairly equal distances, meaning that Baykeeper's earlier recommendation to test at more frequent intervals near shore was ignored. We believe more representative samples should be taken closer to the shore where sediment pollution is known to be high. Relying solely on sporadic Regional Board data for hot spots is insufficient.

12-5

5. The report states that "Confirmation sediment sampling shall be performed at the location where the HDD emerges into the Bay and the results would be considered and addressed prior to commencement of construction near this location." (Mitigation WATER-5: Avoidance of Sediment Contamination). Baykeeper and Clean Water Action would like to urge project proponents to better consider contamination before the project is approved. Waiting until construction begins may be too late to best avoid highly contaminated areas. The proposed plan for dredging with the Hydroplow contains the same flaw, and we would strongly urge that more thorough consideration of contamination be considered now, before the project begins, so that adequate pre-planning might be done to avoid contaminated sites.

12-6

After briefly reviewing the Draft Environmental Impact Report, we remain concerned that the Trans Bay Cable project is unsuitable for San Francisco Bay. We urge you to undertake a more thorough analysis of the water quality impacts and the mitigation measures proposed.

If you should have any questions, please contact Amy Chastain of Baykeeper at extension 106.

Thank you,

Sejal Choksi
San Francisco Baykeeper and Program Director

Jennifer Clary
Clean Water Action

RESPONSE TO COMMENTS

Comment Number	Response
12-1	Comments noted. Section 4.4 of the Draft EIR addresses potential water quality impacts associated with sediment disturbance in the Bay and surface runoff associated with construction activities. In summary, no unavoidable adverse significant water quality effects have been identified associated with implementation of the proposed Project.
12-2	Comment noted. Dioxin has been measured in effluent and treatment plant discharges to the Bay. The TBC Project does not include discharge of effluent or treated water to the Bay. Section CWA 303(d) of the federal Clean Water Act requires states to identify waters that do not meet applicable water quality standards. The California 303(d) list identifies impaired water bodies and pollutants for which the State water board is in the process of developing allowable total maximum daily loads. San Francisco Bay is listed for a number of pollutants including mercury and PCBs. The sediment survey presented in Appendix E of the Draft EIR did not encounter any sediment contamination along the cable alignment and the shore-term construction activities are not expected to contribute to the daily load of identified pollutants.
12-3	Comment noted. The sediment survey presented in Appendix E of the Draft EIR did not encounter any contamination, including mercury, along the cable alignment at concentrations greater than ambient Bay concentrations or generally accepted benchmarks. Methyl mercury would be identified as a potential concern if shallow sediments exhibiting elevated total mercury concentrations above the NOAA effects range medium benchmark of 710 μg/kg were encountered. These concentration levels were not detected. The majority of the cable alignment is in deep water near the center of the Bay that has lower mercury levels than concentrations measured in shallow water in the south Bay and San Pablo Bay.
12-4	Comments noted. Please note that the Standard Oil site and ancillary facilities has been withdrawn from further consideration as noted in the Final EIR and previous comment responses. Therefore, the Project no longer has the potential to impact Kirker Creek. Regarding the Project's potential to result in exceedance of water quality standards, NOAA sediment benchmarks and RWQCB ambient sediment concentrations are accepted criteria used in human health and sediment ecological risk analyses for characterization of sediments in San Francisco Bay.
12-5	Comment noted. The volume of dispersed sediment along the cable alignment is between 117 and 235 cubic yards per mile assuming the full 6-ft burial depth. The total volume of dispersed sediment along the 53-mile alignment is between 6,220 and 12,440 cubic yards. The Dredged Material Management Office (DMMO) guidelines for implementing the USACE Inland Testing Manual indicate that for dredged volumes of between 5,000 and 20,000 cubic yards, 1 composite sample from 4 sample locations is required for testing. Therefore, 27 samples tested for the project from 27 locations far exceeds the requirements of the regulatory dredging agencies.
12-6	Comment noted. The use of HDD at the shoreline crossing near the Potrero substation would allow the cable to enter the Bay at a depth of approximately 30-35 feet below MLLW offshore of known shoreline contamination. The HDD technique consisting of bore-and-core combined with containment at the offshore end of the boring has been proposed to contain drilling mud and cuttings, as well as the introduction of any shoreline contaminants into the Bay. Please see Response to 12-5.

December 16, 2004

Babcock & Brown Power Operating Partners LLC
2 Harrison Street, 6th Floor
San Francisco, CA 94105

Dear David Parquet and the Trans Bay Cable Project Planning Team:

On behalf of San Francisco Baykeeper, a project of Waterkeepers of Northern California ("Baykeeper") we offer these preliminary comments on the proposed Trans Bay Cable Project.

First, let us thank you for your sincere effort to involve the community in the early stages of planning and environmental consideration for this project. We hope that these comments will serve to inform you of our concerns about a project this complex in our unique estuary and to bring about the most effective management of the Bay ecosystem and the most efficient use of your resources. These comments are brief due to Baykeeper's limited involvement and thus do not preclude any future concerns that Baykeeper may have of the final monitoring plan, EIR, final plan implementation, or any unforeseen impacts. It is these impacts that we urge you to identify now, early in the process, before a great deal of capital investment has been put forth. **13-1**

General Comments

Overall, the Trans Bay Cable project is commendable in its goals. The City of San Francisco now relies on a limited power delivery system that is vulnerable to service interruptions. It will come under further pressure as the population grows and the infrastructure continues to age. The current power plants at Potrero Hill and Hunter's Point are relics of a bygone era, evading many of the regulations that govern modern power plants. They pollute the air and water with NOx, SO_2, ground level ozone, particulate matter, and heavy metals. These plants are scheduled for retirement in 2006-8. A viable alternative must emerge to supply power to the city. The 'generation-rich' East Bay provides an attractive solution to this problem – if an effective delivery route can be found.

The current plan, to bury a Bundled HVDC cable in the sediment from Pittsburg, through Suisin, San Pablo, and North San Francisco Bays to Potrero Point has

been put forth as the most viable alternative at this time. As the Project Coordinators have explained, it has become possible to undertake such a project as advancements in the technology of underwater vehicles have reduced both cost and uncertainty of cable installation. The Project Coordinators have described projects very similar to this one that have met with great success around the world.

13-1 While this technology may be well suited for some cases, we cannot assume it is appropriate in all cases. Not all seabeds are the same. The San Francisco Bay Estuary is not like open ocean of the Irish Sea or The Bass Strait, where the Irish and Tazmanians have been well served by trans-oceanic cables. We have been directed to two projects that are most similar to the Transbay Cable proposal: the Cross-Sound Cable across Long Island Sound (NY) and the NEPTUNE project in the Raritan watershed (NJ). We point out that both have been set with problems that have stalled their successful completion. The San Francisco Bay shares many of the challenges of these projects – nearby urban areas, heavy boat traffic, sensitive benthic habitats, and large fishing communities. Our Bay also shares a particular troubling feature with the NEPTUNE project, which is currently stalled indefinitely. Both have a long history of contamination. Our central concern with the Trans Bay Cable Project is that by disturbing six square feet of sediment over 55 miles of the Bay, huge amounts of this toxic contamination, currently entombed in the Bay floor, could become suspended in the water column and enter the food chain.

13-2 With a watershed of 63,000 square miles, the estuary drains 40% of the land area of California through an opening of less than 4000 feet at the Golden Gate. It has been the ultimate repository for the runoff from the many mining operations and industrial facilities that have been established here since the time of the Gold Rush. The Sacramento Valley, which drains into the watershed, has been one of the most heavily farmed regions of the world for over a hundred years. During this time, millions of tons of pesticides and herbicides have been applied to the land. Many of the chemicals applied to the land between 1950 and 1975 have been found to be carcinogenic, teratogenic, or in other ways toxic and have thus been banned. Currently, the San Francisco Regional Water Quality Control Board oversees 21 Superfund sites; 19 toxic pit sites; 2000 spills, leaks, and cleanups; 10,000 fuel leak sites; and 50 brownfields in the area, many on the immediate shoreline. (Wolfe, Nov 6, 2004) A great many compounds have run into the Bay, directly along the proposed route of this project. Many of them have a natural attraction to organic material, so as they enter the water column, they adsorb, or

attach to the outside of, sediment particles and settle to the bottom. Over time, they are covered over by more sediment and become trapped in the Bay floor.

The most dangerous of these compounds are those designed in the early years of chemical engineering, a time when chemical engineers were able to synthesize an extraordinary array of compounds but before doctors and scientists became aware of the long term problems they would pose. They are often incredibly stable and resistant to decay. Many can interfere with the delicate processes of life. They pose no harm when buried in sediment, but if they are released into the food chain, they gain entry into the bodies of aquatic wildlife and thus, into the bodies of fish-eating humans. The active sediment layer, from which sediment is currently re-suspended due to wave and tidal action is no more than 33cm, perhaps as little at 10 cm in San Pablo and Suisin Bays, comprising between 3 and 10 years of accumulation (assuming a sediment accumulation rate of 3.1 cm/yr). (Davis, 2003; Fuller et al., 1999) The proposed project could re-suspend sediment buried up to 2m deep. By liquefying this sediment, comprising 80 to 150 years of accumulation, (Fuller et al., 1999) this project could release a vast number of dangerous compounds into the food chain. We urge that adequate studies be undertaken to determine the ultimate consequences of fluidizing such contaminated sediment. **13-2**

Specific Comments

History of Contamination

San Francisco Bay is one of the few large estuaries on the western coast of North America. Its watershed comprises 63,000 square miles, 40% of the total surface area of the State of California. It has a long history of chemical contamination. Evidence shows that from the first years of Spanish settlement in 1769, toxic compounds were already beginning to accumulate in the sediment of the Bay floor, perhaps as a result of clearing the land by fire. (van Geen and Luoma (1999) citing Hornberger, et al. (1999)) The contamination accelerated during the late nineteenth century as mining operations in the Sierra Nevada foothills released toxic heavy metals, especially mercury, from the hillsides. These metals ran into rivers and settled into the sediment of the Bay and Delta. Soon after these mining operations began, agriculture in the Central Valley expanded dramatically, driven by irrigation water diverted from these same rivers. During **13-3**

the twentieth century, millions of tons of fertilizer, herbicides, and pesticides spilled off this farmland into the Bay. Early compounds, such as the inorganic arsenicals were dangerous in their own right, but between the two World Wars a new generation of chemists was synthesizing far more dangerous chemicals, among them the chlorinated hydrocarbons. These, which include the chlorinated hydrocarbon insecticides (DDT, dieldrin, chlordane, toxaphene, etc.), PCBs, and dioxins, have not only been shown to be dangerous to human systems but are particularly resistant to decay, especially when suspended in sediment. They were banned from manufacture in the 1970s, but in the intervening 50 years of use and illegal disposal, many tons were dumped into the Bay. The contamination continues today. In heavily farmed areas, between 1,250 and 4,300 pounds of pesticides are used per square mile annually. (TBI (1998) citing Brown and Caldwell (1990)) A 1992 report by the San Francisco Estuary Project estimates that current toxic release is on the order of thousands of metric tons per year. (Monroe and Kelly, 1992)

13-3

Many of the contaminants mentioned above have low water solubility and thus partition quickly out of the water column. If they are not ingested by an aquatic animal, they are likely to attach to sediment particles, settle to the bottom, and become embedded in the sediment. (Davis, 2004, Ling et al. 1993) They are persistent in the environment, bioaccumulative in the food chain, and have a profound effect on human health. Of particular alarm are their carcinogenic properties and their effect on the proper development of the human fetus. Our central concern with the Trans Bay Cable Project is that by disturbing six square feet of sediment over 55 miles of the Bay, huge amounts of these toxic chemicals could become suspended in the water column and enter the food chain. It should be noted that sediment in upstream locations has shown to be more contaminated than downstream locations. (Vankatesan et al., 1999) The portion of the cable buried in Suisun Bay is particularly worrisome.

13-4

Due to considerations for recreational anchors, the cable must be buried 1 to 2 meters deep in this sediment along its entire 55 mile path. To accomplish this, a hydroplow will direct water at a pressure upwards of 100 psi into Bay floor, disturbing between 27,000 cubic meters and 54,000 cubic meters of sediment. The sediment will 'fluidize' and the cable will sink to the appropriate regulated depth. Not enough is known about this process. Specifically, to what extent will the chemicals entombed in this liquefied sediment be released into the aquatic environment? We urge that the proper studies be undertaken to answer this

13-5

question. Of particular concern is sediment from the years of greatest Chlorinated Hydrocarbon (CHC) contamination, between 1950 and 1975. **13-5**

Through conversations with colleagues at NY/NJ Baykeeper regarding their experiences with the proposed NEPTUNE project, we have come to understand that dredging may be required to achieve favorable bottom conditions for the hydroplow. We have not been made aware of any dredging required in this project. Dredging can have significant impacts on the Bay floor. We urge that any dredging activity be undertaken with the greatest caution and consideration for this sensitive and important habitat. **13-6**

Special Areas of Concern

Suisin Bay

The coastline west of Pittsburgh is heavily industrialized, and we would recommend particular sensitivity when disrupting the sediment in this area. As the proposed route leaves Pittsburgh heading west, it passes a shoreline with a long history of military and industrial tenants. It passes first by a sewage outfall at Mallard Island and around Stake Point, where the General Chemical Bay Point Works chemical plant stands just before Middle Point. Beginning with this facility, we pass a long stretch of potentially contaminated coastline. The Concord Naval Weapons Station encompasses 7,000 acres along two miles of shoreline from Belloma Slough to Pacheco Creek and also includes Seal, Roe, and Ryer Islands to the north. It was from this well-protected port that the Navy provided munitions for its Pacific fleet during WWII, Korea, and Vietnam. It is included in the National Priorities List (Superfund) program, identifying it as one of the most highly contaminated sites in the country. According to this program administered by EPA, "Soil, sediments, and surface water are contaminated with heavy metals including zinc, copper, lead, cadmium, and arsenic, as well as SVOC [(semi)volatile organic compounds] and pesticides… Tidal action in the wetlands inundated the sources, carrying contamination to Suisun Bay." (USEPA) On the east side of the Weapons Station, is Pacheco Creek. Upstream in this creek stands the Tosco Avon Oil Refinery. The process of refining petroleum produces many harmful byproducts, including dioxin, which are discharged into this creek and flow to the Bay. To the West, there are additional petroleum refineries, discharging these same toxic compounds into the Bay. **13-7**

13-7 These facilities were built along this shoreline in part because the Bay provides a convenient repository for their outflow. Chemicals from these sites may lie suspended in the sediment today. This stretch of almost 15 miles from Pittsburg to Davis Point is an area of special concern, requiring testing at a more frequent interval than 1000 yards. If the contamination is too great, an alternative route, north of Ryer Island, could be explored.

Potrero Point

13-8 There is little doubt that the sediment around Potrero Point, the proposed terminus for the cable, has been heavily contaminated. We understand that the project design team is sensitive to this fact and will likely opt to use directional drilling technology to avoid re-suspending this sediment. We urge caution even with this seemingly benign approach, and recommend extensive testing and monitoring of this site.

Chemicals of Concern

Chlorinated Hydrocarbons (CHCs) –

13-9 CHCs are a family of chemicals characterized by one or more hydrocarbon rings attached to one or more chlorine atoms, and often other compounds. They have been released into the water as a result of an accident, such as an electrical transformer explosion, after agricultural application such as to protect crops from insects, or from illegal dumping. CHC exposure can impact many of the body's systems, with negative impact on proper respiratory, cardiovascular, gastrointestinal, endocrine, dermal, and ocular function. Many are listed by the EPA as 'probable human carcinogens'. (ATSDR – Chapter 3)

It is important to understand how these compounds came to exist. PCBs (polychlorinated biphenyls) are a class of 209 chemicals that were produced in mixtures known as Araclors by the Monsanto Company between 1929 and 1977. Commercial manufacture produces some combination of different congeners. Each of these congeners reacts differently with body. Their number classification is based on their number of chlorine atoms. The more chlorinated a PCB congener, the more resistant it is to decay. While UV-B or high temperatures will break up highly chlorinated PCBs, even the residual products persist in the environment. The highest levels of PCB contamination in San Pablo Bay are between 60-70 cm. (Venkatesan, 1999)

Furans (PCDFs) and dioxins (PCDDs) exist as byproducts of industrial processes and the combustion of other compounds, especially chlorophenols, chlorobenzenes, and PCBs. They are among the most toxic synthetic substances known to science. They are also highly persistent.

Chloronated hydrocarbon pesticides, including DDT, were first hailed as miracle chemicals when they were introduced in 1938. Their ability to protect crops from insects and other pests was unmatched. Unfortunately, they too are highly toxic to humans and wildlife. This was not fully understood until the 1970s, at which time they were banned for use in the United States. In the intervening years, millions of tons ran into Bay after rains or illegal dumping. These chemicals are highly persistent and remain in the sediment today.

Health Effects

Given the brief nature of these comments, we will only discuss one pathway of negative health effects – the manipulation of endocrine function. The CDC provides a full discussion of health effects through the Agency for Toxic Substances and Disease Registry's catalogue of Toxicological Profiles. **13-9**

Many CHCs and their metabolites affect the proper balance of hormones in the body by mimicking their chemical and physical properties in several different ways. They can fool the brain into thinking there is a high level of a particular hormone in the blood, triggering it to send the signal to stop producing that hormone, with a resultant shortage. They can bind to the chemicals that are meant to neutralize the hormone, with a resulting overload. They can induce or suppress the production of enzymes in the liver meant to metabolize the hormone, again changing the natural levels. Any of these, or a combination of several, will have a profound effect on the body.

Two examples of affected hormones are the thyroid hormone and estrogen. Both play vital roles in the delicate and irreversible process of prenatal development.

During development the thyroid hormone directs process of organizing the developing brain. For the period between 8 weeks, when brain development begins, and the time of thyroid hormone production (10 – 12 weeks), the fetus relies on thyroid hormone from its mother. A thyroid deficiency during this period results in cretinism, with symptoms including deaf-mutism, spasticity, gait disturbances, profound mental retardation, and complete or partial inability

to stand. (Porterfield and Hendry (1998) citing Stanbury (1984); Donati et al. (1992); Rogan and Ragan (2003)) Even after this period, a lack of thyroid hormone can impair neurological development, shown later in life as learning and behavioral disorders such as attention problems, impaired memory and diminished spatial perception. Brain development continues until several weeks after birth and can be affected by CHCs that are secreted through a mother's breast milk. (Klein, 1972) Such problems have been reported in a study of children born in the early 1980s to women who had eaten large amounts of Great Lakes fish shown to have high CHC levels. (Jacobson and Jacobson, 1996) They continue to become increasingly common in our society.

Estrogen levels can also be affected, especially by DDT and other pesticides that were used so heavily in the Central Valley. A male exposed to estrogen mimicking compounds can develop malformed sexual organs and feminized behavior. (Vreugdenhil et al., 2002; Skakkebæk et al., 2001) Sterility or more serious consequences will result. Although the mother's estrogen will not cross through the placenta, estrogen mimicking chemicals from outside the body do
13-9 cross into the fetus' bloodstream. Other compounds, such as some of the dioxins, work in the opposite way, binding to the receptors meant for estrogen without activating them. This leads to an estrogen deficiency, especially damaging to the female fetus. (Soto, et al., 1994; Lascombe, et al., 2000)

Heavy Metals

Heavy metals exist naturally in the earth's crust and naturally leach into the environment in low levels. Human activities such as mining and the burning of fossil fuels can release these metals at much higher levels. Such mining began in earnest in our watershed in the mid 19th century with the discovery of gold in the Sierra foothills. Miners diverted water from rivers and forced it into high pressure jets to remove the rock from the hillside. This released naturally occurring metals, especially mercury and cadmium. Mercury was also used as an amalgam to extract the pure gold from alluvium ores and then dumped directly into the watershed.

Mercury comes out of the ground in its metallic or inorganic form, which is not a great threat to humans. In the environment, though, microorganisms metabolize it into methylmercury, which is lipophilic and as such becomes much more dangerous to wildlife and humans alike. Methylmercury is a known neurotoxin. Symptoms of exposure include impaired peripheral vision, hearing, taste, and smell; slurred speech; unsteadiness of gait and limbs; muscle weakness;

irritability; memory loss; depression ; and sleeping difficulties. It also damages the kidneys and causes death in high doses. Children, particularly fetuses and newborns, are quite sensitive to mercury exposure. Many of their systems continue to develop into their teenage years and exposure to mercury can interfere with this development. (ATSDR – Chapter 3)

13-9

All of these compounds exist in the sediment of our estuary. If they are released into the water column, they will enter the food chain, eventually accumulating in the large, predatory, long-living fish that humans eat. Because the chemicals accumulate over time, the levels in a fish's meat can be millions of times higher than in the surrounding water. Thousands of people eat these fish caught from the Bay each year. Our first priority should be to the health of these people and the health of their families.

13-10

Suggestions

The following are specific suggestions to ensure that this project will have minimal impact on human health and aquatic wildlife.

Take sediment core samples at more frequent intervals

As we have shown, much of the proposed route has the potential for heavy sediment contamination, much of it localized. The current plan to test sediment cores every 1000 yards may not accurately reflect this heavy contamination. Especially along the southern shoreline of Suisin Bay, we suggest a more rigorous monitoring program.

13-11

Take sediment core samples to an appropriate depth

Especially in soft sediment, the cable will need to be placed deeper than the one meter standard to avoid recreational marine anchors. The high organic content and fine sediment particles of these softer surfaces also make them more attractive to contaminants. Sediment cores should be taken at a depth consistent with the planned depth of the cable.

13-12

Use best detection methods available

It is not appropriate to group chemicals by class. Many chemicals within one class can act quite differently. In order to accurately detect what chemicals are present in sediment, it is necessary to use a high resolution gas chromatograph or electron capture detection. (ATSDR – Chapter 7) These expensive tests are necessary given what we know about contamination of Bay sediment and its potential health effects.

13-13

Investigate technology for sediment removal

13-14 If it is found that the sediment along the proposed route would release chemicals such that their presence in the water exceeds acceptable limits, it may be necessary to work with Pirelli and other contractors to devise a method for removing the contaminated sediment in an environmentally sound manner and covering the cable with clean sediment.

Recognize incomplete science

13-15 Throughout each stage of testing and design, it is important to recognize that society's understanding of certain processes is not definitive. Many of the chemicals suspended in the sediment have not been tested for health effects or environmental persistence. Chemicals can act synergistically within the body and the water column, one multiplying the effect of another by hundreds of times (Van Birgelen et al., 1996). Any decisions should err on the side of caution, especially as many effects are irreversible and occur society-wide. There are several models for evaluating the rate of chemical re-suspension into the water column. We urge you to consult several before making any conclusions.

Explore Alternative Routes

13-16 Baykeeper would encourage another look at the BART Trans Bay Tube/Federal Highway route to Pittsburgh. With security concerns, it would undoubtedly be difficult to implement this plan, but if sediment contamination proves to be extensive, it may be more efficient to come up with a way to prevent security breaches rather than manage polluted sediment.

Understand historical contamination

13-17 In discussions with the Project Coordinators and Engineering team, some questions arose about the depth at which contaminated sediment in the Bay lies as well as the depth of the Active Sediment Layer. We recommend that these questions be resolved as soon as possible. See the Davis, Fuller and Ling papers referenced below for a discussion of these topics.

Understand impacts to benthic communities

13-18 This letter has dealt primarily with Bay sediment contamination and its impacts on aquatic wildlife and human health. This letter does not preclude further comment on the sensitivity of the benthic communities impacted by this proposal. We urge that a full understanding of the project's impact on the benthic habitat be developed.

Please contact us if you have a question about these comments. And once again, thank you for this opportunity to provide input.

Sincerely,

Avi Ringer
Policy and Research Intern
Waterkeepers Northern California

Sejal Choksi
San Francisco Baykeeper
Waterkeepers Northern California

References

Agency for Toxic Substances and Disease Registry – Toxicological Profiles for PCBs, Dioxins, DDT, Mercury, and Cadmium, Chapter 3: Health Effects. http://www.atsdr.cdc.gov/toxpro2.html (last visited Dec 14, 2004)

Agency for Toxic Substances and Disease Registry – Toxicological Profiles for PCBs, Dioxins, DDT, Mercury, and Cadmium. Chapter 7: Analytical Methods. http://www.atsdr.cdc.gov/toxpro2.html (last visited Dec 14, 2004)

Birnbaum LS. 'Endocrine Effects of Prenatal Exposure to PCBs, Dioxins, and Other Xenobiotics: Implications for Policy and Future Research.' *Environ Health Perspect* 102:676-679 (1994)

Cheek AO, Kow K, Chen J, and McLachlan JA. 'Potential Mechanisms of Thyroid Disruption in Humans: Interaction of Organochlorine Compounds with Thyroid Receptor, Transthyretin, and Thyroid-binding Globulin' *Environ Health Perspect* 107:843-849 (1999)

Colborn T, Dumanoski D, and Myers JP, Our Stolen Future. Plume (New York) 1997.

Davis JA. 'The Long Term Fate of PCBs in San Francisco Bay'. RMP Technical Report: SFEI Contribution 47. San Francisco Estuary Institute, Oakland, CA. (2003)

Fairey R, Taberski K, Lamerdin S, Johnson E, Clark R, Downing J, Newman J, Petreas M. 'Organochlorines and other Environmental Contaminants in Muscle Tissues of Sportfish Collected from San Francisco Bay.' *Marine Pollution Bulletin* 34 (1997) 1058-1071

Fox River Watch Resources on PCBs and Cancer (last visited November 22, 2004) http://www.foxriverwatch.com/cancer_pcb_pcbs_1.html#human

From the Sierra to the Sea: The Ecological History of the San Francisco Bay-Delta Watershed. The Bay Institute (1998)

Fuller CC, van Geen A, Baskaran M, Anima R. 'Sediment Chronology in San Francisco Bay, California, defined by ^{210}Pb, ^{234}Th, ^{137}Cs, and ^{239,240}Pu.' *Marine Chemistry* 64 (1999) 7-27

Hinton SW, Brunck R, Walbridge L. 'Mass Transfer of TCDD/F from suspended sediment particles.' *Wat Sci Tech* 28 (1993) 181-190

International Programme on Chemical Safety – Environmental Health Criteria for PCBs Dioxin, DDT, Mercury and Cadmium - http://www.inchem.org/pages/ehc.html (last visited Nov 12, 2004)

Jacobson JL, Jacobson SW. 'Intellectual Impairment in Children Exposed to Polychlorinated Biphenyls in Utero' *N Engl J Med* 335: 783-789 (1996).

Klein AH, Meltzer S, Kenny FM. 'Improved prognosis in congenital hypothyroidism treated before age three months. *J Pediatr.* 81: 912-5 (1972).

Lascombe I, D Beffa, U Rüegg, J Tarradellas, and W Wahli. 2000. 'Estrogenic Activity Assessment of Environmental Chemicals Using in Vitro Assays: Identification of Two New Estrogenic Compounds.' *Environmental Health Perspectives* 108:621-629.

Ling, H., Diamond, M., Mackay, D. (1993) 'Application of the QWASI fugacity/aquivalence model to assessing sources and fate of contaminants in Hamilton Harbour.' *Journal of Great Lakes Research* 19 (3): 582-602 (1993)

Monroe MW, Kelly J. 'State of the Estuary. A Report on Conditions and Problems in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.' Prepared by the Association of Bay Area Governments for the San Francisco Estuary Project, U.S. Environmental Protection Agency. Oakland, California. (1992)

'Naval Weapons Station (NAVWPNSTA) Port Chicago Naval Magazine Concord, California' http://www.globalsecurity.org/military/facility/concord.htm (Last visited November 18. 2004)

Osius N, Karmaus W, Kruse H and Witten J. 'Exposure to Polychlorinated Biphenyls and Levels of Thyroid Hormones in Children.' *Environ Health Perspect* 107:843-849 (1999)

Porterfield SP and Hendry LB. 'Impact of PCBs on thyroid hormone directed brain development.' *Toxicology and Industrial Health* 14 (1998) 103-118

Rogan, W MD and Raga, B. 'Evidence of Effects of Environmental Chemicals on the Endocrine System in Children.' *Pediatrics* Vol. 112 No. 1 July 2003, pp. 247-252

Skakkebæk, NE, Rajpert-De Meyts E, and KM Main. 'Testicular dysgenesis syndrome: an increasingly common developmental disorder with environmental aspects.' *Human Reproduction* 16 (2001) 972-978.

Soto AM, Chung KL, and C Sonnenschein. 1994. The Pesticides Endosulfan, Toxaphene, and Dieldrin Have Estrogenic Effects on Human Estrogen-Sensitive Cells. *Environmental Health Perspectives 102: 380-383.*

US Environmental Protection Agency, National Priorities List 'Concord Naval Weapons Station.' http://yosemite.epa.gov/r9/sfund/overview.nsf/ef81e03b0f6bcdb28825650f005dc4c1/f51c32dd07337d1f8825660b007ee645?OpenDocument (last visited Dec 8, 2004)

Van Birgelen, APJM, KM Fase, J van der Kolk, H Poiger, A Brouwer, W Seinen and M van den Berg. 'Synergistic effect of 2,2',4,4',5,5'-Hexachlorobiphenyl and 2,3,7,8-Tetrachlorodibenzo-p-Dioxin on hepatic porphyrin levels in the rat.' *Environmental Health Perspectives* 104:550-557(1996).

van Geen A and Luoma SN. 'The impact of human activities on sediments of San Francisco Bay, California: an overview.' *Marine Chemistry* 64 (1999) 1-6

Venkatesan MI, de Leon RP, van Geen A, Luoma SN. 'Chlorinated hydrocarbon pesticides and polychlorinated biphenyls in sediment cores from San Francisco Bay.' *Marine Chemistry* 64 (1999) 85-97

Vreugdenhil HJI, Slijper FME, Mulder PGH, and Weisglas-Kuperus N. 'Effects of Perinatal Exposure to PCBs and Dioxins on Play Behavior in Dutch Children at School Age.' *Environ Health Perspect* 110 (2002) A593–A598.

Wolfe, Bruce, Executive Director, CA Regional Water Quality Control Board, SF Bay Region. Presentation to a Joint Hearing of CA State Assembly Committee on Environmental Safety and Toxic Materials and the Select Committee on Environmental Justice. November 6, 2004

RESPONSE TO COMMENTS

Comment Number	Response
13-1	Comments noted. This letter dates from late 2004 and, as such, is not specific to the accuracy or content of the Draft EIR for the Trans Bay Cable Project which was issued on May 10, 2006. None the less, the City of Pittsburg as CEQA Lead Agency appreciates the San Francisco Baykeeper's interest in the Project and has responded to the issues raised in the December 16, 2004 letter.
13-2	Comment noted. Please see Responses10-9 and 10-12. Sediment toxic hot spots are typically associated with historic manufacturing and town gas operations located along the Bay shoreline. It is true that at some toxic hot spots, contamination increases with depth. However, in deep, open water there is no evidence of contamination from toxic hot spots or evidence that contamination increases with depth. The majority of the cable alignment is in deep water near the center of the Bay. The use of HDD at the shoreline crossing near the Potrero Power Plant would allow the cable to enter the Bay at a depth of approximately 25 feet below MLLW offshore of known shoreline contamination. The HDD technique being proposed consisting of bore-and-core combined with containment at the offshore end of the boring has been proposed to ensure that drilling mud and any shoreline contaminants are not introduced to the Bay.
13-3	Comment noted. Please refer to Responses 10-9 and 10-12.
13-4	Comment noted. Please refer to Responses 10-9 and 10-12.
13-5	Comment noted. Please refer to Responses 10-10 and 10-12.
13-6	Comment noted. Please refer to Response 10-10.
13-7	Comment noted. Please refer to Responses 10-9, 10-12, and 12-5.
13-8	Comment noted. Please refer to Responses 10-10 and 10-12.
13-9	Comment noted. Please refer to Responses 10-9 and 10-12.
13-10	Comment noted. Please see Responses 10-9 and 10-12. There is no evidence of contamination in sediments along the cable alignment and, therefore, there is no reason to expect that fish could become contaminated by exposure to dispersed sediments. Long-term exposure to contamination is required before fish show elevated tissue concentrations. As indicated in Response 10-12, the volume of sediment being dispersed is extremely small particularly compared to typical dredging projects and the sediment would be dispersed at a very slow rate. It is not credible to hypothesize a fish would preferentially remain in the disturbed area of the sediment plume over the course of the cable installation.
13-11	Comment noted. Please see Response 12-5.
13-12	Comment noted. Please see Response 12-5.
13-13	Comment noted. Please see Response 12-5.
13-14	Comment noted. Please see Responses 10-12 and 12-5.
13-15	Comment noted. Please see Responses 10-12 and 12-5
13-16	Please refer to Section A.8.3 of the Draft EIR which analyzes numerous alternatives to the proposed Trans Bay Cable Project, including its proposed submarine cable component. None of the alternatives is considered to be feasible and capable of meeting the stated Project objectives.
13-17	Comment noted. Please see Responses 10-9 and 10-12.
13-18	Comment noted. Various sections of the Draft EIR describe the benthic communities and potential impacts to these communities. For example, Draft EIR Sections 4.6.3.2.5 and 4.6.3.2.6 address potential impacts to the benthos with regard to cable installation. Sections 4.6.3.3.1 and 4.6.3.3.2 include discussions of potential impacts to the benthos from operation of the cable and provide references to studies of impacts to benthic communities conducted on similar cable undersea projects.

COMMUNITY DEVELOPMENT *P.O. Box 5007, Antioch, CA 94531-5007*

June 26, 2006

Mr. Ken Strelo
Planning Department
65 Civic Avenue
Pittsburg, CA 94565

RE: **TRANS BAY CABLE PROJECT**
DRAFT ENVIRONMENTAL IMPACT REPORT

Dear Mr. Strelo:

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Trans Bay Cable Project. The proposed Standard Oil site is located near the City of Antioch and as such there are some concerns with this project. Specifically, they are as follows.

1. Page 1-18 of the Executive Summary states that Pittsburg West Tenth Street Alternative 1 and Pittsburg Mirant sites both avoid various potentially significant impacts (such as water quality due to dredging and potential onshore biological impacts associated with cable installation) that would be associated with the proposed Standard Oil site. Also, the Pittsburg West Tenth Street Alternative 1 and Pittsburg Mirant alternative sites are considered to be environmentally superior to the proposed Standard Oil Converter Station site which is the proposed location. Based on the information in the document, there is less dredging for the above two alternatives as they are located further to the west. Also, vehicular access to both the Alternative 1 and the Mirant site are more direct route than the proposed location which may result in less congestion on Highway 4. The two alternatives seem to be preferable also due to their location in a Heavy Industrial designation more appropriate for the proposed use. **14-1**

2. The proposed Standard Oil location is close to the western property line for the City of Antioch. As such, there may be several impacts which would require mitigation.
    - Water Quality – There needs to be sufficient mitigation to make sure that dredging activities do not interfere with or degrade the City of Antioch water intake on the Delta. Please provide quantifiable verification of this in the document. **14-2**
    - Noise – The City of Antioch maximum exterior noise level is 60 CNEL for stationary noise sources. The project should be mitigated to the extent that noise generated from the project does not exceed this within the City limits.

Building Services Phone (925)779-7065 – Fax (925)779-7034
Planning Services Phone (925)779-7035 – Fax (925)779-7034
Capital Improvement Phone (925)779-7050 – Fax (925)779-7003
Neighborhood Improvement Phone (925)779-7042 – Fax (925)779-7034
Land Development/Engineering Phone (925)779-7035 – Fax (925)779-7034

14-2

- Truck Routes - The proposed project does not identify truck routes that may be within the Antioch city limits. All truck routes to the Pittsburg site should be accessed from and through the City of Pittsburg.
- Air Quality – The prevailing winds flow from west to east. Construction impacts must be mitigated to ensure that dust generated by construction and operation of the project does not carry off the site.
- Lighting – All lighting should be mitigated for spillover effects and designed to minimize regional "nighttime sky" glare impacts.

As noted above, there may be some issues that need to be substantiated to support the assertions made in the DEIR, and additional or revised mitigations may be required to address potential impacts. The above mentioned items should be addressed prior to certification of this document. Also, please notify the City of Antioch on any public hearings regarding this project.

14-3

If you have any questions, please do not hesitate to call me at (925) 779-6120 or contact me at noshinsky@ci.antioch.ca.us.

Sincerely,

Nina Oshinsky
Senior Planner

RESPONSE TO COMMENTS

Comment Number	Response
14-1	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates the City of Antioch's review of the Draft EIR for the proposed TBC Project and concurs with the City of Antioch's comment. The Project proponent has made a decision to withdraw the previously-proposed Standard Oil site, including ancillary facilities, from further consideration thus the City of Antioch's concerns have been addressed. Refer to Sections 1.0 and 3.0 of the Final EIR for further information.
14-2	Please refer to Response 14-1.
14-3	Comments noted. Please refer to Response 14-1.

~4592227

From: Joe Boss [joeboss@joeboss.com]
Sent: Monday, June 26, 2006 5:03 PM
To: Ken Strelo
Subject: The Trans Bay Cable Project

Importance: High

(SCH# 2004082096)
The Trans Bay Cable Project

On behalf of the Dogpatch Neighborhood Association, and myself I raise the following issues regarding the overall conclusions of the Historic Resources Inventory and Evaluation report as it relates to the two sites identified as the preferred and alternative locations for the San Francisco Converter Station

Both locations were studied very thoroughly during a process conducted by the California Energy Commission during its investigation of an Application for Certification for "Unit 7" by the Mirant California (formerly Southern Energy Company). I find it difficult to agree with the conclusions of your EIR, particularly in light of its reliance on previous studies conducted over the past decade, but silent on any of the testimony before the CEC. I would conclude that all of the information and testimony during that process is both public record should be readily available to your EIR consultants, URS. URS also developed the Unit 7 EIR information for Mirant. **15-1**

I would request an extension of a week in order to more fully develop my comments, if that is at all possible, having just returned for a lengthy trip out of State.

Here are the specific areas of concern:

1. Both sites have been identified as contributing to an identified historic area.
2. The Dogpatch Historic District has been established and identifies the industrial area as a key component to a larger area of Historic significance.
3. During the deliberations over Unit 7's impacts, much progress was made in identifying potential contribution to rehabilitation within the Union Ironworks, Speckles Sugar/PG&E complex. **15-2**
4. The report does not discuss the lengthy body of Evidence presented by Christopher Verplanck, Paul Groth, and Charles Chase regarding the historical significance of the industrial area.
5. Tearing down with no identified mitigation is not a real possibility **15-3**
6. The San Francisco Planning Department is in the process of and EIR and rezoning of the area and does not appear to have been included in the discovery. **15-4**

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RESPONSE TO COMMENTS

Comment Number	Response
15-1	The City of Pittsburg as CEQA Lead Agency appreciates your review on behalf of the Dogpatch Neighborhood Association of the Draft EIR for the TBC Project, including the assessment of potential cultural resource impacts related to historic resources in San Francisco. The previous testimony before the CEC was reviewed and cited in the Draft EIR (Section 4.7.1.2.1) and in the technical report for historical resources (Draft EIR Appendix G). Furthermore, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). HWC (Mitigated) avoids all direct and indirect impacts to the historic buildings on the HWC site, the adjacent Mirant property (i.e., Station A Complex), and to potential historic districts. Please refer to Responses 3-7 and 10-44 for more information.
15-2	Please refer to Response 15-1.
15-3	Comment noted. As stated in the prelude (*Historical Architectural Resources*) to Mitigation Measure(s) CUL-2 (Disturbance of Historical Architectural Resources) of the Draft EIR, these measures apply to construction of the previously proposed San Francisco HWC Converter Station which would involve demolition of historical resources. It should be noted that, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site), thereby completely avoiding direct impacts to the two historic buildings on the eastern portion of the HWC property. Another advantage of the HWC (Mitigated) site is that it allows the proposed 115 kV interconnection to the PG&E Potrero substation to be installed without impacting the Station A Complex on the adjacent Mirant Potrero property. This action would not directly or indirectly impact the potential historic district(s) located north of the HWC site. Refer to Section 4.A.7 of the Final EIR for more information. The mitigation measures presented in the Final EIR that would be undertaken to address this shift of the proposed project have been expanded and clarified. The Draft EIR presents four mitigation measures (i.e., Mitigation Measure CUL-2a, Recording Architectural Resources; CUL-2b, Architectural Resource Interpretive Display and/or Interpretive Material; and CUL-2c, and Architectural Resource Salvage Opportunities. The Final EIR presents an additional mitigation measure, CUL-2d, Central Waterfront Historic Preservation. Refer to Final EIR Section 13.0 for more information.
15-4	Comments noted. Please refer to Draft EIR Section 4.8.2.3.4 (Central Waterfront Neighborhood Plan [Draft] and Final EIR Section 4.A.8) for information regarding the pending zoning and planning code controls that encompass the Project area in San Francisco.

Mirant California, LLC
696 West 10th Street, PO Box 192, Pittsburg, CA 94565
T 925 427 3500 F 925 427 3518 U www.mirant.com

16

June 26, 2006

Ken Strelo
City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Strelo,

We appreciate the opportunity to comment on the City of Pittsburg ("City") Draft Environmental Impact Report ("DEIR") prepared for the proposed Transbay Cable Project ("the Project").

Mirant owns three California power plants: the Potrero Power Plant ("Potrero Plant") in San Francisco, operated by Mirant Potrero, LLC; the Pittsburg Power Plant ("Pittsburg Plant") in Pittsburg; and the Contra Costa Power Plant ("CCPP") in Antioch. The Pittsburg Plant and the CCPP are both owned and operated by Mirant Delta, LLC.

16-1

Together, Mirant's three power plants provide over 2,300 megawatts ("Mw") of critical power to the California grid and are especially important to San Francisco Bay Area electric reliability. Two of Mirant's facilities, the Potrero Plant and the Pittsburg Plant, would be directly affected by Project activities. Mirant is committed to long-term electric reliability in California and understands the need for the Project but has several concerns related to potential impacts of the proposed Project as well as certain proposed project alternatives.

A. Energy Impacts

Appendix F of the CEQA Guidelines requires EIRs to consider a project's potentially significant energy impacts. The DEIR fails to address the potential impacts the Project or its proposed alternatives may have on the availability of Mirant's facilities, which provide critical electric reliability to the California grid. Numerous aspects of the proposed project and the proposed alternatives could have significant impacts on the availability of Mirant's electrical generation units, thereby impacting California's power supply. For example, the following elements of the proposed Project and certain alternatives could adversely impact the availability of Mirant's generation units at either the Potrero or Pittsburg Plants:

16-2

- Construction of the proposed San Francisco HWC Converter Station and AC cable connection to the PG&E Potrero Substation could interfere with a major gas line that runs underneath 23rd Street and serves Potrero Plant Unit 3, which generates 206 Mw. The DEIR does not analyze how interference with this gas line would impact Potrero

Plant operations and energy reliability, or how to avoid or mitigate this impact. This natural gas fuel line is also implicated by San Francisco Converter Station "Mirant Alternative 1," and the DEIR fails to address this potential impact in its alternatives analysis (Section 5.0). 16-2

- The routing of the San Francisco AC lines, if aboveground, could cross the 115 Kv cable routes from Potrero Unit 3 and the gas turbines on the northern portion of the Potrero Plant. The DEIR does not take into account the potential impacts of lines crossing and the potential to impact Potrero Plant operations in the event of failure of either cable, or how to avoid or mitigate this impact. 16-3

- The eastern edge of the proposed converter station for San Francisco Converter Station "Mirant Alternative 1" appears to occupy existing water tanks for the Potrero Plant's gas turbines. These water tanks provide stored water capacity used when ever the peaking gas turbines are run. The removal of these tanks could jeopardize the availability of the gas turbines and thereby undermine overall electric reliability. The DEIR fails to address this potential impact. 16-4

- San Francisco Converter Station "Mirant Alternative 3" implicates the east-west Humboldt Street roadway that bisects the Potrero Plant. The roadway is of a higher elevation than the surrounding property, and this alternative would likely require leveling this roadway to build the proposed converter station. Numerous electrical cable routes underlie the roadway and any grading activity could significantly interfere with these cables and thereby significantly impact the power generation capability of the Potrero units. The DEIR does not address the Humboldt Street roadway or the potential impacts on electric reliability associated with disturbance of cables underlying the roadway. 16-5

- The dredging proposed for the offshore AC cable installation in Pittsburg could interfere with the Pittsburg Plant's cooling water intake structures, interrupting or jeopardizing the availability of the Pittsburg units. The DEIR does not analyze how such dredging would impact Potrero Plant operations and energy reliability, or how to avoid or mitigate this impact. 16-6

As described above, the DEIR fails to address the potential impacts on Mirant's facilities and energy availability or discuss how to avoid or mitigate these impacts.

B. Section 4.4. Water Resources and Quality

The Project includes a proposed onshore AC cable route connecting the Pittsburg Converter Station with the PG&E Substation at Mirant's Pittsburg Plant that would be located immediately adjacent to Willow Creek, which runs north-south across Mirant's property and drains the Willow Creek Watershed. The DEIR addresses impacts to the Kirker Creek Watershed Drainage Area but does not mention or address any potential impacts to the Willow Creek Watershed. Impacts to the Willow Creek Watershed must be addressed. 16-7

C. Section 4.5. Terrestrial Biological Resources

Several elements of the configuration of both the proposed Project and all three Pittsburg Converter Station alternatives are located on Mirant property, in the immediate vicinity of known California least tern (*Sterna antillarum browni*) ("CLT") habitat: (1) the Project's onshore AC cable route connecting 16-8

the Pittsburg Converter Station with the PG&E Substation at Mirant's Pittsburg Plant; and (2) the proposed western construction laydown areas and onshore AC and DC cable routes for all three Pittsburg Converter Station alternatives The CLT is listed as an endangered species by the U.S. Fish and Wildlife Service ("FWS") and as a fully protected species by the California Department of Fish and Game. The DEIR includes the CLT in the list of potentially impacted species in Appendix F, but states that the impacts will be low because "project impacts will occur in roadways and other areas outside of the species potential habitat." However, this statement is incorrect. The Project is immediately adjacent to CLT habitat and construction of the cable route could have direct and indirect impacts to the CLT that have not been analyzed. **16-8**

Similarly, the DEIR does not take into account the close proximity of known salt marsh harvest mouse (*Reithrodontomys raviventris*) habitat on Mirant property and the potential impacts that the construction laydown areas proposed in the Pittsburg Converter Station alternatives could have on this species. The salt marsh harvest mouse is a fully protected species under the California Fish and Game Code. Salt marsh and pickleweed habitat is located immediately west of the proposed construction laydown area, and the DEIR does not address potential biological impacts of this alternative or discuss the effect such impacts may have on the alternatives analysis. **16-9**

D. Section 4.6. Marine Biological Resources

The DEIR's description of construction-related impacts on marine biological resources inadequately addresses potential impacts to the listed delta smelt, green sturgeon and other listed aquatic fish species. First, section 4.6.3.2 appears to conclude that there will be no construction-related impacts to listed aquatic species due to the fact that impacts will occur during a time "that [the National Marine Fisheries Service ("NMFS")] suggests that sensitive life stages of ESA listed salmonids (Chinook and steelhead) are not likely to be present within the San Francisco Bay region." However, the DEIR does not mention construction-related impacts on delta smelt, which is under the jurisdiction of the FWS. Delta smelt and delta smelt habitat are known to be in the vicinity of the proposed Pittsburg offshore and onshore cable routes, yet the DEIR does not include any mitigation measures to ensure that delta smelt and/or delta smelt habitat are not threatened. The delta smelt has experienced severe population decline over the last several years. The DEIR fails to fully address potential impacts to delta smelt or discuss how such impacts may be avoided or mitigated. **16-10**

Secondly, Section 4.6.1.3 does not include the green sturgeon (*Acipenser medirostris*) as a special-status species. NMFS listed Central Valley populations of the green sturgeon as a federally threatened species in April 2006. DEIR Appendix F incorrectly lists the green sturgeon as merely a federal species of concern. The DEIR fails to address potential impacts on this threatened species or discuss how to avoid or mitigate those impacts. **16-11**

For clarification of any of these comments, please contact Mark Osterholt at 925.427.3529.

Sincerely,

Jeffrey S. Russell
President

RESPONSE TO COMMENTS

Comment Number	Response
16-1	Comments noted. The City of Pittsburg as CEQA lead Agency appreciates Mirant's review of the Draft EIR for the proposed TBC Project.
16-2	Comments noted. An exhaustive underground survey was conducted to locate existing underground utilities in the area. All utilities in the area of concern have been mapped. Installation of the cable in these areas will be performed based on this information, using a combination of equipment and hand excavation to locate and protect existing utilities during construction.
16-3	Comments noted. The proposed 115 kV AC cable would be placed underground between the converter station site and the PG&E Potrero Substation. The proposed cable route does not interfere with either the San Francisco Mirant 115 kV overhead transmission line or transmission towers.
16-4	Comment noted. The Project proponent is aware that Mirant Alternative 1 would require removal and relocation of a water tank on Mirant's property at the Project proponent's expense.
16-5	Comment noted. In the event the alternative Mirant 3 layout was selected for implementation, the Project proponent would coordinate with Mirant to relocate the affected portion of Humboldt Street at TBC's expense.
16-6	Comments noted. The Project proponent has withdrawn the Standard Oil site and ancillary facilities from further consideration and, thus, the Project no longer includes a dredging component near Mirant's once through cooling water intake facilities in Pittsburg. No adverse Project-related impacts on Mirant's cooling water intake facilities are anticipated.
16-7	Comment noted. None of the proposed or alternative Project components would directly impact Willow Creek on Mirant's Pittsburg property. The proposed AC and DC cable routes (refer to Figure A.8-20 in the Draft EIR and Figure 3-11 in this Final EIR) stay at least 200 feet or more to the east of Willow Creek. The proposed cables would be installed in underground conduit via trenching in the gravel shoulder of the existing Mirant Pittsburg facility access road which is paved. Mitigation Measures WATER-1 (Erosion Control and Contaminant Source Control) and WATER-2 (Spill Prevention and Control Plan for HDD) would minimize or avoid any potential for construction-related impacts to Willow Creek.
16-8	Comments noted. In response to this comment, Mr. Ronald Kino (Mirant Environmental Specialist) was contacted by the EIR preparers on August 23 and 24, 2006. Mr. Kino concurred with URS Biologist Bill Martin's assessment from the site reconnaissance meeting at Mirant's Pittsburg facility in April of 2004 that the site is composed of heavily disturbed industrial landscape lacking native plant communities/habitats. The offshore cable route comes onshore via HDD under rock rip-rap and continues in unvegetated, heavily disturbed landscapes. Additionally, the proposed temporary construction laydown areas and the alternative converter station sites on the Mirant Pittsburg property are also located on unvegetated, heavily disturbed landscapes. Based on the California Natural Diversity Database (CNDDB) mapped occurrences, Bill Martin's field assessment, and the input from Mr. Kino, the potential for impact to sensitive terrestrial biological resources from the proposed onshore cable routes, laydown areas, and or the alternative converter station areas on Mirant's Pittsburg property is low to non-existent since no sensitive resources are present in the potentially affected Project areas.

RESPONSE TO COMMENTS

Comment Number	Response
16-9	Comments noted. The Standard Oil site, including laydown areas has been removed from further consideration, thus potential impacts to salt marsh harvest mouse are no longer applicable for the Standard Oil site laydown areas referenced in this comment. As discussed in Response 16-8, the EIR preparers contacted Mirant Environmental Specialist Ronald Kino on August 23 and 24, 2006. Mr. Kino confirmed that there is "no pickleweed on the Mirant property". Pickleweed marsh habitats occur considerably further west of the Mirant property. Based on the lack of habitat known to support the species on the Mirant Pittsburg property, including the portion where proposed or alternative Trans Bay Cable Project facilities would be located (i.e., saltmarsh or pickleweed marsh, sometimes with adjacent upland vegetated grasslands), it is unlikely this species occurs on the Mirant Pittsburg property. Therefore, no Project-related impacts to salt marsh harvest mouse would be likely to occur.
16-10	See Response 10-33 related to delta smelt. As described in the Draft EIR, work is planned to be conducted during the environmental work windows for a number of listed (e.g., Chinook salmon, steelhead) or commercially important species (e.g., Pacific herring). NOAA Fisheries issued a Final Rule to list the southern distinct population segment (DPS) of green sturgeon as threatened on April 7, 2006, after the biology section of the Draft EIR was prepared and the document was in production. This final rule became effective on June 6, 2006, after the Draft EIR was published. The Final EIR text has been updated to include Section 4.6.1.3.4 describing green sturgeon. Please refer to the new Section 13.0 of the Final EIR for the applicable text revision.
16-11	See Response 16-10 regarding the listing status of green sturgeon. The Final EIR text has been updated to include Section 4.6.1.3.4 describing this species. Please refer to the new Section 13.0 of the Final EIR for applicable text revision. Green sturgeon (and other listed fish species) were not addressed separately in the impacts section of the Draft EIR. As discussed in Draft EIR Section 4.4 (Water Quality), the cable-laying operation would result in a very localized sediment plume that is not expected to significantly impact water quality. Installation of the cable could potentially suspend approximately 6,220 to 12,440 cubic yards of sediment over the entire 53-mile project area. This would amount to about 117 to 235 cubic yards of suspended material per mile. This amount of suspended material is small compared with the volume of sediment resuspended in the Bay by the tides or wind. Fish species inhabiting the Bay and estuarine species such as delta smelt are well adapted to the natural condition of relatively high turbidity. It is expected that green sturgeon would react to the temporary disturbance of the cable-laying operation similarly to other mobile fish species as described in Section 4.6.3.2.4 in the Draft EIR, that is, they would tend to exhibit behavioral avoidance of the immediate area of temporarily increased turbidity and activity during the cable-laying operation.

RECEIVED
JUN 2 8 2006
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PLANNING DEPARTMENT
65 CIVIC AVE PITTSBURG 94565

17

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June 26, 2006

RECEIVED
JUN 29 2006
PLANNING DIVISION
PLANNING AND BUILDING DEPT
CITY OF PITTSBURG

VIA FACSIMILE (925) 252-4814 AND MAIL

Ken Strelo
Project Planner
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Re: Proposed Trans Bay Cable Project - Comments on the Draft Environmental Impact Report

Dear Mr. Strelo:

This office represents the owners of 570-588 West 10th Street (APN 085-270-018) in the City of Pittsburg (the "Property") in connection with the proposed Trans Bay Cable project, which consists of installation of a 57-mile long submarine cable in San Francisco Bay from a terminus in the City of Pittsburg to a terminus in the City and County of San Francisco (the "Project"). As illustrated in Figure 5.4-3 of the Draft Environmental Impact Report for the Proposed Trans Bay Cable Project (the "DEIR"), the Pittsburg West Tenth Street Converter Station Alternative 1, and the Pittsburg West Tenth Street Converter Station Alternative 2 both require utilization of the Property. Our clients strongly support the conclusion of the DEIR that the Pittsburg West Tenth Street Converter Station Alternative 1 is the environmentally preferable alternative; and, as such, should be selected by the City in approving the Project. To that end, this letter provides comments on the DEIR only with respect to the required construction in Pittsburg, and does not address the required cable installation in the Bay or the required construction in the City and County of San Francisco. 17-1

As set forth in more detail below, because the Pittsburg West Tenth Street Converter Station Alternative 1 (the "Tenth Street Alternative 1") is a feasible alternative that would substantially lessen the various environmental impacts associated with the proposed Project, the Project may not be approved unless and until the alternative West Tenth Street location is selected as the location of the Pittsburg converter station. Accordingly, we respectfully request the City of Pittsburg to move forward with the Project only if the Pittsburg converter station is located at West Tenth Street. 17-2

1. The Pittsburg West Tenth Street Converter Station Alternative 1 Is Environmentally Superior To The Proposed Project And Should Therefore Be Selected As The Site For The Pittsburg Converter Station.

As expressly set forth in the DEIR, and as stated by representatives of the URS Corporation during the June 14, 2006 public meeting, the Tenth Street Alternative 1 is environmentally preferable and superior to the siting of the required converter station at the "Standard Oil site," located in proximity to the former Standard Oil Avenue. (DEIR, p. 6-4.) Moreover, not only is the location of the Tenth Street Alternative 1 environmentally preferable, the alternative is feasible and must therefore be selected.

A fundamental policy goal of the California Environmental Quality Act (Pub. Resources Code, §§ 21000 et seq.; "CEQA") is to "take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state." (Pub. Resources Code, § 21001(a); see also 14 Cal. Code Regs., § 15002(a)(2) [stating that a basic purpose of CEQA is to "[p]revent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible."].) It is the further policy of the state that: 17-2

> ...public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects...

(Pub. Resources Code, § 21102.) **"CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible."** (14 Cal. Code Regs., § 15021(a).) The West Tenth Street Alternative 1 affords the City of Pittsburg the perfect opportunity to select a feasible alternative that will protect the environmental quality of the state by lessening the environmental effects associated with the proposed project.

A. Siting The Converter Station On West Tenth Street Fully And More Satisfactorily Satisfies the Project Location Objectives.

With respect to the location of the Pittsburg Converter Station site, the DEIR establishes the following objectives:

> Locate the converter stations such that:
>
> (1) they are in close proximity to existing, high capacity PG&E substations;

> (2) the converter station site in the East Bay provides access to a substation that supports local generation as well as being reinforced by diverse generation from outside the local area;
>
> ...(4) connecting the two converter stations sites with new transmission wires should create minimum short-term disruption to the areas and no long-term undesirable impacts;
>
> ...and (7) they possess long-term financeable real estate rights.

(DEIR, p. 2-3.) The DEIR further provides that the cable routes should involve minimal environmental impacts, and that "installation and final location of the cable should result in minimal short-term disruption to the public, ensure public safety, and provide an appreciable measure of long term security." (DEIR, p. 2-4.)

The West Tenth Street Alternative 1 is clearly best suited to satisfy the above-referenced objectives. The West Tenth Street site is located in very close proximity to the existing PG&E substation, and is located much closer to the substation than the proposed Standard Oil site. (See, e.g., DEIR, Figures 3-1, 3-6, 4.4-5.) Utilization of the West Tenth Street site would also greatly reduce the length of the necessary cable, and would therefore create the least amount of disruption (both short-term and long-term) to the environment. (See id.) Lastly, as discussed in section 2 below, Trans Bay Cable, LLC has acquired long-term financeable real estate rights for the West Tenth Street location. 17-2

B. Potentially Significant Environmental Impacts Associated With The Pittsburg Converter Station Will Be Minimized Or Eliminated If The West Tenth Street Alternative 1 Is Selected.[1]

i. Air Quality.

As set forth in the DEIR, locating the converter station at the West Tenth Street site will result in less emissions than would be associated with a converter station at the Standard Oil site. Notably, marine vessel emissions would reduced because the length of cable required to be installed off-shore (across New York Slough and around Browns Island) would be substantially reduced.

ii. Water Resources and Quality.

With respect to water resources and water quality, the West Tenth Street site would again provide a more environmentally friendly and sensitive location for the converter station than the Standard Oil site. For example, stormwater from the presently developed West

[1] For a summary description of the potentially significant impacts associated with the Standard Oil site that are not applicable to the alternative Pittsburg West Tenth Street site, please see page 6-2 of the DEIR.

Tenth Street location would discharge into the existing City storm drain system. (DEIR, p. 5.4-5.) Given the demolition and construction associated with the project, it is reasonable to expect the level of stormwater discharge to remain approximately the same as under existing conditions. Because the Standard Oil site is presently undeveloped, and "[s]tormwater currently flows from the site to its natural water course and then discharges into Kirker Creek," it will be necessary to fully construct and develop a stormwater capture and discharge system consistent with the requirements of the Contra Costa County NPDES Stormwater permit. It is extremely concerning that the DEIR states that during construction and after full buildout, **"[m]ost stormwater from the [Standard Oil] converter station site would continue to flow along its natural watercourse into Kirker Creek,"** especially given the DEIR's further statement that "[p]roject construction could include oil leaked from heavy equipment and vehicles, grease, hydraulic fluid, fuel, construction materials and products, waste materials, landscaping runoff containing fertilizers, pesticides or weed killers, and erosion of disturbed soil." (DEIR, pp. 4.4-23, 4.4-24.) Such discharges would fail to comply with the local NPDES stormwater permit.

As a practical matter, converting the barren Standard Oil site to a fully developed parcel (including required stormwater control facilities), will most certainly have greater and more significant environmental impacts than if the already developed West Tenth Street location is redeveloped as a converter station. The substantial increase in impervious surface (and all associated environmental impacts) can be avoided entirely if the West Tenth Street Alternative 1 is selected.

17-2

iii. Terrestrial Biological Resources.

The DEIR makes clear that, **"[n]o sensitive terrestrial biological resources are present on [the alternative West Tenth Street] converter station site or the associated onshore facilities..."** (DEIR, p. 5.4-6.) The fact that "[n]o impacts to natural communities, wetlands, or special-status species," are expected to occur if the converter station is located at the West Tenth Street location is in stark contrast to the potential impacts associated with siting the converter station at the Standard Oil site.

As summarized in the DEIR:

> Construction of [the] proposed Pittsburg Standard Oil Converter Station, including onshore cable route, proposed access road bridge construction, and laydown areas, has the potential to significantly impact wetlands and waters of the United States as well as special-status plant and animal species and the habitats that support them []. *Potentially impacted habitats include vernal pools, salt marsh, and Kirker Creek. Potentially present and impacts fauna include: salt marsh harvest mouse, Giant garter snake, western pond turtle, California clapper rail, California black rail, short-eared owl, salt marsh yellow throat, white-tailed kite, raptors, and vernal pool*

> *shrimp. In addition, various special-status/rare plants could be impacted.*

(DEIR, p.1-6 [emph. added].) As a matter of good public policy, the Pittsburg West Tenth Street Converter Station Alternative 1 should be selected so that any potential impacts to natural communities can be entirely avoided.

iv. Marine Biological Resources

If selected, the alternative West Tenth Street Converter Station location would also significantly reduce the impacts on marine biological resources. The DEIR describes the reduction in impacts as follows:

> The Pittsburg West Tenth Street Converter Station Alternative 1 would eliminate the need for the HVAC installation in the Bay, and would reduce the length of the HVDC installation by approximately 4 miles relative to the proposed standard oil site. No cable installation would be needed in the channel between Winter Island and Browns Island and no dredging would be needed to cross the channel where the cable routes cross New York Slough associated with the Standard Oil site [].

17-2

(DEIR, p. 5.4-7.) If the project moves forward at the Standard Oil site, temporary disturbance of the seabed would occur, and localized turbidity would also likely result. Furthermore, mobile animals would likely be displaced. These impacts will be avoided if the West Tenth Street Converter Station Alternative 1 is selected.

v. Marine Transportation and Commercial Fishing.

The DEIR does not specifically address those marine transportation and commercial fishing impacts that will result from the construction of the converter station at the Standard Oil site. Notwithstanding this omission, the Alternatives section of the DEIR states that siting the converter station at the West Tenth Street location will "avoid local impacts to commercial marine transportation and commercial fishing vessel operation." (DEIR, p. 5.4-12.) Selection of the West Tenth Street alternative "would also avoid the need to dredge the shipping channel in two locations on either end of New York Slough, thereby minimizing potential impacts relative to the proposed Standard Oil Converter Station site." (DEIR, p. 5.4-12.) While it is clear that the West Tenth Street alternative is environmentally preferable and superior, we again note that, because an analysis is not set forth in the DEIR, we are unable to determine what specific marine transportation and commercial fishing impacts (and their associated level-of-significance) may be caused by siting the station at the Standard Oil site.

vi. Traffic and Transportation.

Perhaps one of the most remarkable differences between a converter station located at the Standard Oil site, and the alternative West Tenth Street converter station, is the requirement that a new two lane road and bridge be constructed over Kirker Creek for purposes of accessing the Standard Oil site. No such bridge – and its associated environmental impacts (and required permits) – is required to access the West Tenth street site. (DEIR, pp. 4.10-19, 5.4-14.)

2. Trans Bay Cable, LLC Has Secured The Right To Use The West Tenth Street Property For Purposes Of Constructing the Converter Station.

17-2

The DEIR indicates that in order for the Pittsburg West Tenth Street Converter Station Alternative 1 to be implemented, it will be necessary to lease or procure several parcels on West Tenth Street. Please be advised that since the time the Notice of Preparation was issued, Trans Bay Cable LLC acquired and currently holds an option to lease the Property for purposes of the project.

Conclusion. The selection of the West Tenth Street Alternative 1 as the Pittsburg converter site will allow the City, and the project proponent, to achieve the project objectives at the least environmental cost. Because CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible, and because the other alternatives (including the Standard Oil site) have the potential to cause serious environmental harm, we urge the City to only approve the Project with the West Tenth Street Alternative 1.

Please contact the undersigned directly should you have any questions or require further clarification regarding these comments.

Very truly yours,

MILLER, STARR & REGALIA

Kristina D. Lawson

KDL:KDL

cc: Wilson F. Wendt

RESPONSE TO COMMENTS

Comment Number	Response
17-1	The City of Pittsburg as CEQA Lead Agency appreciates Miller, Starr & Regalia's review of the Draft EIR for the proposed Project. Based on the impact assessments presented in the Draft EIR and the comments received on the Draft EIR, the City of Pittsburg and the Project proponent agree with the commentor's preference for the Pittsburg West Tenth Street Alternative 1 as the environmentally preferred converter station location in Pittsburg. As noted in the Final EIR and previous responses to comments on the Draft EIR, the previously-proposed Standard Oil site and ancillary facilities has been withdrawn from further consideration.
17-2	Comments noted. Please refer to Response 17-1.

From: Nagasaki, R (R.Nagasaki) [R.Nagasaki@chevron.com]
Sent: Tuesday, June 27, 2006 7:30 AM
To: kstrelo@ci.pittsburgh.ca.us
Cc: Miller, Randolph (RNML); Quan, Stuart (capt.quan)
Subject: Trans Bay Cable

M. K. Strelo
City of Pittsburgh
Trans Bay Cable Comments for Draft E.I.R.

Mr. Strelo,

In addition to the comments made by Captain Quan the Richmond Refinery would like to have these comments also included.

In the DEIR, pg. 51 of the Executive Summary, there is a "Potentially Significant Impact", MTRANS-1, for Vessel Navigation Hazards. Presently, there is no process to routinely check and precisely identify the routing of the transmission wire. We recommend an additional Mitigation, MTRANS-1d, to survey or otherwise check the transmission wire's precise route, and to post or otherwise make available to mariners that route, in GPS-verified latitudes and longitudes, to ensure that mariners have clear understanding of the wire location, in order to avoid damage to the wire while deploying anchors. **18-1**

In the DEIR, pg. 51 of the Executive Summary, there is a "Potentially Significant Impact", MTRANS-1, for Vessel Navigation Hazards. Presently, there is no process to require the wire-laying vessels to temporarily slow down or suspend wire-laying operations to allow inbound vessels, or departing vessels, to complete their business. This omission could significantly delay vessels having business in the upper San Francisco Bay and along the Sacramento River, potentially causing adverse economic impact on the terminals these ships may have business at. We recommend an additional Mitigation, MTRANS-1e, to require the wire-laying vessels to give way to arriving or departing vessels, reducing or eliminating any adverse economic impact. **18-2**

Thank you for you attention.

Regards,

Richard Nagasaki
Chevron Shipping Co., LLC
Richmond Refinery
Office: 510 242-4630
E-Mail: R.Nagasaki@chevron.com

RESPONSE TO COMMENTS

Comment Number	Response
18-1	The City of Pittsburg as CEQA Lead Agency appreciates Chevron Shipping Co. LLC's review of the Draft EIR for the proposed Project. Before and during installation of the submarine cable, the precise location of the vessels engaged in cable-laying operations would be reported to the U.S. Coast Guard for dissemination via the local Notices to Mariners. The as-built location of the cable would be documented and reported to the USACE and NOAA for addition to navigation charts for San Francisco Bay. As requested, Mitigation Measure MTRANS-1d has been added to Section 4.9.3.2.1. Please refer to the Table 1-1 and Section 13.0 of the Final EIR for appropriate text revision.
18-2	Comments noted. The Project proponent/construction contractor would fulfill its statutory obligation to inform other vessel traffic of short-term submarine cable laying activities associated with the proposed TBC Project before and during installation of the cable. The Project proponent/construction contractor would maintain contact with the U.S. Coast Guard Vessel Traffic Service (VTS) San Francisco Bay, and would provide accurate information to the Commandant, Coast Guard District 11, Waterways Management Branch for inclusion in local Notices to Mariners regarding the location and potential hazards posed by construction vessel traffic. It should be noted that the proposed submarine cable route avoids potential conflicts with established U.S. Coast Guard navigation channels to the maximum extent possible, and that the proposed limited crossings of the established navigation channels are not in areas that would be expected to affect Chevron Shipping Company's operations. The Project proponent would coordinate with the U.S. Coast Guard and other interested parties, including Chevron Shipping Co., LLC, prior to the initiation of submarine construction activities and during the submarine installation activities to coordinate activities and avoid potential conflicts with marine vessel traffic.

bcdc
Making San Francisco Bay Better

RECEIVED
JUN 29 2006
CITY OF PITTSBURG
PLANNING DEPARTMENT
65 CIVIC AVE. PITTSBURG 94565

June 26, 2006

Ken Strelo
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565-3814

SUBJECT: Transbay Cable Project Draft Environmental Impact Report (SCH No. 2004082096)
(BCDC File Nos. MC.MC.7812.1 and CC.MC.7305.1)

Dear Mr. Strelo:

On May 12, 2006, the San Francisco Bay Conservation and Development Commission (Commission) staff received the Draft Environmental Impact Report (DEIR) for the Trans Bay Cable Project, which would involve laying 57 miles of submarine and onshore buried high voltage direct current (HVDC) transmission cable between two new converter sites in the City of Pittsburg in Contra Costa County and in the City and County of San Francisco. As proposed, a transmission cable, a metallic return cable, and a fiber optic communication cable would all be bundled into a single line, and the bundled cable would be buried three to six feet or deeper, where necessary, below the Bay mud. To install the cable a jet plow would be towed behind a ship with a tool to "fluidize" the bottom sediments creating a trench where the cable would be placed. The proposal also includes the installation of approximately 5.5 miles of submarine, underground, and aboveground transmission line in the City of Pittsburgh, and the installation of a 0.3-mile transmission cable or overhead transmission line in San Francisco. **19-1**

Although the Commission itself has not reviewed the DEIR, the staff comments discussed below are based on the McAteer-Petris Act, the Suisun Marsh Preservation Act, the *Suisun Marsh Protection Plan*, the Commission's *San Francisco Bay Plan* (Bay Plan), the Commission's federally-approved management plan for the San Francisco Bay, and the federal Coastal Zone Management Act (CZMA).

Jurisdiction

The Commission's permit jurisdiction includes all tidal areas of the Bay up to the line of mean high tide or up to five feet above Mean Sea Level or the extent of wetland vegetation in marshlands, all areas formerly subject to tidal action that have been filled since September 17, 1965, and the shoreline band that extends 100 feet inland from and parallel to the Bay jurisdiction. The Commission also has jurisdiction over managed wetlands adjacent to the Bay, salt ponds, and certain waterways.

For the transbay cable project, it is useful to know that the eastern limit of the Commission's Bay jurisdiction is defined by a line across the Sacramento River between Stake Point and Simmons Point, extending northeast to the mouth of Marshall Cut.

Commission permits are required for construction, dredging, dredged material disposal, fill placement, and substantial changes in use within its jurisdiction. Permits are issued when the Commission finds proposed activities to be consistent with its laws and policies. In addition to any needed permits under its state authority, federal actions, permits, and grants affecting the coastal zone are subject to review by the Commission, pursuant to the federal CZMA, for their consistency with the Commission's federally-approved management program for the Bay. If the transbay cable project does not involve a federal proponent, supporting funds, or property, federal consistency concurrence by the Commission would not be necessary. 19-1

From reviewing the DEIR, it appears that the proposed project would include the following activities within the Commission's Bay and shoreline band jurisdictions: (1) installation, use, and maintenance of the transmission cable; (2) construction, use, and maintenance of a new San Francisco converter site; (3) associated on-shore or overhead transmission line(s); and (4) construction site preparation activities (including demolition, remediation, and use of lay-down sites). 19-2

Commission's Bay Jurisdiction

Fill. The DEIR does not include a map that identifies the proposed project in relation to the Commission's Bay jurisdiction. However, from reviewing the document, it is clear that a major portion of the 57-mile-long transmission cable would be placed in the Commission's Bay jurisdiction. Section 66605 of the McAteer-Petris Act states, in part, that fill in the Bay can be authorized by the Commission only when: (a) the fill would constitute the minimum necessary to achieve the project purpose; (b) no alternative upland location exists; (c) the public benefits of the fill exceed the public detriment from the loss of water areas; (d) the fill would occur on land to which the project proponent has adequate title; and (e) the activity would minimize harmful effects to the Bay's natural resources. 19-3

Minimum Fill Necessary. Page A-56 of the DEIR correctly states that the Commission requires an alternatives analysis for all projects involving fill in the Bay. Appendix A analyzes potential alternatives to the proposed transbay cable and concludes, based on a fixed set of screening criteria, that the alternatives considered are not capable of achieving the project objectives. For purposes of seeking Commission review and authorization of a fill project and providing it with adequate information to determine whether that project would involve the least volume of fill, it will be necessary when submitting a BCDC permit application to quantify the amount of Bay fill associated with the alternatives considered in Appendix A. It would be helpful if this information were provided in the Final EIR (FEIR). 19-4

Upland Alternatives and Public Benefits Outweigh Public Detriment. The alternatives analysis in Appendix A cites a variety of reasons for the elimination of various alternatives to the transbay cable, including anticipated lengthy schedules for obtaining regulatory approval, the unlikelihood of securing an exception for encroachments at Caltrans right-of-ways, technical difficulties for running a cable along certain corridors (e.g., the transbay BART tube or Caldecott Tunnel), and complex land ownership and related title issues. From reviewing this section of the DEIR, it appears that in several cases the conclusion regarding feasibility of implementing alternatives is based on assumptions and not necessarily on 19-5

conclusive investigation into the potential legal, regulatory, or technical obstacles. In conducting its review of the transbay cable, the Commission would need more definitive information about whether upland alternatives are feasible and, therefore, any additional information that would elaborate on project alternatives feasibility would be extremely helpful either at the time of BCDC permit application submittal or issuance of the FEIR. Ultimately, this information will assist the Commission in determining both whether the public benefits of the project would outweigh the detriment associated with the fill and there is not available upland location. 19-5

Adequate Title. Because the Commission's law requires that all projects involving fill in the Bay can occur only on property at which project proponents have sufficient title, it will be necessary for the project proponent to identify the party(ies) that own the Bay property where the transbay cable would be placed, and either those property owners must be co-applicants or the applicant must have sufficient property interests from those parties. 19-6

Minimize Harmful Effects to the Bay. Section 4.6 of the DEIR discusses the impacts to marine resources related to the transbay cable project. However, this section omits a discussion about the Commission's regulatory requirements governing the protection of the Bay's natural resources, including fish, other aquatic organisms, and wildlife, and certain habitat needed for their protection, including tidal flats and marshes and subtidal areas. Per the Bay Plan policies on fish, other aquatic organisms, and wildlife, in evaluating Bay projects for authorization, the Commission must find that marshes, mudflats, and subtidal habitat would be "conserved, restored, and increased." Furthermore, in making this determination, the Commission must consult with and give appropriate consideration to the state and federal resource agencies, and not authorize any project resulting in a "taking" of a listed species unless found appropriate by the resource agencies. According to the Bay Plan policies on tidal marshes and tidal flats, and subtidal areas, all projects subject to Commission consideration should also be sited and designed to minimize or avoid adverse resource impacts at these areas. And lastly, the Bay Plan policies regarding subtidal areas state, in part, that Commission approval of projects potentially disturbing these areas is partly contingent on the effect such projects would have on local and Bay-wide hydrology, sediment movement, bathymetry, and various other factors affecting the Bay. The FEIR should, at a minimum, acknowledge that the Commission has regulatory authority governing the protection of the Bay's natural resources and habitats per its laws and policies. 19-7

Cable Installation and Turbidity. The DEIR states that the installation of the transbay cable would increase turbidity in the water column but that the impact to fish and other species would not be significant. The document does not mention how far or wide the resulting plume would extend and, thus, the FEIR should address whether any lateral movement of the plume would affect important habitat (e.g., eelgrass beds) whose viability is partly dependent on clarity of the water column. 19-8

Protective Mattresses and Rocky Habitat. Although briefly mentioned, the DEIR refers to protective mattresses that would be placed atop certain rocky substrate areas of the Bay where trenching of the transmission cable is not possible. Moreover, the DEIR states that these areas, once recolonized, may support habitat types that differ from what currently exists. The FEIR should clarify the location and size of the affected rocky areas, any anticipated habitat loss, and expectations as to the type and extent of replacement 19-9

19-9 communities. The project proponents should understand that the protective mattresses would be considered fill in the Bay and, thus, need to meet the Commission's requirements regarding allowable fill as cited previously.

19-10 **Directional Drilling and Noise Thresholds.** The DEIR mentions horizontal directional drilling associated with installation of the transmission cable but does not appear to indicate if this activity would comply with any noise thresholds as proscribed by the resource agencies; this should be clarified in the FEIR.

19-11 **Work Windows.** Page 4.9-14 of the DEIR states that the transbay cable would be installed in recognition of the work windows for Pacific herring and, if not practical, cable-laying operations would be coordinated with the U.S. Coast Guard and Vessel Traffic Management. The project proponents should be aware that the Commission's regulations provide that any work outside of the herring window would need to be coordinated with the State Department of Fish and Game, whose approval of a schedule deviation would be necessary for the Commission to concur with a schedule change. In addition, the FEIR should address how restrictions regarding other listed species, including salmon, steelhead, Delta smelt, and, most recently, North American green sturgeon, would be incorporated into the project schedule.

19-12 **Maintenance and Repair.** The DEIR states that maintenance and repair requirements for the transbay pipeline would be minimal. Nevertheless, any maintenance and repair activities in the Bay would require Commission authorization and, thus, its review of, among other things, any related impacts to Bay resources. Therefore, the FEIR should explain any anticipated maintenance and repair activities, including the location of repair, the materials used during operations, and associated potential impacts. Page 4.9-16 and Appendix A discuss repair options in the event of an emergency. However, these sections do not discuss any potential damage to resources if such an emergency were to occur. The FEIR should address the impact of emergency events, such as a break in the cable, its impacts on resources, and any proposed mitigating measures.

19-13 **Cable Extension and Decommission.** Page A-51 of the DEIR states that the expected as-built project life of the transbay cable would be 40 years and that extending its life would be possible if certain activities were undertaken. The FEIR should describe the types of activities involved in extending the cable's life and discuss any potential resource—or other—impacts to the Bay associated with these activities. Further, the FEIR should address any impacts associated with decommissioning, and removing or abandoning the cable in-place, as indicated in the document.

19-14 **Mitigation.** In the event that the proposed project would result in adverse environmental impacts that cannot be avoided and for which mitigating measures have not yet been proposed in the DEIR, the FEIR should discuss such measures. The Commission's policies regarding mitigation state, in part, that "projects should be designed to avoid adverse environmental impacts to [the] Bay" and, further, that "[w]henever adverse impacts cannot be avoided, they should be minimized to the greatest extent practicable....[and] measures to compensate for...impacts should be required."

Dredging and In-Bay Disposal. As discussed in Section 4.4 of the DEIR, the proposed transbay cable would involve dredging at two locations where the transmission cable would cross below an existing shipping channel and thus be at a depth that is inaccessible by the hydroplow. The DEIR states that 38,000 cubic yards of material would be dredged at each location to create a 400-foot-long by 30-foot-wide trench, 15 to 20 feet below the Bay floor. The material would be used to backfill these two sites following construction or used at an appropriate upland site.

Commission regulations allow in-Bay disposal of new dredged material only if the activity is consistent with the dredging policies of the Bay Plan, which state, in part, that: (1) the material would be placed at a site designated by the Commission; (2) the volume of material placed in the Bay would meet site limits adopted by the Commission; (3) the quality of material would be consistent with the advice of the Regional Water Quality Control Board and the Dredged Materials Management Office (DMMO); and (4) the disposal activity would be consistent with the advice of the resource agencies. The FEIR should address these dredging and in-Bay disposal issues recognizing that: (1) the in-Bay disposal location discussed in the DEIR has not been designated by the Commission, the Regional Board, the resource agencies, and the DMMO have not taken final action on the proposed dredged material quality or current disposal options; and (2) the Commission's policy preference for beneficial reuse of dredged material. 19-15

Further, as described in the DEIR, the laying of the transmission cable over a four- to five-month period would occur between June 1 and November 30 of each calendar year, consistent with current restrictions to protect certain sensitive fish species. However, the DEIR does not appear to mention existing windows to protect certain species when dredging and disposal activities occur, and the FEIR should address this issue.

Section 4.4.2.3 of the DEIR incorrectly refers to the Commission's regulatory authority as "local." The FEIR should correct this information to indicate that the Commission has state regulatory authority. (You should also note that a similar error is made on Page 4.9-10 of the document.) Moreover, Section 4.4.3.4.1 (page 4.4-32) indicates that the DMMO issues permits. The FEIR should clarify this statement by indicating that the DMMO is a review body *only* and its action typically precedes that of the permitting authorities, including the Commission. 19-16 19-17

Lastly, although not specifically mentioned in the DEIR, it appears that at least a portion of the cable would be placed in the Suisun Bay, an area where sand mining regularly occurs. Please address how on-going sand mining activities would be affected by the proposed construction activities and any precautionary measures to be taken to protect the transbay cable from on-going mining activity. 19-18

Water Quality. Section 4.4 of the DEIR indicates that the placement of the transmission cable would avoid areas of contaminated sediment. Additionally, this section states that the near- and offshore locations adjacent to the proposed San Francisco converter site contain elevated levels of PAHs that, if disturbed—i.e., through the placement of a cable—could cause substantial water quality impacts. Per the Commission's water quality policies in the Bay Plan, pollution in the Bay's water "should be prevented to the greatest extent feasible." Further, per the Bay Plan policies, in considering a project like the underwater cable the Commission would need to consult with and base its decision on the Regional Board's 19-19

19-19 evaluation of and advice on the proposed project and any potential water quality impacts. Therefore, it is advisable that the project proponents conduct early consultation with and obtain all necessary authorization from the Regional Board to aid the Commission in determining whether the project would adversely impact the Bay's water quality.

Commission's Suisun Marsh Jurisdiction

19-20 **Environment.** The maps contained in the DEIR show that a section of the proposed transbay cable would be located in portions of the Suisun Bay within Solano County and, thus, in the Commission's primary management jurisdiction of the Suisun Marsh. Therefore, it would be necessary to obtain a Commission marsh development permit for this element of the project. According to the *Suisun Marsh Protection Plan* (Marsh Plan) policies on environment, various habitats of the Marsh "...are critical...for marsh-related wildlife and are essential to the integrity of the Suisun Marsh." The FEIR should examine any potential impacts of the construction and operation of the transbay cable on Suisun Marsh habitat, and, if necessary, describe measures to mitigate these effects.

19-21 **Utilities and Improvements.** Further, the Marsh Plan policies on utilities, facilities and transportation state, in part, that underground cables in the Marsh should be permitted by the Commission only if no alternative route is feasible and the design meets certain standards, including, that: (1) trenches should be "only slightly wider" than the utility line of which they house to minimize wetland disturbance; (2) any vegetation disturbed by cutting a trench in marsh areas should be reseeded within one growing season if revegetation does not occur naturally; and (3) cable installation in the Bay should be scheduled to avoid major fish migrations. Included in these policies is guidance that all construction plans affecting the Marsh should be reviewed by the State Department of Fish and Game to assure minimal resource impact. Lastly, regarding dredging and dredged material disposal activities in the Marsh, these policies provide similar guidance to that contained in the Bay Plan's dredging policies but adds that dredging should be conducted in a manner that protects "important Marsh fisheries and wildlife and their habitat..." and that dredged material disposal should occur in "non-tidal areas where the materials can be used beneficially...."

In light of these policies of the Marsh Plan, the FEIR should: clearly identify the location of the transbay cable in the Suisun Marsh and show its location in relation to wetland areas; identify any potential project-related impacts to wetlands in the Marsh and measures for mitigating these effects; provide a construction schedule for any work affecting wetland area in the Marsh; identify the width of the proposed trench in relation to the cable width; discuss the consistency of construction schedule in the Marsh with fish migration windows; specify dredging locations on a map and discuss potential beneficial reuse options for dredged material.

Commission's Shoreline Band Jurisdiction

19-22 The DEIR does not include a map that identifies the proposed San Francisco converter site in relation to the Commission's 100-foot shoreline band jurisdiction. However, it appears that at least a portion of the 23,000-square-foot, 64-foot-tall converter structure and ancillary facilities, associated on-land or overhead transmission line, and lay-down areas would be located in the Commission's shoreline band jurisdiction. Section 66602 of the

McAteer-Petris Act states, in part, that: "...that maximum feasible public access, consistent with a proposed project, should be provided." In evaluating projects with potential impacts on existing or future public access to the Bay, the Commission relies on its law and also related policies of the Bay Plan.

Public Access. Section 4.8 of the DEIR discusses public access and its relationship to the proposed San Francisco converter facility and ancillary facilities and operations. The document states that the use of the San Francisco site for the proposed new converter facility precludes the development of public access amenities at the site because of the facility's industrial nature and concerns about public safety. Further, the document concludes that this impact will be mitigated—and thereby rendered "less than significant"—by working with our staff to meet the Commission's conditions regarding public access to the Bay. 19-22

Since the Commission's law and policies regarding public access state that a project, such as the one under consideration, needs to provide the maximum feasible public access consistent with the project, the project proponent should initiate the process of exploring and preparing appropriate public access improvements as early as possible in the planning process. As stated in the DEIR, on-site access may not be feasible due to the nature of the proposal; in that case, in-lieu access at an appropriate location could be considered and explored. Including a proposed public access package in the FEIR would allow the Commission staff and the other interested parties an opportunity for early comment and input. In addition, it would be helpful if the FEIR included a map of existing or planned San Francisco Bay Trail segments and existing and planned public shoreline access, and the location of these features in relation to the San Francisco converter site.

Public Views. Section 4.13 of the DEIR discusses visual impacts of the project. Based on its regulations, the Commission must consider a project's potential impacts on public views of the Bay. Further, the Commission's Bay Plan policies on appearance, design and scenic views state, in part, that "[a]ll bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas...." Therefore, the FEIR should include figures that depict the potential view impact of the project from the immediate and nearest public road showing how the Bay view would be affected from that location, and also from the adjacent Warm Water Cove Park. The FEIR should consider any impact of the new converter facility on the view from the park and consider the use of screening effects or breaking down the massing and height of the 64-foot-tall facility, if feasible. 19-23

Non-Point Source Pollution and Water Quality. Section 4.4 of the DEIR regarding the proposed San Francisco converter site does not discuss potential non-point source pollution control measures related to construction and operation of the facility. In evaluating shoreline projects for approval, among other things, the Commission must consider whether any potential impacts from increased impervious surfaces and land disturbances could be offset by incorporating measures such as vegetated swales, permeable pavement materials, and vegetation. Therefore, such measures should be considered for the proposed project and discussed in the FEIR in accordance with the Bay Plan policies on water quality. 19-24

Lastly, Section 4.14 of the DEIR discusses hazardous materials and remediation activities associated with the proposed San Francisco converter site. The project proponent should be aware that such activities occurring in the Commission's jurisdiction, including any 19-25

demolition, would require its authorization and an explanation as to the type of measures employed to prevent any water quality impacts. Further, in evaluating remediation projects, the Commission would rely on the advice of the Regional Board and the state Department of Toxics Substances Control and, therefore, the advice and/or concurrence of these agencies should be sought and obtained, and provided to the Commission.

19-25

Thank you for the opportunity to comment on this DEIR. If you have any questions regarding this letter or the Commission's policies, please call me at (415) 352-3613.

Sincerely,

JAIME MICHAELS
Coastal Program Analyst

JM/

cc: State Clearinghouse

RESPONSE TO COMMENTS

Comment Number	Response
19-1	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates BCDC's review of the Draft EIR for the proposed Trans Bay Cable Project and recognizes BCDC's role in protecting the Bay.
19-2	Comments noted. Based on the physical location of the proposed and alternative Trans Bay Cable Project components, the City of Pittsburg understands that the converter station and ancillary facilities in Pittsburg/Contra Costa County are all located east of BCDC's jurisdiction. In addition, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC site [mitigated]) (refer to Section 4.A of the Final EIR). Accordingly, all of the converter station sites in San Francisco and associated 115 kV AC interconnections to the existing PG&E Potrero substation are outside of BCDC's jurisdiction since their easternmost boundaries are more than 100 feet inland from the western shore of the Bay as it existed on September 17, 1965. The proposed submarine cable (approximately mileposts 0.0 – 49.5; refer to Map A.2-1 in Section 3.0 of the Final EIR), including onshore portions in San Francisco within 100 feet of the Bay shoreline as well as portions of the temporary construction laydown areas in San Francisco are within BCDC's jurisdiction.
19-3	Comments noted. Please refer to Response 19-2.
19-4	Comments noted. Based on the distance of proposed submarine cable within BCDC's jurisdiction (i.e., approximately 49.5 miles) and the approximate diameter of the cable (i.e., 10 inches), an estimated 5,277 cubic yards of buried submarine cable would be installed in BCDC's jurisdiction or about 107 cubic yards per mile. In addition, a currently unquantified amount of protective mattresses would be required (e.g., at shallow utility crossings and possible need to install insulation at BART tube crossing, etc.). The results of the forthcoming geophysical survey will help clarify the actual amount of fill that would be associated with the Project.
19-5	Comments noted. As discussed in Section A.8.3 in Appendix A of the Draft EIR, multiple land-based alternatives for meeting the Project need and objectives were examined. These include alternatives previously considered by the SFSSG, the CAISO, the CEC, and PG&E. In addition to apparent insurmountable obstacles in getting a land-based transmission line from Contra Costa County to San Francisco, including the portion up to the East Bay shoreline, there are no identified feasible ways to get across the Bay to San Francisco without installing a submarine cable in the Bay. Caltrans does not allow longitudinal encroachments in their rights of way and has specifically stated that the cable can not be installed on its bridges. Similarly, it is not feasible to install the cable in BART's trans Bay tube due to space limitations, structural design limitations, construction window constraints, and safety concerns. The CAISO and CEC recognize the need for the proposed Trans Bay Cable Project as demonstrated by the CAISO's approval of the Project on September 8, 2005 and the CEC's analysis of alternatives and selection and support for the Project in their 2005 Strategic Transmission Investment Plan. Please refer to Responses 3-1 and 3-6, Section 13.0, and Appendix C of the Final EIR for documentation of these facts.
19-6	The SLC and the Port of San Francisco own the Bay property where the DC cable would be installed. TBC is in the process of negotiating a long-term lease agreement, with both parties, to acquire the legal rights to install the cable. Upon execution of both lease agreements, a copy will be made available upon request.
19-7	Comments noted. A text revision has been be made to include Section 4.6.2.2.2 San Francisco Bay Plan. Please refer to the new Section 13.0 of the Final EIR for the applicable text revision. Also refer to

RESPONSE TO COMMENTS

Comment Number	Response
	Draft EIR Section 4.8.2.3.6 (San Francisco Bay Plan) for information regarding the San Francisco Bay Plan and BCDC's jurisdiction and responsibilities, including those related to protection of resources. In general, the proposed Trans Bay Cable submarine route is located in deeper water and avoids tidal flats, mudflats, and intertidal areas. In addition, the proposed cable installation method using a Hydroplow is minimally invasive and designed to limit disturbance of Bay floor habitat and limit sediment disturbance/suspension. In addition to minimal construction impacts, no adverse long-term impacts during the operational phase of the Project would be expected to occur.
19-8	Comment noted. Please see Responses 6-6, 10-12, and 10-32.
19-9	Comments noted. The locations and extent of hard bottom, rocky locations, if any, along the proposed Trans Bay Cable submarine route are currently not known but are expected to be minimal or non-existent based on available data. Protective mattresses may be required to be placed over the cable in rocky areas, as applicable, and in areas of shallow utility crossings, as applicable. The forthcoming geophysical survey will identify any such areas/needs. Although the geophysical survey has not yet been conducted, a Project-specific environmental sediment quality sampling survey was conducted in 2005 along portions of the proposed submarine cable route (refer to Figure 4.4-2, Sediment Sample Locations, of the Draft EIR). No rocky bottom areas were encountered during this survey (refer to the boring logs in Appendix E, Sediment Characterization Report of the Draft EIR for more information). It is not expected that much, if any, of the proposed cable route will encounter rocky substrate, with the possible exception of the area east of Angel Island and the Tiburon Peninsula (refer to Map A.2-1, Sheets 2 of 10 and 3 of 10 in Section 3.0 of the Final EIR; approximate DC cable mileposts 7.0 to 11.5). The sediment sampling program performed for the Trans Bay Cable Project included a sample (identified as SFB-3 on Draft EIR Figure 4.4-2 and the boring logs in Draft EIR Appendix E) along the proposed cable route at approximately milepost 11 east of the Tiburon Peninsula. No rocky substrate was encountered to a depth of 6 feet at this location. It is expected that little, if any, rocky substrate is present along the proposed cable route and that the potential need for, and use of, protective mattresses relative to this condition would be minimal or non-existent. The forthcoming geophysical survey will clarify this issue. Once the geophysical survey results are available, the Project proponent will evaluate the need for protective mattresses, evaluate the associated volume of fill, and include this estimate in the permit application to be submitted to BCDC for the Project. The volume of concrete mattresses is currently expected to be minimal and the long-term impacts to marine organisms associated with replacement of limited, if any, natural hard bottom with artificial (i.e., concrete) hard bottom would be expected to be minimal since the substrates are both conducive to organisms with an affinity for hard bottom substrate.
19-10	Comments noted. The currently proposed directional drilling locations (i.e., bore pits) are shown on Figures 3-15 and 3-8 in the Final EIR for Pittsburg and San Francisco, respectively. The noise levels from horizontal directional drilling are much lower than pile driving and, as shown on the referenced figures, the directional drilling locations for the HVDC cable are further away from potentially sensitive receptors (i.e., residences) than the pile driving that would occur at the converter stations. Because the general construction and pile driving (with the exception of the West Tenth Street Alternative 2) noise levels were determined in the Draft EIR to be less than significant, the noise and vibration impacts from directional drilling would also be less than significant. The HDD drilling operation would be performed from both the landside and from a barge on the waterside. A diesel engine would be used to power the drill. This engine would be similar to the engines used in trucks that are in the area every day carrying freight.

RESPONSE TO COMMENTS

Comment Number	Response
19-11	As discussed in the Draft EIR (Section 4.6.3.2), installation would be conducted within Environmental Work Windows outlined in the Long Term Management Strategy (LTMS) for bay dredging and disposal, recognized by agencies such as NOAA Fisheries. The work windows would provide for protection of listed salmonids and a number of other species such as Pacific herring and Dungeness crab. Other listed species include delta smelt and the green sturgeon. These are year-round residents and no work windows exist. For these species, consultation with USFWS (delta smelt) and NOAA Fisheries (green sturgeon) will be required. As discussed in the EIR and in response to other public comments (for example, see Responses 10-33 and 16-11), it is expected that the cable installation would not significantly affect these species, if present.
19-12	Comments noted. The proposed Trans Bay Cable would be heavily armored and expected to be buried at a typical target depth of 3 to 6 feet. In the unlikely event of damage to the cable, the electrical current would be automatically shutoff within milliseconds with no anticipated environmental impacts with the exception of a temporary loss of a portion of the power supply in the San Francisco area. There are no planned, regular maintenance activities associated with the proposed submarine cable, and thus, no associated potential environmental impacts. In the unlikely event that the cable was damaged at some location, it would be necessary to excavate the damaged portion and repair the damaged portion via a splice which would occur on a surface vessel. Once the splice was completed, the cable would be reburied and/or covered with protective mattresses on the Bay floor at approximately the same location as the original installation. The potentially affected area would be minimal and disturbance to habitat would be temporary and similar to the original installation. No significant impacts would be expected to occur.
19-13	The anticipated cable life is at least 40 years based on the Project proponent's experience on similar projects. If future conditions warranted extending the life of the Project beyond 40 years, refurbishment of the converter stations in Pittsburg and San Francisco would be more likely than a need to refurbish and/or replace the submarine cable. In the event that the cable needed to be replaced, the Project owner would likely need to reapply to applicable regulatory authorities at that time to install a new cable in the Bay (i.e., not likely possible to refurbish a 40-year-old cable if in fact it had deteriorated or had been severely damaged over time). Since the cable is proposed to be buried at a typical depth of 3 to 6 feet, the Project proponent proposes to not remove the cable in the Bay upon decommissioning of the Project in order to avoid additional disturbance to the Bay floor and associated biological communities, and potentially affected adjacent buried utilities.
19-14	Comments noted. As assessed and discussed in the Draft EIR, the proposed Trans Bay Cable Project has been designed to have minimal impacts on the Bay and is not expected to result in any potentially significant impacts to the Bay.
19-15	Comments noted. The Project proponent has withdrawn the previously proposed Standard Oil site, including ancillary facilities, from further consideration. The need for dredging at two locations in New York Slough was only associated with the Standard Oil site, Therefore, potential impacts associated with dredging and dredge spoil disposal in New York Slough are no longer applicable to the proposed Trans Bay Cable Project.
19-16	Comment noted. While the BCDC is in fact a state agency, in relation to the TBC Project, BCDC addresses the Bay Area "region" and, therefore, is discussed in terms of the Project's local area.

RESPONSE TO COMMENTS

Comment Number	Response
19-17	Comment noted. The text in Section 4.4.3.4.1 of the Draft EIR has been revised in response to this comment. Please refer to new Section 13.0 of the Final EIR for applicable text revisions.
19-18	Comment noted. The Project proponent consulted with the SLC (among others such as Hanson Permanente Cement Company) during the cable routing process and made sure that the proposed cable route avoids all sand mining areas/leases (refer to EIR Map A.2-1). The proposed Project is not expected to have any impact on designated sand mining operations in Suisun Bay or elsewhere.
19-19	Comments noted. The Project proponent has consulted with the Regional Water Quality Control Board (RWQCB) to discuss the Project details and the RWQCB's potential concerns regarding the Project. The RWQCB has commented on the Draft EIR as well. Please refer to the responses to the comments in the RWQCB comment letter (Comment Letter 25).
19-20	Comments noted. The Suisun Marsh Protection Plan is discussed in Draft EIR Sections 4.8.2.3.7 and 4.8.3.4.2. As discussed in Draft EIR Section 4.6 (Marine Biological Resources), installation of the proposed submarine cable in the Bay and connecting waterways such as Suisun Bay using the minimally invasive Hydroplow would not result in any identified potentially significant impacts.
19-21	Comments noted. The proposed submarine cable route is shown on Map A.2-1 and the portion within Suisun Bay is shown on Sheets 8 of 10 and 9 of 10. The mapped location of the proposed cable route may be modified slightly based on the results of the forthcoming geophysical survey. Any proposed future deviations from the currently mapped location would be developed in consultation with pertinent regulatory agencies, including BCDC. Installation of the submarine cable in Suisun Bay using the minimally invasive Hydroplow is not expected to result in any potentially significant impacts to wetlands or marsh habitat. The trench width associated with the Hydroplow operation is expected to be only slightly wider (e.g., 4 to 6 inches on average) than the cable bundle width of approximately 10 inches. Cable installation in Suisun Bay is planned to occur during a portion of the NOAA recommended fish window of June 1 through November 30 for anadramous fish. The proposed Project no longer includes dredging of or spoil disposal from New York Slough east of Suisun Bay.
19-22	Comments noted. Please refer to Response 19-2 regarding the relationship of the proposed Project components, including those in San Francisco, to BCDC's jurisdiction. Since the HWC site as analyzed in the Draft EIR has been withdrawn from further consideration and shifted to the west, potential Project conflicts with public access along the Bay in San Francisco are no longer applicable.
19-23	Comments noted. As discussed in previous comment responses, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west (HWC [Mitigated] site) on the overall HWC property in San Francisco. The closest roads to the HWC (Mitigated) site that are accessible to the public are Illinois Street to the west, 23rd Street to the north, and 24th Street to the south. Please refer to Section 4.A.13 (Visual Resources) of the Final EIR for the visual impact assessment for the HWC (Mitigated) site. The new location of the HWC (Mitigated) site will remove the visual mass of the Converter Station on the north side of Warm Water Cove Park and places the DC Hall further from the water, where it will have less visual impact than the former location. In summary, no unavoidable adverse significant visual impacts, including those to views of the Bay or from Warm Water Cove Park, are associated with the HWC (Mitigated) site.
19-24	Comments noted. The Project proponent has negotiated with the landowner at the HWC property and now proposes to shift the San Francisco converter station site to the west on the overall HWC property (HWC [Mitigated] site). This shift locates the converter station site further away from the Bay shoreline.

RESPONSE TO COMMENTS

Comment Number	Response
	As discussed in Draft EIR Section 4.4.3.2.1, surface runoff from the HWC site (applies to entire property) is currently directed to the San Francisco combined stormwater and sanitary sewer system; i.e., site runoff does not flow to the Bay. The HWC site is currently completely covered with buildings and/or pavement, thus it is already impervious. Development of the San Francisco converter station at the HWC (Mitigated) site would not increase surface runoff relative to the currently existing condition. As discussed in Draft EIR Section 4.4.3.2.1, Mitigation Measure WATER-1 (Erosion Control and Contaminant Source Control), including development and implementation of a Stormwater Pollution Prevention Plan in accordance with NPDES requirements, would reduce potential impacts to a less-than-significant level. No further mitigation is warranted.
19-25	Comments noted. The HWC (Mitigated) site is not within BCDC's jurisdiction. Demolition activities and potential site remediation activities for the HWC (Mitigated) site are discussed in Section 4.A.14 of the Final EIR. In summary, no unavoidable site remediation related impacts, including those related to Bay water quality, would be expected to occur.

July 10, 2006

Ken Strelo
City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, CA 94565

Subject: Draft EIR for the Trans Bay Cable Project

Dear Mr. Strelo:

Thank you for the opportunity to comment on this important project. The Bay Trail Project is a nonprofit organization administered by the Association of Bay Area Governments (ABAG) that plans, promotes and advocates for the implementation of a continuous 500-mile bicycling and hiking path around San Francisco Bay. When complete, the trail will pass through 47 cities, all nine Bay Area counties, and cross seven toll bridges. To date, slightly more than half the length of the Bay Trail alignment has been developed.

San Francisco Bay Plan and San Francisco Bay Trail Plan

The proposed project has the potential to impact the Bay Trail alignment on the shoreline at the Port of San Francisco's Warm Water Cove Park. While the current alignment of the Bay Trail in this area is along Illinois Street, as referenced in the DEIR when discussing the San Francisco Bay Plan (Section 4.8.2.3.6—Land Use and Recreation) the "San Francisco Bay Trail sections should be located near the shoreline unless that alignment would have significant effects on Bay resources; in this case, an alignment as near to the shore as possible should be provided consistent with Bay resource protection". This is also a central point of the San Francisco Bay Trail Plan which states as its first policy that the goal of the Bay Trail program is "to develop a continuous trail which...is *situated as close as feasible to the shoreline*..." (emphasis added—"*The Bay Trail—Planning for a Recreational Ring Around San Francisco Bay*", July 1989). The Final EIR should discuss the proposed project in the context of the Bay Trail Plan and its Policies. **20-1**

Mayor's "Blue Greenway" Task Force

A significant investment of time, energy and money has recently been allocated to the "Blue Greenway"—a coordinated citywide effort to complete San Francisco's Bay Trail from AT&T Park south to the County line in the near

term, and to plan in the long-term for the realignment of the Bay Trail to the water's edge on the central and southern waterfront. Gavin Newsom appointed a Mayor's Task Force comprised of a wide array of community groups, stakeholders, and agency representatives to achieve this goal. This ambitious plan can only be achieved by securing public access to the shoreline whenever the opportunity arises on San Francisco's waterfront. It is our hope that this project will help further the Mayor, the City, and the Bay Trail Project's goals for shoreline public access.

Proposed Mitigation Measures

While the document seems to recognize that public access to the shoreline is an important—and likely required—amenity, the DEIR states that the use of the site as a converter facility precludes the development of public access amenities due the facility's industrial nature and public safety concerns. The proposed mitigation measure for this potentially significant impact is to "obtain any necessary permits from applicable agencies, including BCDC, and meet requisite conditions of approval including any conditions to provide Bay access in the vicinity of the Project site" (Section 4.8, Land Use and Recreation).

While BCDC may in fact require public access on the project site or in the immediate vicinity, it is not appropriate to rely on a future permit negotiation as a mitigation measure in an environmental review document. The purpose of the California Environmental Quality Act is to disclose to the public the significant impacts a project may impose, and offer specific mitigation measures to address the impacts. The DEIR identifies the proposed project as being in "potential conflict with public access improvements"—a potentially significant impact. It is not possible for interested parties to effectively comment on the appropriateness of proposed mitigation measures if they are not clearly stated in the document. Please include specific plans for public access to the shoreline in the Final EIR.

20-1

Integration of the Bay Trail Into the Project Description

It is our understanding that fencing associated with security and public safety concerns will surround the site, thereby blocking any potential future public access. It is essential that a waterfront trail alignment connecting to existing shoreline access at Warm Water Cove Park be included as an integral part of the proposed project. Regarding safety and security concerns, an existing 8-10 foot-wide Bay Trail segment is located bayward of PG & E's Hunter's Point Power Plant connecting Heron's Head Park and India Basin Shoreline Park. The path is separated from the generating facility by a 10-12 foot cyclone fence, and was in use while the power plant was in operation. In addition, a segment of Bay Trail in Palo Alto is similarly located adjacent to a PG & E substation, and a pathway in Pinole directly borders a functioning water treatment plant. We believe that it is entirely feasible for a similar arrangement to be employed at any one of the three alternative sites chosen

for the converter station. Please include a detailed description, including graphics, of such a layout in the Final EIR.

If you have any questions, or if I can be of any assistance, please do not hesitate to contact me at (510) 464-7909, or by e-mail at maureeng@abag.ca.gov. 20-1

Sincerely,

Maureen Gaffney

Cc: Marshall Foster, Mayor's Office of City Greening
David Beaupre, Port of San Francisco
Jamie Michaels, SF Bay Conservation and Development Commission
Jeff Condit, San Francisco Neighborhood Parks Council

RESPONSE TO COMMENTS

Comment Number	Response
20-1	The City of Pittsburg as CEQA Lead Agency appreciates the Association of Bay Area Governments' (ABAG's) review of the Draft EIR for the proposed Trans Bay Cable Project. The Project proponent has successfully negotiated with the landowner at the HWC site in San Francisco and shifted the HWC converter station site to the west (HWC [Mitigated] site) as a mitigating action. The HWC (Mitigated) site avoids any impacts on potential future implementation of the San Francisco Bay Trail Plan along the Bay waterfront. Please refer to Section 4.A of the Final EIR for more information.

"Ken Strelo"
<KStrelo@ci.pittsburg.ca.us>
07/10/2006 11:18 AM

To "Trudi Opton Loscotoff" <tloscotoff@bergdavis.com>, "David Parquet" <David.Parquet@babcockbrown.com>, "Joan Lamphier" <jlamphier@lamphier-gregory.com>, "Michael
cc
bcc
Subject FW: Transbay DEIR

Hi everyone.

See email below for more comments.

-----Original Message-----
From: Karen Pierce [mailto:Karen.Pierce@sfdph.org]
Sent: Monday, July 10, 2006 11:09 AM
To: Ken Strelo
Cc: joeboss@joeboss.com; karen.pierce@sfdph.org; info@lejyouth.org; 4010@pacbell.net; milletdick@yahoo.com; Jill.Lerner@sfgov.org
Subject: Transbay DEIR

I am a member of the Power Plant Task Force for the San Francisco Board of Supervisors. Unfortunately, I was unable to provide my input before our letter was sent to your offices. However, there are other important Environmental Justice considerations that have not been examined through the process to date and must be addressed in the EIR as described below:

The Community Survey Report for the Bayview Hunters Point (BVHP) Health and Environmental Assessment Task Force, a representative study of health and attitudes about the environment published in 2001, found that 14% of residents of Bayview Hunters Point eat fish caught in the San Francisco Bay. Bayview Hunters Point, a largely African American population is one of the poorest communities in San Francisco and families rely on fish from the Bay for subsistence. Any disturbance of Bay sediment, known to be contaminated, is a potential health threat and must be considered before a project such as this is approved. **21-1**

Communities in other parts of the Bay Area have populations equal to or greater than BVHP who rely on fish from the Bay for subsistence. The universe of that population should be determined and proper mitigation identified.

Karen Goodson Pierce

BVHP Health and Environmental Assessment Task Force
30 Van Ness Avenue, Suite 2300
San Francisco, CA 94103
Ph: 415.581.2459
Fax: 415.581.2490

RESPONSE TO COMMENTS

Comment Number	Response
21-1	See Responses 10-12, 12-6, 13-2, and 13-10. Installation of the proposed submarine cable would not be expected to result in contamination of fish or other marine organisms, thus no associated human health effects associated with eating organisms from the Bay would occur due to the Trans Bay Cable Project.

-----Original Message-----

From: Paula Fernandez [mailto:Paula.Fernandez@sfgov.org]

Sent: Monday, July 10, 2006 5:32 PM

To: Ken Strelo

Cc: jlamphier@lamphier-gregory.com; Patrice M Siefers; Carol Bach; JHendry@sfwater.org; Marlena Byrne; Grace Park; Greg Asay; Jesse Blout; Brad Benson

Subject: Part I of 2: City and County of San Francisco's Comments on DC Underwater Cable--Draft EIR

Attached are the City and County of San Francisco comments and attachments on the DEIR for the Trans-Bay Cable Project. Please contact me if you have any difficulties opening our comments or any of the attachments. 22-1

Paula Fernandez

City Attorney's Office

City Hall, Room 234

San Francisco

(415) 554-4623

paula.fernandez@sfgov.org

DEIRcom.pdf

ATTCH-1.PDF

Comments of the City and County of San Francisco on the Draft Environmental Impact Report on the Trans-Bay Cable Project

July 10, 2006

GENERAL COMMENTS

22-2 The City and County of San Francisco (CCSF) appreciates the consideration shown by the City of Pittsburg in granting CCSF's request for an extension of the deadline for comments. For convenience, CCSF has included as Attachment 7 the comments of the San Francisco Power Plant Task Force on the DEIR.

22-3 **General Plan Referral**: The project applicant should submit a General Plan Referral application as part of its CEQA clearance process for land use so that the project's consistency with the General Plan can be assessed. The project will use City property (tidal lands and public rights of way), and this also triggers the General Plan Referral process, and the DEIR should include this requirement.

22-4 **Document Graphics:** Throughout the DEIR, graphics are referenced in the Appendix; however, in the web-downloaded version, NO graphics are available. At least in the project alternatives section, it would be helpful if the graphics were interspersed within the text descriptions of alternatives. The project developer's web page shows a different site for the Converter Plant than the two sites analyzed in the DEIR. The alternative sites need to be graphically shown within the body of the document.

22-5 **Land Use:** The project is located in the Central Waterfront Neighborhood Planning Area and as noted in the DEIR, the plan is in draft form. The DEIR needs to note that the immediate area surrounding the Mirant and HWC sites to the west is designated for mixed-use residential/neighborhood commercial development in the draft plan. This plan is currently undergoing programmatic environmental review. The ability of the project and potentially future mixed use residential development to exist peacefully will require special attention to noise impacts, and our comments are designed to provide possible solutions to issues generated by proximate industrial and residential development. The one-half block buffer proposed on page 47 of the site is probably inadequate to provide for a reasonably quiet residential neighborhood absent further treatment and site planning for both the new residences and for the power facilities. The DEIR should recognize this impact to future land uses and mitigate the impact by providing noise buffers for the converter plant. The City could also in its own environmental review as a responsible agency require more intensive sound insulation and window treatments for new residential and other noise sensitive receptors.

22-6 In addition, the draft plan calls for focusing higher density mixed use development around transit nodes, one of which will be the new Third Street light rail station located at Third and 24th Street. This provides further justification for both a noise and visual barrier at the Converter Plant site. Please discuss these plans in the DEIR and the plant's neighborhood impacts, using appropriate noise and visual mitigation. Currently the DEIR treats the area as an old industrial and blighted area and, consequently, does not proactively consider the mitigation ultimately needed given the City's on-going planning for this neighborhood.

22-7 **Permits:** Clarification is needed as to whether the converter plant will be obtaining a building permit in the City or whether the State Architect will be issuing the building

permit. If the project will not be receiving permits from the City, a new mitigation measure should be added to the DEIR to ensure that the police services, fire services, hazardous materials usage and storage, geotechnical and structural strength will meet San Francisco's standards. The mitigation measure would provide San Francisco Departments of Building Inspection, Fire, Police, Public Health, and Planning notice and review of intermediate plans, opening dates, etc. so that full coordination exists on all services to be provided to the facility. In addition, coordination with the City's Building Department on geotechnical issues and the design of the facility will assist in making certain that the City's power supply is not seismically endangered. **22-7**

Environmental Justice: The DEIR does not discuss any potential environmental justice issues raised by this project in either San Francisco or Pittsburg. San Francisco believes that the potential impacts from the project must be considered in the context of environmental justice concerns in both communities. California law defines environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations and policies." (Gov. Code § 65040.12) San Francisco supports the goals of environmental justice and is committed to promoting social justice and equality in the context of environmental policymaking and review and in carrying out its administrative and regulatory duties. **22-8**

The San Francisco locations proposed for the project are in or near a community of color that has been disproportionately impacted by industrial facilities including facilities used for the generation and transmission of electric power. The potential for impacts on this community, in particular, should be identified by the DEIR. The DEIR should also address similar issues for the Pittsburg location of the project.

Mitigation Details and Monitoring: The summary of potentially significant environmental impacts uses slightly different mitigations for essentially the same impacts for the San Francisco and Pittsburg Converter Plant sites. Generally, the mitigations are more detailed and complete for the Pittsburg Converter Plant than for the San Francisco Converter Plant. The significant difference this makes is that mitigation monitoring responsibility is assigned to the City of Pittsburg for the San Francisco site. It is unclear how the City of Pittsburg will provide mitigating monitoring for the San Francisco converter plant. There needs to be a mitigation monitoring commitment made via a full time resource person, or there needs to be an agreement between San Francisco and Pittsburg regarding funding a full time resource person to ensure the mitigations are implemented, monitored and that City procedures are followed. **22-9**

EIS: If this project requires a federal action, such as a FERC permit, the appropriate document to prepare would be an EIS/EIR. Will an EIS be prepared for the project? **22-10**

Analysis of EMF Impacts: EMF issues are not adequately examined. The DEIR states that since there are currently no federal or state standards with regards to EMF emissions, "EMF is not considered in this EIR as a CEQA issue and no discussion is provided pertaining to potential impacts and a level of significance determination." (DEIR, App. K, p. K-1). The DEIR therefore provides only "preliminary estimates" of EMF exposure associated with the project. **22-11**

This approach is deficient and greater modeling of potential EMF exposures associated with the project should be developed. All other recent EIR prepared in conjunction with addressing San Francisco electric reliability needs conducted EMF modeling of the

projects. This included the San Francisco Electric Reliability project and PG&E's Jefferson-Martin transmission line.

22-11 Although the DEIR is correct that there are no binding standards for EMF exposure, the California Department of Health Services (DHS) has classified EMF as a *possible* carcinogen. The California Public Utilities Commission has implemented a decision (D.93-11-013) requiring utilities to incorporate "low-cost" or "no-cost" measures for managing EMF from power lines up to approximately 4% of total project cost. PG&E, for example, included these measures in its recent transmission project. The DEIR identifies, but does not examine further, some of these measures as well (DEIR, App. K, p. K-10)

SECTION 2.3: PURPOSE AND NEED

22-12 1. The DEIR relies extensively on the planning studies of the California Independent System Operator (CAISO), yet the ISO's analysis also identified the Moraga-Potrero transmission line as providing many of the same benefits as the Trans Bay Cable at approximately the same cost. Neither of these alternatives is discussed in significant detail in the DEIR.[1]

22-13 2. There are issues that neither the CAISO's study nor the DEIR examined in sufficient detail. Neither studied, beyond a cursory examination, the potential for energy efficiency and renewable energy to address San Francisco's reliability needs. Neither studied, again beyond a cursory examination, the potential to determine the optimal combination of alternatives that would best meet San Francisco's needs.

22-14 3. The DEIR performs only a cursory review of the environmental effects of the alternative proposals. The CAISO, while arguably possessing technical and economic expertise, does not possess any special environmental expertise. Thus both the DEIR and the CAISO Phase 2 study, did not examine environmental effects of the various proposals in anything beyond cursory detail.

22-15 4. The DEIR should further discuss the ability to provide reliable service after major earthquakes. California's previous experiences with the effect of earthquakes upon DC converter stations has not been positive. The major DC converter facility in California, the Los Angeles Department of Water & Power's Sylmar Converter station was substantially damaged and essentially had to be replaced after both the 1971 Sylmar and 1994 Northridge earthquakes. The DEIR discusses the steps that Trans Bay plans to take so that the facilities will be able to survive a major earthquake, as well as maintaining a back-up converter on site. Nonetheless, the DEIR should discuss further the ability of DC converter stations to withstand earthquake events and the estimated time the project could be out of service after an event, particularly as compared to other alternatives..

SECTION 3.4: CONSTRUCTION IMPACTS

22-16 1. Cumulative Construction Impacts: It appears that this project is planning construction at about the same time as the BART seismic retrofit of the Trans Bay Tube. This should be considered in the construction impacts with respect to identifying cumulative

[1] These could be discussed as either alternatives to the project or as variations of the "No Project" alternative required under CEQA.

construction impacts, identifying construction traffic routes, lay-down areas, etc. so that the demands of both projects are met with minimum disruption to city residents and businesses. **22-16**

2. Dust/Demolition/Hazardous Materials: The project site should have additional soil borings and soil testing for hazardous materials prior to being disturbed by grading, tunneling, demolition or other disruption. This is not currently shown as a mitigation measure in the DEIR for the San Francisco portion of the project. **22-17**

SECTION 4.2: AIR QUALITY

System-wide energy impacts and their corresponding air quality effects need to be modeled. The DEIR, as well as Trans Bay's FERC filing both state that a benefit of the project is to allow greater access to East Bay generation.[2] It thus appears that the Trans Bay project could result in changes in power generation and hence emissions between power plants in the Greater Bay Area. This effect is not examined or modeled in the DEIR. This review needs to be done even if overall emissions decrease. While overall emissions may decrease, localized emissions in certain areas could increase significantly. The NOP recognized this need to assess the potential redistribution of air emissions. **22-18**

The normal method to assess the potential emission effects of electric projects is to do electric production modeling simulation. This technique is well developed and has been extensively used in other EIR processes. Absent this modeling, the localized and regional effects of the project cannot be determined. **22-19**

4.2.3.2.1 Construction-related Impacts.

The laying of the electrical cable between Pittsburg and San Francisco will involve the use of two vessels – the cable-laying ship Guilio Verne and a cable-laying barge.[3] Collectively these vessels will emit over 70 tons of NOx over a period of about 100 days. This is 0.7 tons or 1,400 pounds/day of NOx. Although these emissions are temporary, they are still significant. Over the course of 4 months, these ships will emit almost 5 times the yearly limit of 15 tons/year used by the Bay Area Air Quality Management District (BAAQMD) to assess the significance of a major new source. **22-20**

The potential effect of these emissions on localized and regional air quality should be modeled. Contrary to the DEIR's statement that the vessels would be moving around the bay, instead the vessels would be moving slowly along a clearly defined route (the cable route) with limited movement[4] for long periods of time. The DEIR estimates that it will

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[2] The City [of Pittsburg], Contra Costa County and the surrounding East Bay region have access to several thousand megawatts of generation either directly or through the existing East Bay region transmission system. That generation is available to serve the City of San Francisco but for the limited transmission capacity into the San Francisco peninsula. FERC filing p. 2

[3] A dredge would also be needed for use around the Pittsburg converter site.

[4] "The cable-laying vessels themselves would be "restricted in their ability to maneuver." This means that the nature of the vessels themselves or of their operations limit their ability to take actions to avoid collisions…(DEIR 4.9-12) and that: "From approximately the Carquinez Straits to Pittsburg installation would likely be done from a cable installation barge. *This barge would be moored to deployed anchors*." (Draft EIR, 4.6-15, emphasis added)

22-20 take approximately 100 days to lay the 57miles of cable, or approximately ½ mile of cable per day. At this rate, a ship could be within 5 miles of any given point for a period of 20 days.[5]

22-21 Compounding this problem is the time, and location, at which these emissions would occur. To protect sensitive marine wildlife, these vessels would operate from June 1st through October[6], the same time as the BAAQMD's "Spare the Air" season when the BAAQMD is most at risk for violation of state and federal air quality standards. These emissions would also occur in close proximity to numerous other major emission sources[7] in an area that has exceeded federal ozone standards.[8]

22-22 The DEIR lists several potential mitigation measures which would be adopted "if feasible." There is no discussion in the DEIR as to either the feasibility of these measures or the corresponding emission reductions.

22-23 Mitigation Measure AIR-2 is not sufficiently specific to clearly describe the mitigation or enable subsequent monitoring. This measure should state more explicitly how emissions from construction equipment will be mitigated, including what type of alternative fuel, whether alternative fuel is a more effective mitigation than exhaust controls on equipment engines, what constitutes "use… as practical", and what the limitations on idling time, operating hours, and/or amount of equipment in use would be. Similarly, Mitigation Measure AIR-3 should be more specific, including which alternative fuel is proposed, how fuel consumption will be minimized, and whether shore-side power is feasible (i.e. does the infrastructure to provide shore-side power exist on the vessel and/or at any of the locations where the vessel will be docked?).

SECTION 4.3: GEOLOGIC RESOURCES AND SOILS

22-24 Geology and Seismic Impacts: The DEIR must clearly state that the site is on fill, has high erosion, high shrink-swell/subsidence potential, high seismic and tsunami risk, and is tainted with industrial pollutants.

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[5] Starting 5 miles away from a point, it would take a ship 10 days to travel to reach the point. At this rate, It would take another 10 days of the ship sailing away from the point before it was 5 miles away from the point.

[6] As the Draft EIR notes, to minimize effects on endangered species such as salmon, cable laying east of the Carquinez Straits will occur during the time-period of June 1 through November 1. (Draft EIR, p.4.6-15)

[7] As the Draft EIR notes;: "Pittsburg is known for its steel and chemical industries. Industrial uses are primarily situated along the waterfront based on proximity to New York Slough. The Mirant Pittsburg Power plant dominates the western waterfront, while major manufacturing operations are located along the eastern waterfront, including USS-POSCO, Dow Chemical;, and the Delta Diablo Wastewater Treatment Plant." (Draft EIR, 4.8-5) Each of these sources is an EPA Title V major source. As the vessels precede westward from Pittsburg they will pass numerous other Title V facilities such as the petroleum refineries located in Benicia and Martinez, the C & H Sugar plant, and others.

[8] The Pittsburg site has exceed the federal 8 hour AAQS standard 11 times in the past 10 years including as recently as 2002 (DEIR Table 4.2.4) and also "show[s] some exceedances" of the California 24-hour AAQS for PM10 and PM2.5."

Similarly, the description of the building design process for the San Francisco converter plant is less detailed than for the Pittsburg site, whereas the impact of facility failure would be very severe in both areas. **22-25**

This section would benefit from further discussion of the nature of the soil, which is predominantly fill material, at the San Francisco converter site (section 4.3.1.4.1), and Article 22A of the San Francisco Health Code, which is mentioned briefly in section 4.3.2.3.2. The fill soils that comprise much of San Francisco's eastern shoreline often contain metals, organic compounds, and/or asbestos-containing serpentine rock, and consequently require special management during construction to avoid posing an environmental health risk to workers, the public, and/or future occupants. Article 22A, administered by the Department of Public Health requires project proponents to characterize soil that will be disturbed prior to construction, and develop site-specific health and safety and/or soil management plans as applicable based on the findings of the soil characterization. The potential impact resulting from disturbance of fill soils, and the requirement under Article 22A to manage soils to minimize that potential impact should be incorporated into Impact GEO-2 and Mitigation Measure GEO-2 or identified and discussed as a separate potential impact and mitigation. **22-26**

SECTION 4.4: WATER RESOURCES AND QUALITY

4.4.1.3.1 Sediment Quality Along the Proposed Cable Route. This section states that the cable route for the proposed project was designed to avoid known toxic hot spots, but that refers only to known toxic hot spots identified by the RWQCB's Bay Toxic Hot Spots program in 1999. The cable route goes through or near another area of known sediment contamination off-shore of the Mirant Potrero Power Plant. This area of PAH-contaminated sediment should be mentioned here and in Appendix E, and data about sediment quality in this area should be incorporated into the rest of the environmental analysis. **22-27**

In the discussion of sampling methodology, it would be worth mentioning the number of samples collected/volume of sediment to be disturbed by cable installation, and how that sampling frequency conforms to DMMO guidelines for sediment characterization. It should also be noted that none of the sediment sampling conducted by TBC was near the cable alignment within the City and County of San Francisco. **22-28**

The section comparing TBC's sediment sampling results the Regional Monitoring Program (RMP) sediment characterization data should state more explicitly the conclusion that the DEIR is drawing: that comparison of the two data sets suggests that the data are not significantly different and that sediment along the proposed cable alignment is representative of ambient or background sediment quality, with the exception of sediment from RMP sampling station CB012S. CB012S is not sufficiently close to the proposed alignment from the bay to the shoreline to be representative of sediment that will be encountered en route. **22-29**

4.4.3.2.1 San Francisco HWC Converter Station, Construction-related Impacts. The horizontal directional drilling (HDD) process and potential impact are not described in sufficient detail. Discharge of drilling mud (water, bentonite clay, and other inert materials) and disturbance of bay sediment are identified as potential impacts to water quality, and development of a Spill Prevention and Control Plan for the HDD operation is **22-30**

proposed as mitigation. Depending on the final selection of a San Francisco converter site, the HDD may go through contaminated sediment off-shore of the Potrero Power Plant. In that circumstance, conventional horizontal drilling methodology would pose a significant potential impact as a result of disturbing and releasing contaminated sediment along with drilling mud. This section should describe the proposed "core and bore" HDD operation in much greater detail, including a schematic diagram showing the angle and depth (below mudline) that the HDD will be drilled throughout its route. The use of casings and pumps to contain and recover sediment during HDD, which has been described in presentations about the proposed project, should also be described in greater detail with supporting illustrations, and identified as a mitigation measure. This additional detail should also address the potential for HDD to create a preferential pathway for migration of contaminated sediment or water.

22-30

4.4.3.2.1 San Francisco HWC Converter Station, Operations-related Impacts. This section should address post-construction storm water discharge, including how the converter station will be designed to comply with post-construction controls, as required by State regulation and the Port's Storm Water Management Plan, and whether storm water runoff from the facility will be discharged to the City's combined sanitary sewer system.

22-31

4.4.3.4.1 Offshore DC Cable Route, Construction-related Impacts**.** The basis for the finding that 10-20% of the sediment fluidized by the Hydroplow stinger is ejected into the water column should be cited and provided as an appendix if applicable. The DEIR should affirmatively state than any "equivalent technology" that might be used instead of the Hydroplow would have a comparable or lower sediment disturbance rate.
This section on cable placement finds that sediment quality data are required to assess the potential for cable installation by Hydroplow are required to asses the potential for water quality impact from disturbance of contaminated sediment. This statement should be followed by a reference to the *Water Quality Impacts from Hydroplow* where sediment quality data is discussed. This section states that both the project-specific sediment sampling and the RMP data indicate that the sediment along the proposed cable route is not contaminated. However, data regarding elevated concentrations of polynuclear aromatic hydrocarbons (PAHs) and dense non-aqueous phase liquid (DNAPL), which is cited elsewhere in this section (URS, 2001) indicates that the cable route may pass through contaminated sediment. Available information about PAH and DNAPL contamination in sediment off-shore of the Potrero power plant, should be presented here, including a figure showing the extent of PAH and DNAPL contamination relative to the proposed cable routes for the three San Francisco Converter Station alternatives. The proposal to switch from Hydroplow installation to HDD, and the use of casings and pumps to contain and recover sediment during HDD through the area of known sediment contamination may also be considered as a mitigation measure for the potential water quality impact identified in this section. Sediment sampling at the location where the HDD emerges from the sediment into the Bay may or may not be feasible, and does not in itself constitute mitigation.

22-32

It is likely that the PAH-contaminated sediment off-shore of the Potrero Power plant will require remediation during the life of the cable. The potential for the presence of the cable within the contaminated sediment to impact the feasibility of potential remedial alternatives should be addressed as a potential impact.

22-33

SECTION 4.5: TERRESTRIAL BIOLOGICAL RESOURCES

The document appears to sufficiently identify and mitigate species impacts for the Pittsburg portion of the project but does not identify either impacts or mitigation to species for the San Francisco portion of the facility. This should be addressed in the final document. **22-34**

SECTION 4.6: MARINE BIOLOGICAL RESOURCES

Again, the document appears to sufficiently identify and mitigate species impacts for the Pittsburg portion of the project but does not identify either impacts or mitigation to species for the San Francisco portion of the facility. This should be addressed in the Final document. **22-35**

Water Temperature: It appears that the converter requires cooling water to function. However, the project description does not mention this potential impact nor does the biological impact section analyze it. The DEIR should the impact of producing and disposing of the heated water as well as mitigation, if appropriate. How will the water be disposed of? How much water? How hot is the water? Will it be reused? How is it cooled? If the project proposes to discharge the water into the Bay, will its discharge increase ambient water temperatures in the Bay and, if so, what effect will this have on plant and animal life? **22-36**

Impacts on Crab Season: The end of the proposed construction period (June through November) is at the beginning of the commercial Dungeness Crab Fishing season in the San Francisco Bay. An expected impact of hydro-tunneling on the Bay bottom would be the disruption and loss of fisherman's crab pots which lie on the bay floor and are marked with buoys when set. The annual Dungeness Crab fishing season is important to the San Francisco fishery and economy, as well as the Bay Area public. Mitigation should be proposed to reduce loss of fishermen's crab pots by adding to the maritime information program and expanding it to the fishermen in Moss Landing, Half Moon Bay, and San Francisco. The fishermen would need to know when and where cable lying activities will occur so that they remain clear of cable laying. **22-37**

Regarding fishery and marine impacts and permits, the proponents may wish to contact Caltrans District 4 as they have completed numerous recent biological surveys and permitting for seal pups, salmon, etc. and can provide excellent information on permits, lead times, underwater noise mitigation. It is also possible that some of the same surveys (already completed) can be used by the federal resource agencies for this project. **22-38**

4.6.1.3 Special-status Species. The National Oceanographic and Atmospheric Administration (NOAA) has announced that the Green Sturgeon is proposed to be listed as a Threatened Species as of July 6, 2006. Preliminary advice from NOAA indicates that Green Sturgeon is present in San Francisco Bay year-round, and consequently the proposed project will require consultation with NOAA and may require implementation of additional measures to protect Green Sturgeon. **22-39**

4.6.3.2 Construction-related Impacts. The cable is proposed to be installed by three different methods: Hydroplow or equivalent technology, dredging, or HDD. The section on construction-related impacts should include the potential for underwater noise from any of these installation methods to impact marine organisms. NOAA has established general guidelines regarding levels of underwater noise that do not pose a significant risk **22-40**

22-40 of impact to, which can be used for comparison with underwater noise generated by the various cable installation methods proposed.

SECTION 4.7: CULTURAL RESOURCES

The Draft EIR description of archaeological and historic architectural resources that are present in the preferred HWC project site and alternate sites does not include the potential Potrero Point historic district. In 2002 the City and County of San Francisco (CCSF) participated in the California Energy Commission hearings on the proposed expansion of the Potrero Power Plant, Unit No. 7. The CCSF with the assistance of four experts in historic preservation documented that in addition to the resources identified in Mirant's Application for Certification and the 2001 CCSF Central Waterfront Cultural Resources Survey the following resources were identified as potential contributors to a Potrero Point California Register Historic District:

Pier 70 San Francisco Yard
American Can Company
Remnant of Irish Hill (landscape feature)
22-41 Station A
Station A Machine Shop
Meter House
Compressor House
Western Sugar Warehouses at the foot of 23rd Street

The CEC hearing (as documented in the attached transcript) established the eligibility of these historic resources for listing on the California Register and proposed that the significant adverse effects of the Mirant project be mitigated by requiring a contribution to the rehabilitation of another eligible resource within this potential historic district. This proceeding should be fully reflected in the DEIR because this project would similarly significantly impact resources that share the same historic context and period of significance, and would impact their eligibility as contributors to the same potential historic district. A copy of the CCSF prepared testimony and a transcript of the CEC proceeding is being provided as an attachment to this document and therefore should be recognized as part of the our comment on the DEIR.

The DEIR fails to adequately evaluate the impacts of the project and the mitigation measures and alternative have not been adequately developed with maximum attention to preservation issues. This can be accomplished by developing a preservation alternative
22-42 that would retain the existing structures on the project site and rehabilitate the structure (s). A partial preservation alternative would further evaluate the project's impacts by including demolition of one of the buildings on the project site while rehabilitating the remaining ones.

The DEIR should analyze potential mitigation of impacts on historic resources within the potential Potrero Point Historic District including the rehabilitation of other contributing resources within the same historic district. The CEC proceeding acknowledged the nexus
22-43 between the loss of Station A, Station A Machine Shop, the Compressor House and the proposed rehabilitation of the Pier 70 Union Iron Works Machine Shop (Building 113/114) on the Port's property. As a result the Port was asked to provide cost estimates to the CEC which are now within the hearing transcript. However, the CEC process did not conclude due to the project sponsor's having suspended and later withdrawing their application. The mitigation measures proposed for the project are not commensurate

with the impacts that would result from project implementation, including the alternative project location on the Mirant site. The project sponsor should consider more significant mitigation, in addition to archival documentation and interpretive historical exhibits that would reduce or lessen the impact of the project on historic resources in the potential historic district and Central Waterfront area. **22-43**

The project sponsor should also consult and obtain comment on the DEIR from the San Francisco Planning Department Historic Preservation Coordinator, the Landmarks Preservation Advisory Board and San Francisco Architectural Heritage, all of which have jurisdiction or are subject matter experts in historic preservation. **22-44**

The setting, impact and mitigation analysis in Section 4.7 describes the Spreckels sugar warehouses on the HWC site, acknowledge their status as historic resources per CEQA standards, and discloses that the proposed project would require the demolition of these structures to avail the area for the converter station installation. While there are mitigation measures identified, they would not fully mitigate the significant impact on historic resources. **22-45**

There has been a lot of historic research work and community interest in preserving historic resources in the Central Waterfront area, including those at the Mirant and HWC sites. Under CEQA, EIRs are required to analyze feasible alternatives to avoid significant adverse impacts. The Alternatives analysis in Section 6 does not include a great deal of discussion about the impact on historic resources, which is concluded to be the only unavoidable significant impact of the project. It would be helpful for the EIR to elaborate more fully. What consideration has been given to maintaining the sugar warehouses in whole or in part? If such treatments have been concluded as infeasible alternatives, it would be helpful to provide that information in the EIR. If the alternatives site analyses contained within Section 6 is intended to meet CEQA requirement to offer the Sheedy site as an alternative to avoid the adverse historic resource impacts, then that relationship also should be explained more directly. **22-46**

SECTION 4.8: LAND USE AND RECREATION

Land Use: The operative land use plans for the project in San Francisco are the existing Central Waterfront Plan, the draft updated Central Waterfront Plan and the conceptual Blue Greenway Plan. Relevant policies from those plans are listed below and should be addressed in the project description and or in the land use sections of the environmental document as mitigations. In reviewing these policies and the project proposal, it appears that the open area in the vicinity of the Converter site along with 25th Avenue could be used as part of the bike/pedestrian trail and be connected to the new 3rd Street light rail.

Relevant Existing General Plan Policies, Central Waterfront Plan and Recreation and Open Space Elements: **22-47**

1.3 Assure adverse environmental impacts of new development are mitigated to the maximum extent feasible.

2.3 Improve, expand and develop recreation areas at existing public access points along the waterfront enabling public use and enjoyment of the shoreline.

9.1.1 Maintain and improve quality of existing shoreline recreation areas at China Basin Channel, Agua Vista Park , Warm Water Cove and Islais Creek.

10.3 Encourage the rehabilitation of architecturally or historically significant buildings with reuse potential.

7.1 Maintain and improve existing recreational improvements at Warm Water Cove and expand to the north side of the Cove as opportunities arise. Develop a waterfront picnic area and Fishing pier at Twenty Fourth Street. Provide public access along the north side of the Cove and construct a fishing Quay at the Bay. Improve enjoyment of the area by providing attractive landscaping and maximizing bay views.

22-47

3.1 Assure that new development adjacent to the shoreline capitalizes on its unique waterfront location, considers shoreline land use provisions, improves visual and physical access to the water and conforms to urban design policies.

4.2 Maximize joint use of other properties and facilities for open space.

Public Access and Views. Sections 4.8 and 4.13 of the Draft EIR include discussion of Land Use, Recreation and Visual Resources/Aesthetics. The preferred HWC project site is located adjacent to the north side of Warm Water Cove Park. The EIR describes the park and surrounding area as an industrial area that has not been improved with many public amenities, which is true. However, there are a number of community planning efforts underway, described in the EIR, which include objectives to maintain and improve Warm Water Cove and create other public improvements in the Central and Southern Waterfront area that similarly provide areas for public enjoyment of Bay views and compatible. safe viewing sights of maritime and industrial activities that are unique to this area of San Francisco. In light of these plans and policies, and because Warm Water Cove currently is one of the few public open spaces in this part of the waterfront, the EIR should include in its visual impact analysis photomontage images of the proposed project as viewed from Warm Water Cove Park, looking to the north, and assessment of those impacts on recreational resources.

22-48

The DEIR should analyze the impact of the project on the San Francisco Bay Trail and Bay Water Trail, the existing and potential recreational value of the Bay shoreline area, as well as linkages to other shoreline areas and existing and potential recreational areas to north and south.

22-49

Production, Distribution and Repair Uses: The land use section should identify the current amendment to the City's General Plan for protecting Production, Distribution and Repair Uses and should state that continuing the use of the property in M-2 Major Industrial zone would be consistent with the City's current efforts to maintain suitable heavy commercial zoning districts.

22-50

Warm Water Cove: The Recreation and Open Space Elements of San Francisco's General Plan call for improving the Warm Water Cove area with a fishing-oriented pier at the end of 24th Street and expanding and improving the open space near the PG&E plant. Text from the plan follows.

22-51

> Improve the park site and cove shoreline along the Bay at the end of 24th Street with shoreline fishing as the primary recreation use. Any fill placed at or adjacent to the cove should retain and enhance the natural and man-made factors that make the cove desirable for fishing. These factors include maximum open water and circulation into and out of the cove to prevent stagnation. Create a more interesting park landscape by re-grading the site to maximize Bay views, and improve the soil as required to permit more vigorous vegetation growth and install marine tolerant plant species.

As opportunities arise, improve the waterfront picnic area west of Maryland Street. Continue to provide public access to the cove from Twenty Fourth Street and improve visibility of the park from the street. Provide a consistent level of maintenance for landscaped and developed areas. As opportunities arise, extend the park to the north bank of the channel along the shoreline in front of the PG & E facility. When and if that facility is deactivated, give priority to expanding the public open space along the shoreline. **22-51**

SECTION 4.9: MARINE TRANSPORTATION AND COMMERCIAL FISHING

The DEIR does not provide sufficiently detailed information regarding depths of the bay along the cable route relative to vessel traffic routes to fully evaluate potential impacts to vessel movement on the bay. Map exhibit A2-1 should use NOAA charts that include bay depths to display cable route relative to regulated vessel traffic areas and approaches to Port Facilities. NOAA navigational charts, such as chart #18650 for the area off the SF waterfront, should be utilized. **22-52**

Section 4.9.1.1.1 Navigation in the Bay: Vessels movements in the bay include or are planned for deep draft vessels that draw 50 ft of water. Therefore the route of the cable must follow existing bay contours where the depth is greater than 50 ft. In locations where the route is in less than 50 ft water the route must ensure that it does not conflict or constrain deep draft vessel movements on the bay with attention to the approaches to and from Port facilities. The cable route should not induce alternate vessel routes that would require dredging. **22-53**

The DEIR should fully analyze the projects impacts on future dredging in the Bay.

SECTION 4.10: TRAFFIC AND TRANSPORTATION

Currently the impact of moving the oversize equipment is shown in the document as significant in Pittsburg but not significant in San Francisco. It should be considered significant in both areas and mitigated in both locations. Appropriate mitigation my include transporting the large equipment and lay-down materials and equipment by ship directly into the Port of San Francisco using Pier 70 or another appropriate pier. This would help minimize impacts to roads and traffic. **22-54**

CCSF and regional agencies are implementing the Bay Trail through the southwestern waterfront area as described in the Draft Central Waterfront Plan and the Blue Greenway Conceptual Plan. This project is adjacent to the open space identified in City plans. To mitigate potential conflict, the project should provide easements and incorporate a pathway and water access point at the end of 24th Street consistent with the Blue Greenway Plan. Design of the path, associated signage, and display of/disposition of any artifacts found on the site should be approved by the City Planning Director. **22-55**

The San Francisco Municipal Railway is constructing the Metro East Light Rail Maintenance Facility in 2009 at the former Western Pacific property. The proposed site is also considered as an alternative site for the converter station lay down and staging area. (This is the site shown in the developer's web page as the Converter Site, Option 2). We understand that currently the MTA and the Port are discussing the use of four acres of land as the lay down area. The detailed project description in the DEIR calls for a laydown facility totaling seven acres. The document should clarify that four acres is the **22-56**

22-56 size of the lay down area needed for the project and should state that the area has been agreed to, if that is the case.

22-57 The document should clarify that by the time this project is underway, the new Third Street light rail service (which will use the Metro East Facility as its base) will be operating. Traffic Mitigation 4 should be clarified to coordinate with San Francisco Muni, the Port and the Department of Parking and Traffic so that all activities and needs are met because multiple construction projects will be underway simultaneously. The goal should be for coordinated traffic control among all of the projects to minimize vehicular delays and delays to SF Muni.

22-58 The Draft Central Waterfront Plan should be specifically acknowledged and cited. Briefly, it calls for a new through street along both 23rd and 25th Streets from Illinois to the Bay which will enhance access to the proposed converter site and could also coordinate with the under-grounding of the cable line in terms of surveys and construction.

22-59 While the DEIR points out that San Francisco does not consider lack of on-street or lot parking (for construction workers in this context) to be a significant impact, the document needs to point out that this is San Francisco's stance with respect to single occupant commuters. The City generally requires that project contractors provide information and incentives so that project construction workers either use transit or vanpooling to access the site so as not to add to the already difficult transportation environment for residents. Several residences are in the area and there is no neighborhood parking permit program in effect. In addition, it appears that there will be three projects underway in the area simultaneously—this project, the Muni Metro East Maintenance Facility and the peaker plant construction. There may also be other Port projects underway during the same time period. The new Third Street light rail will feature a station at Third and 23rd which should allow for good transit access for workers. The impact of worker parking in the area on resident parking and Muni operations along Third Street appears to be potentially cumulatively significant and, thus, mitigation should include providing a TDM program for workers.

SECTION 4.11: NOISE AND VIBRATION

22-60 Noise: Table 4.11-9 shows leq 1 hour of between 52 and 73 decibels for operational noise of the Converter Plant. No ldn estimate is shown for San Francisco for operational noise, yet the ldn metric is shown for the Pittsburg operational noise with noise exceeding the 75 dBA (ldn)standards in effect for both areas. It appears that the difference is that ldn was used for Pittsburg and leq was used for San Francisco. The final noise work should calculate ldn for the project for the San Francisco Converter Plant and report any impacts and mitigations. It makes sense that there would be noise impacts for the Potrero site in that it is much closer to residences that the Pittsburg site, which was found to have noise impacts. The same significance criteria should be provided for each site. [We understand that leq was used to be consistent with the San Francisco Noise Ordinance which is quite old, and we prefer that the 75 ldn threshold be applied to the site as the significance threshold. We understand that ldn is typically used to assess power generation and transmission projects.] We note that this is one area where there seems to be a different treatment of the Pittsburg site than there is for the San Francisco site. In the case of Pittsburg, operations noise is noted as a significant impact because it exceeds 75 dBA ldn. What is the operational noise impact for the San Francisco site in ldn and does it require a similar mitigation as is proposed for the Pittsburg plant?

Operational noise is declared as no impact for the San Francisco plant yet is shown as an impact for the Pittsburg plant even though the closest residence is six times closer to the plant in San Francisco than it is in Pittsburg. This does not make sense and should be revised. **22-61**

The document does not present an estimate of cumulative noise impacts with and without the project. Please provide this analysis and identify appropriate mitigations. **22-62**

SECTION 4.13: VISUAL RESOURCES/AESTHETICS

While it is located in a heavy commercial zoning district, the project site is also within the viewsheds of residents and the Bay and is within the area planned for mixed use development. An alternative that would screen and buffer views of the converter, provide historic interpretation of the area, and assist in implementing the Blue Greenway project and other neighborhood streetscape improvements called for in the Draft Central Waterfront Plan should be included in the EIR. Improved views to the facility would then result from Illinois Street, 25th Street, Cesar Chavez and the Warm Water Cove. This would also be consistent with San Francisco General Plan policies. **22-63**

The project description summary at the beginning of the DEIR leaves open the question of whether the wiring from the converter plant to the Potrero PG&E Plant would be underground or overhead. The San Francisco Master Plan, Urban Design Element has a design policy of allowing only under grounded utilities in new development. This would apply to the line that will transport the converted AC power to the Potrero Power Plant. **22-64**

SECTION 4.14: HAZARDOUS MATERIALS AND WASTE MANAGEMENT

The converter facility will use and produce hazardous materials and is proposed to have an automated fire retardant system. Automatic notification facilities should be built into the project so that the San Francisco Fire Department is notified as well as officials in Pittsburg. **22-65**

The project should be modify to accomplish the following: **22-66**

1. harden the facility against vandalism;
2. reduce the on-site storage and creation of hazardous materials;
3. placard the area with appropriate hazardous materials signage; and
4. separate the open space uses from the converter plant uses.

Storm Water Run-Off: The document appears to sufficiently identify and mitigate run-off impacts for Pittsburg, but fails to address either impacts or mitigation of storm water for the San Francisco portion of the facility. Peak demand and capacity should be assessed both in the short and long term and any needed storm water capacity can be provided as a mitigation. **22-67**

In addition, the project is located in an area of known soil contamination dating back numerous years. (See sources at footnote 1 of these comments). The project should include clean-up of hazardous materials on-site and soil remediation so that no hazardous materials are further introduced into the Bay. **22-68**

22-69 Hazardous Sediments: Additional information about sediments may be available from Caltrans District 4, based on borings very recently done for the construction of the Bay Bridge East Span and also borings done for the San Francisco end of the bridge for the retrofit of the structure on the City side and borings very recently done for the skyscraper on Rincon Hill.

22-70 Article 22A of the City and County of San Francisco's Health Code requiring analysis of soils for hazardous waste constituents should be identified in the discussion of site and regulatory setting, and in Section 4.14.3.2.1 regarding construction-related impacts from soil removal. Compliance with Article 22A will ensure that soil to be disturbed by construction in San Francisco will be characterized, and that, depending on the results of soil characterization, a site-specific health and safety plan and soil management plan will be required by the Department of Public health for it's review and approval prior to beginning work. Article 22A effectively ensures development of more project and site-specific soil and groundwater management procedures and additional regulatory oversight for soil removal protocols described generally in mitigation measures HAZ-2 and HAZ-6.

22-71 Section 4.14.3.2.1 regarding construction-related impacts from the HWC Converter Station should reference the fact that the management measures that will be used to prevent releases of hazardous materials and wastes, accidental spills, and discharge of contaminated groundwater (described in mitigation measures HAZ-3, HAZ-4, HAZ-5 and HAZ-7) are all part of and will be included in the illicit discharge element of the storm water pollution prevention plan (SWPPP) that will be developed in compliance with the statewide general permit for discharge of storm water from construction sites.

22-72 The description of site and regulatory setting with respect to the HWC Converter Station, and section 4.14.3.2.2 regarding operations-related impacts of hazardous materials usage should identify the City and County Department of Public Health (SFDPH) as the local agency delegated with authority to implement state hazardous materials management regulations. Use and storage of hazardous materials at the converter station will require the operator to register with the SFDPH, including submittal of documentation regarding the operators management of both hazardous materials and wastes. This registration is effectively equivalent to the Hazardous Materials Business Plan described in mitigation measure HAZ-8, and also applies to hazardous waste. Regulation of hazardous waste management by DPH should also be identified with respect to impact and mitigation measure HAZ-9. The SFDPH should be identified in Tables 4.14-8 as an agency that would be involved in response to a hazardous materials spill.

SECTION 5.0: PROJECT ALTERNATIVES

1. Energy Efficiency and Renewable Energy projects. The potential for energy efficiency or renewables to provide an alternative to the project is not adequately considered in the DEIR.

22-73 CEQA Guidelines require projects to consider the effect of their projects on energy efficiency.[9] To the extent energy efficiency can reduce the overall level of energy usage in the Bay Area, this would clearly be the environmentally preferred alternative, avoiding not only the need for new transmission projects but also conserving the use of fossil fuels

[9] CEQA Guidelines, Appendix F

and reducing their associated pollution emissions. The DEIR should therefore consider the role of energy efficiency as an alternative to the proposed project.

The DEIR should address the potential for increased energy efficiency and demand response as potential alternatives to the project. The ISO Action Plan (provided with the DEIR) notes that it deferred any consideration of energy efficiency and related demand response programs[10] Both the DEIR and the ISO's Phase 2 Study provide only a cursory (approximately ½ page each) description of this alternative. **22-73**

A variety of programs are already in place that could be expanded or re-evaluated to determine their effectiveness. The CPUC has already established a goal of reducing peak demand by 5%. The CPUC has also recently released a proposed decision that would allow PG&E to develop an aggressive Advanced Metering Infrastructure program designed to enhance the ability of customers to reduce load during peak periods. The CAISO has also operated demand response programs.

The potential to meet this need through renewable energy also needs to be examined. At a minimum, Trans Bay should examine the feasibility of putting solar energy collectors on the roofs of its converter sites. **22-74**

2. Alternatives to how the project is designed and/or built. As noted in the DEIR, the project contains several potential sites for the location of the converter station, construction lay-down area, and potential different paths under the Bay.

a) Trans Bay's proposed construction lay-down site is the same one currently planned for the San Francisco Electric Reliability Project (SFERP). The DEIR lists two alternatives for a construction lay-down site. The Western Pacific Railroad site is the site currently planned for use by CCSF for the construction of the SFERP. Therefore, this alternative should be removed from further consideration in the DEIR. **22-75**

b) Size of Cable. The NOP mentions a "likely capacity of 600 MW" (NOP, p. 2) and also that "at this time, the transmission capacity of the proposed project is anticipated to be up to 750 MW." (NOP, p. 3). Many ISO documents and project proponent statements also describe the project as being either 400 MW or 600 MW. Now, as described in both the DEIR and Trans Bay's FERC filing, the project is described as 400 MW.

There is no discussion in the Alternatives section comparing the environmental costs/benefits of a 600 MW vs. 400 MW transmission line. It would appear that many of the environmental effects of the project would be the same regardless of project size (e.g. dredging, cable-laying impacts, converter station construction). There is discussion of the potential environmental benefits that might accrue to a larger project through further changes to how electric generation is dispatched in the Greater Bay Area. **22-76**

c) Dual vs. single cable. The DEIR should address the potential for improved reliability that might result from use of dual cables as opposed to a single cable. **22-77**

SECTION 6.2.3: NO PROJECT ALTERNATIVE

1. The "PG&E Reconductoring Study" identified in the ISO's Phase II Study should be the "No Project" alternative. The DEIR and the ISO Phase II study both note that there is not a reliability need for new transmission until 2012. The ISO Board Recommendation designating Trans Bay Cable as the preferred alternative, as well as the ISO Phase II

22-78 Study, shows that "reconductoring" of existing transmission facilities can provide reliable service until approximately 2018.[11] Most of this activity would involve upgrades to facilities within the existing transmission footprint and avoid the need for new transmission lines.[12] As noted in the ISO Phase 2 study, the cost of this approach is approximately ½ ($173 million) of the target cost of the Trans Bay Project.

Trans Bay is a "merchant transmission" company. Trans Bay has no on-going obligation to ensure and/or plan for the reliable operation of the entire transmission grid. As noted in the DEIR, this obligation has been placed with the CAISO, which under state law has an obligation to plan for a reliable transmission system. Pacific Gas & Electric, as a public utility regulated by the California Public Utilities Commission (CPUC) also has a legal obligation to provide reliable service to its customers.

22-79 Absent the Trans Bay project being built, it is highly unlikely that either the CAISO or PG&E would "do nothing" as proposed in the DEIR and allow reliability to degrade. Even accepting that major new transmission lines would be unlikely to be built in the Bay Area, the most likely outcome then would be for the CAISO and PG&E to exercise their statutory responsibility and engage in the various "reconductoring" activities identified in the CAISO Phase 2 study. Therefore, this outcome should be the "No Project" alternative against which the Trans Bay Cable is evaluated.[13]

Under this "No Project" alternative, the primary benefit identified for the Trans Bay Cable, at least in its early years, is its stated potential to reduce transmission and congestion losses.

2. Continued operation of the Potrero power plant should not be part of the "No Project" Alternative. The DEIR incorrectly states that "One potential consequence of the 'No Project' alternative would be that the relatively inefficient and polluting Mirant Power Plant may need to run in the future to meet San Francisco's electric supply needs." (DEIR, 1-16)

22-80 This statement is incorrect and should be removed from the DEIR. First, it is inconsistent with numerous public statements made by the project proponents as to the result and purpose of the project. To cite but one example from Trans Bay's public presentations:

> Mr. Parquet "explained that one of the consequences of the project was not to shut down generation in San Francisco. The project that would cause generation to shut down in San Francisco was a transmission line being constructed by PG&E on the Jefferson/Martin line and which would cause the shutdown of the Hunters Point Power Plant. As planned and as the ISO intended, a new smaller

[11] The ISO Phase II study notes that there would be a need for new transmission line construction to commence toward the end of this period.
[12] Many of these projects may be subject to the CPUC's General Order 131-D and thus not subject to the need for CEQA review.
[13] Although this should be the "No Project" alternative, CCSF does not have an opinion if this is or isn't the optimal outcome.

power plant in San Francisco, the Little Peaker Project, would likely cause the shutdown of the Potrero Power Plant." (Trans Bay EIR Oct. 19, 2005 scoping session) [14]

The "little peaker project" (i.e. the San Francisco's Electric Reliability Project) is currently scheduled to be on line by 2008. **22-80**

The DEIR's statement is also inconsistent with the CAISO studies upon which Trans Bay relies. Both the initial CAISO Action Plan, as well as the CAISO Phase 2 study assume that Potrero is retired as a result of the Jefferson-Martin and San Francisco projects.

SECTION 6.0: COMPARISON OF ALTERNATIVES

Environmentally Superior Alternative: The document states that there is no clear environmentally superior site alternative for the San Francisco Converter Plant. If the revisions noted in the Visual, Cultural, and Land Use sections herein are made to the project (as either mitigations or as part of the project description), we believe the environmentally superior alternative for the Converter Station will become evident. The traffic section should note that the laydown facility location at the Port property will not result in any impact to SF Muni and that this may be the superior alternative for a lay down area. **22-81**

The Babcock and Brown web site shows the Converter Plant Facility at the site of the Muni Metro East Maintenance Facility, which does not appear to be a project alternative. It is our understanding that the SF Muni and Port are in negotiations for use of four of the 17 acres designated for the light rail facility as a laydown area. This should be made clear in the project description and the revised document should confirm that the two plans have no conflicts. **22-82**

[14] See also the San Francisco Chronicle (July 30, 2005) and Trans Bay's October 2004 presentation to the San Francisco Power Plant Task Force

Attachments

	Attachment 1	CEC Hearing Transcript July 23, 2002
	Attachment 2	Prepared testimony of Charles Chase
22-83	Attachment 3	Prepared testimony of Paul Groth
	Attachment 4	Prepared testimony of Christopher Ver Planck
	Attachment 5	Prepared testimony of Mark Paez
22-84	Attachment 6	May 21, 2001 Port letter to the Mayor's Office of Economic Development
22-85	Attachment 7	Comments of the San Francisco Power Plant Task Force on the DEIR

EVIDENTIARY HEARING

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification	)	Docket No.
for Mirant Corporation's	)	00-AFC-4
Potrero Power Plant	)	
Unit 7 Project	)	
	)	

VOLUME IV

505 VAN NESS

SAN FRANCISCO, CALIFORNIA

TUESDAY, JULY 23, 2002

10:07 a.m.

Reported by:
Peter Petty
Contract No. 170-01-001

COMMITTEE MEMBERS PRESENT

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William Keese, Commissioner, Associate Member

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Stanley W. Valkosky, Hearing Officer

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I N D E X

	Page
Proceedings	1
Opening Remarks	1
Topics	7
Cultural Resources (continued)	4
CCSF witness panel Groth, Ver Planck & Chase	4
Direct examination by Ms. Minor	4
Exhibit 36	6,25/130
Exhibit 49	52/130
Examination by Committee	52
Cross-examination by Mr. Carroll	83
Cross-examination by Mr. Westerfield	99
Cross-examination by Mr. Ramo	114
Cross-examination by Mr. Rostov	121
Afternoon Session	142
Hazardous Materials Management	143
Applicant witness Lague	143
Direct examination by Mr. Carroll	143
Exhibits	144/273
Examination by Committee	152
Cross-examination by Mr. Westerfield	188
Cross-examination by Ms. Minor	196
Examination by Committee	216
Cross-examination by Mr. Rostov	218
Examination by Committee	237
Redirect examination by Mr. Carroll	246
Recross-examination by Mr. Westerfield	259
Recross-examination by Mr. Ramo	264
Examination by Committee	269
Redirect examination by Mr. Carroll	270

I N D E X

	Page
Topics (continued)	274
Hazardous Materials Management (continued)	274
Staff witness Tyler	274
Direct examination by Mr. Westerfield	274
Exhibit	275/387/495
Examination by Committee	303
Direct exam (Resumed) by Mr. Westerfield	308
Examination by Committee	311
Cross-examination by Ms. Minor	332
Cross-examination by Mr. Rostov	358
Cross-examination by Mr. Ramo	367
CCSF witness panel Cone & Lee	388
Direct examination by Ms. Minor	388
Exhibit	389
Cross-examination by Mr. Carroll	405
Cross-examination by Mr. Westerfield	406
Examination by Committee	411
Redirect examination by Ms. Minor	427
Recross-examination by Mr. Westerfield	432
CCSF witness Radis	388
Direct examination by Ms. Minor	434
Cross-examination by Mr. Carroll	455
Cross-examination by Mr. Westerfield	472
Adjournment	495
Reporter's Certificate	496

PROCEEDINGS

10:07 a.m.

COMMISSIONER PERNELL: Good morning. This is the continuation of the second set of evidentiary hearings for the proposed Potrero Unit Seven project. My name is Commissioner Pernell. I'm the presiding member of the committee. My associate member is Commissioner Keese.

To my right is our hearing officer, Stan Valkosky. To his right is Commissioner Keese's advisor, Mike Smith.

At this time I'll have the parties introduce themselves and their team for today, starting with the applicant.

MR. CARROLL: Yes, good morning. Mike Carroll, Latham and Watkins, on behalf of Mirant. Here with me today is Mark Harrer with Mirant, Dale Shileikis, and Kelly Haggerty, and John Lague with URS, Michael Corbett and Denise Bradley, also with URS, and Marcus Young with Singer and Associates.

COMMISSIONER PERNELL: Good morning.

Staff, please.

MR. WESTERFIELD: I'm Bill Westerfield, representing the CEC staff, and with me this

morning is Mark Pryor, who is the project manager for this Unit Seven project. Also, Rick Tyler, who will be a witness today on the subject of hazardous materials, and Mike Ringer on hazardous waste management.

COMMISSIONER PERNELL: Good morning.

Intervenors, starting with the City and County of San Francisco.

MS. MINOR: Good morning. Jackie Minor with the City Attorney's Office representing the City and County of San Francisco. We have with us today three cultural resources witnesses, who will testify as soon as we're ready to get started officially: Dr. Paul Groth, Christopher Ver Planck, and Charles Chase. Also with us today is Mark Paez with the San Francisco Court, and Andria Pomponi, a consultant with the City from the firm of Camp Dresser and McKee; Joanna Woolman from our intern program in the City Attorney's Office is back today, and also two of our witnesses who did not get my voice mail message late last night saying don't show up, we're behind schedule. So we have one of our hazardous materials witnesses, Steve Radis, as well as Dr. John Fetzer, one of our waste management witnesses, in the audience

this morning.

COMMISSIONER PERNELL: Thank you. Good morning.

MR. RAMO: Alan Ramo, representing Our Children's Earth and Southeast Alliance for Environmental Justice.

MR. ROSTOV: William Rostov representing Communities for a Better Environment.

COMMISSIONER PERNELL: Okay. Any other intervenors? Any elected officials? Anyone representing agencies this morning?

Seeing none, and our public adviser is here. Would you just come down and introduce yourself, please, for those who don't know you from yesterday.

MS. MENDONCA: Good morning. This is Roberta Mendonca, the Energy Commission public adviser, and I'll be glad to assist any of you with questions about the process.

COMMISSIONER PERNELL: And now I'll turn the hearing over to our hearing officer, Mr. Valkosky.

HEARING OFFICER VALKOSKY: Thank you, Commissioner.

Welcome to our second 14-hour session.

I hope I'm joking.

(Laughter.)

HEARING OFFICER VALKOSKY: Yesterday we concluded with the cultural resource witnesses from applicant and staff. We will now proceed with the direct testimony on behalf of the City and County of San Francisco.

Ms. Minor.

MS. MINOR: Thank you. We have three witnesses: Dr. Paul Groth, Christopher Ver Planck, and Charles Chase. And we will have them testify as a panel.

THE REPORTER: Gentlemen, if you could kindly raise your right hands.

Whereupon,

PAUL GROTH, CHRISTOPHER VER PLANCK,

and CHARLES CHASE

Were called as witnesses herein and, after first being duly sworn, were examined and testified as follows:

MS. MINOR: The order of our witnesses will be first Dr. Paul Groth, then Christopher Ver Planck, and then Charles Chase. We will have direct testimony for each of them, and then we will tender them for cross-examination.

And I think I'll do something now that relates to Mr. Ver Planck's testimony so that I don't have to get up and do this. We are going to substitute color photos for the exhibits that were attached to Mr. Ver Planck's testimony.

THE REPORTER: Ms. Minor, so these are just direct replacements, albeit color?

MS. MINOR: They are, and when we get there you can let me know if you want to make the packet a new exhibit number or just kind of substitute them for what is there.

Dr. Groth, are you ready?

THE WITNESS: Yes.

MS. MINOR: Okay, good.

DIRECT EXAMINATION

BY MS. MINOR:

Q Would you state your name, please, for the record, and you've also indicated that there is a preliminary statement that you'd like to make?

A My name is Paul Groth, and I should warn the people here today that because I stutter, there may be some uncharacteristically long pauses in my statement. I hope it won't lengthen the proceedings substantially.

And I also have four corrections. Should I give them at this time?

Q Yes, please.

A In my written testimony, on page five, line seven, "southwest" should be "southeast," so that line says "became the PG&E site to the southeast."

On page six, line five, strike the words, "Henry Scotts." Just delete the words, "Henry Scotts."

And on page seven there are two corrections: Line three, the first word should be "was," not "were." Sorry about that bird cage. And line five, the word "crowed" should be "crowded." Makes more sense: "Thirty saloons crowded the block."

Q Dr. Groth, are there any further corrections to your testimony?

A No, that's all.

Q Okay. Subject to the corrections that you have just made on the record, dose the testimony that you filed on July 10th in this proceeding represent the testimony, a true and accurate account of your testimony?

A Yes, it does.

Q Would you please summarize your professional qualifications and educational background.

A I am an associate professor of architectural history, urban history, and cultural landscape history in the department of architecture and the department of geography at the University of California at Berkeley. I have a professional architecture degree from North Dakota State University, and a Ph.D. in historical human geography from the University of California at Berkeley. I've been study the historical cultural landscapes of the United States for 27 years, and am considered a national expert in the history of America's ordinary urban buildings, particularly industrial sites, workers' housing, residential hotels, and how these sites are interrelated with social history.

I've served as a historical consultant to CalTrans, the City of San Francisco, the Foundation for San Francisco's Architectural Heritage, the State Historical Society of Minnesota, and the Department of Housing, Preservation and Development of New York City.

I've published widely in the journals

and academic publishing houses in the United States, and am a past national president of the Vernacular Architecture Forum, a 900-member group of preservationists and historians devoted to the study of ordinary buildings and landscapes in North America.

Q Would you amplify further your qualifications as it relates to industrial landscapes.

A I began studying factories seriously in 1975 while teaching at the New Jersey School of Architecture, and applied to Berkeley's geography department specifically to study the history of ordinary workplaces.

I first saw the Union Ironworks and the PG&E power plant in 1982. I have to admit that until then, I had not imagined that a large intact industrial district had survived San Francisco's 1906 earthquake and fire. At about the same time, in the research for my doctoral dissertation at Berkeley, I mapped all types of residential hotels in San Francisco from 1880 to 1930, and the Michigan Street, Irish Hill, and Dogpatch districts literally popped out as significant concentrations of rooming houses and cheap lodging

houses for Potrero Point industries, clear proof of an important historical pool of blue collar labor.

In 1986, spurred by these Potrero Point subjects, I applied and was accepted as a postdoctoral fellow at the National Museum of American History of the Smithsonian Institution in Washington, DC. At the Smithsonian, I studied industrial history with Dr. Gary Kulik, a noted historian of New England textile mills, and with Robert Vogel, a co-founder of the Society for Industrial Archaeology.

Subsequently at Berkeley I've taught graduate seminars on American industrial buildings built after 1870, as well as the social and architectural history of San Francisco and West Oakland factories and workers' housing. I've also supervised several masters' theses and doctoral dissertations relating to these topics.

My own research has focused primarily on the machine shop building; that's building 113 of the Union Ironworks. For comparison with Potrero Point, I'm also studying West Oakland, although its most important employment sites, the Southern Pacific Railroad yard and the Moore shipyard, are

long gone.

Q What is the significance of industrial sites in the US?

A Today most Americans appreciate Silicon Valley, and the importance of a semiconductor industry, its venture capitalists and its various ranks of laborers as being an important story. From the 1870s to the 1940s, equally important were America's burgeoning new concentrations of factories. Factories were centers of new technology.

In these large industrial workplaces, American industrialists, engineers, and workers hammered out what we now know as American technological know-how and world mastery of machinery. Factories essentially called into being the giant industrial city.

Large industrial workplaces drove the post-1870 explosion of America's urban population, including both the migration from rural and small-town people to white collar jobs in the city, and the immigration to the United States of people from all over the globe for blue collar jobs.

Factories were also crucibles of culture. Nationally, factory workplaces were

battlegrounds over the imposition of the Protestant work ethic on often non-Protestant immigrants. Factory work drove the adoption of American time consciousness, and the spread of the idea of efficiency, also known as productivity these days, to become something like a national religion.

Now, obviously, not every workplace merits preservation. But in the set of preserved places, in every major metropolitan area, it is essential to conserve the history of the rank and file workers, both men and women, whose long hours of work, usually under noisy, hot, smoky conditions, are as significant as the labor of capitalists and their engineers working in the main office.

In factory settings, in nearby union halls and workers' clubs, laborers in large workplaces fought for important political and economic rights. By their labor, workers made their own contributions to American material culture and progress. And where the products of a workplace are regionally and nationally significant, then the preservation of the workplace becomes particularly significant and

important.

However, in spite of the importance of industrial sites, surveys for the National Register and other preservation efforts have often overlooked important industrial sites.

Q In your testimony you indicate that there are some inherent products in identifying industrial sites, and in particular, you discuss issues related to integrity. During testimony on Monday the 22nd, there was a lot of focus on the issue of integrity.

Would you please clarify your view as to the inherent problems as they relate to integrity in identifying industrial sites.

A Surely. The most easily identified National Register sites and districts are the kinds of places for which the Register was originally intended: spectacular architectural design and the homes of famous leaders. But with factories, the things that delight most architectural historians, fine details and dramatic style, are rare. Sheer huge scale and forthright honesty of materials and forms are often the most one can hope for in the design of industrial sites.

So, thus, integrity, which is quite easy to identify with high-style design, is with factories much more nuanced. Often, in fact, integrity is the wrong question to ask when judging the preservation importance of a factory setting.

Economically successful industrial sites are messy and complicated. Their building complexes typically grow with many rapid accretions. Most factory complexes are not built in any one year, like a mansion or an office tower. Rather, factories are begun in a particular year and continue to grow and change. Additions and remodeling, even abandonment of older buildings can be much more significant than the original structures.

On industrial sites, the disciplines of labor history, social history, and business history are probably more important for evaluation than architectural design that such experts are rarely the ones doing the National Register evaluations.

Should I go on there?

Q No, I think that that's an adequate response, thank you.

A Okay.

Q You indicate that there are four things that tie together the industries on Potrero Point. Would you please list those four things.

A The four things, most important things, and there are others, would be, first, the clear boundary of deep-water access; second, the links between Potrero's famous industrialists on Potrero Point; third, the development of a single-use district for heavy industry, one of the first on the West Coast of the United States; and fourth, the interlocking histories of labor and neighborhoods in Potrero Point.

Q Okay. And, Dr. Groth, your testimony provides sufficient detail, with respect to each of the four themes. I'm going to ask you to take each theme and say just a couple of sentences to summarize why that particular theme is important.

A Okay. Well, the first theme is the reliance of all the industries on Potrero Point on deep-water frontage and Pacific Ocean links. The water line, in fact, defines the three sides of the district very clearly. I think that's enough on that. But all the plants on Potrero Point relied on Pacific Rim and oceangoing connections.

The second theme, the small group of famous California capitalists who developed the area, is -- Potrero Point gives us a great place to really see how a small handful of San Francisco capitalists worked together, both officially and unofficially, both on the books and off the books, to make an industrial district happen.

It starts with James Fair who, in 1866, brings the Pacific Steel Rolling Mills to the site. In 1881 Claus Spreckles establishes his Pacific -- rather, his San Francisco sugar refinery on the Southern third of Potrero Point. Two years later, the owners of the Union Ironworks move their entire operation from the south of Market to the northern third of Potrero Point.

And the two major families behind the Union Ironworks were two sets of brothers, the Donahues and the Scotts. In fact, the profits from the early Union Ironworks in the south of Market had fueled Peter Donahue's founding of San Francisco Gas of Electric, which later becomes PG&E. And later, the Scott brothers are very important in Union Ironworks as they move it down to Potrero Point.

The Scotts and the owners of the Rolling

Mills in the 1880s co-planned major expansions at the Rolling Mill together. The Scotts were major buyers of the Rolling Mill Steel, and the only railroad into the steel mill ran directly through the middle of the Union Ironworks. So what I'm trying to make the case for here is how interlocking everything happening on Potrero Point was.

When Spreckles in 1901-1902 builds his huge station A power plant, he quickly sells it to San Francisco Gas and Electric, but if you look at Sanborn maps as late as 1919 at Potrero Point, it's clear that on the same lots, Spreckles sugar tanks or plants, for the sugar plant, and PG&E tanks are on the same sites. So all of these industries are working together.

Q And the third theme?

A The third theme is the coordinated transformation over a single generation of the entire peninsula into a large single-use industrial area for heavy and polluting industry. The major Potrero Point owners did all this decades before legal zoning was adopted in the United States as a method for solving land use conflicts between industrial, residential, and

retail areas.

Between 1899 and 1920, some combination of Potrero's industrial leaders worked diligently and probably secretly to assemble over 100 19th-Century lots and privately owned wooden cottages, roadhouses, rooming houses, and saloons in the four blocks on the west side of the district.

Over 70 of the 100 assembled parcels were east of Michigan Street, many on top of what was then Irish Hill. Industrialists saw the hill itself as an obstacle and worked for decades to blast away as much of it as possible. They didn't want the kind of crowded and mixed land uses they had to contend with in areas like the south of Market or the north waterfront.

And they wanted to eliminate Irish Hill for other reasons as well. The residential and retail neighbors complained about noise and pollution and impeded industrial expansion, and eradicating Irish Hill and the mixed use blocks on the western side of the district was also clearly motivated as a way to close down as many as possible of the working people's saloons, which were union hotbeds and always, union or not, zones of opposition to management.

Before 1900, over 30 saloons -- 38 by my recent --

COMMISSIONER PERNELL: Excuse me, can I stop you there?

THE WITNESS: Yes.

COMMISSIONER PERNELL: Let me make sure I got this. You mentioned four different elements that kind of connect Potrero Hill as an industrial district.

THE WITNESS: Yes.

COMMISSIONER PERNELL: And one of them is the waterways --

THE WITNESS: Correct.

COMMISSIONER PERNELL: -- and the other is the fact that all of the various businesses are interlocking so that it's one cohesive district.

THE WITNESS: Mm-hmm.

COMMISSIONER PERNELL: The third one I have is the fact that the workers and the neighborhoods surrounding the district are somewhat interlocking?

THE WITNESS: That's actually my fourth point.

COMMISSIONER PERNELL: Okay. What is your missing one?

THE WITNESS: The third one is --

COMMISSIONER PERNELL: What I'd like to do, if at all possible, is just have you list those, and not really go through all of the --

THE WITNESS: All of the detail?

COMMISSIONER PERNELL: -- all of the details.

THE WITNESS: Okay.

COMMISSIONER PERNELL: What we're looking for is just facts and not necessarily the whole, although it's very interesting, the history, but I've been criticized for keeping this panel here for 14 hours, and I don't want to do that again today.

THE WITNESS: Okay.

MS. MINOR: Commissioner Pernell, I was letting Dr. Groth do some of the background and some of this repeated in Mr. Ver Planck's testimony. We were not going to do it then, but we will step it up and go through this very quickly.

COMMISSIONER PERNELL: Okay, thank you.

BY MS. MINOR:

Q And if you can clarify the third point and then restate the fourth point, I think the

record will be clear.

A Sure. Well, the third point is basically that the actions of the landowners on Potrero Point, working together, shows the active and cooperative roles of PG&E and Union Ironworks in shaping the land use of the whole district, in particular. I think that's the most important thing to say there, and I won't go into all of the details.

I should apologize. I'm used to hour-and-a-half lectures at Berkeley, so --

(Laughter.)

THE WITNESS: The fourth theme is this theme that the -- Although industrialists fought to eliminate conflicting residential land uses, before 1945 in particular, blue collar workers sought to live within close working distance of multiple places of employment. So Potrero Point's labor history is closely related to the residential districts of Irish Hill, while it lasted, Dogpatch, and Potrero Hill.

So quite literally, the human lives of workers knit together at the Potrero Point district even more than the interlocking directorates of its factory owners. I think

that's the most important thing.

So the residents are the people -- the skilled people working at the Union Ironworks, the women working at the cannery, and then children, and the newest people and working at the roughest jobs, they're the ones really tying the whole peninsula together.

BY MS. MINOR:

Q The final question from your testimony, you indicate that Potrero Point industrial district really has national significance. And in your testimony we underscored by way of summary the main findings that support the statement.

Can you please just highlight for the record the main summary that will explain why you believe Potrero Point industrial district would have national significance.

A Okay. First, this remarkable ensemble of different kinds of industries, all in one united area, are nationally significant, simply because they survive, especially those that predate the 1906 earthquake. And they survive in an accessible location, where visitors, residents, tourists can see them. Thirty years ago, these sites wouldn't have been particularly rare, and

today they are.

Second, the Potrero Point district is one of the best places in California to tell the essential early chapters of the story of western urban industry as part of mining history and as part of American industrial history in general. Western industrial history has very little study and is woefully under-represented in American history.

The West is more than ranching, mining, and oil drilling, and California is much more than gold, oranges, the Beach Boys, and movie-making. And we need to preserve and interpret industrial sites to make this clear. Potrero Point is an excellent place to do that, probably the best place in San Francisco, and probably the best in Northern California.

The third theme of national significance is that Potrero Point's historical sites share the important story of production support for the Spanish-American War, World War I, and World War II. And both the war production and the promotion of war were closely tied to the industrialists and the industries on Potrero Point.

Fourth, especially the sugar warehouses

and Union Ironworks stand as nationally significant reminders of San Francisco's central role in American commercial and military domination of the Pacific Rim since the 1880s.

Most importantly, the surviving sites on Potrero Hill are nationally significant, especially as a remarkably preserved ensemble of early heavy industrial plants in a single-use industrial district, one of few such well-preserved districts on the West Coast of the United States.

The cannery, historic PG&E structures, sugar warehouses, the rail corridors, and even the remaining bit of Irish Hill all provide important context, integrity of setting and feeling for the Union Ironworks. The juxtaposition of Dogpatch and Potrero Hill are also important contributors.

The American West has other early individual industrial sites and other blue collar residential districts; however, Potrero Point's juxtaposition of a large integrated set of industrial workplaces, established 20 years before zoning made such combinations a required pattern, next to intact 19th-Century housing districts is highly significant, not just for San Francisco

history, but for the history of all California.

Q Thank you. Any further comments at this point, Dr. Groth?

A No.

MS. MINOR: Thank you.

Our next witness is Christopher Ver Planck.

BY MS. MINOR:

Q Would you state your name, please, for the record, and then indicate if there are any corrections to your testimony.

A Christopher Ver Planck. I have two corrections. The first one is on page five of my testimony, line eight, where it says, "zone of heavy industry not seen anywhere else in the West," I would like to add "by 1910" after "West."

And the next correction is on page seven, line 26, where I say, "It is my opinion that the historic portion of the Potrero power plant," "power plant" should be changed to "Point."

Q So that line would read, "It is my opinion that the historic portion of the Potrero Point"?

A Correct.

Q Are there any further corrections?

A No.

Q With the corrections that you have made to your testimony today, does your filed testimony continue to reflect the testimony that you submit in this matter?

A Yes.

Q Mr. Ver Planck, would you please summarize for us your professional qualifications and educational background.

A Surely. I'm an architectural historian at Page and Turnbull, a preservation architecture firm in San Francisco. I have over six years professional experience in the field of architectural history, cultural resources management, etc.

Prior to joining Page and Turnbull I worked for San Francisco Architectural Heritage for two years. While at Heritage I worked on numerous efficacy and research projects, including a series of historic resources along San Francisco's northeast waterfront.

I have a master's degree in architectural history and historic preservation from the University of Virginia School of

Architecture. As a student I worked as the assistant to the building conservator at Montecello for one year.

I have published numerous articles in local journals, and also published some book reviews in Vernacular Architectural Forum. I regularly give talks and papers at various conferences, including SAH.

Before I came back to California, I was also the Kress Thompkins fellow at HABS/HAER in Washington, DC. And while there, I worked on recording textile mill villages and textile mills in the Chattahoochee River Valley in Georgia.

Q Thank you. In your testimony, you commented on the report prepared by Dames and Moore, which is now URS, and indicated that you had several specific areas that you disagreed with the findings of Dames and Moore. What are those areas of disagreement?

A Well, I have three major comments about the report, and I will -- in the interest of brevity, I will not duplicate Dr. Groth's testimony. But if you would like me to further elaborate on these points, please let me know.

The first point I would like to make is

I do not believe that the Dames and Moore report looked at the Potrero power plant in the larger context of other historically significant industries at Potrero Point. And specifically, I don't think enough work was done to establish that what is left of the Potrero does not contribute to a larger potential historic district.

MR. WESTERFIELD: I'm sorry, excuse me. I couldn't hear that because the tape was going and it was right in my hear. Could I ask you to repeat what you've just said?

THE WITNESS: Surely. I believe that the report, Dames and Moore report, did not look at the Potrero power plant in the larger context of other historically significant industries in Potrero Point and did not address the potential for these sites to comprise an historic district.

Dr. Groth established in his testimony that there are several themes that tie together the industries on Potrero Point, including the links between Potrero's industrialists, the development of an unprecedented single-use district for heavy industry, as well as the interlocking histories of labor and industry.

Secondly, I do not agree with the

report's analysis of the architectural significance of the historic resources on the Potrero power plant site. It is my opinion that the compressor house, meter house, machine shop -- otherwise known as the office, and station A are each individually eligible for listing under California Register criteria one and three.

Third, I would also disagree with the URS/Dames and Moore report finding that station A does not return historic integrity.

BY MS. MINOR:

Q Okay. Let's take each of the historic resources, starting with the meter house, then move to the compressor house, and clarify those areas of disagreement with Dames and Moore, and also establish your points that these buildings do have architectural significance.

A Okay. In regard to the meter house, it is my opinion that in addition to being eligible for the California Register listing under criterion one, it is also eligible for individual listing under California Register listing criterion three.

The meter house is an example of a type and period of American industrial architecture.

It's also a very rare surviving example of industrial architecture in San Francisco. In California, especially the Bay Area, where rapid deindustrialization has occurred, most such buildings have been destroyed, as land values are very high, and unutilized lands such as this as consequently redeveloped, such as the North Beach area and other areas in San Francisco where this has happened.

The meter house, built in 1914, is especially closely related to the historic machine shop at the Union Ironworks. That's building 113 at Pier 70 with load-bearing brick construction, arched windows, steel roof trusses, pilaster buttresses, and gabling walls. See Exhibit C for comparison of the meter house to the machine shop.

It is an extremely rare example of a defined building type under criterion three. Although built in 1914, it shows more in common with pre-quake industrial structures in San Francisco and elsewhere in the United States. To my knowledge, there is only one other building in San Francisco outside of the central waterfront that resembles it in any clear and direct way, and that is the California Electric Company building

at 16678 Townsend Street, which was built in 1888 and partially survived the 1906 earthquake.

Q You've referred us to Exhibit C that's attached to your testimony.

A Mm-hmm.

Q Would you tell us what Exhibit C depicts.

A What I've done is I've attached two photographs. The photograph at the top is, of course, the machine shop, building 113 at Union Ironworks. And the bottom photograph is a picture of the meter house.

And what I've tried to do is establish the fact that there is a clear and compelling link between these two structures, although the machine shop was built approximately 35 years earlier. I think it illustrates the common industrial architectural language with the pilaster strips that extend up to the eaves, the arched openings, and the gable and walls.

The meter house is definitely a much smaller building, but I think it's quite evocative of this particular building type: very simple, very spare architectural ornament, a little cornice molding on the meter house. You can see

the machine shop doesn't have much more. In fact, it probably even has a little bit less. You can see the corbel, the pilaster cap over the top of the wall in the upper right-hand corner.

COMMISSIONER PERNELL: Would you say that these two buildings would complement each other historically and architecturally, if they were closer together?

THE WITNESS: I would say architecturally that they share much in common, but historically they -- aside from the fact that the owners of both of these industries cooperated to a certain extent to create Potrero Point as a single-use industrial site, in terms of their use, they really don't have a whole lot in common with each other. Because, of course, the meter house is related to gas production; the machine shop is a very different use.

Q What is the use of the machine shop?

A My understanding, and I'm not an expert on this, but my understanding is the machine shop was -- Actually, Dr. Gróth could probably shed more light on this. The Union Ironworks had various buildings where various parts of the shipbuilding and other manufacturing took place.

And my understanding is this is where bearings and smaller items were manufactured.

Q But related to shipbuilding and the maritime industry.

A Right.

Q Okay, thank you. Now, if you could continue with your rationale for the significance of the compressor house.

A Okay. The compressor house, built a decade later in 1924, shares a common vocabulary with other PG&E substations constructed throughout San Francisco and Northern California in the 1910s and 1920s. During this period, PG&E hired a series of prominent San Francisco architects to design electrical substations. Although utilitarian and often windowless buildings, the substations were given a degree of architectural ornamentation in keeping with PG&E's status and power in California. The design of these buildings also reflect the then-popular tenets of the City Beautiful movement.

Architect Willis Polk, one of San Francisco's most important architects of the early 20th Century, designed many of PG&E substations and power plants of that era. One of the most

important of these substations that I would like to compare with a compressor house is substation C, a/k/a the Jesse Street substation, designed in 1905 with additions added in 1907 and 1909.

I would like to refer you to Exhibit D. And I apologize for the fact that the photograph at the top is quite small, but I would like to go through some of the common features between these two buildings, and if anyone is familiar with the Jesse Street substation, I think you'll see what I mean: with rectangular massing, very thin applied ornament. The compressor house has these rusticated pilasters on a pretty regular basis, very simple moldings and corbeling along the cornice line.

The Jesse Street substation is ornamented to a higher degree because it was a more publicly beautiful building. I think it's interesting that the compressor house, located where it was, even has as much ornament as it does. And if you look at other substations throughout the city, you'll see a very common architectural vocabulary. And it would be interesting to find out actually who designed the compressor house, because I don't think that

information has surfaced yet.

Q What is the significance of the seniority between the Jesse Street substation and the compressor house?

A I think the primary significance behind this is the link between architecture and prestige that many turn-of-the-century, late 19th-Century industrialists saw. These companies were local companies, they were very concerned about their images, the architectural styles they chose for their buildings, no matter how utilitarian, reflected their prestige, their power, and their ability to hire big-name architects to design even the most utilitarian buildings.

Q Let's move on to station A.

A I disagree with the URS/Dames and Moore report findings. Station A does not, quote, appear to be architecturally significant or significant in the history of building technology, and I've got two separate points there. The first point I will discuss is the architectural significance of station A, and then I'll discuss the integrity question.

COMMISSIONER PERNELL: Excuse me, before you get to station A and the compressor house,

would you say that historically that would be listed in one or three or one and three?

THE WITNESS: California Register criteria one and three.

COMMISSIONER PERNELL: One and three.

THE WITNESS: Yes.

COMMISSIONER PERNELL: Okay, and the same question would be for the station A?

THE WITNESS: Correct, yes.

COMMISSIONER PERNELL: One and three?

THE WITNESS: Yes.

COMMISSIONER PERNELL: Thank you.

THE WITNESS: First of all, enough of the structure survived to communicate this historic appearance from public ways. I would like to direct you to Exhibit C -- I'm sorry, Exhibit E.

Exhibit E shows the north elevation of station A, which dates from the original 1901 construction, and it also shows the machine shop, which abuts the station A on the west side.

BY MS. MINOR:

Q Mr. Ver Planck, a point of clarification.

A Mm-hmm.

Q What you're calling the machine shop has also been called the office building during these hearings?

A Correct. On Sanborn maps, early Sanborn maps it's marked as both or either, so it's not clear. I think its use has changed.

Q Furthermore, the 1930 remodeling of the south and part of the west elevations has assumed a level of importance that may even supersede the original 1901 construction, in terms of overall significance.

The vocabulary, the architectural vocabulary chosen for the 1930 remodel shares much in common with the compressor house and other PG&E buildings of the same era, with the rusticated pilasters, very simple cornice, and overall rectangular massing.

The National Park Service in National Register Bulletin 15 states, "Additions, such as the 1930 addition to station A, constructed during the period of significance, may acquire their own significance through age and associations. URS/Dames and Moore also found that station A's historic integrity had been severely compromised." I also disagree with this finding, based on my

understanding of integrity of industrial sites.

Integrity is the ability of a property to convey its significance. The evaluation of integrity is quite subjective; however, determining why, where, and when a property is significant and defining the seven aspects of integrity facilitates the determination.

As noted by Dr. Groth, the traditional interpretation of integrity is geared toward high-style buildings that are constructed in a particular year, and in many cases do not undergo significant rebuilding or additions, not industrial spaces such as station A.

Factories and industrial spaces are indeed messy. They tend to experience generations of accretions. Station A is no exception, although most of its alterations, including the substantial 1930 remodel, took place well within the period of significance.

Dames and Moore relied on the demolition of the boiler room in the rear of the building in 1983 to support its finding, that the integrity of station A has been compromised. The boiler room and the turbine room, which does survive, were distinct parts of station A. In addition, the

removal of the boiler room can only be perceived from the rear of the building, which is generally not publicly accessible. The northwest and south elevations all retain a very high degree of integrity, in relation to all seven variables of integrity: location, design, setting -- although setting, I think it has established, has been compromised overall; materials, workmanship, feeling, and association.

Even with the rear half, which is not visible from the street removed, a six-story-tall brick building over 400 feet long, especially a pre-1906 structure, largely pre-1906 structure, is a significant landscape feature. Even with the boiler room gone, I would estimate that upwards of 60 percent of the building remains.

I know it's been going back and forth about how much of the building is gone. I think if you look at an aerial photograph, and I'd like to refer you to Exhibit I believe it's 46 from yesterday, which shows a plot plan of the PG&E site, and if you look at station A, you'll see where --

COMMISSIONER PERNELL: One second.

THE WITNESS: Okay.

COMMISSIONER PERNELL: Okay.

THE WITNESS: If you look at the actual footprint of station A, you'll see the boiler room extent. The top half is kind of reddish-orange, the bottom half is grey. To the left you'll see the 1930 addition on the lower left-hand side of the building. You'll also see the machine shop office to the north of that section.

In terms of the overall footprint, it looks to me like a little more than a third of the building is gone, if you accept the fact the machine shop is part of the building.

BY MS. MINOR:

Q Are you familiar with other buildings in San Francisco and then in California as well that -- where significant portions no longer exist, but the building has been deemed eligible for the California Register or the National Register?

A Yes. In San Francisco, there is one city landmark in particular that comes to my mind and that's the El Capitan Theater on Mission Street. I don't remember the exact address, but I believe it's the 1800 block. And essentially what we have here is a combination theater and hotel

built in the early 1920s, and the facade of the theater and the hotel survives, but the auditorium is gone. In fact, you can only perceive that if you go through the building to where the auditorium was and it's now a parking lot. But that's not clearly perceived from public ways either.

Q Thank you. And your comments about the machine shop?

A Okay. The URS/Dames and Moore report does not address the machine shop or office appended to the west wall of station A in sufficient detail. In my opinion, the machine shop is an extraordinary small-scale concrete structure with a highly unusual Renaissance baroque facade made of sheet metal, the cornice and the window hoods.

And I'd like to refer you back to Exhibit E again. It's a very unusual building in San Francisco. I find it's also, similar to the points I made before, I think it's very interesting that PG&E would have lavished such attention to detail on such a small-scale utilitarian structure within a larger industrial site such as this.

I think more research needs to be done to figure out, to learn more about this particular building: what it was used for and who designed it.

COMMISSIONER PERNELL: Is it freestanding?

THE WITNESS: According to -- Can I refer to Joe Boss's observations? According to Joe Boss, who was here yesterday, the east wall is attached to the brick of station A, but the other three walls are freestanding concrete. That's my understanding. I've not been inside the building.

COMMISSIONER PERNELL: Did you take these pictures?

THE WITNESS: I took the exterior photos, yes.

COMMISSIONER PERNELL: Okay.

BY MS. MINOR:

Q Let's move to your recommendations, specifically focusing on your proposal that an industrial historic district be established called the Potrero Point district, and what the boundaries of that district would be.

A Okay. It is my opinion that the historic portion of Potrero Point is eligible for

listing in the National Register as an historic district. This proposed Pier 70 Potrero Point district possesses a significant concentration, linkage and continuity of sites, buildings, and structures that are united historically by an informal plan of industrial development.

The proposed district will be composed of a variety of industrial sources, resources, many of which are individually significant, and all of which share an important common history. The proposed district a definable geographic area, and shares a common period of significance, 1882 to 1949.

I'd like to refer you to Exhibits F1 and F2 for the potential boundaries of the district. Let's start with F1.

Now, the boundaries that I've established here are very general in nature. For an actual historic district, one would actually have to go in here to conduct further research to determine contributors and non-contributors. This is a general starting point.

And as other testimony has pointed out, there are large areas that don't have buildings on them, and there are large areas that have -- not

large -- there are smaller areas that have non-contributor buildings on them.

These boundaries would have to be redrawn to conform to the largely historic sections of the Potrero Point area, but, by and large, these boundaries do hold true.

In my opinion, the most important sections of the potential historic district are Pier 70, Union Ironworks, and the northern half marked in type, with the center of that historic district being -- of this section of the historic district being 20th Street, like the machine shops on the south side, the drafting house, and the headquarters, the administration building on the north side of 20th Street.

Extending southward, south of buildings 113 and 114, there are several other important Union Ironworks buildings that show up better on Exhibit F2, which is an historic aerial photograph of Pier 70, taken about 1945. And many of the buildings on the east side adjacent to the water are gone, but most everything in the center is still there, including the large plate shop, which is the linkage between the Pier 70 Union Ironworks area of the district and the Potrero power plant

area to the south.

Basically, the only interruption you have between these two sections is one gas tank. And I believe that is tank number four. Aside from that, the buildings of the Union Ironworks Pier 70 section and the Potrero power plant are physically within one area.

And proceeding further south, below the Potrero power plant, this district would also encompass the two Western Sugar refinery warehouses. And unfortunately, I've only got one hooked in the boundary; that was a typographical error. There is another warehouse to the left that would also be included.

Subject to further evaluation, the proposed district would encompass the Union Ironworks steel buildings at Pier 70, the remnants of Irish Hill, the American Can Company as well, which is the large industrial structure between Illinois and Third Streets, which can also be seen on Exhibit F2 with the monitor roofs between the Dogpatch district marked out in red and the Union Ironworks Pier 70 marked out in red as well.

As I said before, the period of significance for the district would be 1882 to

1949, with the earlier date based on the construction of the earliest Union Ironworks buildings, and 1949 being the ending date, which corresponds with the beginning of the district's decline and decay following the end of the Second World War.

The identified themes to the area's significance include architecture and industry, according to the National Park Service National Register Bulletin 16A, page 40.

Q Does that conclude your testimony?

A Yes, it does.

MS. MINOR: Thank you.

THE WITNESS: Thank you.

MS. MINOR: Our last witness is Charles Chase.

BY MS. MINOR:

Q Would you please state your name for the record and indicate if there are any corrections to your testimony.

A My name is Charles Chase and I have no corrections to my testimony.

Q Would you please summarize your professional qualifications.

A Yes, I will. I'm the executive director

of San Francisco Architectural Heritage. I have more than 25 years of experience as an architect specializing in historic architecture and have extensive experience in the recording, assessment, and rehabilitation of existing historic building resources.

I have worked in the public, private, and nonprofit sectors on a variety of projects requiring compliance with federal and state historic preservation regulations, in California, Florida, Georgia, and South Carolina.

I am the former director of Real Estate Services for Historic Savannah Foundation, Savannah, Georgia, and the former preservation officer for the city of Charleston, Charleston, South Carolina. And I hold bachelor's and master's degrees in architecture, with specialization in architectural preservation from the University of Florida.

Q Thank you. Would you briefly summarize the role of San Francisco Heritage in San Francisco, and also your participation on the central waterfront cultural resources survey, and your role on the Port of San Francisco Pier 70 Citizens Advisory Committee.

A Yes. Heritage is a chartered nonprofit corporation established in 1972. Its mission is to develop and maintain public appreciation and understanding of the cultural, aesthetic, and economic value of San Francisco's architecturally and historically significant structures and districts; and two, to be an effective force in motivating public and private action to preserve and protect these resources.

In 1999 the San Francisco Planning Department received California State Historic Preservation Grant funding to survey the central waterfront. The central waterfront cultural resource survey which you have talked about or heard testimony on was a part of that activity.

In addition to that, the Port of San Francisco Pier 70 Citizens Advisory Committee was established to assist the poor in identifying and prioritizing goals and objectives for the improvement of Pier 70, and I sit as a member of that advisory committee. It established historic preservation as a principal goal for Pier 70, in order to encourage the retention of significant resources and to inform and shape future development under the Port's control.

Q The testimony has established that the loss of historic resources at Potrero Point would be significant. What mitigations do you propose to mitigate the loss of the cultural resources at the Potrero power plant site?

A The testimonies of Mr. Ver Planck and Dr. Groth demonstrate that industrial resources on the Potrero Point site are highly significant. Therefore, their loss demands a higher level of mitigation, and relocation as proposed by the CEC staff as a means to mitigate this loss creates a false sense of history, as these resources would lose integrity of location, setting, and association by being placed in a different context.

These facts combined with the questionable feasibility of safely moving these resources without significant damage leads one to examine other more prudent forms of mitigation that would better preserve the overall history of Potrero Point.

The most appropriate mitigation measure identified thus far is the rehabilitation of historic resources within the eligible historic district. It is my opinion that the most worthy

resource for rehabilitation is the Union Ironworks building, building 113, at Pier 70, which is comparable to station A in scale, materials, construction, and simple detailing.

Should station A be demolished, building 113 would be the sole surviving large-scale early masonry building remaining within the industrial Potrero Point district. The demolition of station A increases the importance of building 113 as an individual structure; however, the loss of station A removes important adjacencies, spatial relationships, and the physical fabric of the larger industrial district. Therefore, transfer of funds to rehabilitate building 113 would help retain a highly significant resource that shares similar physical characteristics of scale, material, and characteristics, including load-bearing masonry construction.

Unlike the proposed relocation of structures suggested by the CEC staff, rehabilitation of building 113 would reinforce a highly significant authentic resource, and extend its useful life in its original location. The CEC staff proposal to relocate historic resources would technically salvage the brick and mortar,

but it would create a false and artificial context and delude the integrity of the district by establishing artificial spatial relationships.

Q Thank you. There were questions yesterday of the status of the Pier 70 historic district eligibility. Mr. Chase, can you clarify for us where that stands today.

A The status of the Pier 70 historic district is one that is in process towards designation. It is known and has been recognized as a -- by the State Historic Preservation Office as determined eligible. It has been formally done so by the SHPO.

Q Is it eligibility for the National Register or eligibility for the California Register?

A I believe it's eligible for the National Register, and concurrently would be eligible for the California Register under the process, they're similar processes.

Q And what is the status of the Dogpatch district?

A Currently the Dogpatch survey has been adopted or has been -- yes, it has been adopted by the City and County of San Francisco and historic

district regulations, legislation is pending for the establishment of a local historic district.

Q And that legislation is pending before --

A The board of supervisors of the City and County of San Francisco.

Q Do you have any further comments at this point?

A I think, based upon the importance and contribution of each of these buildings that have been discussed this morning, and the need to remove station A and the ancillary supporting structures, rehabilitation of building 113 contributes to a higher level of retention than the relocation measures recommended by the CEC staff.

In the event further study and evaluation determines this recommendation is not feasible, rehabilitation of other historic buildings within the proposed district should be studied.

Q Does that conclude your testimony?

A Yes, ma'am.

MS. MINOR: Thank you.

We have concluded our direct testimony,

and the witnesses are available for cross-examination.

HEARING OFFICER VALKOSKY: Okay. Before we begin, Ms. Minor, you indicated you wanted to identify those five pages of colored photographs, replacement photographs?

MS. MINOR: Yes. Shall we make them as a packet a new exhibit?

HEARING OFFICER VALKOSKY: Yes. We'll take the five pages of colored photographs that are replacements for the attachments to Mr. Ver Planck's testimony, and we'll identify it as Exhibit 49.

MS. MINOR: Is there an Exhibit 48?

HEARING OFFICER VALKOSKY: Yes. That was the modifications to staff's testimony that they submitted to the cultural resources testimony.

Okay. Before we begin cross, again, just a couple of questions for the panel for clarification.

Who would the recognizing body be for the Potrero Point district? In other words, what process would you have to follow to have the district as you described officially acknowledged

as a historic district?

WITNESS VER PLANCK: Well, you'd have to conduct further study, establish boundaries, and fill out the National Register nominating form. You would then submit that to the SHPO's office in Sacramento. They would review it and make any requested, they would request changes, possibly. Those would then be done. You would resubmit it, but it would be the Historic Resources Commission that meets three times yearly that would make the final determination.

HEARING OFFICER VALKOSKY: Okay, and what stage in that process is the existing Potrero Point district? You said there had to be further studies done.

THE WITNESS: Correct. Yeah, this is just an identification. There has been no formal work, aside from identifying a potential historic district that encompasses --

HEARING OFFICER VALKOSKY: Okay. So this is a very early stage, for lack of a better description.

THE WITNESS: Correct.

HEARING OFFICER VALKOSKY: Okay.

WITNESS CHASE: Excuse me. There is one

piece of information that --

COMMISSIONER PERNELL: I'm sorry, you need to identify yourself just for the record.

THE WITNESS: Okay. I'm Charles Chase. I think there is an additional piece of information that is helpful. There are certain properties within this district that have already been surveyed. Because of the Dogpatch survey, the previous work that has been done on the Pier 70 site, that information would not necessarily be duplicated but would be used in the definition of the boundaries that we have discussed this morning.

HEARING OFFICER VALKOSKY: Okay. But nevertheless, you would still have to study a bunch of the other elements, and I'm assuming this would take a period of several years? Is that a representative factor?

WITNESS VER PLANCK: Well, the advantage we have is that the bulk of the research has been done.

HEARING OFFICER VALKOSKY: The bulk has been done.

THE WITNESS: The histories of -- The context that I prepared for the Dogpatch historic

district nomination, plus the city's central waterfront survey, these context statements would cover virtually everything that would need to be included within a context statement for the potential Potrero Point district.

Basically, what one would have to do is establish the boundaries, justify those boundaries, and tinker with the context statement to make it fit specifically this identified potential district.

HEARING OFFICER VALKOSKY: Okay, and are there any efforts currently underway which would lead to that result in an identified amount of time?

THE WITNESS: No.

HEARING OFFICER VALKOSKY: No, okay. Do you -- I understand from your testimony that the City and County consider station A an historical resource. Does your testimony also consider the meter house and the compressor house as significant historical resources?

THE WITNESS: Yes.

HEARING OFFICER VALKOSKY: Okay. Mr. Chase, when you indicated that, in your opinion, rehabilitation of building 113 would

suffice in the event that the station A building were demolished, would it also suffice in the event the meter house and the compressor house were demolished?

WITNESS CHASE: Essentially, yes. What we're saying is that comparable resources, rather than seeing buildings relocated or inappropriately placed on sites that might have an adverse or a negative effect on authentic resources in their original location, that the appropriate measure would be to balance the effect by investment in authentic resources.

So essentially, the simple answer is yes, but we think that there are comparables that should be looked at: the size and shape, for instance; the kind of intensity of station A, the efforts to seismically reinforce is a simple measure. For station A, those values would be similar to the warehouse, the machine shop, building 113.

HEARING OFFICER VALKOSKY: Okay. Hypothetically, were funds made available for the rehabilitation of building 113, would that, in your opinion, reduce any impacts from the removal of station A, the meter house and the compressor

house, to below a level of significance?

THE WITNESS: There would still be significance of the action, but we believe that those actions that you have heard and have been recommended to you as an option for mitigation, we don't believe that those are appropriate for either the buildings or any potential site within the proposed district that you've heard about today.

Therefore, we think that the protection and further retention of authentic historic resources is the appropriate measure.

HEARING OFFICER VALKOSKY: When you talk about the rehabilitation of building 113, what is your meaning of the term "rehabilitation"?

THE WITNESS: In general, it is meeting the secretary's standards for rehabilitation in terms of retention of the existing historic fabric, it would be the seismic reinforcement of that building to retain or prolong its life. It does not contemplate any adaptive use or new use, because there is none proposed, and, therefore, it would be inappropriate to do that at this time.

It is the, I guess the objective view is to retain that building through retention and

support of its existing foundations, its existing exterior masonry walls, its window and door openings, its roof framing, and roof covering system to a level that meets current building codes. Also taking into account that this building is eligible for use of the state historic building code, would then utilize that as well as any measure to retain historic resources in the process of meeting current code requirements.

HEARING OFFICER VALKOSKY: Do you have an estimated dollar figure attached with the rehabilitation?

THE WITNESS: That question has been asked a number of times over the last couple of days, and the answer to that is no. It is something that needs to be studied, it needs to be assessed on a specific building basis.

Building 113 has simply, because of its age, its former use and current use, have particular aspects and characteristics that need to be very intensely studied, and the simple answer is no, we have not done that. We believe that that is something for qualified engineers and constructors to do.

HEARING OFFICER VALKOSKY: Assuming the

funds were defined or determined to be reasonable and were made available, what mechanism would you suggest to make sure that the funds were, in fact, dedicated to the rehabilitation of building 113 and not used for other worthwhile purposes?

THE WITNESS: I think certainly there are ways to do that. I would assume that the Port of San Francisco as the current property owner for building 113, that based upon the required evaluation, structural assessment and cost estimates, that those funds be dedicated and used for the building.

It could very well be done in a manner that requires stipulations to meet the secretary's standards. I believe that that, by contract, could be accomplished.

HEARING OFFICER VALKOSKY: Okay. You indicated that the Port is the owner. Has the Port indicated to you an interest in the rehab of building 113?

THE WITNESS: It is an unreinforced masonry building, and, as a member of the Citizens Advisory Committee for Pier 70, the Port has indicated their concern and we have reflected that concern back on them, that this building is

probably the most significant resource in their holdings at Pier 70 and needs to be preserved. And they have recognized that and intend to do that.

Again, the funds are not currently available, and there is no planned future allocation for that building at this time.

HEARING OFFICER VALKOSKY: Last question on the funds: Do you have any idea how long it would take to get an estimate as to how much funds were needed, what amount of funds were needed?

THE WITNESS: I'm going to evade your question, I think. The notion is that the Port of San Francisco would probably be better served because they have a system in place for doing that within their hierarchy of employees and staffing, but my general professional opinion is that you could, within three to six months, have a full estimate that would tell you a fairly accurate cost for the seismic stabilization and maintenance of the existing building shell. However, there are complications because the Port owns the property and I am not a Port employee or privy to their inner workings.

COMMISSIONER PERNELL: Just a followup

real quick.

HEARING OFFICER VALKOSKY: Mm-hmm.

COMMISSIONER PERNELL: Is the Port of San Francisco a public entity?

THE WITNESS: Yes, it is.

COMMISSIONER PERNELL: So are the members elected or appointed?

MS. MINOR: The Port of San Francisco is actually a department of the City and County of San Francisco. The governing body is a commission that's appointed by the mayor of San Francisco, a department head who is also a member of the executive branch, and selected by the mayor of San Francisco.

COMMISSIONER PERNELL: Thank you.

COMMISSIONER KEESE: So could the City exert its influence in trying to get an estimate?

MS. MINOR: Oh, absolutely.

COMMISSIONER KEESE: Would you?

MS. MINOR: Yes.

(Laughter.)

COMMISSIONER PERNELL: That's the shortest answer I've heard.

(Laughter.)

COMMISSIONER KEESE: How about by the

time we continue this topic to a future hearing? And I, of course, don't know when that will be, but it will probably be at least a month.

MS. MINOR: Well, there is a representative from the Port's planning department who is here, and he is obviously not a witness so we're not going to call on him. But I would think that we may not be able to get a firm estimate by the rescheduled date, but certainly we will have something that is a workable number.

COMMISSIONER KEESE: Okay, thank you.

HEARING OFFICER VALKOSKY: Shifting gears, I've heard a range, at least to what a layperson like me finds is a little confusing about historic themes and locational significance. And on the one hand, I hear from Mr. Corbett that relocation of the building to a site that has previously been used for gas production is necessary in order to preserve its significance.

Staff's witnesses seemed to back off on that a little bit, saying as long as we preserve the orientation of the building on a fairly similar site, although not one exactly used for the same purposes, is acceptable in the case of relocation. And now I hear from you gentlemen,

especially Dr. Groth, that what we really should look at is the broader historical trends, the linkages on a more societal level rather than just a particular site-specific level.

I wonder if you could explain that. Am I misinterpreting this, or which is the professionally accepted viewpoint? Which theme should we be looking at? The specific use of a site or the broader integration, the societal themes, I'll call them?

WITNESS GROTH: My point would be that it's better to start with the larger, broader view, rather than a very narrow view. Tell the best story possible on Potrero Point, rather than coal gasification is the only story on Potrero Point. That's the point I was trying to make.

HEARING OFFICER VALKOSKY: And is that generally accepted in the profession?

THE WITNESS: It's been accepted by historians, who are trying to tell the story of American history.

HEARING OFFICER VALKOSKY: Okay, architectural historians or just historians in general?

THE WITNESS: That would not be the most

popular view in preservation groups.

HEARING OFFICER VALKOSKY: So it's fair to say there is some dispute.

THE WITNESS: There is dispute. These are things on which reasonable minds may differ, as you've found.

HEARING OFFICER VALKOSKY: Okay.

And, Mr. Ver Planck, I think this was in your testimony, you indicated that in the proposed Potrero power plant district there were a lot of contributors existing. Now, I believe I heard Ms. Scott from staff yesterday say that anytime the percentage of non-contributors in a district approaches 25 percent, you're getting less and less likely to consider that are as a district.

Do you agree with that?

WITNESS VER PLANCK: Yes, and that's why the boundaries would have to be drawn, so that they encompassed as many historic contributing resources as possible, and omitting the other non-contributing resources.

HEARING OFFICER VALKOSKY: Okay. So that is something that, in the event you go ahead with the Potrero Point district, you think that you could draw the boundaries in such a way as to

avoid that?

THE WITNESS: Yes.

HEARING OFFICER VALKOSKY: Thanks for that clarification.

COMMISSIONER KEESE: Mr. Chase, I wasn't clear on your response to an earlier question, mitigating the removal of station A by rehabilitating building 113. Would that reduce the impact of moving station A to something less than significant?

WITNESS CHASE: I think the direct answer to that is no, in the sense that the loss of those buildings, the removal is significant to the understanding of not only the site but the larger district.

What we are indicating is that the options or alternatives before you that have been discussed are not appropriate either, that they cloud and they, in fact, detract from the original and authentic character of this district by relocation of these buildings to sites where they never were, and that they may cloud the interpretation of other historic, individually as well as collective -- the district description by or in their new location.

COMMISSIONER KEESE: I understand that from your testimony. If you take the district perspective that Dr. Groth just espoused, if you're enriching the district by rehabilitating building 113 at the cost of removing station A, from a district perspective, recognizing there is no district yet --

THE WITNESS: Right.

COMMISSIONER KEESE: -- but there is an overall perspective and story to be told there --

THE WITNESS: I think that there --

COMMISSIONER KEESE: -- is your panel's testimony. So overall, are you reducing the impact to something less than significant?

THE WITNESS: If I might, there is something of the inevitable in our discussion today, and the discussion is that if the power plant moves forward, these resources will be lost. And, therefore, that detracts and takes away from the larger district.

And we believe that compensation for that is the protection and further enhancement of existing authentic resources.

COMMISSIONER KEESE: Okay. I'll move on.

Mr. Ver Planck, regarding station A, you testified that it is historically significant, it has integrity. And I believe in your testimony you remarked that most evaluations of integrity are geared toward high-style buildings that are constructed in a particular year, etc., etc.

The staff's witness yesterday was very clear that the part of station A that's been removed indeed had many very distinct characteristics that made station A what it was: smokestacks, chimneys, the like. The removal of the boiler room removed those features, and it was his testimony, therefore, that the building lacks integrity from that standpoint.

Yet you're saying that it does have integrity. Even with the removal of those features, you still believe that it retains integrity?

THE WITNESS: Well, I think its primary role is creating a backdrop in some ways, especially from public streets for the compressor house and the meter house.

Until I actually visited the site and saw the rear of the building, I didn't know that part of the building was gone. That's not really

apparent, unless you go behind the building. From the street, from most of the perspectives that you have from this complex, it reads as being part of the larger industrial complex that's kind of -- it looks like an appendage, if one doesn't know how these buildings work, an appendage to the Pier 70 site just to the north.

In terms of the boiler house being removed, in terms of the functioning of the plant, yes, that is a significant removal, in terms of the functioning of the plant. But if you're looking at it architecturally, if you're looking at does what is left of the building tell a story about the industrialization of Potrero Point, I believe that it does.

COMMISSIONER KEESE: One last question: I can't seem to come to grips with or reconcile this notion that the removal -- Well, let me ask it a different way. And this is to the panel: How do you balance the need to preserve contemporary or the need to preserve historic sites or historic resources with what may be a very compelling contemporary need?

Clearly the removal of a resource -- Is it always a significant impact? Is it the removal

of any or the demolishment or the degradation of any historic site? Is it always significant when balanced with contemporary needs?

WITNESS CHASE: I think you've heard testimony over the last two days about the significance of individual structures and their contribution to larger districts, whether it be Pier 70, Dogpatch, or the larger district that we have discussed this morning.

In looking at the individual resources that may be removed as the part of an action for contemporary use, and my organization sees this every day and we speak in the public forum about that on a regular basis, that there is and needs to be a balance between what we preserve, how we preserve it, and how we carry on our contemporary lives. We live, we eat, we breathe, we give birth and die in cities, and, therefore, they have to change along with us.

Our point is, is that in looking at resources, we have to compare them to the larger context. We need to identify those resources as being valuable to our understanding of our past, and can they fit within our contemporary lives. If, through the larger discussion, they do not fit

within our immediate needs, we have to do something that either does one of several things. Either it memorializes it, as you've heard about Historic American Building Survey, Historic Engineering Record, documentation, a kiosk, or some kind of recordation.

But that oftentimes is the last-ditch effort. We always try and move to a middle ground where resources are adaptively used, protected, and become a part of our continuing contemporary lives. If they can't be, then we have to find some way to mitigate that.

And I believe that that's pretty much the tenet of all of our regulations within the historic preservation arena, is that we find that there is an effect on a historic resource, and it is then appropriate to determine those mitigation measures that determine whether the resource requires retention or can be allowed to be removed, and what steps do we take to memorialize that.

COMMISSIONER KEESE: Thank you.

WITNESS VER PLANCK: Also, in answer to your question --

COMMISSIONER PERNELL: Because we have a

different speaker, you need to identify yourself for the record, please.

THE WITNESS: Oh, okay, sorry. Chris Ver Planck. I just wanted to add briefly that I think that in many cases the need for a new use is very compelling, perhaps more compelling than in this particular situation. I don't think that it can really be overemphasized what an important district this is. As Dr. Groth stated in his testimony, I think that California's industrial heritage is a really understudied and underappreciated legacy.

It's funny, I'm a third-generation Californian. When I speak to my friends back east, you know, you have these stereotypes of movie-making and orange-picking or whatever. My grandparents came from Oklahoma to work in the shipyards in Long Beach, and it's funny how when I tell people that, they don't really -- they say oh, there's industry in California?

This is where it all began. Potrero Point is where it all started. This was the, as I said in my written testimony, this was the Manchester, the Liverpool, the Sheffield of the west. This is where it all was. And there is

some of it left, and I think whatever is left is very compelling.

HEARING OFFICER VALKOSKY: In assessing the value of these resources, is public accessibility a legitimate factor to consider?

WITNESS VER PLANCK: You mean in terms of --

HEARING OFFICER VALKOSKY: By that I mean, and I'm trying to explore this with what's been described yesterday. I mean, you can have a historic resource such as Fort Point, which people can walk in and out of, touch, feel, and you can have a historic resource such as the meter and compressor houses would be, and they're preserved on site, which is, except for some distant viewing, essentially inaccessible to the public because it's on a heavy industrial.

So what I'm wondering is -- And Mr. Smith asked what kind of factors do we consider. What I'm wondering is, is this a legitimate factor in the profession that you would consider in assessing the value of the resources, and determining whether or not it should be retained or mitigated or whatever.

WITNESS GROTH: Well, I might answer

that. I think almost any -- If building 113, the machine shop, is stabilized, it's going to have a fairly large use inside or several uses. It's very likely to have, in its adaptive reuse, whatever that is going to be, a lobby, a public viewing space. And I'm sure if it's reused, according to the secretary's guidelines, which it will have to be, they will preserve the sense of this gigantic crane bay, which is -- How long is that building?

WITNESS VER PLANCK: Six hundred feet?

WITNESS CHASE: Four hundred, five hundred feet?

WITNESS GROTH: Four- or five hundred feet. There's a crane bay several stories tall that runs the whole length of the building. That space will have to be -- The sense of that space somehow -- There are going to be smaller things inside it, but the sense of that big space is going to be visible. And I think people will have a fairly good access, not just to see the outside, but to go inside to some kind of lobby or whatever and get a sense of a truly great industrial building.

HEARING OFFICER VALKOSKY: Right. So is

what you're saying that that building, whatever use, would be something that the average member of the public could walk into or touch, lean against, as opposed to buildings on the industrial site which the average member of the public could at best view through a fence from whatever distance?

THE WITNESS: It's much more likely to be viewed by the public.

HEARING OFFICER VALKOSKY: Okay. And in your opinion, is that a legitimate factor to consider when evaluating the value of the resources?

THE WITNESS: Absolutely.

HEARING OFFICER VALKOSKY: Okay, thank you.

MS. MINOR: Mr. Chase, did you have some comments as well?

WITNESS CHASE: I think in terms of looking at the buildings on the power plant site, if, for instance, they were retained in their current location and not accessible to the public, they do provide public benefit. I want to emphasize the point that it is not always accessibility to the interior of the buildings that provide -- that historic resources provide to

your understanding of the built-in environment.

Because they fill and create spatial relationships within this area and of similar building type, the texture or the grit of this district will be continued, as those buildings continue to survive. And they do inform the public by their construction, by their size, their shape, their location and frontage to apparent former public rights-of-way.

MS. MINOR: Okay. I think Dr. Groth had one more quick comment.

WITNESS GROTH: I should add that the machine shop was the largest human-occupied building on Potrero Point. Over 800 people at peak periods worked in the machine shop.

HEARING OFFICER VALKOSKY: This is the building 113?

THE WITNESS: Building 113, yeah.

HEARING OFFICER VALKOSKY: Right.

THE WITNESS: Among the things they built were the engines for ships as large as your stage, and three times taller. The last large things they made in the machine shops were the plates and the fittings for the BART tubes. Very important things were made, pieces for very

important things were made by large numbers of people in building 113.

And I think the displays of historical photographs -- that's either on the exterior and interior -- will be very exciting, because people will see, this isn't just a shed where some machines were, this is a place where lots of people and many generations worked, and they made very important things for the history of the United States.

HEARING OFFICER VALKOSKY: Thank you.

COMMISSIONER PERNELL: I just have a couple of followup questions. I think one of the benefits to this model that we're doing now is all but one question got answered.

(Laughter.)

COMMISSIONER PERNELL: Just a couple of followups. Mr. Chase, you sit on that advisory committee that you talked about earlier, and could you elaborate a little bit more about what I'm assuming the resolution that's going to the board of supervisors for the historical preservation of Potrero Point?

WITNESS CHASE: I can clarify something for you. There is currently nothing going before

the board of supervisors on the Potrero Point district. As we described earlier, the information is being garnered from other surveys and other activities. What I did say was that the Dogpatch historic district legislation, to create a historic district for that portion of the area that we've talked about, is pending.

COMMISSIONER PERNELL: Okay. So I thought I would go to your Exhibit F2, which -- well, it just has the Dogpatch on it. Right, okay.

If I was to go to that, which kind of outlines, and I know this is a general outline of the Dogpatch community, but there are some other -- there is this other, Union Ironworks Pier 70 there, so the resolution or legislation that's going through the board of supervisors doesn't include the Union Ironworks Pier 70 portion?

THE WITNESS: No, it doesn't. In terms of the residential industrial area, and the author of that is sitting next to me, Mr. Ver Planck. He may be able to describe it better to you.

COMMISSIONER PERNELL: Okay.

Mr. Ver Planck, why didn't you include the Pier 70 area that you were kind of generally

outlining as what would be a historical industrial district?

WITNESS VER PLANCK: Well, I went back and forth on that question when I first started these efforts about three and a half, four years ago. And the reason why I decided to exclude the industrial sites was that the predominant character of Dogpatch is residential. Although there are industrial sites within the district, I tried to exclude as much of that as possible.

Because the National Register theme that I identified was residential, and in particular, industrial workers' housing. So I always envisioned Pier 70 Union Ironworks being nominated later, as, although there's no formal status to this term, a sister district that is linked to Dogpatch and vice versa.

But there would be two associated districts, one industrial, one residential but with the same or very similar context, contextual history behind them.

COMMISSIONER PERNELL: In order to do the industrial proposed district, would you still have to go to the board of supervisors, or would that be the Commission Port of San Francisco?

THE WITNESS: If it's a city, if it's to be a city landmark district, it would go through the same process that the Dogpatch district is going through; i.e., be sponsored by a supervisor -- in this case, supervisor Maxwell -- and then go through the whole process of board of supervisors, mayor.

COMMISSIONER PERNELL: Okay. And then my last followup is, and this is a followup to Mr. Valkosky's question in terms of public access, and I was sitting here thinking about what is the benefit to San Francisco, what is the best benefit to San Francisco in this regard, in the topic in which we are talking about. And we have, in going down, taking a look individually at the site and the buildings, and if I could refer you to what is Exhibit -- Okay, this is from the AFC, but this is the color map?

THE WITNESS: Yeah, figure 8.3 would deal with that yesterday by Mr. Carroll.

COMMISSIONER PERNELL: Okay. As I understand, as we look at Humboldt Street that runs right down the side of the meter house, and then you have the compressor house and then you have station A, there is a fence there. This is

private property, so there is a fence there, and I would assume that whether this project is successful or not, there would still be a fence there because it's private property.

So public access can't really get to these buildings, whether those buildings were rehabbed or not or moved around, it's still private property. So would the benefit, historical benefit to San Franciscans and the general public, visitors and what have you, be from it looks like one square block away, looking over. So theoretically, if they decided to redo the roof and nothing else, it would just look like a rehabbed building.

So that is a question not for you to answer, but certainly one that I think we all should think about is what is the best benefit to San Francisco on this question.

Secondly, Mr. Chase, is it -- again, this is private property. Can your advisory committee, or can the City of San Francisco demand, and I know that there is an ordinance that says things have to be earthquake-proof -- Actually, it's a statute, but can they demand -- If nothing happens to this site, can the City of

San Francisco or your advisory committee demand rehab of these buildings, other than the earthquake-proof for safety reasons?

WITNESS CHASE: The Citizens Advisory Committee does not have any legal authority to demand. We certainly can suggest and urge. I think it's probably best put to the City in the way that all buildings must either be protect -- you know, protect public health and safety. The buildings could not fall into ruin and create an environmental -- whether it be vermin or some threat to the public.

COMMISSIONER PERNELL: Right, to the public. But that is the statute that covers retrofitting for earthquakes, I would assume.

MS. MINOR: Commissioner Pernell, there was testimony yesterday that the City has granted a waiver of the Uniform Masonry ordinance through, I believe it was -- the testimony was January 1st, 2006.

COMMISSIONER PERNELL: Right.

MS. MINOR: And so the question you're posing is if this project has not moved forward by the expiration of that waiver, what would be the status of these unreinforced buildings. And I'm

not an expert on that and I can't answer legally what the requirements would be under the city ordinance. But the City would have to issue a demolition permit, if that is how Mirant would choose to proceed with these resources.

And obviously, based on the testimony we've submitted, there would be significant questions raised as to whether the City would issue such a permit to demolish historic resources.

COMMISSIONER PERNELL: Right, but I think my point is, if -- Let's say they put some reinforced steel up to make it earthquake-proof. Is there any other ordinance or any other leverage that the City or the committee, the advisory committee has to make them rehab these buildings, to your knowledge? I mean, if you don't know, you don't know.

MS. MINOR: I don't know.

COMMISSIONER PERNELL: Okay. So it goes back to my point on what is the best, in this situation, benefit to San Franciscans. And that is not a question for anyone to answer, but I think that's something that we all need to be thinking about.

HEARING OFFICER VALKOSKY: Okay. Before we pick up with the cross-examination, we'll take a ten-minute recess.

(Brief recess.)

COMMISSIONER PERNELL: Mr. Valkosky.

HEARING OFFICER VALKOSKY: Thank you, Commissioner Pernell. We'll begin the cross-examination of the City and County's witnesses.

Mr. Carroll.

MR. CARROLL: Thank you.

Good morning, gentlemen.

CROSS-EXAMINATION

BY MR. CARROLL:

Q Mr. Ver Planck, I have a couple of questions for you, to start out with. And you, in both your written and your oral testimony today, you expressed the opinion that there is this broader district that we've been talking about which encompasses Pier 70 district, the American Can Company, the power plant, the sugar refineries, and also, the remnants of Irish Hill.

A Right.

Q And we didn't talk very much about Irish Hill, but I was wondering if you could explain a little bit the basis upon which you would

potentially include Irish Hill within that broader district.

A Sure. Actually, maybe we should refer to an exhibit so you can see what's left of it. Actually, it's probably best seen on -- Which exhibit is this one? URS figure 8.3, it's 1(B)? That is a reproduction of an AFC page, so it's from Exhibit One.

Q Okay. You can see Irish Hill on the left-hand side about midway. There is a little chunk of serpentine rock with some eucalyptus behind it. Irish Hill was originally a much more significant landscape feature, probably about 300, 250-300 feet in height that was gradually eaten away over time for the expansion of the industrial plant of both Union Ironworks, Bethlehem Steel, and PG&E.

Basically, that's all that's left is that little hillock that you see there. The justification for including it within a potential historic district is based on a growing body of knowledge and expertise dealing with what are called cultural landscapes.

And, although this is a natural feature insofar as it actually has some rock involved, its

current appearance is the result of man's activities; i.e., you know, several themes that play very prominent points in the development of Potrero Point -- blasting, filling, creation of industrial sites -- in addition to the fact that Irish Hill, on the top of it there's -- I don't think it's ever been archaeologically investigated, but there are shards, bits of building materials, metal, what not, all around on top of this hill.

More research would have to be done to evaluate its significance, but at this stage I believe its inclusion within the boundaries of the potential district is justified.

Q So is that based primarily on geographic proximity or former uses of Irish Hill?

A Both. I mean, it could -- the boundary could be drawn to include -- it's also adjacent to some of the most significant buildings on the Union Ironworks site.

Q Okay. And I guess where I'm headed with these questions relates to a question that was touched upon earlier. I guess what I'm -- when I read your prepared testimony it talks about it, and perhaps it was in Dr. Groth's testimony as

well, about the connection between the workers and the industry.

I guess I'm having a hard time understanding why one would include Irish Hill in this broader district but not Dogpatch.

A It's a good point. Irish Hill was always an anomaly within the Potrero Point district. It was a pre-existing use. It was housing. It was basically the most inaccessible and the most difficult area to blast, so it was the last to succumb to industrial expansion in 1917 when both these companies took it out.

And I think that in many ways its significance may relate more toward industrial expansion than actual housing, because the powers of these industrialists were brought to bear on the Hill.

It was actually a big -- It was a big deal when this happened. There was a lot of resistance by the people that lived there to leaving their homes, but in 1917 there was a war going on, they had to expand the plant to build more ships. They were able to get the government to evict the residents of Irish Hill, and then they started blasting it away. So I think it ties

in more to industrial.

Q I read your survey. It looks like it was a lot of work. You spend a great deal of time in this document talking about the industries on Potrero Point, and I don't know if I've got the terminology right, but I think it's what's been referred to as the context statement, the connections between the residential district and Dogpatch and the industries on Potrero Point.

Yet I didn't see in this document the notion of the broader district, and the idea that appears in your prepared testimony today about this broader district on Potrero Point. Did I miss that, or --

A That's absolutely correct. I was emphasizing -- My survey was of Dogpatch in particular. But in order to understand the residential districts adjacent to the industry, one had to explore the industrial history. The reason for this housing existing was proximity to jobs.

But according to National Register practices, basically you've got to establish a coherent theme. In this case it was industrial workers' housing. I suppose there are districts

that incorporate both industrial and residential, but typically you need to have a very coherent-type theme. And that's why I discussed the background, the industrial background of Potrero Point, but only examined in detail the residential area.

Q And I can't recall whether you mentioned it in your qualifications or not, but you are also on the advisory committee for the Central Waterfront Cultural Resource District Survey?

A That's correct.

Q And I assume that you are generally familiar with the contents of this document?

A Yes.

Q Okay, and --

HEARING OFFICER VALKOSKY: Excuse me, Mr. Carroll, "this document," is the Central --

MR. CARROLL: Yes, I'm sorry. It's the Central Waterfront Cultural Resources Survey, Summary Report and Draft Context Statement, October 2000 through October 2001, prepared by the San Francisco planning department.

HEARING OFFICER VALKOSKY: Thank you.

BY MR. CARROLL:

A And, just to be clear, the Potrero power

plant site is within the boundaries of the area surveyed in the Central Waterfront Survey, correct?

A Yes.

Q Okay. And you're aware that the power plant buildings, including the station A complex, were included in Appendix D?

A Yes.

Q Okay. On page 23 of this document, if I could ask you to turn there.

A This is the --

Q I'm sorry, no, 23 of the text at the front.

A Okay.

Q There begins a discussion titled Central Waterfront's Potential Historic Districts, and it identifies four of them, the first being Pier 70, the second being Dogpatch, the third being bridges and tunnels, and the fourth being industrial-type buildings.

And I guess my question would be the same as I asked you with respect to Dogpatch. Why is it that we don't see here, apparently it didn't dawn on anyone that there might be the broader Potrero Point district that we've been discussing

over the last couple of days?

A I think that the Potrero power plant buildings were considered to fall under the last category, industrial-type buildings. And it's been a while since I've reviewed this document, but let me just check.

MS. MINOR: If you need to review, take your time and do so.

MR. CARROLL: Absolutely.

THE WITNESS: Okay.

(Brief recess.)

THE WITNESS: Now, my understanding in regard to the Potrero power plant site was that since the work had already been done by Ward Hill, and I know this is a matter of discussion in the Survey Advisory Task Force meetings, that they were just incorporated by reference.

BY MR. CARROLL:

Q Okay. And that I understand. You know, it's clear to me, which makes perfect sense, that since Ward Hill and others had surveyed the station A properties, that wasn't redone and he accepted his work and appended it. What I'm questioning, though, is that recognizing that it was obviously considered and was part of the

survey, and by it I mean the station A complex, what I guess I don't understand is why, then, in the text when there is a discussion of the potential districts that might exist in this area, there is no mention at all of this broader Potrero Point district which now seems to be a matter so obvious to everyone that it goes without saying and is a district of national importance.

A Yeah. I just want to consult the map in Appendix C that's referred to for Pier 70.

Okay. I'm looking at the map two, Appendix C. It's a little hard to find, there is no page number, but if you look in the back there is a series of appendices. This is the map. Actually, I think it may be just before --

Q This is Ward Hill's work. Is it before or after Ward Hill's work?

A I believe it is before.

Q Okay.

A Because I think that's --

Q Here, I've got it now.

A You've got it, okay. Now, the Central Waterfront survey area, let's see, they do call out the PG&E area and Pier 70 -- I'm afraid I can't answer that.

MR. CARROLL: Okay.

BY MR. CARROLL:

Q Mr. Chase, you were also on the Central Waterfront Cultural Resources Survey District Advisory Committee?

A Yes, sir.

Q Do you have any explanation as to why the identification of potential districts would not have included this broader district?

A The process of accumulation of the data, I think some background is in order to talk about the survey process. The document that you have before you is part of a collection of information as well as what you have referenced in terms of the power plant site. That information was collected as a part of a state-sponsored grant for the City and County of San Francisco to develop an understanding of the resources in this area.

The background is that we knew, because of the kind of potential development that was happening, has happened over the last several years, that this area would be an area that dramatic change would take place, not only in the Dogpatch area but with the potential of development on the Pier 70 site.

So we, as part of the advisory committee, took the task of trying to collect this data, one, for the survey of potential districts looking at the work that was started by the organization that I represent -- San Francisco Architectural Heritage -- with the assistance of Christopher Ver Planck, both as an employee of the organization as well as a consultant through Page and Turnbull, and developed specifically that information.

We incorporated that into the larger work of the City and County of San Francisco and developed a document that referenced the work, the past and current work. The development of the themes were relegated to the ongoing work of those activities.

We have since then taken into account all of the work that is presented in this document, and that's where you have heard testimony of Dr. Groth and Mr. Ver Planck that a larger district should be considered. And, as we've referenced, this is ongoing.

Q Okay. Thank you for that explanation, but at the time this was finalized, and this was September or October. I guess the date on the

front is October but the date on the inside is September of last year when you were analyzing potential historic districts within the Central Waterfront. At that time you didn't see the broader Potrero Point historic district as a potential district?

A At the time, the larger -- Again, because of what Mr. Ver Planck had indicated about themes, we knew that thematically the Dogpatch survey was a piece of this that could be sent forward and identified by the City and County as a district.

So, to answer your question, a larger district was not considered to be the first priority of our activities.

Q Was it on the list of priorities at all?

A No. Again, as I indicated, with the information provided by Dr. Groth, the larger district came to light after this document was published.

Q Thanks. You mentioned earlier that you are also a member of the Pier 70 Citizens Advisory Council. Are you familiar in that capacity with the proposal submitted last year to the Port of San Francisco by the San Francisco Arts Future

Consortium, which was to develop an arts complex at Pier 70 including, amongst other things, full rehabilitation of building 113?

A I am aware that that proposal was tendered. The details of that, none of the members of the Citizens Advisory Committee were made privy to the particulars of that effort. We knew that the offering by the Port of San Francisco for development of properties on the western edge of Pier 70 was offered and was a part of that in developing the goals for historic preservation for that offering.

The alternative proposal utilizing building 113 came very late in the process and was not -- the details of that were not revealed to the advisory committee.

Q So the advisory committee did not participate in the period of exclusive negotiations that weren't entered into between the Port and the Arts Consortium?

A That's correct. We were given status reports, but we were not privy to any of the specifics for those activities.

Q In any of your status reports, were the potential costs of the rehabilitation of building

113 ever discussed?

A Not that I can remember.

Q If I told you that in a June 5th staff report from the Port staff to the Port Commission that the estimated costs for that was $50 to $55 million, would you have any reason to doubt the veracity of that?

A I'm sorry, I can't really speak to that. If that is their report, if it was based on evaluations, I might take that. But I have no knowledge of it, nor the specifics of what that entailed.

Q And do you have any knowledge of the current status of the Port's discussion with the Arts Consortium regarding building 113?

A The last piece of information that I have as a member of the committee is that the exclusive rights to negotiate with the Arts Consortium and the concurrent private developer have concluded.

Q Concluded successfully or unsuccessfully?

A They are not moving forward any further with those proposals.

COMMISSIONER PERNELL: Excuse me,

Mr. Carroll, what document are you referring to?

MR. CARROLL: This is a June 5th, titled Memorandum. It's essentially a staff report from Douglas Wong, executive director of the Port of San Francisco, to the members of the Port Commission.

COMMISSIONER PERNELL: And the report is on building 113 rehab?

MR. CARROLL: The report is on the development efforts of the Port with respect to Pier 70, one of those efforts being a proposal submitted by the San Francisco Arts Future Consortium to rehabilitate building 113, the other proposal being a proposal from AMB for commercial development. The staff report details the exclusive discussions that had gone on with those two parties; in fact, that they had both fallen through or concluded unsuccessfully, and includes two proposed resolutions which were then adopted by the Port Commission at its June 12th, 2002 hearing.

What I would ask -- I don't have a witness, obviously, from the Port here to sponsor this document, but what I would ask is that the committee take notice of this and admit it into

the record, the staff report. What I have here is the staff report, proposed resolutions, and then the minutes indicating that the resolutions were adopted as proposed.

HEARING OFFICER VALKOSKY: Is there any objection?

MS. MINOR: Actually, I am going to object. We haven't seen the document, copies have not been made available. We don't know the scope of the issues being discussed. Pier 70 is a very large site, obviously. It is not clear from Mr. Carroll's testimony whether we're talking about multiple buildings or one building that was involved in the dollar amount he cited as the rehab cost.

HEARING OFFICER VALKOSKY: I think since we are going to have a continued session on cultural resources, why don't you hold off the introduction of that when, as I understand, the City will have additional witnesses as well as a cost estimate on behalf of the Port.

MR. CARROLL: I'd be happy to do that.

HEARING OFFICER VALKOSKY: Okay.

COMMISSIONER PERNELL: Keeping in mind that we're concentrating on building 113.

MS. MINOR: That's correct, and that's the building that you've asked for an estimate.

COMMISSIONER PERNELL: Right, not the whole Pier 70.

MS. MINOR: Exactly.

MR. CARROLL: That actually concludes my questions. Thank you, all of you.

HEARING OFFICER VALKOSKY: Mr. Westerfield?

MR. WESTERFIELD: Thank you, Mr. Valkosky. I just have a few questions.

Good morning.

THE WITNESSES: Good morning.

MR. WESTERFIELD: Well, good afternoon, sorry about that. And I think I'm going to direct my questions to Mr. Chase to begin with, just as someone to orient with, but certainly if anyone else has something to contribute or add, I'd be happy to hear it.

CROSS-EXAMINATION

BY MR. WESTERFIELD:

Q I'm trying to sort of digest some of this testimony about determining the significance or evaluating the significance of the meter house and the compressor house in terms of the larger

district, but also seeing how moving them or altering them somehow diminishes or even destroys their historical significance.

I think, in thinking about that, it seems to me that the City or the testimony might want it both ways, because Mr. Chase, as I understand your testimony, I think you say when it comes to moving the meter house or the compressor house even slightly, that somehow would create a false sense of history that destroys the significance of those buildings. And yet I also hear from other testimony that these buildings need to be considered broadly, in terms of the entire district, and that, in fact, Mirant has been too restrictive in understanding the significance of these buildings.

So, to me, there is a little disconnect. Can you help me to understand that better?

A Yes, sir. First off, I'd like to point to the National Register bulletin that we talked about on a number of instances, bulletin number 15, in dealing with the criteria for consideration of moved properties.

And the primary issue here is the association dependence on site. For a property

whose design values or historical associations are directly dependent upon its location, any move will cause the property to lose its integrity and prevent it from conveying its significance. And that's one of the principal that I have used in making the statements that I have made.

And that I believe that yes, there may be some leeway within a few feet, if it creates or does not devalue the larger understanding of how these buildings as a complex of buildings worked. To just simply pick up the meter house and the compressor house and move them to another location without being informed by their other component parts -- station A being a major integral part of that -- that it does lose its integrity.

That it also establishes a false environment for the other surrounding historic resources that it may be placed near or adjacent to.

Q Okay. Is it your opinion that these buildings have sort of a broader significance than simply their association with the manufacturer or gas industry? Should they be considered in a broader context?

A And the answer to that is yes, they

should be considered in a broader context. They are part of what we have described this morning as a larger district of a heavy industrial nature, and they do inform us about the construction type, the materials used in that broader district.

As Dr. Groth has indicated to you in his testimony, the larger issues and the interweaving of both land ownership, land use, and the industrial development of the larger area.

Q Yes, I think I heard earlier testimony about they supply some of the texture and the grit to this industrial area by being there.

A That's correct.

Q So why would it be that moving them, say, somewhere else on the Mirant property, somehow destroys their contribution to the texture and grit of the industrial district?

A Because their site would not -- their location would not be authentic to its gas production, its historic use.

Q Okay. And because of that, they then lose all significance.

A They don't lose all significance, but they lose a component of their significance that may reduce their value to less than contributing.

Q Is it your opinion that they do lose all their value?

A Not all their value, but certainly, as a part of the continuum that we have discussed, the more appropriate treatment of the buildings is, first, in their original location, their current location, and then if they are relocated, is there an available site for that to happen to meet the larger conditions that we've talked about in the last two days.

Q I'm also trying to get a sense of how to calculate mitigation. So, again, Mr. Chase, I think you gave the opinion in your prepared testimony about mitigation, so I guess I'll direct this to you.

And I think the way I'd like to propose it is a very broad kind of fundamental question, as we've talked about a lot of the details here, we've looked at a lot of the trees here. I want to look at the forest for a second.

I think the question of mitigation in my mind really comes down to the balancing that was maybe talked about earlier between the need for electrical power in San Francisco, and balancing that against the need to preserve historic

resources. And so I'm afraid what sometimes in my mind it comes down to is really a question of really money.

How much is it worth to society to save this heritage? Who pays the cost and how much are we going to ask them to pay? Now, I haven't asked my question yet, really, and that's -- Let me try and focus that a little bit better for you.

Now, let's assume that these buildings have to be demolished, and I'm talking about the compressor house and the meter house. Let's assume that those two buildings only have historical value and they need to be demolished. How is the committee to calculate or judge how much those buildings are worth? How do they value those buildings in monetary terms?

A And specifically monetary?

Q Yes.

A Okay.

Q Because, I mean, I think by context of this, I think it all comes down to money.

A Okay. And I will set aside and will reserve the fact that there are other values for the preservation of these buildings, that if one deals with the hard dollar-and-cent loss of these

buildings, I think that in a very simplistic, if we lived in a simplistic world that one might say we have X number of square feet, cubic feet, pounds of material.

And one can calculate the cost of (a), the relocation of that, which we can do with our technology and our ability to put dollars to those quantities. And we could find another resource or find that dollar value to contribute in some other way. And let me just say that if you are looking at a building, one would have to look at not only the foundation cost, the seismic retrofit, the rehabilitation to the secretary's standards, but also, as we have been talking about energy, the inherent energy that it has taken to manufacture those elements.

Because we lose -- By the loss of that material, by the demolition of those materials, we lose something that we have not ordinarily taken into account but we pay the price for, in dollars and cents, for the manufacture of those goods, those products, whether it be brick, whether it be mortar, whether it be nails, glass, metal roofing.

So all of those features ought to be taken into account in the compensation for the

loss of a building.

Q All right. I'll just probe one thing you mentioned. You said -- It seems to me you said you should take into account the cost of relocation.

A Well, if relocation were part of the scenario, but I corrected myself because we were talking about demolition and total replacement.

Q So you would not take into account the cost of relocation.

A I would not take into account the cost of relocation, if relocation is not a part of your scenario.

Q Well, I thought your testimony is that if you relocate the buildings, they lose much of their value, if not all of it.

A They do in relocation, but that has nothing to do with the value that those buildings contribute in their original location and what they contribute in their original location as they stand today, because that's what you're asking me the question for is what is the value of the building today.

Q Okay. So you talk in terms of the cost of rehabilitation, if I understand you correctly;

is that right?

A Right.

Q And then the cost of mortar and brick and the materials as well; is that what you were saying?

A Right.

MS. MINOR: Can I just -- I think it would be helpful if you restated the question, so that we don't have to go back three responses to know which question he's responding to.

MR. WESTERFIELD: Well, I'm just asking about his responses, not --

MS. MINOR: Well, why don't -- I think it would be helpful if it's clear that there is a question that he's responding to.

HEARING OFFICER VALKOSKY: Well, why don't we have a brief question that the witness can respond to, or have a series of brief questions. Can you do that?

MR. WESTERFIELD: Okay. My original question was how does the committee calculate how much to value the meter house and the compressor house?

HEARING OFFICER VALKOSKY: Okay.

THE WITNESS: And the quantification of

the materials for the loss of that building.

BY MR. WESTERFIELD:

Q All right, and how do you put that in dollars and cents?

A The cost of the brick, the mortar, the steel, the glass, the foundations, the seismic reinforcement components.

MR. WESTERFIELD: Okay. Are there any other opinions by the witnesses here as to how to answer that question? How the committee should value the loss of these two historic resources?

WITNESS GROTH: In monetary terms?

MR. WESTERFIELD: In monetary terms.

WITNESS GROTH: I would defer to Mr. Chase on that. He's the expert on that.

MR. WESTERFIELD: Okay. Mr. Ver Planck?

WITNESS VER PLANCK: I would do the same.

MR. WESTERFIELD: I know it's a tough question.

All right. Then I just have one other question about the unreinforced masonry building ordinance, and I'm having a tough time understanding it. And I know it's relevant to these buildings, and it seems to me now is the

time to try to clarify it. And so I wondered if there are any witnesses who can help here.

Under the ordinance, as I understand it, there is the option to either reinforce this unreinforced masonry or demolish the building. Whose choice is it under the ordinance to do that?

WITNESS CHASE: It is dependent upon whether the resource has been recognized as a historic resource, and whether it is protected by other ordinances within the City and County of San Francisco.

If you are dealing with a non-recognized, non-designated resource, then it would be the filing of a building permit application to demolish.

BY MR. WESTERFIELD:

Q Well, we're talking about historic resources here, the meter house and the compressor house. So assuming that, can you answer the question?

A The application would move forward if it were -- it would go to the Landmarks Preservation Advisory Board for review through the Planning Commission, so it would require an approval process by a number of appointed boards and

commissions.

Q Okay. So there is the choice of either demolition or reinforcement, demolition or reinforcement. And so when you say, I think, as I understand it, the choice is -- Is it the choice of the owner of the building to decide whether to demolish or to reinforce it, or are you saying it really is the choice of the City?

A There are requirements that all property owners have to maintain their buildings in sound structural order. Those regulations we all have to live to. If you happen to own an unreinforced masonry building, because of state statute there are requirements for reinforcing those buildings by a specific deadline. And in this case, these buildings have been proffered an extension to January 1, 2006.

It is the responsibility of the property owner to either demolish the -- to seismically retrofit and meet the current standards or apply for a demolition permit.

Q Okay, and if the owner decides to apply for a demolition permit and decides to demolish it, does the City then have the discretion to deny that permit and not allow them to demolish it?

MS. MINOR: Why don't you make it clear whether you're asking a hypothetical question or you're asking that question in the context of the meter house and the compressor house.

MR. WESTERFIELD: Okay. We'll make it hypothetical, that's fine.

MS. MINOR: Okay.

BY MR. WESTERFIELD:

Q Hypothetically, you've got two historic resources, and the owner decides they want to demolish it and they apply for a demolition permit. Can the City essentially deny the demolition permit?

A If it is listed on the unreinforced masonry building survey listing, yes, the review process could require that the buildings be maintained and repaired.

WITNESS VER PLANCK: And in my understanding -- Chris replying -- that's also a grounds for extending the deadline for retrofit. The building does have some sort of level of significance as determined by this UMB survey that was conducted I believe in 1993 or -4.

MR. WESTERFIELD: Okay.

HEARING OFFICER VALKOSKY: Okay. Let's

take it to a more specific level. Let's deal not in a hypothetical, but with the meter house and the compressor house.

The waiver expires on January 1, 2006. Mirant decides that they don't want to retrofit, seismically retrofit. They apply to the City for a demolition permit. In that case, in dealing with the existing structures which, as I understand, are not listed but are eligible for listing, would the City have the ability to deny the demolition permit? Or what actions could the City take?

WITNESS VER PLANCK: I think one question that would have to be answered is what rating were these buildings given in the UMB survey.

WITNESS CHASE: But the simple answer is yes.

HEARING OFFICER VALKOSKY: They could deny the demolition permit?

WITNESS CHASE: Yes.

HEARING OFFICER VALKOSKY: Okay. By denying the demolition permit, does the City then require the property owner to retrofit?

WITNESS CHASE: They do not necessarily

require the retrofit, but you would have to abandon any use and you would still have to protect the public health and safety of workers or occupants of the site.

HEARING OFFICER VALKOSKY: Okay. Now, could that requirement be met by not having any public or worker use and putting a suitable fence around the area to prevent people from getting access to it?

THE WITNESS: I can't say for sure, but it's possible that there might be limits established by that. Since I'm not a part of that regulatory body, I can't tell you what the building inspections office would require.

HEARING OFFICER VALKOSKY: Understood, but it would, to your knowledge, focus on protection of the public health and safety as the primary concern?

THE WITNESS: Yes, it would.

HEARING OFFICER VALKOSKY: Thank you.

MR. WESTERFIELD: Those are all the questions I have. Thank you.

HEARING OFFICER VALKOSKY: Okay.

Any redirect, Ms. Minor?

I'm sorry, gentlemen, you didn't sign up

for cross. That's why I overlooked --

Mr. Ramo.

MR. RAMO: I have just a few questions in light of questions that have just been asked by both the Commissioners and Commission staff.

Good afternoon, Mr. Chase and panel members.

THE WITNESSES: Good afternoon.

CROSS-EXAMINATION

BY MR. RAMO:

Q Mr. Chase, is it your testimony that the nature of the significant impact from demolishing the buildings we've been discussing can be quantified in dollars and cents?

A As I started the response to that question from Mr. Westerfield, I think there are other values for the protection of these buildings for historic preservation that cannot always be easily quantified. You can, and we do in many instances in our daily lives, put dollars and cents to brick and mortar. And, therefore, you could qualify the loss of the buildings by establishing a dollar fee through an itemized quantified estimate.

Q I guess what I'm trying to get to, are

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In the Matter of:	Docket No. 00-AFC-4
MIRANT'S (FORMERLY SOUTHERN ENERGY) POTRERO POWER PLANT UNIT 7	PREPARED TESTIMONY OF CHARLES E. CHASE REGARDING CULTURAL RESOURCES

Question 1: Please state your name, professional qualifications and experience and educational background.

Response 1: I am one of several cultural resources expert witnesses for the City and County of San Francisco (CCSF) and the Dogpatch Neighborhood Association. I am currently the Executive Director of San Francisco Architectural Heritage (Heritage). My resume is attached hereto as Exhibit A. I have more than twenty-five years of experience as an architect specializing in historic architecture and have extensive experience in the recording, assessment and rehabilitation of existing historic building resources. I have worked in the public, private and not for profit sectors on a variety of projects requiring compliance with federal and state historic preservation regulations in California, Florida, Georgia and South Carolina. As former Director of Real Estate Services for Historic Savannah Foundation (Georgia), I provided review services for the Georgia State Historic Preservation Office for projects seeking compliance with federal tax regulations relating to historic property rehabilitation in the City of Savannah. As Preservation Officer for the City of Charleston, South Carolina, I reviewed and commented on all federal, state and locally regulated preservation projects as a part of Charleston's response to the federal Certified Local Government program which was established to afford local government the opportunity to comment on the effects of federal expenditures on historic resources.

I earned Bachelors and Masters degrees in Architecture from the University of Florida.

Question 2: Please explain the historic preservation work that Heritage does in San Francisco.

Response 2: Heritage is a chartered, not-for-profit corporation, established in 1972. Heritage was an outgrowth of citizen effort to prevent the destruction of significant historic

resources by the San Francisco Redevelopment Agency in San Francisco's Western Addition. Its mission is 1) to develop and maintain public appreciation and understanding of the cultural, aesthetic and economic value of San Francisco's architecturally and historically significant structures and districts; and 2) to be an effective force in motivating public and private action to preserve and protect these resources.

Question 3: What is the purpose of your testimony?

Response 3: The purpose of my testimony is to establish that: 1) the evaluation of cultural resources on the Potrero Power Plant site must occur in the context of on-going preservation efforts in San Francisco; 2) the industrial resources on Potrero Point are significant; and 3) the loss of some of the historic industrial resources on the power plant site requires mitigation that is appropriate to the significance of the loss.

Question 4: What role did you play in the Central Waterfront Cultural Resource Survey and other survey efforts now underway?

Response 4: I am currently an advisor to the San Francisco Planning Department's Central Waterfront Cultural Resource Survey. I am among a number of professional architects, architectural historians, planners and preservationists whose knowledge or expertise is relied upon to evaluate the area's history, development, and historic resources within the area boundaries.

In 1999, the San Francisco Planning Department received California State Historic Preservation Grant funding to survey the Central Waterfront Area. It was the first such survey initiated by the City Planning Department in over ten years. In an effort to support the City's efforts, Heritage and the Dogpatch Neighborhood Association, with the encouragement of the State Historic Preservation Office, incorporated the Dogpatch Neighborhood Cultural Resource Survey findings into the larger Central Waterfront Survey. The Central Waterfront Cultural Resource Survey was undertaken because of concerns about the decline in industrial uses in the area and increasing pressure to develop more commercial and residential facilities South of Market Street in San Francisco. In addition, the area of San Francisco east of Freeway 280, south of 16th Street and north of Islais Creek was determined to be an area where development pressures were likely to have a significant and far-reaching effect on known and potential historic resources.

The Planning Department has maintained the advisory committee to review the content and findings of the city's on-going survey efforts including the current, North Mission Area

Cultural Resources Survey, an effort supported in part from a grant from the California Office of Historic Preservation.

Question 5: Please explain the role of Heritage with local government planning and California Environmental Quality Act (CEQA) compliance.

Response 5: For more than thirty years, Heritage has worked with various San Francisco City departments and agencies to identify and protect significant architectural resources. Throughout Heritage's history, it has identified significant historic resources and, where applicable, has nominated individual sites and districts to the National Register of Historic Places, California Register and the City of San Francisco.

Heritage has been responsible for a number of surveys throughout San Francisco, which have resulted in changes in planning policy and regulations. Heritage conducted the Downtown Survey, which was instrumental in the development of San Francisco's Downtown Plan and Articles 10 and 11 of the San Francisco Planning Code. This survey formed the basis for the development of transfer of development rights for the downtown and South of Market areas of San Francisco.

Today, Heritage continues to survey areas of potential significance. The Dogpatch Survey, a component of the Central Waterfront Cultural Resources Survey is the most recent survey effort of the organization.

Heritage's staff also reviews Environmental Impact Reports (EIR) affecting known and potential historic architectural resources, and provides information and comments on the effects proposed development may have on historic and cultural resources as defined by the CEQA.

Question 6: What is your role on the San Francisco Port's Pier 70 Citizen's Advisory Committee (CAC) and the role of the Advisory Group as community advisors to the planning and development efforts of the Port?

Response 6: I joined the Port of San Francisco's Pier 70 CAC in 1999 to represent community interest in the rehabilitation and adaptive use of cultural and architectural resources along the central waterfront. The CAC was established to assist the Port in identifying and prioritizing goals and objectives for the improvement of Pier 70. The CAC established historic preservation as a principle goal for Pier 70 in order to encourage the retention of significant resources and to inform and shape future development within the Port's control.

Question 7: What are your observations of the Port's Pier 70 preservation efforts and the CAC's recommended historic resource mitigation measures?

Response 7: A previous assessment of Pier 70 has identified Pier 70 as eligible for listing on the National Register of Historic Places. In a recent Pier 70 requests for proposals, the Port has identified it the need to recognize and appropriately treat the known historic resources within the Pier 70 Development Area. The Pier 70 CAC concurred and recommended retention of Pier 70's historic maritime industrial buildings, structures and site features. The CAC's goal was to retain these resources and the established pattern of development as a means to direct and influence compatible new construction.

Question 8: What are your comments and concerns about the findings and conclusions of Mirant's and the CEC Staff's experts?

Response 8: I have a number of comments related to the importance of preserving industrial resources and establishing a Potrero Point District and the impact of the loss of historic resources at the Potrero Power Plant site.

The Importance of Preserving Industrial Resources and Establishing a Potrero Point District

1. The testimony of CCSF and Dogpatch witnesses Groth and Ver Planck identified and presented significant evidence that an industrial historic district exists which includes portions of the Potrero Power Plant site and Pier 70. Unfortunately, historic industrial district recognition in California has not kept up with similar efforts in other states that have larger concentrations of heavy industrial development. Our traditional view of high-styled architecture of the wealthy or the vernacular styles of specific ethnic populations cannot fully comprehend nor embrace industrial sites and their influences on San Francisco and our nation's history.

Mirant's cultural resource experts offered a limited interpretation of the importance of the Potrero Power Plant's resources because of the narrow scope of their assignment. Limited by the need to address individual resources directly affected by the proposed power plant development, their conclusions are incomplete and inaccurate. The CEC staff identified and recognized that some of the Potrero site's historic resources as significant, but the Staff did not frame the question in the context of the historical interconnections during the period of significance (1882-1949).

The physical location of Potrero Point, adjacent to deep water, away from the burgeoning City center and located within easy access of rail lines all contributed to the development of large-scale industrial buildings at Potrero Point. During the period from 1882 to 1949, these

resources were connected by the cross supply of materials, energy and labor, which made possible significant contributions to the country's economic and military power.

The Potrero Point resources were formed by functional necessity in response to the technologies of the period; they were developed by industrialists and sustained by an emerging immigrant labor force. All these factors played a significant role in shaping the resources in question. The collective ingenuity and skill of the industrialists molded San Francisco's labor, social and business history and is manifested in the resources at Potrero Point.

These resources qualify for a higher level of recognition for their significance and collective contribution to the nation's industrial and military history by the establishment of an historic district.

The vast majority of what remains today within the boundaries of the district proposed in the testimony of Ver Planck represents the last remnants of our San Francisco's industrial history. Today, the perception of the post-1870 industrial society and development is isolated to buildings and sites rather than an interdependent network of buildings, materials and labor, each supporting the other. Today, we see the Pier 70 and Potrero Point areas as isolated from each other and without physical connection. However, this belies the reality as evidenced in Mr. Groth's testimony of the interconnection and daily life on Potrero Point in the first half of the twentieth century.

The Impact of the Loss of Historic Resources at the Potrero Power Plant Site

The additional loss of historic resources threatened by the expansion of the Potrero Power Plant will have a significant impact. The destruction of the physical resources will erode the relationship of buildings of similar scale, such as Building 113 (Pier 70) and Station A (Potrero Power Plant). Destruction of other buildings, such as the Machine Shop/Office building will erode the continuity of construction type and materials, and the hierarchy of function and use within the larger historical context. The evolution of changes and necessary adaptations to keep up with technologies, manufacturing systems and labor laws will also be lost, thereby further setting apart and isolating the remaining resources.

The evaluations by Mirant and the CEC Staff did not take into account the social, economic and cultural contributions these buildings have made to San Francisco and the nation as a heavy industrial district. The evidence provided by Groth and Ver Planck establishes 1) a nexusof these resources, 2) the need to more fully comprehend the effect the proposed changes will have on the larger industrial landscape of Potrero Point, 3) the need to document these

resources, and 4) the necessity of mitigating their loss in a manner commensurate with their significance.

In an effort to balance the necessary development and the recognition of history and the preservation of historic resources, we should mitigate the proposed losses at the Potrero site through appropriate and sound measures that increase the likelihood that the remaining resources will continue to contribute in a meaningful way to our understanding of history

Question 9: What mitigation do you propose for the loss of the cultural resources on the Potrero Power Plant site?

Response 9: The testimonies of Ver Planck and Groth demonstrate the industrial resources on Potrero Point are highly significant. Therefore, their loss demands a higher level of mitigation. Relocation, as proposed by the CEC staff, as a means to mitigate this loss, creates a false sense of history, as these resources would lose integrity of location, setting and association by being placed in a different context. These facts, combined with the questionable feasibility of safely moving these resources without significant damage leads one to examine other, more prudent forms of mitigation that would better preserve the overall history of Potrero Point.

The most appropriate mitigation measure identified thus far is the rehabilitation of historic resources within the eligible historic district. It is my opinion that the most worthy resource for rehabilitation is the Union Iron Works building (Building 113) at Pier 70, which is comparable to Station A in scale, materials, construction and simple detailing. Should Station A be demolished, Building 113 would be the sole surviving large-scale early masonry building remaining within this industrial Potrero Point district. The demolition of Station A increases the importance Building 113 as an individual structure. However, the loss of Station A removes important adjacencies, spatial relationships and the physical fabric of the larger industrial district. Therefore, transfer of funds to rehabilitate Building 113 would help retain a highly significant resource that shares similar physical characteristics of scale, material and characteristics, including load bearing masonry construction.

Unlike the proposed relocation of structures suggested by the CEC staff, rehabilitation of Building 113 would reinforce a highly significant authentic resource and extend its useful life in its original location. The CEC Staff proposal to relocate historic resources would technically salvage the "brick and mortar," but it would create a false and artificial context and dilute the integrity of the district by establishing artificial spatial relationships.

Question 10: What is your conclusion?

Response 10: Based upon the importance and the contribution each of these buildings make to the district, and the need to remove Station A and the ancillary supporting structures, rehabilitation of Building 113 contributes to a higher level of retention than the relocation measures recommended by the CEC Staff. In the event further study and evaluation determines this recommendation is not feasible, rehabiliation of other historic buildings with in the proposed District should be studied.

Question 11; Does this conclude your testimony?

Response 11: Yes, it does. Thank you.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 10, 2002

Charles Edwin Chase

Charles Edwin Chase, AIA

Profession

Architect
Registrations: NCARB; Florida, South Carolina

Education

Master of Architecture, University of Florida, 1975
Bachelor of Architecture, University of Florida, 1972

Experience

1999-present

Executive Director
San Francisco Architectural Heritage.
San Francisco, California

1987-1999

City Archtitect/ Preservation Officer
Charleston, South Carolina

Division management within Department of Planning & Urban Development. Staff of three responsible for owner/architect coordination, building evaluations, and inspections for 3600+ structures. Liaison with South Carolina and President's Advisory Council on Historic Preservation (Section 106) related work.

Capital projects management including professional consultant services selection, programming, design, document development and bidding phases. Recent projects total $30 million in capital improvements. Management of staff and consultant work to develop and meet architectural and archaeological stipulations of Section 106 Memorandum of Agreement conditions for public works projects. Acquisition of grant funds for the planning and construction phases of city owned facilities.

1988

Executive Director
Charleston Heritage Housing, Inc.
Charleston, South Carolina

Established not for profit housing provider organization to utilize underdeveloped and dilapidated historic housing stock in Charleston, SC. Developed housing acquisition criteria, board goals and objectives, financial needs assessment, and established 501(c)3 status for corporation.

EXHIBIT

A

1985-1986

Architect
Coral Gables, Florida

Research and development of City of Miami Downtown Master Plan: Urban Preservation Component including feasibility, cost estimates and facade improvement studies.

Developed design guidelines and building maintenance standards for commercial and residential structures, Dade County, Florida.

1983-1985

Director of Preservation & Real Estate
Historic Savannah Foundation, Inc.
Savannah, Georgia

Prepared contract documents and supervised rehabilitation of mid-nineteenth century structures under federal tax credit program. Restoration/adaptive use of two house museums. Evaluation, design and cyclical maintenance procedures for foundation properties.

1982-1983

City Architect
City of Coral Gables, Florida

Established the Office of Architectural and Preservation Services for the planning and maintenance of city facilities. Member of the city manager's staff, reviewed municipal development projects. Coordinated evaluation and negotiation process for developer selection for $40 million Biltmore Hotel Tower (1926) redevelopment.

1977-1982

Associate Vice President
Spillis Candela & Partners
Coral Gables, Florida

Architect and project manager. Projects included museum, restaurant, and retail space design; interior architectural detailing, furnishing selection and lighting. Interim Business Development Director assisted with initial client contacts, prepared qualifications statements, graphic presentations, feasibility studies and presented firm's credentials leading to acquisition of corporate and government contracts.

1975-1977

Architect
National Trust for Historic Preservation
Washington, DC / Charleston, South Carolina

Prepared architectural, written and photographic documentation of two-year program including physical assessment, documentary research, and non-destructive testing leading to the conservation of Drayton Hall (1738). Supervision of architectural historian, historical archaeologist and landscape architect.

Awards

1998 **Achievement Award / International City/County Management Association**
International City Resources Program
Historic Preservation & Tourism Management: Charleston South Carolina and Cochin, Kerala State, India.

1989 **Merit Award / American Institute of Architects, South Florida**
Freedom Tower Restoration (Miami Daily News)
Miami, Florida

1989 **Restoration Award / Florida Trust for Historic Preservation**
Freedom Tower Restoration (Miami Daily News Building)
Miami, Florida

1985 **Award of Excellence**
American Institute of Architects, South Georgia Chapter
William Scarborough House Garden Pavilion
Savannah, Georgia

1979 **Merit Award for Restoration** &
Honor Award for Interior Design /
American Institute of Architects, Florida South Chapter
Biltmore Country Club Restoration
Coral Gables, Florida

Organizations

1980-present American Institute of Architects, Member

1987-present Association for Preservation Technologies, Member

1984-1985 Historic Resources Committee, Co-chair
American Institute of Architects, Georgia Association

1975-present National Trust for Historic Preservation, Member.

Community Service

2000 **Historic Resources Survey Advisory Committee, City of San Francisco**
Member
Committee established by the San Francisco Planning Department to participate in the development of survey needs, criteria and review of findings of staff and consultants.

1999 – present **Pier 70 Citizens Advisory Committee**
Member
Committee established by The Port of San Francisco to participate in the decision making process for port owned property within the pier 70 area.

1998-1999 **The Secretary's Award for Historic Preservation: HUD/National Trust**
Juror, Awards Committee

Program established to honor exemplary housing solutions through historic preservation.

1998 **Project RESTORE, Charleston, SC**
Executive Committee
A subsidiary program of the ELPIS Foundation, to return fathers to families through education and skills development. Project RESTORE's focus on traditional building skills restores neighborhood housing while teaching trade and business skills.

1993 **Drayton Hall, Charleston South Carolina**
Review of Architectural and Engineering qualifications for the development of visitor's center/interpretation complex on this National Trust Property.

1991-1992 **Hurricane Andrew Assessment, Louisiana**
Service to the National Trust Southern Regional Office. Five day tour of damaged sites to provide assistance to owners and architects of commercial and residential historic buildings. Established damage assessment survey to measure rehabilitation costs and identify professional assistance needs.

Charleston 2000: Master Plan
Member, Urban Design Committee
Appointed by Mayor Joseph P. Riley, Jr.,, Charleston, South Carolina to develop future planning strategies for the city's urban core.

1989-1990 **Disaster Recovery Team**
Director
Coalition of non-profit community organizations created to direct recovery efforts effecting historic resources in Charleston, SC after Hurricane Hugo.

1986-1987 **National Register Review Board / State of Florida**
Member
Advisory committee established to review and comment on the appropriateness of applications to the National Register of Historic Places, National Park Service, US Department of the Interior

1982-1983 **Miami Heritage Conservation Board, Miami, Florida**
Chairman

1981 **Florida Governor's Mansion Charrette /** Tallahassee, Florida
Member, Design Team
American Institute of Architects, Florida Association

1980-1981 **Metro-Dade [Florida] Community and Economic Development Board**

Lectures, Symposia, Workshops

2002 "Compatible Design in Historic Districts, Presidio Post Open House, The Presidio, February 26, 2002

2001 "Fundraising for Preservation Organizations", Panelist, California Preservation Foundation Annual Meeting, San Diego, CA., May 19.

"Investment Tax Credits and Conservation Easement Donations", Preservation Incentives Workshop, California Preservation Foundation, San Francisco, Colusa, CA September 13-14

2000 "Role of the Not for Profit Preservation Organizations" Region V Regional Workshop for Historic Resource Managers, , General Services Administration, San Francisco, CA , Feb

1998 "Local Historic Preservation Regulations", North Carolina Senior BAR Association Fall Conference Meeting, Charleston, SC, October 2-3.

1995 - 1999 Elderhostel, College of Charleston, Charleston, SC.
Lecture series on the role of government in historic preservation; coordination and efforts of not for profit organizations, private sector and government for the preservation of the urban environment.

1992 "Preservation Measures & Mitigation after Hurricane Hugo"
Key West Preservation Conference, May 21-23.

1991 "Overview of Charleston's Efforts in Urban Design, Preservation & Public Housing", Fortune 500 Forum, Charleston, SC, November 14 -16.

1990 "Examples of Public Private-Partnerships for Preservation and Urban Design."
Business in the Community Meeting, HRM Prince of Wales, February 20.

"Preservation & Mitigation in Response to a Natural Disaster"
Preservation Challenges for the 1990's: A Conference for Public Officials.
National Park Service, Washington, DC, June 5-7.

"Urban Design & Historic Preservation in Charleston, SC";
"Preservation Boards & Commissions: Charleston as an Example"
National Trust for Historic Preservation Annual Meeting, October 17-21.

1987 "Historic Preservation and Tourism Management in Charleston, SC"
National Trust for Historic Preservation Annual Meeting
Washington, DC, October 7-11.

Publications

1998 "Charleston: Guarding Her Customs, Buildings, And Laws", Preservation Forum, National Trust for Historic Preservation, Fall, 1998, Washington, DC.

1990 "Keeping the Doors Open to History," Preservation Forum, National Trust for Historic Preservation, Fall 1990, Washington, DC.

1986 Resourceful Rehab: A Handbook for Historic Buildings in Dade County, Florida, Metro-Dade Community & Economic Development, Dade

County, Florida.

1984 "They Don't Build Them Like That Now," UPDATE, The Historical Association of Southern Florida, Miami, Florida.

1982 "The Techniques Employed for the Restoration of the Biltmore Country Club Building," The Biltmore Revisited, Metropolitan Museum and Art Centers, Coral Gables, Florida.

STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission

CALIF ENERGY COMMISSION

JUL 10 2002

RECEIVED IN DOCKETS

In the Matter of:	Docket No. 00-AFC-4
MIRANT'S (FORMERLY SOUTHERN ENERGY) POTRERO POWER PLANT UNIT 7	PREPARED TESTIMONY OF DR. PAUL GROTH REGARDING CULTURAL RESOURCES

Question 1: Please state your name, professional qualifications and experience and educational background.

Response 1: I am one of several cultural resources expert witnesses for the City and County of San Francisco and the Dogpatch Neighborhood Associaiton. As set forth in my curriculum vitae, which is attached hereto as Exhibit A, I am an Associate Professor of architectural history, urban history, and cultural landscape history in the Department of Architecture and the Department of Geography at the University of California, Berkeley. I have a professional architecture degree from North Dakota State University (1972) and a Ph.D. in historical human geography from the University of California, Berkeley (1983). I have been studying the historical cultural landscapes of the United States for 27 years, and am considered a national expert in the history of America's ordinary urban buildings, particularly industrial sites, workers' housing, residential hotels, and how these sites are inter-related with social history. I have served as a historical consultant to CALTRANS, the City of San Francisco, the Foundation for San Francisco's Architectural Heritage, the State Historical Society of Minnesota, and the Department of Housing Preservation and Development of New York City. I have published widely in the journals and academic publishing houses in the United States, and am a past national president of the Vernacular Architecture Forum, a 900-member group of preservationists and historians devoted to the study of ordinary buildings and landscapes in North America.

Question 2: What are your qualifications concerning industrial landscapes?

Response 2: I began studying factories seriously in 1975, while teaching at the New Jersey School of Architecture, and applied to Berkeley's geography department specifically to study the history of ordinary workplaces. In 1982, while looking out the windows of an artist's

loft in the American Can building on Third Street, I first saw the Union Iron Works and PG & E power plant. I must admit that I had not imagined that a large, intact industrial district had survived San Francisco's 1906 earthquake. About the same time, for my doctoral dissertation, I mapped all types of residential hotels in San Francisco from 1880 to 1930. The Michigan Street, Irish Hill, and Dogpatch districts literally popped out as significant concentrations of rooming houses and cheap lodging houses for Potrero Point industries—clear proof of an important historical pool of blue-collar labor.

Spurred by these Potrero Point subjects, in 1986, I applied and was accepted as a post-doctoral fellow at the National Musuem of American History of the Smithsonian Institution (in Washington, DC) where I studied industrial history with Dr. Gary Kulik, a noted historian of New England textile mills, and with Robert Vogel, a co-founder of the Society for Industrial Archaeology. Subsequently, at Berkeley I have taught graduate seminars on American industrial buildings built after 1870 as well as the social and architectural history of San Francisco and West Oakland factories and workers' housing. I have also supervised several masters' theses and doctoral dissertations relating to these topics.

As shown in Appendix A for this testimony, my own research has focused particularly on the Machine Shop building of the Union Iron Works, the locations of supervisors and managers throughout the shipyard, and the railway connections within the early shipyard and its later expansion under Bethlehem Steel ownership into the former Pacific Rolling Mills site. For comparison with Potrero Point, I am also studying West Oakland, although its most important employment sites (the Southern Pacific Railroad yards and the Moore Shipyard) are long gone.

Question 3: What are the purposes and scope of your testimony?

Response3: The purposes of my testimony are to establish:

1) the importance of preserving industrial sites;

2) the historic nexus between the industries on Potrero Point; and

3) the national significance of a Potrero Point historic district.

Question 4: What is the importance of industrial sites in U.S. history?

Response 4: Today, most Americans appreciate Silicon Valley and the importance of the semiconductor industry, its venture capitalists, and its various ranks of laborers. From the 1870s to the 1940s, equally important were America's burgeoning new concentrations of factories. In these large industrial workplaces, American industrialists, engineers, and workers hammered out what we now know as American technological know-how and world mastery of

machinery. Large industrial workplaces drove the post-1870 explosion of America's urban population—including both the migration of rural and small town people to white collar jobs in the city, and the immigration to the United States of people from all over the globe for blue-collar jobs. Nationally, factory workplaces were battlegrounds over the imposition of the Protestant work ethic on often non-Protestant immigrants. Indeed, factory work drove the adoption of American time-consciousness and the spread of the idea of efficiency (also known as "productivity") to become something like a national religion.

Obviously, not every workplace merits preservation, but in the set of preserved places in every major metropolitan area, is it essential to conserve the history of the rank and file workers, both men and women, whose long hours of work—usually under noisy, hot, smoky conditions—are as significant as the labor of capitalists and their engineers working in the main office. In factory settings and nearby union halls and workers' clubs, laborers in large workplaces fought for important political and economic rights and, by their labor, made their own contributions to American material culture and progress. Where the products of a workplace are regionally and nationally significant, then the preservation of a workplace becomes particularly significant.

Question 5 What are the inherent problems of industrial sites and National Register reviews?

Response 5: The most easily identified National Register sites and districts are the kinds of places for which the Register was originally intended: spectacular architectural designs and the homes of famous leaders. With factories, the things that delight most architectural historians—fine details and dramatic style—are rare. Sheer huge scale and forthright honesty of materials and forms are the most one can hope for in the design of industrial sites. So too, "integrity" (which is quite easy to identify with high-style design) is with factories much more nuanced and often the wrong question to ask when judging significance. Economically successful industrial sites are messy and complicated; their building complexes typically grow with many rapid accretions. Most factory complexes are not "built" in any one year, like a mansion or an office tower; rather, factories are "begun" in a particular year. Additions and remodeling can be much more significant than the original structures. On industrial sites, the disciplines of labor history, social history, and business history are probably more important for evaluation than architectural design, but such experts are rarely the ones doing the National Register evaluations.

In only a few states—especially Massachusetts, Rhode Island, and North Carolina (for their textile industries), New York (for its 1920s electrical industry sites) and Michigan (for automobile production)—did early State Historic Preservation Office (SHPO) staff members really understand industrial site importance as part of their early state-wide surveys. In these states, famous and ambitious 1970s SHPO statewide surveys identified, at the state level, industrial preservation districts along with other significant districts. Similarly, most states east of the Mississippi and a few in the Great Plains now have sophisticated and thorough statewide surveys of vernacular architecture as well as high-style sites. The California SHPO office has never had a sufficient budget for such surveys. California is twenty to thirty years behind states like Massachusetts, North Carolina, and even Kansas.

In part because of such survey gaps, engineering and industry specialists founded the Society of Industrial Archeology (the SIA) in 1971. For some regions, the SIA has done fine work in site identification and scholarly publishing. However, the SIA has primarily focused on machines and buildings; only rarely have they asked much about the social or labor aspects of industrial sites. This has marginalized the SIA among American social and cultural historians. For its own part, California's chapter of the SIA has largely concerned itself with a few small gold-country sites.

Thus, it is not surprising that the Final Staff Assessment for the Potrero Point Power Plant project has come to such limited conclusions. Mirant's cultural resource experts have been asked questions that addressed only isolated fractions of the Potrero Point district; they have based their analyses on guidelines written for other types of resources; and they have not had the opportunity to address the larger questions of the site and situation of the cultural resources which remain on Potrero Point.

Question 6:. What is the nexus of historical relationships among the industries on Potrero Point?

Response 6: There are several themes that tie together the industries on Potrero Point. These are:

- The clear boundary of deep-water access
- The links between Potrero's famous industrialists
- Development of a single-use district for heavy industry
- The interlocking histories of labor and neighborhoods

Each of these themes is discussed below.

- **The clear boundary of deep-water access**

A first theme that ties together Potrero Point's historical development is the reliance of its industries on deepwater frontage and Pacific Ocean links. Indeed, on three sides, the water line defines the district very clearly: to the north, the slips and dry docks of the Union Iron Works (now Pier 70); to the east, before 1904, the wharves of the Pacific Rolling Mill steel plant (and, after 1904, an extension of the Union Iron Works) and also on the east, the coal docks of what became the PG&E site; to the south and southwest, the wharves of the Western Sugar company. To the west, the rail lines of Third Street form a logical fourth boundary of the Potrero Point historic district.

- **The links between Potrero's famous industrialists.**

A second theme linking Potrero Point into a single historic district is the small group of famous California capitalists who developed the area through both formal and informal associations. In his masterful book, *Imperial San Francisco,* Gray Brechin shows how closely-interlocked families have directed San Francisco's business empires. The details are complicated, but at Potrero Point the workings of these interlocking families is particularly striking and important.

The first big name to arrive was James Fair (whose daughters memorialized their father with the Fairmont Hotel); in 1866 he established the Pacific Rolling Mills on the middle third of Potrero Point. In 1881, to process raw sugar from his Hawaiian sugar plantations (his family owned most of the island of Maui), Claus Spreckles established his San Francisco sugar refinery on the southern third of Potrero Point. Two years later, the owners of the Union Iron Works moved their entire operation from the South of Market to the northern third of Potrero Point. The major families behind the Union Iron Works in the nineteenth century were two sets of brothers, the Donahues and the Scotts. The profits and products of the early Union Iron Works (first located in the South of Market area) had fueled Peter Donahue's founding of the San Francisco Gas and Electric Company (later PG&E). By 1883 the Union Iron Works was controlled by Irving Murray Scott and his banker-brother, Henry Tiffany Scott (who sold the Iron Works in 1904 and with those profits took over control of Pacific Telephone and Telegraph). Although Peter Donahue died in 1885, family ties remained: Henry Scott's daughter married into Peter Donahue's extended family. The Scotts and the Rolling Mills owners were clearly on friendly terms, too. In 1880, Irving Scott co-planned major expansions of the Rolling

Mills with its then head, Patrick Noble. The Scotts were major buyers of the Rolling Mill's steel, and the only railroad route into the steel mill ran directly through the middle of the Union Iron Works.

After the turn of the century, Potrero Point's industrialist ties became even more interwoven. In 1901 Spreckles built his huge Station A power plant, which he quickly sold to Henry Scott's San Francisco Gas and Electric. As late as 1913, Sanborn Maps show PG&E facilities built on the present-day site of one of the Spreckles sugar warehouses; at several points in the southern third of Potrero Point, PG&E tanks and sugar plant tanks stood side by side on the same lots. Meanwhile, in the 1890s, the warships built by Irving Scott had been instrumental in winning the Spanish-American war in the Philippines, which in turn opened the Philippines for Spreckles to establish even more sugar plantations. Spreckles brought his raw sugar to San Francisco Bay on his own fleet of ships, at least some of which were built by his business colleagues and neighbors over at the Union Iron Works.

Not surprisingly, given the interlocking genesis of the industries on Potrero Point, the waves of development and years of historical significance for the remaining elements of the sugar plant, ship yard, gas works, and electrical plant closely coincide, from the 1880s to the 1940s (with the power plant period of historical significance being from 1901 to 1949).

- **Development of a single-use district for heavy industry**

A third theme linking all of Potrero Point is the coordinated transformation, over a single generation, of the entire peninsula into a large single-use industrial area for heavy and polluting industry—all this, decades before legal zoning was adopted in the United States as a method for solving land-use conflicts between industrial, residential, and retail areas. As part of their investment strategies, all of the factory owner-developers active in Potrero Point were also very active railroad and mining investors and real estate developers.

Some combination of Potrero's industrial leaders worked diligently (and probably secretly, under various aliases) to assemble over one hundred nineteenth-century lots and privately-owned wooden cottages, row houses, rooming houses, and saloons in four blocks on the west side of the district (between 20th, Michigan, and 22nd streets and what is today known as Third Street). Over 70 of the 100 parcels were east of Michigan street, many on top of Irish Hill. Industrialists saw the hill itself as an obstacle, and worked for decades to blast away as much of it as possible. The industrialists didn't want the kind of crowding and mixed land uses they had to contend with in older areas like San Francisco's South of Market or North Waterfront.

Residential and retail neighbors complained about noise and pollution and impeded industrial expansion. Eradicating Irish hill and the mixed-use blocks along the western side of the district were also clearly motivated by the industrialists' wish to close down as many as possible of the working people's saloons, which were union hotbeds and always (union or not) zones of opposition to management. Before 1900, over 30 saloons crowed the blocks adjacent to the gates of the Union Iron Works, PG&E and Western Sugar.

During World War I, the peninsula's major landowners completed their conversion of the west side of the district to industrial uses. The largest user of the new large industrial plots was the Pacific Factory of American Can Company, which still occupies an entire city block. On part of another cleared block, PG&E built a warehouse; on yet another cleared block, the Union Iron Works built a parking lot for white collar workers. These actions portray the active and cooperative roles of PG&E and the Union Iron Works in shaping the land use of the whole district.

Another unifying aspect of the historical development of Potrero Point is its ecological history, in particular the soil pollution resulting from the concentration of heavy, polluting industries. The seepage of ground pollution certainly has not been confined to any one parcel of land, and ironically--by retarding development—toxic wastes have helped to preserve the peninsula's industrial heritage.

- **The interlocking histories of labor and neighborhoods.**

Although industrialists fought to eliminate conflicting residential land-uses, before 1945 blue-collar workers sought to live within close walking distance of multiple places of employment. Potrero Point's labor history is thus closely related to the residential neighborhoods of Irish Hill (while it lasted), Dogpatch, and Potrero Hill.

Quite literally, the human lives of workers knit together the Potrero Point district even more than the interlocking directorates of its factory owners. The members of one family would have people working at multiple sites on Potrero Point: older men working skilled jobs at the shipyard; younger men and new immigrant boarders working as unskilled day laborers wherever they could, most often at the warehouses and at the dirtiest and toughest jobs throughout the peninsula; women and children at the cannery, and cooking and serving at the many cheap eateries and saloons. So too, the single residents of the area's numerous commercial rooming houses and cheap lodging houses (most with saloons and lunch counters on their ground floor)

needed many different workplaces nearby; when work in one place was scarce,workers moved on to the next employer on Potrero Point.

Question 7: What is the national significance of the Potrero Point industrial district?

Response7: First, it is important to stress that Potrero Point's present-day set of machine shops, foundries, shipyards, gas and power plants, cannery, and sugar warehouses—mostly built before 1930--are nationally significant simply because they survive (especially those structures that predate the 1906 earthquake), and survive in an *accessible* location. Thirty years ago these sites were not particularly rare; today, they are. They stand in a place where people can easily visit them; they only lack stabilization and interpretation. Had I been hired to evaluate Station A, I would have rated it as clearly significant. Even with the rear half (not visible from the street) removed, a six-story-tall brick building over 400 feet long--especially a pre-1906 structure in San Francisco--is a significant landscape feature.

The Potrero Point district is one of the best places in California to tell the essential early chapters of the story of Western urban industry as part of mining history and as part of American industrial history in general. The Union Iron Works produced 90 per cent of the machinery used in the Comstock lode, and through the early 1900s continued to produce machinery essential for mining throughout the West. The sugar plant and PG&E remnants contribute to the history of California's industry. The cannery is an important historical site for San Francisco's women's labor history. Western industrial history is very little studied, and woefully under-represented in American history. The West is more than ranching, mining, and oil drilling. California is much more than gold, oranges, the Beach Boys, and movie-making. We need to preserve and interpret industrial historical sites to make this clear.

Potrero Point's historical sites share nationally significant links to production support for the Spanish American War, World War I, and World War II. With up to 5,000 people employed in the war production surges, the Union Iron Works was, by far, San Francisco's largest industrial employer. But war themes apply not only to the Union Iron Works but also to the industrialists behind PG&E and Western Sugar, who actively promoted war involvement to boost local demand and prices during military build-ups. The wave of electrical appliance promotion for American homes in the early 1920s was due to the overproduction of wartime electrical capacity.

The sugar warehouses and the Union Iron Works also stand as nationally significant reminders of San Francisco's central role in American commercial and military domination of

the Pacific rim since the 1880s. Those humble sugar warehouses are modest but tangible reminders of the long-distance Pacific rim economy of the 1880s, where laborers as well as raw materials were brought from Hawaii and the Philippines. Coal for the gas works came from Australia and Wales as well as Washington state and British Columbia. Gray Brechin, especially, has helped us understand how these sites symbolize California's private-industry reliance on U.S. military contracts and on Pacific Rim imperialism.

Most importantly, the surviving sites on Potrero Point are nationally significant especially as a remarkably preserved *ensemble* of early heavy industrial plants in a single-use industrial district, one of the few such well preserved districts on the West Coast. The cannery, historic PG&E structures, sugar warehouses, the rail corridors, and even the remaining bit of Irish Hill all provide important context—integrity of setting and feeling--for the Union Iron Works. The juxtaposition of Dogpatch and Potrero Hill are also important contributors. The American West has other early individual industrial sites and other blue-collar residential districts. However, Potrero Point's juxtaposition of a large, integrated set of industrial workplaces—established 20 years before zoning makes such combinations a required pattern—*next to* intact nineteenth-century housing districts is highly signficant, not just for San Francisco history but for the history of all California.

Admittedly, we may not *like* telling stories of backroom business collusion, low wages, poverty, pollution, war mongering, and imperialism. Nonetheless, Americans need to know and understand these stories as well as the more positive stories of the innovation and leadership of the important industrial leaders who shaped industry and urban development in Northern California and the Western United States. The ensemble of sites on Potrero Point, and the interlocking great fortunes and labor histories behind them, present one of the best and most significant remaining places in California to tell such stories.

Question 9: Does this complete your testimony?

Response 9: Yes it does. Thank you.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 8, 2002

Paul Groth

Paul Groth

Appendix A: Key Sources Relating to Paul Groth's Prepared Testimony

Adams, George R. [Director, Historic Landmarks Project, American Association for State and Local History, Nashville, Tennessee] "National Register of Historic Places Inventory for the San Francisco Yard, Bethlehem Steel, Shipbuilding Division," [my copy is dated June 1978, and shows no action taken by the California SHPO; see also Malone 1988].

Adler, Jacob. *Claus Spreckels: The Sugar King in Hawaii* (Honolulu: University of Hawaii Press, 1966).

Brechin, Gray. *Imperial San Francisco: Urban Power, Earthly Ruin* (Berkeley: University of California Press, 1999).
Brechin devotes an entire chapter (pp. 121-170) to the Scott brothers and Union Iron Works. See also pp. 249-264.

Coleman, Charles M. *PG&E of California: The Centennial Story of Pacific Gas and Electric 1852-1952* (New York: McGraw Hill, 1952).

Corona, Al. "City Treasure Grew Up in a Village called the Potrero," *San Francisco Examiner* (September 8, 2000).

Eichner, Alfred S. *The Emergence of Oligopoly: Sugar Refining as a Case Study* (Baltimore: Johns Hopkins Press, 1969).

Fitzhamon, E. G., "The Potrero," *San Francisco Chronicle* (September 14, 1928).

Groth, Paul. "Making the System First: Engineering Cultural Change in Twentieth-Century Factory Complexes," paper for the American Studies Association Meetings, New York City, November 1987.

Groth, Paul. "Factory and Home: Engineering a New Architectural Order," National Museum of American History, Smithsonian Institution, Washington DC, February 1988.

Groth, Paul. *Living Downtown: The History of Residential Hotels in the United States* (Berkeley: University of California Press, 1994; paperback edition, 1998; electronic edition, netLibrary, 2001).

Groth, Paul. "San Francisco's Third and Howard Streets: Skid Row and the Limits of Architecture," in Diane Favro, Zeynip Celik, and Richard Ingersoll, eds., *Streets of the World: Critical Perspectives on Public Space* (Berkeley: University of California Press, 1994), pp. 23-34.

Groth, Paul. "Generic Buildings and Cultural Landscapes as Sources of Urban History," *The Journal of Architectural Education* 41:3 (1988), Special Issue on Urban History in the 1980s, Diane Favro and Zeynep Celik, eds., pp. 41-44.

Groth, Paul. "Values and Challenges of Ordinary Cultural Landscapes," Keynote presentation for National Park Service, Landscape Preservation Workshop, Point Reyes National Seashore. July 1993.

Groth, Paul. "Social Connections as Clues to Cultural Landscape Health," keynote lecture, American Landscape Lecture Series, Graduate School of Design, Harvard University, February 1997.

Groth, Paul. "Workers Houses in West Oakland" (co-authored with Marta Gutman), in Suzanne Stewart and Mary Praetzellis, eds., *Sights and Sounds: Essays in Celebration of West Oakland* (report for the Cypress I-880 Replacement Project, California Department of Transportation, CALTRANS, with the Anthropological Studies Center, Sonoma State University, 1997), pp. 31-84, with 32 photos and 21 measured drawings.

Groth, Paul. "Rooming and Boarding in West Oakland," in Suzanne Stewart and Mary Praetzellis, eds., *Sights and Sounds: Essays in Celebration of West Oakland* (report for the Cypress I-880 Replacement Project, California Department of Transportation, CALTRANS, with the Anthropological Studies Center, Sonoma State University, 1997), pp. 85-112.

Groth, Paul. "A Profile of West Oakland Work in 1952," in Suzanne Stewart and Mary Praetzellis, eds., *Sights and Sounds: Essays in Celebration of West Oakland* (report for the Cypress I-880 Replacement Project, California Department of Transportation, CALTRANS, with the Anthropological Studies Center, Sonoma State University, 1997), pp. 211-222.

Groth, Paul. "Factories In the Survey of Everyday Architecture," invited paper for methods session, Vernacular Architecture Forum annual meeting, Columbus, Georgia, May 1999.

Groth Paul. "Connecting Ordinary Homes, Workplaces, and Public Realms: A 'Profession of Faith' about the Practice of Urban Architectural History," for closed symposium, "Paris and Chicago: Parallels Morphological and Conceptual," Northwestern University, Evanston, Illinois, September 2000.

Groth, Paul. "Morphology as Cultural Distinction: Workers' Cottage and Minimal Bungalow Districts in Northern California, 1870-1945," paper for session, "American Morphology," at 2001 Biennial Conference of the International Seminar on Urban Form, Cincinnati, Ohio, September 2001.

Groth, Paul. "From Workers' Cottages to Blue Collar Bungalows: Cultural Connections inside California Factories and Homes," Colloquium Series, Department of Geography, University of California, Los Angeles, May, 2001.

Groth, Paul. "Morphology as Cultural Distinction: Workers' Cottages and Minimal Bungalow Districts in Oakland, California," MS under consideration (requested by editors) for *Urban Morphology,* the journal of the International Seminar on Urban Form.

Hill, Ward, and Laurence H. Shoup. "Historic Architecture Report: Station A, Potrero Power Plant, in the City and County of San Francisco." (San Francisco: Dames and Moore [now URS, United Research Sciences], December 1999.

Malone, Jonathan. Draft Case Reports [for the San Francisco Landmark Preservation Advisory Board] for the Union Iron Works Main Office Building, Powerhouse, brick Office Building, and Machine Shop. (San Francisco: [Department of City Planning?], January 14, 1988.

Reinoehl, Gary, and Roger Mason. "Cultural Resources: Testimony of Gary Reinoehl and Roger Mason," (San Francisco: Mirant Corporation, February 13, 2002): 5.4-1 to 5.4-38.

Ryder, David W. *Men of Rope: The History of the Tubbs Cordage Company* (San Francisco: Historical Publications, 1954).

Sanborn Map Company. *Sanborn Fire Insurance Maps of San Francisco*, editions of ca. 1886, 1899, 1913, 1948.

San Francisco Bethlehem Steel Company Shipbuilding Division. *A Century of Progress, 1849-1949.* (San Francisco: San Francisco Bethlehem Steel Company Shipbuilding Division, 1949).

Teiser, Ruth. "The Charleston: An Industrial Milestone," *California Historical Quarterly* 25, 1 (March 1946).

Teiser is a good source on Irving Scott's role in the Pacific Rolling Mills and in the Union Iron Works.

Wahrheit, Virginia. "Factory and Myth: The Union Iron Works, 1849-1905." Unpublished research paper, Department of Architecture, Fall 1986).

Wirth Associates, Inc. *Potrero 7: Phase I: Cultural Resources Overview and Inventory* (San Diego: Wirth Associates, March, 1979).

Although early, this is a thoughtfully prepared study. It has an excellent bibliography on pp. 122-156. See especially pp. 88-98, appendixes A-3 and A-8 through A-16.

PAUL GROTH: CURRICULUM VITAE

Last name pronounced "growth"
Born 4-25-1949 in Mayville, North Dakota

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Home Address:
887 Corbett Avenue
San Francisco, CA 94131

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E-mail: pgroth@uclink4.berkeley.edu

Home phone: (415) 695-1544

EDUCATION

1976-83 University of California, Berkeley
Ph.D., 1983, and M.A., 1978, in human geography
Concentrations in U.S. urban and historical geography

1974-76 New School for Social Research, New York
Courses in non-fiction writing and U.S. history

1967-72 North Dakota State University, Fargo
Bachelor of Architecture (professional design degree), with honor, 1972
Elective concentrations in music and humanities

RESEARCH INTERESTS

My overarching interest is in cultural landscape studies—that is, the history, form, and meaning of ordinary built environments, particularly in the United States. I study the ways in which social groups have used space (as buildings, rooms, street grids, fields, or yards) to articulate social relations and to derive cultural meaning.

I have focused my work on (1) vernacular urban architecture such as machine shops and neighborhoods of workers' cottages; (2) landscapes of socially and politically disenfranchised people, places such as Native American reservations and single-room housing for single adults, migrant workers, and the elderly; (3) ways in which social theory can be quietly used to illuminate cultural landscape questions; and (4) the application of built-environment history to design and public policy.

EXHIBIT
A

HONORS AND AWARDS

Senior Fellow, Doreen B. Townsend Humanities Institute, UC Berkeley, 1999-2000

John Brinckerhoff Jackson Prize, 1995: book prize of the Association of American Geographers, for *Living Downtown*. The Jackson Prize is awarded to significant work which conveys better understanding of the American environment not only to academics but also to the public.

Abbott Lowell Cummings Prize, 1995: book prize of the Vernacular Architecture Forum, for *Living Downtown*. The Cummings Prize is awarded annually for the work that has made the most significant contribution to the study of vernacular architecture in North America.

Honorable Mention, John Hope Franklin Prize, book prize of the American Studies Association, 1995, for Living Downtown. The Franklin Prize is awarded annually for the best published book in American Studies.

National Award of Distinction, for excellence in teaching, from the Council of Educators in Landscape Architecture, Spring 1988

Smithsonian Institution Post-Doctoral Fellowship, National Museum of American History, Washington, DC, for six months, 1986: research connecting factory design, labor relations, and working class culture

N.E.H. Museum Research Fellowship, Winterthur Museum and Gardens, Wilmington, Delaware, for six months, 1985: research in material culture studies and their relation to urban housing

Regents Fellowship, UC Berkeley, 1977-78

University Fellowship (Charles Fish Scholarship), UC Berkeley, 1976-77

Environmental Education Fellowship, ACSA (Association of Collegiate Schools of Architecture), 1972-73: for a public program in environmental education

GRANTS

Committee on Research, Competitive Computer Purchase Grant, 1995: for office computer upgrade and laser printer, $3,500

American Cultures Summer Faculty Fellowship, UC Berkeley, 1994: for summer workshop and development of American cultures course, $4,500

Humanities Research Assistantship, Committee on Research, UC Berkeley, 1992-93: for research assistant on the history of Indian reservations, $2,000

National Endowment for the Humanities, Research Division, 1991-1993: six person grant, "Building the West," for six-book series (Yale University Press) on western U.S. vernacular architecture. My share: $10,000 for travel support to study Anglo settlement design on Indian reservations as a tool of cultural control.

Instructional Improvement Grant, Council on Educational Development, UC Berkeley, 1986-87: for improvement of the college slide collection in landscape architecture history, $7,700

Competitive Grant-in-Aid, Committee on Research, UC Berkeley, 1985: computer equipment for cultural landscape research, $2,500

Regent's Junior Faculty Development Fellowship, summer 1985: for research on residential hotel history, $3,000

Beatrix Farrand Grants, Dept. of Landscape Architecture, UC Berkeley,
1992: computer equipment for reservation field work, $1,500
1991: assistance on *Understanding Ordinary Landscapes* for Yale Press, $7,500
1990: VAF session on cultural interp. of plant materials, $2,400
1988: for the Vision, Culture, and Landscape symposium, $6,000
1987: pilot project in teaching landscape arch history, $1,000
1986: field work in American cultural landscapes, $1,450
1985: theoretical frameworks for landscape interpretation, $2,500
1984: study of cultural bias in resource identification, $3,224
1981: study of Oakland urban history, $1,500

Annual faculty research enabling grants, Committee on Research, UC Berkeley, 1984-2002: $725 to $1,000

Teaching Innovation Grant, Council for Educational Development, UC Berkeley, 1980: for AC 15, a self-guided field trip through Oakland, for ED 169 classes, $3,000.

ACADEMIC EMPLOYMENT

Present **Associate Professor in the Department of Architecture and in the Department of Geography,** University of California, Berkeley.

As the major part of my teaching role, I have expanded J. B. Jackson's parent course in landscape studies into a two-semester historical sequence, for 100 students, entitled "American Cultural Landscapes." The course is cross-listed in architecture, American studies, and geography.

From 1983 to 1994, my position was split 75% in landscape architecture and 25% in architecture. In 1994, it was consolidated 100% in architecture. In 1996 the faculty of the Department of Geography added me to their department as a 0% appointment (that is, with no geography teaching assignment).

1991-93 **Co-Director, American Studies Program**
University of California, Berkeley

Coordinating faculty from a dozen departments, and preparing proposal documents for in a new and experimental American Studies program that crosses the lines between professional schools and humanities departments. A 25% commitment.

1983-90 **Assistant Professor, Department of Landscape Architecture** and Department of Architecture, UC Berkeley

1979-83 **Part-time teaching positions**

Lecturer, 1979-83, Dept. of Landscape Architecture, UC Berkeley
Lecturer, 1979, Department of Geography, San Francisco State U.
Assistant Director, summer 1979, for the San Francisco Summer Term, Higher Education Consortium for Urban Affairs; I directed student research for 24 seniors from Midwestern colleges

1975-76 **Adjunct Faculty, New Jersey School of Architecture**
New Jersey Institute of Technology, Newark, NJ

1973-75 **Assistant to the Dean, New Jersey School of Architecture**
New Jersey Institute of Technology, Newark, NJ

During the school's first two years I wrote the curriculum proposal (1974), coordinated all academic advising, wrote publications and handbooks, directed admissions, and supervised scheduling. From 1973 to 1976 the school grew to 20 faculty and 350 student majors in four operating curriculum years.

1972-73 **Coordinator and Instructor, Public Education Program in Cultural Environment Awareness,** Department of Architecture,
North Dakota State University, Fargo, ND

Wrote program master plan and grant proposals, taught four extension courses, and developed a resource center for area teachers; program reviewed in the *Journal of Architectural Education* 25 (1974), pp. 25-26.

OTHER EMPLOYMENT

1977-78 **Research Assistant, Harper & Row Publishers, Inc.**

Wrote areal vignettes for a world regions textbook authored by Peter Haggett

1970, 71 summers **Drafter, Clark and Holman, Architects and Engineers,** Fargo, ND

Project designer for C. Wold residence; working drawings and design development for other projects

1969-72 **Part-time writing positions,** Fargo, ND

Wrote a ND architects' public relations magazine, 1971-72;
fine arts columnist for the NDSU student newspaper and yearbook

1964-68 summers **Common Laborer,** Mayville, ND

Hoed sugar beets and worked as a lifeguard, carpenter's helper, and lumber yard worker

BOOKS

Everyday America: Cultural Landscape Studies after J. B. Jackson (Berkeley: University of California Press, in press [bound copies due January 2003]. Co-editor with Chris Wilson.

A seventeen chapter collection, based on a fall 1998 conference at the University of New Mexico in Albuquerque. Personal contributions: co-chair of conference, the content and initial copy-editing for the entire book, and principal author of its introduction chapter, noted below in articles section, and division introductions.

Understanding Ordinary Landscapes (New Haven: Yale University Press, 1997). Paul Groth, principal editor; Todd Bressi, co-editor. 264 pp.

A collection of 17 chapters by historians, geographers, design historians, and anthropologists reviewing current issues and research interests in cultural landscape studies. Based on a symposium held at Berkeley in 1990. Personal sections include chapter 1 and annotated bibliography, noted separately, below.

Living Downtown: The History of Residential Hotels in the United States (Berkeley: University of California Press, 1994; paperback edition, 1998; electronic edition, netLibrary, 2001)

An interdisciplinary analysis of the practice of living permanently in hotels, the building types associated with that life, and the official fight waged against it, surveying the years 1870 to 1970. 304 text pages; 118 pages of notes and bibliography; 165 illus.

Vision, Culture, and Landscape: Working Papers from the Berkeley Symposium on Cultural Landscape Interpretation, editor, (Berkeley: The Center for Environmental Design Research, Spring 1990). 245 pp. Personal contribution:

"Dividing Lines and Meeting Grounds in Cultural Landscape Interpretation," preface, pp. vii-x.

AC 15: Oakland as a Cross-Section of America's Urban Cultural Landscapes--A Visit by Bus, Foot, and Armchair, (Berkeley, CA: Shamelessly self-published experimental draft, 1980). 166 pp.

Historical and interpretive commentaries to 92 common urban elements.

ARTICLES

"Morphology as Cultural Distinction: Workers' Cottages and Minimal Bungalow Districts in Oakland, California," MS under consideration (requested by editors) for *Urban Morphology*

"The Polyphony of Cultural Landscape Studies: An Introduction," Paul Groth and Chris Wilson, in Chris Wilson and Paul Groth, eds., *Everyday America: Cultural Landscapes: J. B. Jackson and Recent Cultural Landscape Studies* (Berkeley: University of California Press, [in press]). [In MS, 40 pp.]

"In Memorium: James E. Vance, Jr., 1925-1999," *Annals of the Association of American Geographers* 90:4 (December 2000): 763-771.

"Guidebooks as Community Service," *Association of Pacific Coast Geographers Yearbook* 62 (2000): 11-25.

"Making New Connections in Vernacular Architecture," Review article for *Journal of the Society of Architectural Historians,* Special Issue on Architectural History 1999/2000, 58:3 (1999): 444-451.

"J. B. Jackson and Geography," *The Geographical Review* 88:4 (1998): iii-vi.

"Frameworks for Cultural Landscape Study: John Brinckerhoff Jackson as a Continuing Catalyst," Chapter 1, *Understanding Ordinary Landscapes* (New Haven: Yale University Press, 1997): 1-24.

"Basic Works in Cultural Landscape Studies," annotated bibliography chapter in Paul Groth and Todd Bressi, eds., *Understanding Ordinary Landscapes* (New Haven: Yale University Press, 1997): 243-260.

"San Francisco's Third and Howard Streets: Skid Row and the Limits of Architecture," in Diane Favro, Zeynip Celik, and Richard Ingersoll, eds., *Streets of the World: Critical Perspectives on Public Space* (Berkeley: University of California Press, 1994), pp. 23-34.

Reprinted in *Designer/Builder: A Journal of the Human Environment* 4:8 (December 1997), pp. 18-24.

"Vernacular Parks," in Stuart Wrede and William Howard Adams, eds., *Denatured Visions: Landscape and Culture in the Twentieth Century* (New York: The Museum of Modern Art, 1991), pp. 135-137.

Reprinted in *Architecture California* 14:2 (November 1992):21-23.

"Tithing for Environmental Education: A Modest Proposal," *Places* 7:1 (1990):38-41.

"Planted Vernacular Landscapes: A Source List for Their Interpretation," (co-authored with Daves Rossell), published in Lexington, Kentucky, for the Vernacular Architecture Forum, May, 1990. 18 pp.

"Lot, Yard, and Garden: American Distinctions," *Landscape* 30:3 (1990):29-35.

"Parking Gardens," Chapter 12 in Mark Francis and Randolph T. Hester, Jr., eds., *Meanings of the Garden* (Cambridge: MIT Press, 1990): 130-137. Parking lots as central spaces in recent American culture.

Translated into Chinese and reprinted in *Reading Cultural Landscape Experiences in Taiwan and America* (Taiwan: TUFC, 1999), Randolph T. Hester, Jr., Shenglin Chang, and Shih Wang, eds., pp. 60-70.

"Nonpeople: A Case Study of Public Architects and Impaired Social Vision," Chapter 11 in Russell Ellis and Dana Cuff, eds., *Architects' People* (New York: Oxford University Press, 1989), pp 213-237.

"Generic Buildings and Cultural Landscapes as Sources of Urban History," *The Journal of Architectural Education* 41:3 (1988), Special Issue on Urban History in the 1980s, Diane Favro and Zeynep Celik, eds., pp. 41-44.

"'Marketplace' Vernacular Design: The Case of Downtown Rooming Houses," in Camille Wells, ed., *Perspectives in Vernacular Architecture* 2 (Columbia: University of Missouri Press, Fall 1986), pp. 179-191.

"Landscape Orders: Frameworks for American Cultural Landscape History," in the Working Papers Series WP01-85 (UC Berkeley: Center for Environmental Design, 1985), 10 pp.

"Forbidden Housing: The Evolution and Exclusion of Hotels, Boarding Houses, Rooming Houses, and Lodging Houses in American Cities, 1880-1930," Ph.D. dissertation, UC Berkeley, May 1983. 639 pp.

"Streetgrids as Frameworks for Urban Variety," *The Harvard Architecture Review* 2 (1981), pp. 68-75.

"Built Environment: A Teacher Introduction to Environmental Education," (co-editor and principal contributor), and "Environmental Education Teaching Tools," 32-page booklets published by the American Institute of Architects, 1975.

CONSULTING REPORTS

"Workers Houses in West Oakland" (co-authored with Marta Gutman), in Suzanne Stewart and Mary Praetzellis, eds., *Sights and Sounds: Essays in Celebration of West Oakland* (report for the Cypress I-880 Replacement Project, California Department of Transportation, CALTRANS, with the Anthropological Studies Center, Sonoma State University, 1997), pp. 31-84, with 32 photos and 21 measured drawings.

"Rooming and Boarding in West Oakland," in Suzanne Stewart and Mary Praetzellis, eds., *Sights and Sounds: Essays in Celebration of West Oakland* (report for the Cypress I-880 Replacement Project, California Department of Transportation, CALTRANS, with the Anthropological Studies Center, Sonoma State University, 1997), pp. 85-112.

"A Profile of West Oakland Work in 1952," in Suzanne Stewart and Mary Praetzellis, eds., *Sights and Sounds: Essays in Celebration of West Oakland* (report for the Cypress I-880 Replacement Project, California Department of Transportation, CALTRANS, with the Anthropological Studies Center, Sonoma State University, 1997), pp. 211-222.

MINOR PUBLICATIONS

"Residential Hotels," entry in Jim Grossman, Jan Reiff, and Ann Durkin Keating, eds., *The Encyclopedia of Chicago History* (Chicago: The Newberry Library, forthcoming). 4 p. MS

"James E. Vance, Jr." *In Memorium* 2000 (Academic Senate, University of California, 2001): 277-279. [excerpted from longer biographical article published in the *Annals of the Association of American Geographers*, noted above] The opening paragraphs of this piece were written by co-committee member Mel Webber.

"Lodging, Boarding, and Rooming Houses," entry in Neil Larry Shumsky, ed., *Encyclopedia of Urban America: Cities and Suburbs,* Vol. 1 (A-L), (Santa Barbara, CA: ABC-Clio, 1998): 433-436.

"Downtown Petaluma," lecture summary in *Proceedings/Tours, Vernacular Architecture Forum 1985 Annual Meeting* (San Francisco: GGNRA, May 1985), pp. 7-10.

"Images of J. B. Jackson's Cultural Landscape," short photo essay (12 images) published in *Landscape Architecture* 71 (November, 1981).

Six feature articles in *Spaces* magazine and feature articles for 11 North Dakota newspapers (both daily and weekly), 1971-72.

BOOK REVIEWS

Winterthur Portfolio 29:4 (Winter 1994), pp. 296-298, on Virginia Scott Jenkins, *The Lawn: A History of American Obsession*, and Fred E. H. Schroeder, *Front Yard America: The Evolution and Meanings of a Vernacular Domestic Landscape.*

Landscape Journal 7:1 (Spring 1988), pp. 73-75, on John A. Jakle, *The Visual Elements of Landscape.*

Annals of the Association of American Geographers 77 (March 1987), pp. 133-135, on Mark Girouard, *Cities and People.*

Design Book Review 8 (1986), p. 55, on Jean D'Ormesson, Anne Lambrichs, et al., *Grand Hotel.*

Vernacular Architecture Forum Newsletter 23 (Spring 1985), pp. 2-3, on Peter Benes and Jane Montague Benes, ed., *New England Prospect: Maps, Place Names, and the Historical Landscape.*

Landscape 28:2 (1984), pp. 21-22, on John Stilgoe, *Metropolitan Corridor: Railroads and the American Scene.*

The Professional Geographer 35:3 (1983), pp. 389-390, on John Stilgoe, *Common Landscape of America, 1580-1845.*

Landscape 25:1 (1981), pp. 42-43, "Architecture Watching," review article on Rifkind, *Field Guide to American Architecture*; John J. G. Blumenson, *Identifying American Architecture*; Marcus Whiffen, *American Architecture Since 1780.*

PAPERS AND OTHER SCHOLARLY PRESENTATIONS

"Dilemmas Raised by Preserving Spaces of Oppression: Indian Reservations of the American West," The Preservation Forum (an international symposium sponsored by Boston University's Art History Department and Preservation Studies Program and the Preservation Society of Newport County), Newport, RI, November 2002

"Morphology as Cultural Distinction: Workers' Cottage and Minimal Bungalow Districts in Northern California, 1870-1945," paper for session, "American Morphology," at 2001 Biennial Conference of the International Seminar on Urban Form, Cincinnati, Ohio, September 2001

"Longmont, Colorado, as a Cross-Section of Urban America," half-day tour and field exercise for Classroom Boulder K-12 Teachers' Workshop, Boulder, Colorado, June 2001 (see also consulting)

"Seeing and Teaching Processes of Cultural Landscape Change," for Classroom Boulder K-12 Teachers' Workshop, Boulder, Colorado, June 2001 (see also consulting)

"From Workers' Cottages to Blue Collar Bungalows: Cultural Connections inside California Factories and Homes," Colloquium Series, Department of Geography, University of California, Los Angeles, May, 2001 (also listed below under "Public Lectures")

"Connecting Ordinary Homes, Workplaces, and Public Realms: A 'Profession of Faith' about the Practice of Urban Architectural History," for closed symposium, "Paris and Chicago: Parallels Morphological and Conceptual," Northwestern University, Evanston, Illinois, September 2000

"The Man Who Wouldn't Write Footnotes: Untold Stories about J. B. Jackson," Department of Geography Colloquium Series, University of California, Berkeley, March 2000 (also listed below under "Public Lectures")

"Work and Home in Blue Collar Urban America: Cultural Parallels and Conversions in West Oakland," talk for Doreen B. Townsend Humanities Institute, UC Berkeley, October 1999

"J. B. Jackson and Other Visitors," invited talk for "100 Years of Geography by the Bay," Hundredth Anniversary Symposium, Department of Geography, UC Berkeley, October 1999

"Guidebooks as Community Service," invited paper for President's Plenary Session, Association of Pacific Coast Geographers, Reno, Nevada, September 1999

"Factories In the Survey of Everyday Architecture," invited paper for methods session, Vernacular Architecture Forum annual meeting, Columbus, Georgia, May 1999

"Architectural and Neighborhood Anchors of Polite Society in the Elmwood," Half-day field trip for California Studies Association, annual conference, Berkeley, California, February 1999

"Ordinary Oakland as Ordinary Urban America," invited paper, methods session of the annual meeting of the Vernacular Architecture Forum, Annapolis, Maryland, May 1998

"Constructing Class and Culture in East Bay Workers' Housing," Department of Geography Colloquium Series, University of California, Berkeley, November 1997 (also listed below under "Public Lectures")

"J. B. Jackson: Teaching the American Cultural Landscape," paper for special session ,"J. B. Jackson: His Life and Work," annual meeting of the Association of American Geographers, Fort Worth, Texas, March 1997

"Workers' Houses in West Oakland," paper for annual meeting of the Society for California Archaeology, Rohnert Park, California, March 1997

"Social Connections as Clues to Cultural Landscape Health," keynote lecture, American Landscape Lecture Series, Graduate School of Design, Harvard University, February 1997 (also listed below under "Public Lectures")

"Workers' Cottages in Oakland, California: Alternatives to Middle-Class Domesticity," Vernacular Architecture Forum Annual Meeting, Ottawa, Ontario, May 1995.

"Indian Reservations of the American West: Environments of Cultural Control," paper for NEH symposium, "Building the West" at the University of New Mexico, Albuquerque, November 1994.

"Values and Challenges of Ordinary Cultural Landscapes," Keynote presentation for National Park Service, Landscape Preservation Workshop, Point Reyes National Seashore. July 1993.

"Reframing the Architectural History of the West," presentation at the Western History Association meetings, Reno, Nevada, Oct. 1990.

"People in Place: Social Class and Building Classification," Methods Session of the Vernacular Architecture Forum Annual Meeting, St. Louis, May 1989.

"Vernacular Parks," invited talk for the Museum of Modern Art, New York City, symposium on Landscape and Architecture in the Twentieth Century, October, 1988.

"Factory and Home: Engineering a New Architectural Order," National Museum of American History, Smithsonian Institution, Washington DC, February 1988.

"Making the System First: Engineering Cultural Change in Twentieth-Century Factory Complexes," paper for the American Studies Association Meetings, New York City, November 1987

"Lot, Yard, and Garden: American Gardens as Adorned Yards," for The Meanings of the Garden Conference, UC Davis, May 1987; paper version published in Mark Francis and Randolph Hester, eds., Proceedings: The Meanings of the Garden Conference (UC Davis, Center for Design Research, May 1987): pp. 196-203.

"Building Form, Social Class, and Micromorphology: Methods in the Study of The Urban Landscape," paper presented at the Association of American Geographers Annual Meeting, Minneapolis, May 1986

"Ordinary Buildings as Social Texts: The Case of Residential Hotels," National Museum of American History, Smithsonian Institution, Washington DC, July 1986.

"Drawing the Line between Home and Shelter: Housing Ideology as Historical Barrier," paper presented at the American Studies Association Convention, San Diego, November 1985

"Downtown Petaluma: Three Changing Roles in American Commercial Buildings," for the Vernacular Architecture Forum Annual Meeting, San Francisco, May 1985

"Landscape Orders: Frameworks for American Cultural Landscape History," presented at the annual meetings of the Association of American Geographers, Detroit, April 1985

"'Marketplace' Vernacular Design: The Case of Progressive-Era Rooming Houses," paper for the annual meetings of the Vernacular Architecture Forum, Newark, Delaware, May 1984

"Hotels as Professionally Forbidden Housing: Ignorance and Omission as Shapers of Urban Form, Growth, and Culture," paper presented to the annual meetings of the Association of American Geographers, Denver, April 1983

"Hotels as Housing: A Morphological Record of Fluid Labor and Talent Supplies in Expanding American Cities," paper for the annual meetings of the Association of American Geographers, Los Angeles, April 1981

"Reading the Speech of 'Dumb' Environments: American Cultural Landscapes as Contexts for Design," paper for the conference, The Role of Historical Studies in Education for Environmental Design, UC Berkeley, April 1980

"The Street Unit and Building Cycle as Frameworks for Studying Urban Form," paper presented to the annual meetings of the Association of American Geographers, Philadelphia, April 1979

ORGANIZER OF PROFESSIONAL MEETING SESSIONS & CONFERENCES

1998 Co-organizer, with Chris Wilson and Stephen Schreiber, of "J. B. Jackson and American Landscape," a public conference held at the University of New Mexico, Albuquerque, Oct 1-3, 1998, in memory of J. B. Jackson. Over 300 people attended, with 80 speakers. Funded by the Graham Foundation, and the J. B. Jackson Fund.

1997 Co-Chair, with Thomas Frye (Oakland Museum), of Local Program Committee for the tours and local lectures given for the national meeting of the Organization of American Historians, in San Francisco, April 1997 (planning meetings, 1995-1997)

1997 Organizer for special session, "J. B. Jackson: His Life and Work," annual meeting of the Association of American Geographers, Fort Worth, Texas, March 1997

1991 Organizer of "Interpreting Vernacular Architecture Internationally," presidential methods session, annual meeting of the Vernacular Architecture Forum (VAF), Santa Fe, New Mexico, May 1991.

1990 Organizer for "Vision, Culture, Landscape: The Berkeley Symposium for Cultural Landscape Studies," a two-day symposium with 26 invited speakers and commentators, attended by over 300 people. This was the first large national gathering in the United States convened to examine questions, methods, and research in cultural landscape studies. Sponsored by the Department of Landscape Architecture and the Department of Geography, with a grant from the Beatrix Farrand Fund.

1990 Organizer and chair of "Interpreting Planted Environments," presidential methods session at the annual meeting of the Vernacular Architecture Forum (VAF), Lexington, Kentucky, May 1990.

1986 Co-organizer, with Michael Conzen, University of Chicago, "New Departures in Urban Geography," paper session at annual meetings of the Association of American Geographers (AAG), Minneapolis

COMMENTATOR FOR SESSIONS AT SCHOLARLY MEETINGS

"Blinded by Science: Locating Environment-Behavior Studies within the Humanities," invited panelist for all-day workshop, Environmental Design Research Association (EDRA) annual meeting, San Francisco, May 2000

"Is Housing Dead?: An American Perspective on the Current State of Housing Research and Practice," for the 27th World Congress on Housing, International Association for Housing Sciences, San Francisco, June 1999

Comments on David Lowenthal lecture, "The Past Is a Foreign Country," for Doreen B. Townsend Center Forum, February 1998

"Aesthetics and Infrastructure of Road Building in the Late Nineteenth and Early Twentieth Centuries," Seventh National Conference on American Planning History, Seattle, Washington, October 1997

"Domestic Space in the Twentieth Century," Vernacular Architecture Forum Annual Meeting, Ottawa, May 1997

"Commercial Buildings in North American Culture," Vernacular Architecture Forum Annual Meeting, 1994

"Architectural Memorials as Sites of Public Memory," American Studies Association Annual Meeting, Nashville, Tennessee, October 1994

"Turn of the Century Commerce and Culture," Vernacular Architecture Forum Annual Meeting, Charleston, South Carolina, May 1994.

"The Fate of the California City," California Communities Forum, College of Environmental Design, March 30, 1993.

"Historical Frameworks" at the IASTE Traditional Dwellings and Settlements conference, Berkeley, October 1990.

"Public Life in the City" at The Future of Urban Open Space symposium, Berkeley, October 1988

"Material Culture and the Structuring of American Society: Contributions from Historical Archeology," American Studies Association, New York City, November 1987

"Urban Housing in the Twentieth Century," Vernacular Architecture Forum, San Francisco, May 1985

SELECTED CONSULTING AND PUBLIC SERVICE

2001 **Classroom Boulder, Colorado Chautauqua, Boulder, Colorado**

One of four national invited faculty for planning and conducting a weeklong workshop in architectural and city planning awareness for Colorado K-12 teachers. Sponsored by the Colorado Chautauqua, Boulder, Colorado; primary funding from the Colorado Endowment for the Humanities.

1998, 1999 **Chief Plenty Coups State Historical Park, Billings, Montana**

With Prof. Thomas Carter, University of Utah, site evaluation of ranch home of the last chief of the Crow Nation: advising local park administrator and Crow Council on beginning phases of making this site an official national monument (as one of best surviving records of Native American groups giving up life in teepees and adopting Western house forms).

1995-1999 **St. Francis Lutheran Church, San Francisco**

1995-99, served on building committee for million-dollar renovation; in Sept 1999, wrote 15-page booklet, "A Century of Ministry: St. Francis Lutheran Church, 1899-1999."

1998 **Common Ground Community, Inc., New York**

Consultation on Ninth Avenue, New York City, SRO development by an innovative low-cost housing and social service providers; Roseanne Haggerty, Director

1997-98 **American Masters, WNET-TV, New York**

Cultural landscape and social history consultant for NEH proposal and script development, 4-hour documentary series, "Building the American Century"

1997 **Oakland Museum of California**

Community workshop in finding neighborhood history in maps and plans (for Fruitvale District of Oakland, California), for the "Building Livable Communities" series of workshops

1995 **Sonoma State University Anthropological Studies Center**

Co-Director, with Marta Gutman, for two urban history studies (listed above) in the 19th century immigrant neighborhood of West Oakland. Funding by California State Department of Transportation (CALTRANS).

1992-93 **Foundation for San Francisco's Architectural Heritage**

Detailed evaluation of building ratings for the Inner Sunset neighborhood review

1990 **Evaluation of Historic Factory District Proposal, Department of Public Works, City and County of San Francisco**

Testified against a preservation proposal which threatened future transit access to the Mission Bay development.

1990 **The Idea of Planning Series, Santa Cruz, California**

Four meetings with citizens and an evening public lecture advising the public and the city's planning committee on reconstruction of the Pacific Garden Mall, destroyed in the Loma Prieta earthquake. Lecture broadcast on KRUZ-TV.

1988 **KQED-TV, San Francisco**

Consultant to Bob Calo, producer, and interviewee for "J. B. Jackson and the Love of Everyday Places," an hour documentary for KQED (independent national PBS distribution, 1989-90).

1985-86 **New York City Department of Housing Preservation and Development**

Professional exchange seminar for the NYC SRO Housing Advisory Board, sponsored by the Fund for the City of New York, with a subsequent seminar on building types and the ideological implications of policy for HPD property redevelopment staff

1985-86 **Minnesota Historical Society, St. Paul, MN**

Member of the consulting panel for "Common Places," an exhibit about urban evolution and urban landscapes in Minnesota

1985 **Tenderloin Housing Clinic, San Francisco, CA**

Consulted for case in Superior Court involving hotel tenants' use of lobby space

1982, 84 **Foundation for San Francisco's Architectural Heritage**

Supplied building-type categories and review criteria for two inner-city areas, and served as an outside evaluation reviewer

1984 **The J. B. Jackson Film Project, Boston, MA**

Provided photographs expressing Jackson's landscape concepts for "A Figure in A Landscape: A Conversation with J. B. Jackson. NEA-funded film, released 1988; distribution by Direct Cinema Limited.

1982, 83 **Twin Cities Public Television (KCTA Channel 2), St. Paul, MN**

Provided background research and suggestions for programs on Route 66 and small town America

1981 **National Housing Law Project, Berkeley, CA**

Assisted in historical research for authors of "The SRO Housing Guide," published in The Clearinghouse Review

1978 **Historic Preservation Division, State Historical Society of Wisconsin, Madison, Wisconsin**

As a full-time summer employee, conducted rural and urban field surveys and local research in six counties for the National Register of Historic Places in Wisconsin

1972 **State Historical Society of North Dakota, Bismarck, ND**

Coordinated a five-student team which developed a master plan for interpretation and historic restoration of Fort Totten, ND, (built ca. 1870); wrote planning participation workbook for joint use by client and area residents, the Fort Totten Sioux Tribe.

COURSES TAUGHT (All at UC Berkeley unless otherwise indicated.)

Lecture courses

American Cultural Landscapes, 1600 to 1900 and 1900 to the Present. A large-lecture, two-semester sequence surveying the evolution and meaning of everyday architecture and landscapes including homes, highways, farms, small towns, factories, urban districts, and recreation areas.

History and Literature of Landscape Architecture. A survey lecture course in the professional history of gardens, urban open space, park planning, and regional management.

Urban Geography. An undergraduate lecture course taught at San Francisco State University.

Introduction to the Built Environment. A team-taught sequence in design theory and policy required of all freshmen at the New Jersey School of Architecture.

Seminars and Studios

Methods of Research in Cultural Landscape History. An intensive graduate seminar of reading, writing, and fieldwork--all aimed at preparing advanced students in the study of the ordinary built environment. Review of issues, theory, and schools of thought.

Theory and Method in Architectural History. An intensive reading seminar which explores the aims, tools, and methods of architectural history, its place in American arts and letters, and the relevance of work in allied disciplines.

Urban Life and Urban Form. A graduate reading seminar on the general physical and social history of North American cities, especially after 1860.

American Cottage Districts and Zones of Emergence, 1880-1980. A graduate research seminar exploring the social and spatial histories of mixed-use neighborhoods and their small houses (ordinary urban additions), typically built for immigrant workers before 1930.

The American Home. A graduate reading seminar in the issues concerning both single-family and multi-family housing types, and their most common forms in urban and suburban contexts. Offered with different foci:

The Minimal Home in the Twentieth Century
The Urban Home in the U.S., 1880-1980
History of the American Apartment, 1880-1980

The Architecture of Marginality: California Case Studies. Graduate reading and research seminar comparing the historical intersection of social marginality and architecture for three American cultures.

American Industrial Buildings after 1870. A graduate reading and research seminar in architecture history, focusing on interior and exterior factory landscapes.

Critical Writing for Architects. An experimental graduate and undergraduate writing seminar, taught with Ray Lifchez.

Seminar on the Teaching of Geography. A semester-long weekly workshop required of teaching assistants in the geography department.

Architectural Awareness Education. A graduate course for high school teachers, offered through the NDSU Extension Division.

Studio courses

Fundamentals in Landscape Design. An undergraduate studio in basic design skills, co-taught with Joe Rodriguez.

Design of Landscape Sites. Mid-level graduate studio in landscape architecture, co-taught with Louise Mozingo and Marsha McNally.

ORGANIZATIONAL AFFILIATIONS AND SERVICE

Contributing Editor, *Places* magazine, 1998-Present
Advisory Board, *Winterthur Portfolio,* 1996-2003
Advisory Board of Editors, *American Quarterly,* 1994-1997
Editorial board, *Landscape* magazine, 1987-1996
Editorial committee, *Perspectives in Vernacular Architecture,* 1987-1989, 1991-92
Advisory Board, Place Matters program of City Lore, New York City, 1999-2003

Vernacular Architecture Forum (VAF), an interdisciplinary 900-member organization devoted to the study of ordinary buildings and cultural landscapes of North America
- National President, 1989-91
- Public Liaison Committee, 1988, 1994-95
- Board of Directors, 1986-92
- Nominating Committee, 1986, 1987, 1996, 2000
- Program Committee, 1985

Society of Architectural Historians (SAH)
- Spiro Kostof Book Prize committee, 1999

American Studies Association (ASA)
- Program Committee for Annual Meeting, 1990-91
- Wise-Sussman Prize Committee, 1991

Organization of American Historians
- Co-Chair, Local Program Committee for National Convention, 1997

American Institute of Architects Committee on Environmental Education, 1973-75, 1982

American Association of Geographers (AAG)
Urban History Association
Society for American City and Regional Planning History
Society for Industrial Archeaology (SIA), and SIA California Chapter
MARHO: The Radical Historians Organization
National Low Income Housing Coalition

University of California, Berkeley, principal committee service:
- Faculty Advisory Committee, American Studies Program, 1992-Present
- Fellows Selection Committee, Townsend Center for the Humanities, 1999
- Program Committee for the new Jean Hargrave Music Library Building, 1999-2001
- Bancroft Library Advisory Committee, 1999-2003

PERSONAL AFFILIATIONS

Berkeley Americanists, monthly faculty reading group, 1983-Present
Card-carrying Lutheran and member, St. Francis Lutheran Church, San Francisco, 1990-Present
- Church Council, 2001
- Building Committee (planning million-dollar renovation), 1995-2001
- Property Committee, 1995-97, 2001
- St. Francis Singers (Chorus), 1992-1997, 2000-present
- Building Fund Core Committee, 1997
- Cookbook Editorial Committee, 1994

Owner of an ill-fated condominium in San Francisco, California, for one year, 1997-98
Season subscriber, San Francisco Symphony

PUBLIC LECTURES

Chronological listing of public lectures

(The key to lecture title codes, "L12" for instance, follows this chronological list)

2001 University of California, Los Angeles, Department of Geography Colloquium Series. L15

2000 UC Berkeley, Department of Geography Colloquium Series. L14
Berkeley Architectural Heritage Association, Annual Awards Dinner. L12

1998 Live radio interview about parking lots as potential public gardens, for the public radio system of Australia

1997 Harvard University, American Landscape Lecture Series, L7 (revised)
UC Berkeley, Department of Geography Colloquium Series, L12

1996 Historic Seattle Lecture Series, Seattle Architectural Foundation. L13
SUNY, Buffalo, Department of Architecture Lecture Series. L11
Washington State University, Pullman, Dept. of Architecture Lecture Series. L11
San Francisco State University, Department of Public Health. L11

1995 Oakland Heritage Alliance. L12
San Francisco State University, Department of Public Health. L11
San Francisco State University, Department of Geography. L11
Association for San Francisco's Architectural Heritage. L11

1992 Alcan Public Lecture Series, Vancouver, BC. L7
University of British Columbia, School of Architecture. L11
University of Utah, School of Architecture. L11
University of Washington, School of Architecture and Planning. L11
University of Washington, Department of Landscape Architecture. L7

1990 City of Santa Cruz, CA, The Idea of Planning series. L10

1989 University of Southern California, School of Architecture. L7, L8
The Plains Art Museum, Moorhead, MN. L7

1988 UC Berkeley, Spring Faculty Forum, College of Environmental Design. L9
UCLA, School of Architecture and Urban Planning. L8

1987 University of Chicago, Program in Geography. L8
University of Virginia, Department of Landscape Architecture. L7
University of N. Carolina, Raleigh, Department of Landscape Architecture. L7
University of North Carolina at Charlotte, Department of Geography. L5
North Dakota State University, Department of Architecture. L5

1986 Pennsylvania State University, Department of Geography. L8. L9

1985	Winterthur Museum, Wilmington, Delaware. L8
	UC Davis, School of Environmental Design. L7
	University of Delaware, History of Technology Seminar. L5
	Syracuse University, Department of Geography. L6
	University of Delaware, Department of Geography. L5
	Syracuse University, Department of Geography. L5
	University of Minnesota, Department of Geography. L5
1983	UC Berkeley, Department of Geography. L5
1982	North Dakota State University, Department of Architecture. L4
	Conservation Education Association National Conference. L3
	UC Berkeley, Urban Architecture Weekend Charrette. L2
1980	HECUA-SF (Higher Education Consortium for Urban Affairs). L1

Key to Public Lecture Titles (Year lecture was written is in parentheses)

L15	From Workers' Cottages to Blue Collar Bungalows: Cultural Connections inside California Factories and Homes (2001)
L14	The Man Who Wouldn't Write Footnotes: Untold Stories about J. B. Jackson (2000)
L13	American Housing in the Streetcar Era (1996; keynote lecture in Seattle series)
L12	Workers' Houses in West Oakland: Two Contrasting Realms (1995)
L11	The Challenges of Downtown Living: Can SRO Housing Work? (1992)
L10	The Value of the Ordinary: American Main Streets as a Santa Cruz Model (1990)
L9	Engineering a New Landscape Order: Factories and Working-Class Homes in San Francisco, 1850-1930 (1988)
L8	Ordinary Buildings as Social Texts: The Case of Residential Hotels (1986)
L7	Exuberance Versus Design: Seeing Health in the Vernacular Landscape (1985)
L6	J. B. Jackson's "Landscape Orders": Connections in the Cultural Landscape (1985)
L5	Forbidden Housing: The History of Downtown Hotel Life" (1983)
L4	Fondness for the Street Forms of Fort Wayne, Fargo, and Freeways (1982)
L3	Discovering Cultural Landscape Evolution: A Teachers' Workshop (1982)
L2	Land Use in Flux: The Physical Evolution of Oakland's Waterfront Blocks (1982)
L1	Using Your Eyes to Learn about the City: a half-day student workshop (1980)

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State Energy Resources
Conservation and Development Commission

In the Matter of:	Docket No. 00-AFC-4
MIRANT'S (FORMERLY SOUTHERN ENERGY) POTRERO POWER PLANT UNIT 7	PREPARED TESTIMONY OF CHRISTOPHER VER PLANK REGARDING CULTURAL RESOURCES

Question 1: Please state your name, professional qualifications and experience and educational background.

Response 1: I am one of several cultural resources experts for the City and County of San Francisco (CCSF) and Dogpatch Neighborhood Association. My resume is attached hereto as Exhibit A. I am the architectural historian at Page & Turnbull, an architectural firm in San Francisco. In my current position, I have completed numerous projects including a cultural resources survey of the Dogpatch neighborhood in San Francisco's Central Waterfront District. Prior to joining Page & Turnbull, I worked for San Francisco Architectural Heritage. At Heritage, I worked on numerous advocacy and research projects, including a survey of historic resources along San Francisco's Northeast Waterfront, a landmark nomination for the Murphy Windmill and Cottage in Golden Gate Park, and a National Register nomination for the New Mission Theater in San Francisco's Mission District.

I earned a Masters degree in Architectural History and Historic Preservation from the University of Virginia. As a student, I worked as the assistant to the Building Conservator at Monticello, in Charlottesville, Virginia. After graduating, I was the Sally Kress Tompkins Fellow at HABS/HAER in Washington, D.C.

I have published numerous articles in local and national journals, including *Vernacular Architecture Forum* and *Apartment Magazine*. I am a member of the Society for Architectural Historians, Vernacular Architecture Forum, Society for Commercial Archaeology, the California Historical Society and am a Board Member of DoCoMoMoNoCa (Documentation and Conservation of the Modern Movement Northern California) and the Northern California Chapter of the Society of Architectural Historians.

Question 2: What are your qualifications concerning industrial landscapes?

Response 2: Although my interests span many areas in the field of architectural history, my primary focus is on late nineteenth and early twentieth century industrial landscapes. This interest was initially sparked while living in Lewiston, Maine, a depressed textile community in New England. For many years, I approached the subject of industrial landscapes from the standpoint of an amateur, drawing and photographing abandoned textile mills and adjacent mill worker tenements. However, my growing interests led me to apply to the Masters Program in Architectural History at the University of Virginia, where I wrote a Masters Thesis on John Cotter Pelton, a Victorian-era San Francisco architect who designed inexpensive cottages for working-class San Franciscans. During the summer of 1997, I worked as a member of a HABS/HAER team recording workers' housing in textile mill villages in the Chattahoochee River Valley of Alabama and Georgia.

More recently, in conjunction with the San Francisco City Planning Department, the Dogpatch Neighborhood Association and San Francisco Architectural Heritage, I prepared the Dogpatch Cultural Resources Survey. While preparing this survey, I conducted many hours of primary research, using Sanborn Fire Insurance maps, City directories, census schedules and historic photographs to reconstruct the history of Potrero Point. The Dogpatch Cultural Resources Survey confirms that Potrero Point was San Francisco's single most important concentration of industrial workers' housing from the 1860s until the end of World War II. My research further demonstrates that Dogpatch was an informal company town, providing housing for generations of primarily immigrant workers in the heavy industries of Potrero Point, including Union Iron Works, Western Sugar Refinery, PG&E, Tubbs Cordage, and American Can. My research is the basis of a San Francisco District Landmark nomination for the Dogpatch neighborhood.

Question 3: What is the purpose of your testimony?

Response 3: The purpose of my testimony is to establish that the historic portion of the Potrero Power Plant is eligible for listing in the *National Register* as a historic district. The district would include the Union Iron Works/Bethlehem Steel and Pier 70 site, the remnants of Irish Hill, the American Can Company, the historic portions of the Potrero Power Plant and the Western Sugar Refinery warehouses.

Question 4: What are your comments and concerns about the URS/Dames & Moore December 1999 Historic Architecture Report?

Response 4: I have several comments about the URS/Dames & Moore December 1999.

First, URS/Dames & Moore correctly noted many of the historical facts that tie together the industries on Potrero Point. These include, the formation of Independent Electric Light and Power by sugar baron Claus Spreckels, the purchase of Independent Electric Light and Power by San Francisco Gas & Electric in 1903, and the subsequent merger of San Francisco Gas & Electric with California Gas & Electric Company in 1905. The merger of these two companies created PG&E--one of America's most powerful private utility companies and a major force in the economic development and political landscape of California. URS/Dames & Moore December 1999 report also accurately documents the construction chronology of the Potrero Power Plant, including the construction of Station A in 1901, the Meter House in 1914, the Compressor House in 1924 and the remodeling of Station A in 1930.

However, a careful review of the URS/Dames & Moore report reveals three significant weaknesses. These are:

1. The report evaluated the historical significance of five buildings at the Potrero Power Plant. However, the report did not look at the Potrero Power Plant in the larger context of the other historically significant industries on Potrero Point and did not address the potential for these sites to comprise an historic district. Dr. Groth established in his testimony, that there are several themes that tie together the industries on Potrero Point, including, the links between Potrero's famous industrialists, the development of a single-use district for heavy industry, and the interlocking histories of labor and neighborhoods on Potrero Point. Although Pier 70 is not formally designated an historic district, it has been determined eligible for listing in the *National Register of Historic Places* and is referred to in San Francisco as an historic district. (See Appendix R, *Historic Architecture Report*, response to CEC Data Requests 30, 31 and 32.) The five buildings on the power plant site that were evaluated for historical significance should have been evaluated in the context of whether, with the Pier 70 Historic District and the adjacent, historic Spreckels sugar refinery warehouses, they formed an historic district.

2. I do not agree with the report's analysis of the architectural significance of the historic resources on the Potrero Power Plant site. It is my opinion that the Compressor House, Meter House, Machine Shop and Station A are each individually eligible for listing under *California Register* Criteria 1 *and* 3. URS/

Dames & Moore finds only the Compressor House and the Meter House eligible (under Criterion 1 only).

3. I also disagree with URS/Dames & Moore's finding that much of Station A does not retain historic integrity. As Dr Groth noted in his testimony, Station A, which predates the 1906 San Francisco earthquake and was originally built by Claus Spreckels, is nationally significant because it has survived.

The Surviving Buildings At the Potrero Power Plant Must Be Evaluated in the Historical Context of Other Industries on Potrero Point

Dr. Groth in his testimony described the factors that initially attracted industry to Potrero Point, including deep water access, good rail access and the availability of cheap labor. Motivated by these factors, industrialists undertook the epic earth moving operations that blasted away the eastern arm of Potrero Point, filling Mission Bay for industrial sites during the late nineteenth and early twentieth centuries.

By the 1880s, Potrero Point had become home to the West Coast's largest concentration of heavy industry, including the Union Iron Works, which built 90 percent of California's mining equipment and much of the U.S. Navy's Pacific Fleet. Until the development of major industrial districts in Los Angeles, Oakland and Seattle in the twentieth century, Potrero Point was the West Coast's Manchester, Liverpool and Sheffield all in one. Although the iron and steel industries (particularly shipbuilding) were the dominant industries at Potrero Point after 1885, other industries continued to co-exist with them. Interestingly, City Gas Company, the earliest predecessor of PG&E had established itself at Potrero Point as early as 1872. Other early industries included several gunpowder manufacturers, Claus Spreckels' Western Sugar Refinery, California Barrel Company and Tubbs Cordage Company. The common link between these industries was the need for large sites, deepwater access and rail connections. Early Sanborn Fire Insurance maps dating from the 1880 indicate that with the notable exception of Irish Hill, Potrero Point had become an exclusively industrial district.

Further evidence of the historic interrelationship of the businesses of Potrero Point is that owners frequently sat on the boards of neighboring companies. The physical operations of many of the companies on Potrero Point overlapped property lines, reflecting their symbiotic nature and interlocking directorships. Intermarriage further cemented alliances among San Francisco's Gilded Age plutocracy. Gray Brechin's *Imperial San Francisco* documents the connections

between Claus Spreckels (Western Sugar Refinery and San Francisco Gas & Electric), Peter Donahue (Union Iron Works and San Francisco Gas & Electric) and Irving Scott (Union Iron Works and Pacific Rolling Mills). These industrialists, in association with the Atchison, Topeka & Santa Fe and Southern Pacific Railroads, were the lords and masters of Potrero Point and their combined clout was critically important in assembling large parcels for development. Sanborn Fire Insurance maps indicate that cooperative efforts between Bethlehem Steel and PG&E ultimately resulted in the eviction of the residents of Irish Hill, so that this bluff could be blasted away and developed for industry by 1917. Potrero Point's shrewd and well-connected captains of industry successfully established a solid zone of heavy industry not seen anywhere else in the West. (See Exhibit B, an aerial photograph (*Ca* 1945) the depicts the industrial uses on Potrero Point.)

The history of Potrero Point establishes that there is a solid historical link between the surviving industrial relics of Potrero Point and the surviving buildings at the Potrero Power Plant site.

Architectural Significance of Historic Resources

The Meter House and Compressor House

URS/Dames & More concluded that both the Meter House and the Compressor House are eligible for listing under *California Register* Criterion 1 (History), but that neither is significant under Criterion 3 (Architecture). *(Appendix R: Historic Architecture Report on Properties Greater than 45 Years of Age within the Immediate Vicinity of the Potrero Power Plant Unit 7 Project (Response to Data Requests 30 and 31.)*

I disagree with this conclusion. The Meter House and the Compressor House are both eligible for individual listing under *California Register* Criterion 3 and district listing under *National Register* Criterion C (Design/Construction), as examples of a type and period of American construction. Both buildings are good and relatively rare surviving examples of industrial architecture in San Francisco. As Dr. Groth noted in his testimony, thirty years ago, these building would have not been rare structures. However, in California, where rapid de-industrialization has occurred, most such buildings have been destroyed. The Meter House (built 1914) is especially closely related to the historic machine shops (Buildings 105, 113 and 114) at Historic Pier 70, with its load-bearing brick construction, segmental-arch windows steel roof trusses and gable end walls. (See Exhibit C which compares the Meter House and the Union Iron Works Machine Shop.)

The Compressor House, built a decade later in 1924, shares a common vocabulary with PG&E substations constructed throughout San Francisco in the 1910s and 1920s. During this period, PG&E hired a series of prominent San Francisco architects to design electrical substations. Although utilitarian and often windowless buildings, the substations were given a degree of architectural ornamentation in keeping with PG&E's status and power in California. The designs of these buildings also reflected the then popular tenets of the City Beautiful Movement. Architect Willis Polk, one of San Francisco's most important architects of the early 20th century, designed most of the PG&E substations and power plants of that era. Several of the more important ones include Substation C (a.k.a., the Jessie Street substation), designed in 1905, with additions added in 1907 and 1909, Station D at 1349 Bush Street, designed in 1912 and Station I, at 111-17 -8th Street, which was designed in 1900. The Compressor House was constructed in 1924, the same year Willis Polk died. Further research should be undertaken to determine who designed the Compressor House. However, similarities between the Compressor House and PG&E substations built in the early 20th century are apparent. See Exhibit D.

Station A

The URS/Dames & Moore report concluded that Station A "...primarily dates from the 1930 remodeling...and therefore...does not appear to be architecturally significant or significant in the history of building technology." *(Appendix R: Historic Architecture Report on Properties Greater than 45 Years of Age within the Immediate Vicinity of the Potrero Power Plant Unit 7 Project (Response to Data Requests 30 and 31 at page R-6.)* I disagree with this finding. Enough of the 1901 structure survives to communicate its original appearance (especially from the north). (See Exhibit E, which appears to show an intact Station A) Furthermore, the 1930 remodeling of the south and part of the west elevations assumed a level of importance that may even supersede the 1901 construction in terms of overall significance. The National Park Service National Register Bulletin, 15 (updated in 1998) states additions, such as the 1930 addition to Station A, constructed during the period of significance, may acquire their own significance through age and association.

Integrity of Station A

URS/Dames & Moore also found that Station A's historic integrity had been severely compromised. I also disagree with this finding.

Integrity is the ability of a property to convey its significance. The evaluation of integrity is quite subjective. However, determining "why, where and when" a property is significant and defining the seven aspects of integrity facilitates the determination.

As noted by Dr. Groth, the traditional interpretation of "integrity" is geared toward high-style buildings that are constructed in a particular year and in many cases do not undergo significant rebuilding or additions, — not industrial spaces, such as Station A. Factories and industrial spaces are messy. They tend to experience generations of accretions, (particularly if they are successful businesses). Station A is no exception, although most of its alterations, including the substantial 1930 remodel, took place well within the period of significance.

URS/Dames & Moore relied on the demolition of the boiler room in the rear of the building in 1983 to support its finding that the integrity of Station A has been compromised. *(Appendix R: Historic Architecture Report on Properties Greater than 45 Years of Age within the Immediate Vicinity of the Potrero Power Plant Unit 7 Project (Response to Data Requests 30 and 31, at page R-6).* The boiler room and the turbine room (which does survive) were distinct parts of Station A. In addition, the removal of the boiler room can only be perceived from the rear of the building (which is not publicly accessible). The north, west and south elevations all retain a very high degree of integrity in relation to all seven variables of integrity: location, design, setting, materials, workmanship, feeling and association. Quoting Dr. Groth's testimony, "[e]ven with the rear half (not visible from the street) removed, a six-story-tall brick building over 400 feet long—especially a pre-1906 structure in San Francisco—is a significant landscape feature (Groth, 2002, at page 10).

Machine Shop/Office Building

The URS/Dames & Moore report considers the Machine Shop to be a part of Station A. The Machine Shop is an extraordinary, small scale concrete structure with a highly unusual Baroque façade. (See Exhibit E.) On Sanborn Fire Insurance maps this building appears to be a freestanding structure and it is perceived as such from Humboldt Street. The Machine Shop building appears to be significant for individual listing in the *California Register* on the basis of Criteria 1 and 3.

Question 5: What are your recommendations?

Response 5: It is my opinion that the historic portion of the Potrero Power Plant is eligible for listing in the *National Register* as a historic district. The district would include the Union Iron Works/Bethlehem Steel and Pier 70 site, the remnants of Irish Hill, the American

Can Company, the historic portions of the Potrero Power Plant and the Western Sugar Refinery warehouses.

Proposed Pier 70/Potrero Point District

As the testimony of the CCSF and Dogpatch witnesses demonstrate, the proposed Pier 70/Potrero Point District possesses a significant concentration, linkage and continuity of sites, buildings and structures that are united historically by an informal plan for development. The proposed district would be composed of a variety of industrial resources, many of which are individually significant and all of which share an important, common history. Finally, the proposed district has a definable geographic area and shares a common period of significance -- 1882 to 1949. See, Exhibits F-1 and F-2 for the potential boundaries of the district.

Subject to further evaluation, the proposed district would encompass the Union Iron Works/Bethlehem Steel buildings at Pier 70, the remnants of Irish Hill, the American Can Company, the Western Sugar Refinery warehouses , and the historic portions of the Potrero Power Plant, including the massive Station A, which provides an important historic setting for other eligible structures. The period of significance for the district is 1882 to 1949, with the earlier date based on the construction of the first Union Iron Works buildings and 1949 corresponding with the beginning of the district's decline and decay. The identified themes for the area's significance include Architecture and Industry (NPS, National Register Bulletin 16A [1997] 40).

Question 7: Does this complete your testimony?

Response 7: Yes it does. Thank you.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 10, 2002

Christopher Ver Planck

Christopher Ver Planck

CHRISTOPHER VERPLANCK

Historian

Education

1997 University of Virginia, Graduate School of Architecture, M. ArchH, Architectural History and Historic Preservation
1992 Bates College, Bachelor of Arts, History
1989 University of St. Andrews, St. Andrews, Scotland

Experience

PAGE & TURNBULL, INC

1999-Present Historian

V. A. Medical Center, San Francisco
Design Guidelines, Downtown San Jose, CA
Niles Overhead Bridge, Fremont, CA
San Francisco Conservatory of Music
Old City Hall Council Chambers, Berkeley
Mission Armory, San Francisco
Jenkins House, Woodside
Irvington Pumping Station, Fremont
La Casa Abierta, Palo Alto
Maybeck Studio, Berkeley
Schlage Lock Factory, San Francisco
Blue Wing Inn, Sonoma, California State Parks
Vallejo Federal Building
Will Rogers Ranch State Historic Park
South End Warehouse, San Francisco
Dogpatch Neighborhood Survey, San Francisco
Presidio of San Francisco Master Plan
374 Reservation Road, Marina
8th & Howard Streets Section 106, San Francisco
Santa Clara Central Library, Santa Clara
Colma Railroad Station, Colma
Davis/Shorb House, Berkeley

SAN FRANCISCO ARCHITECTURAL HERITAGE, San Francisco

1997-1999 Architectural Historian
Central Waterfront/Pier 70 Survey, San Francisco
Murphy Windmill and Millwright's Cottage, Landmark Nomination, San Francisco
Northeast Waterfront (Pier 1-Pier 35) Survey and Analysis of Historic Resources, San Francisco

HISTORIC AMERICAN ENGINEERING RECORD, Washington D.C.

1997 Architectural Historian
Survey of Textile Mill Housing in the United States
Typology of Southern Textile Mill Housing

ASSISTANT ARCHITECTURAL CONSERVATOR, MONTICELLO, Charlottesville, VA

Summer 1996 Sash Conservation and Restoration Project

Selected Publications

"Preserving the Old," Courthouses of California. San Francisco: California Historical Society, 2001.
San Francisco Apartment Magazine. A series of seven articles on San Francisco neighborhoods.1999-2002.
San Francisco Heritage News. "Louis Christian Mullgardt: An Architect with a Capital 'A'," (Sept./Oct. 2001), "Frederick H. Meyer: Versatile Architect of the Old School," (Nov./Dec. 1999), "John C. Pelton's 'Cheap Dwellings' 19th Century Affordable Housing," (Mar. Apr. 1999), and "Historic Mission District Theater Merits Preservation," (Nov./Dec. 1998).
Book Review, Irrigated Landscape, *Vernacular Architecture Forum,* (Fall, 2000)
"St. Mark's Church, San Francisco," *New Fillmore News,* (June 2000)
Typology of Southern Textile Mill Village Dwellings, HABS/HAER publication, (Dec. 1997)

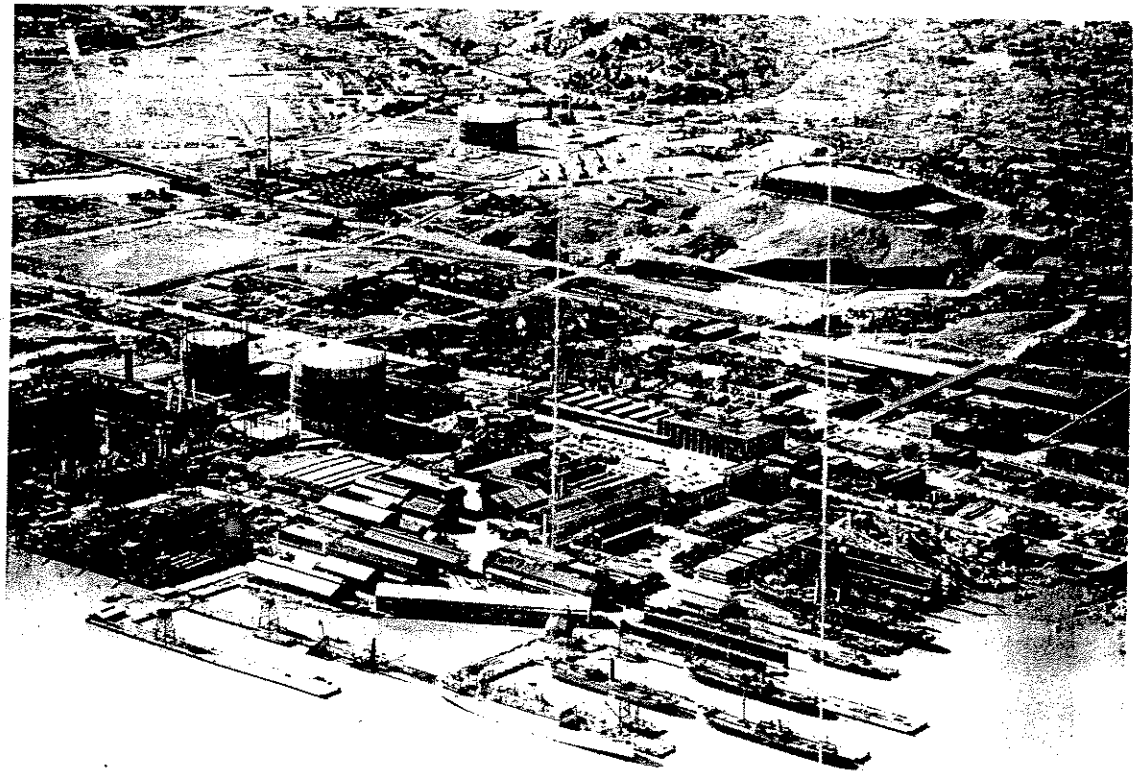
Awards

1997 Sally Kress Tompkins Fellowship, Society of Architectural Historians/HABS/HAER
1988 St. Andrews Society Fellowship for Study in a Scottish University

Affiliations

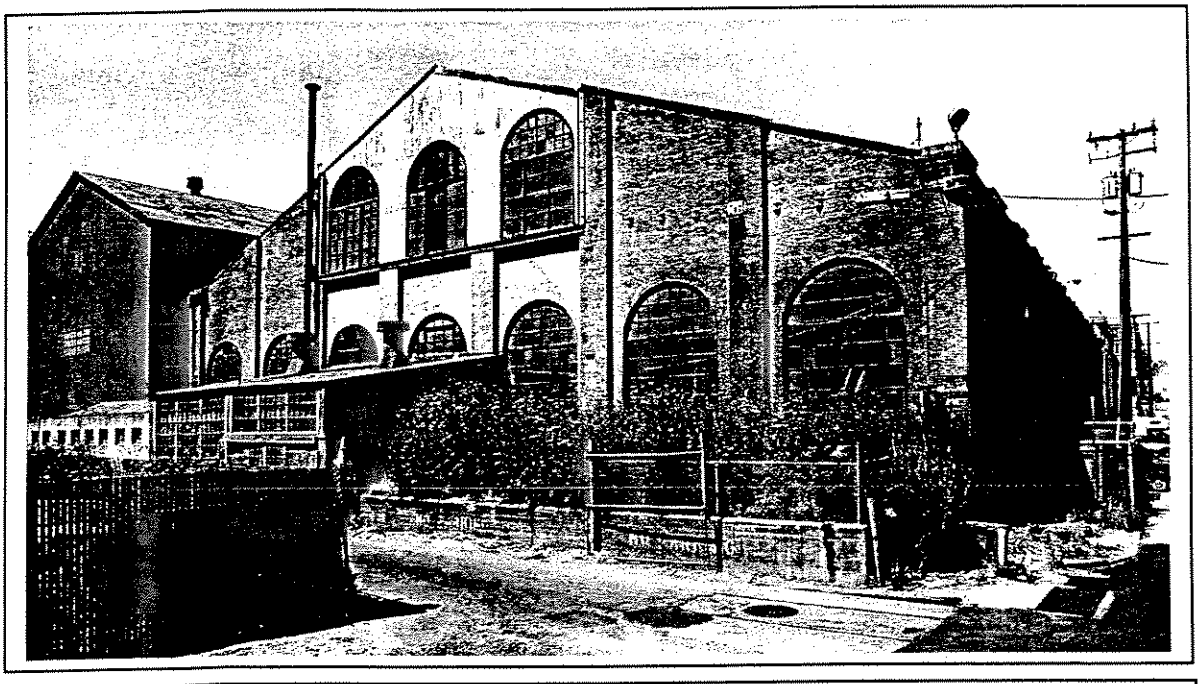
Treasurer, Northern California Documentation and Conservation of the Modern Movement, Mt. Julian Society, National Trust for Historic Preservation, San Francisco Architectural Heritage, Society of Architectural Historians and Vernacular Architectural Forum

EXHIBIT
A

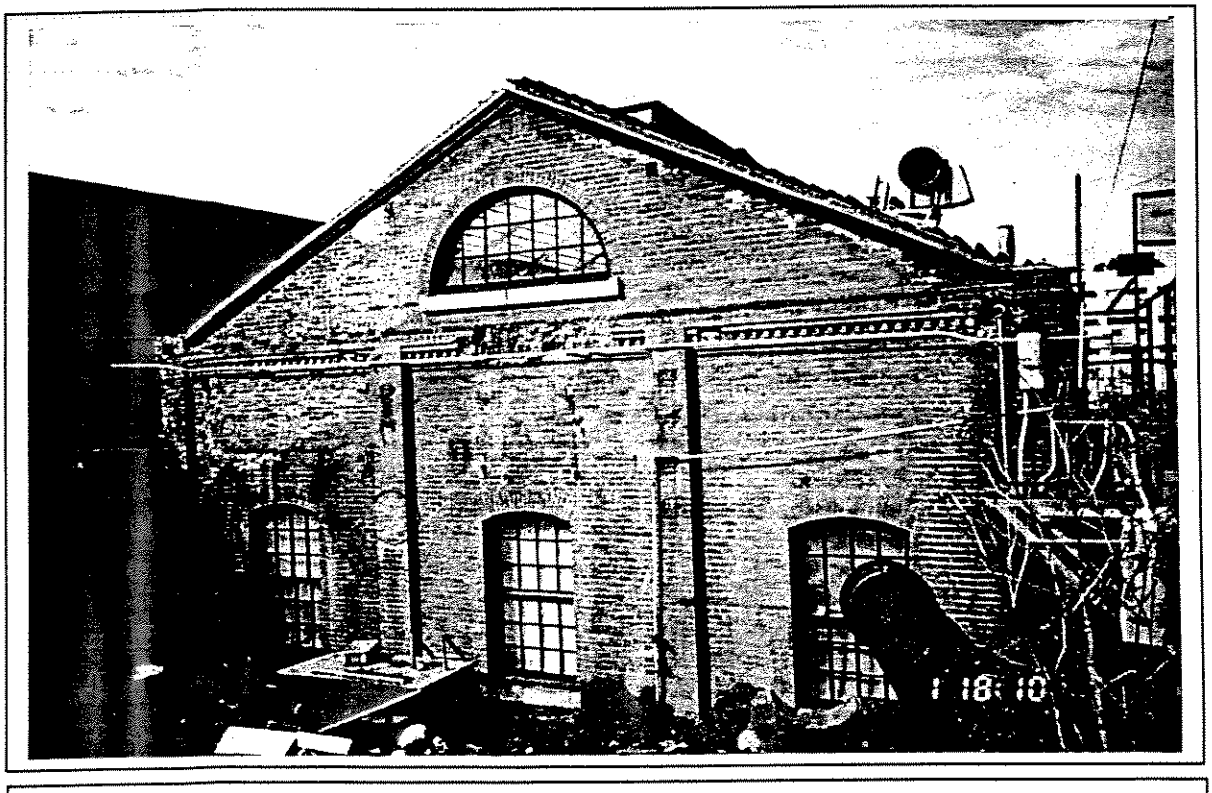


Central Waterfront ca. 1945
Exhibit

EXHIBIT
B



Machine Shop, Union Iron Works, East Elevation

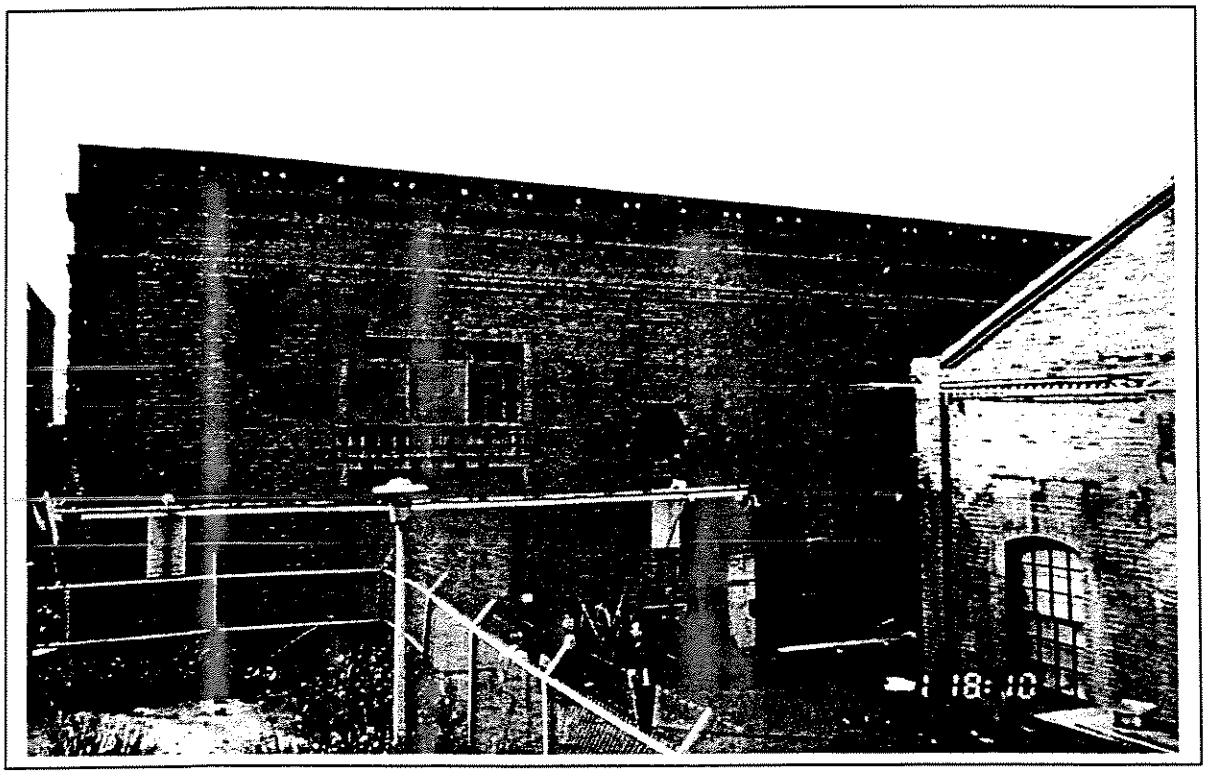


Meter House, Potrero Power Plant, East Elevation

EXHIBIT

C

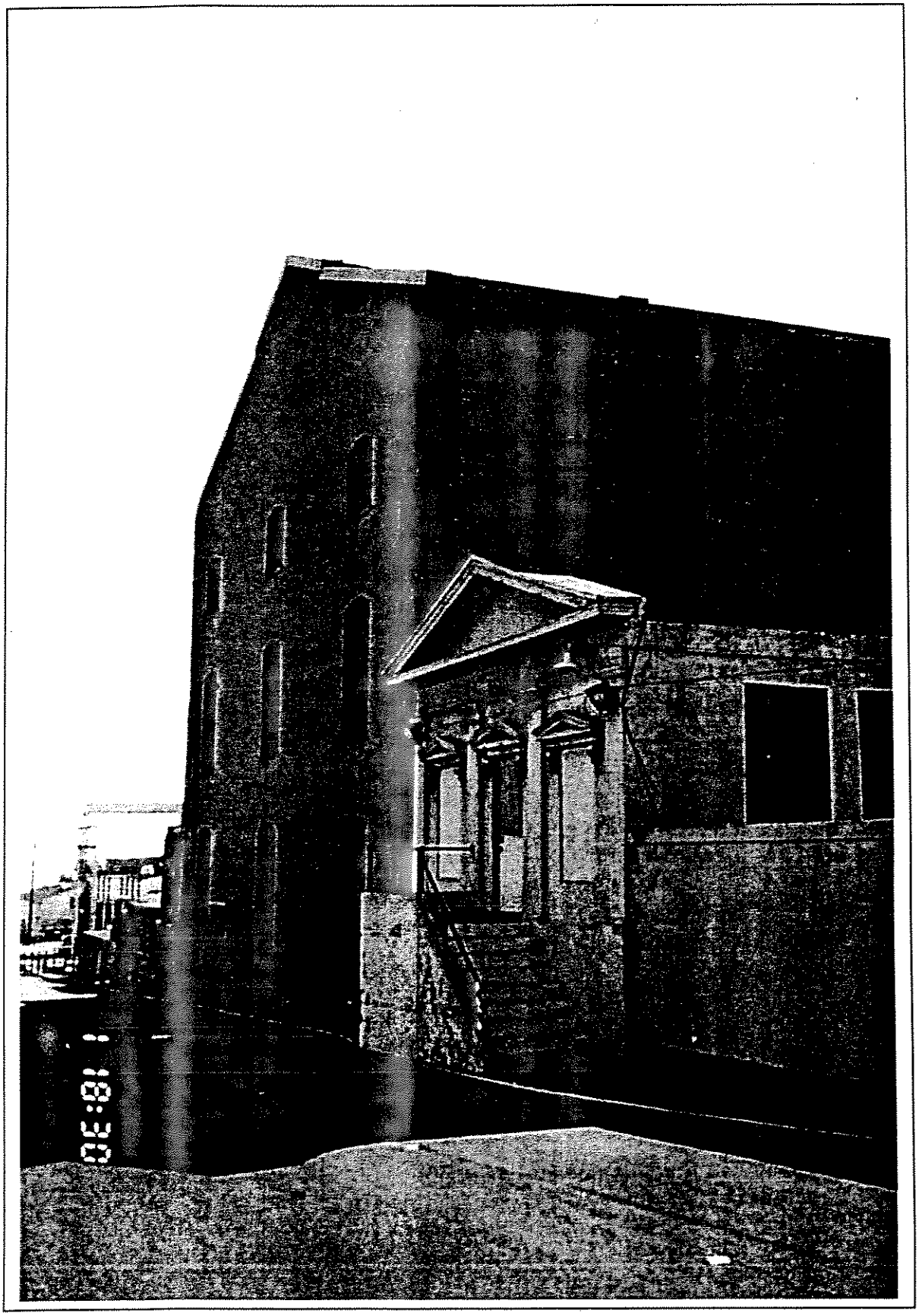
Jessie St. Substation Facade



Compressor House, Potrero Power Plant, North Elevation

EXHIBIT

D

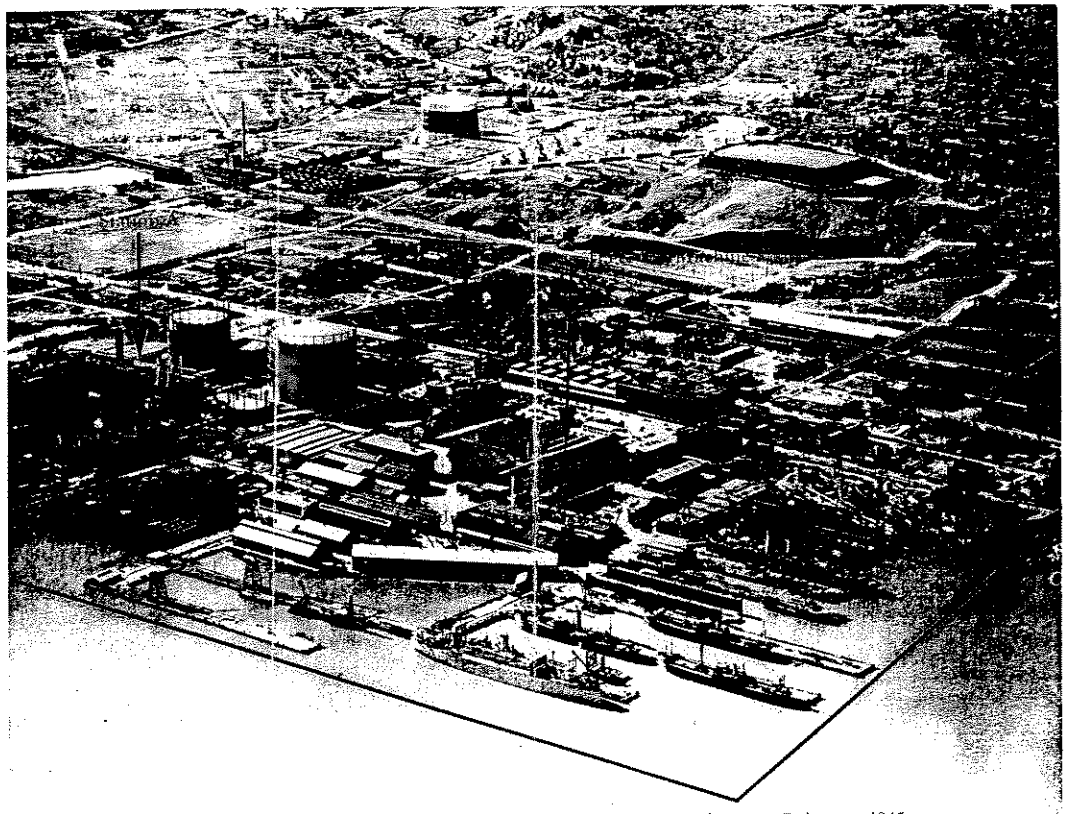


Station A and Machine Shop, Potrero Power Plant, North Elevations

EXHIBIT
E

Map showing likely boundaries of potential Central Waterfront District

EXHIBIT
F-1



Pier 70/Potrero Point, ca. 1945

EXHIBIT
F-2

STATE OF CALIFORNIA
State Energy Resources
Conservation and Development Commission

In the Matter of:	Docket No. 00-AFC-4
MIRANT'S (FORMERLY SOUTHERN ENERGY) POTRERO POWER PLANT UNIT 7	PREPARED TESTIMONY OF MARK PAEZ REGARDING CULTURAL RESOURCES

Question 1: Please state your name, professional qualifications and educational background.

Response 1: My name is Mark Paez. A copy of my resume is attached thereto as Exhibit A. I am a Planner for the Planning and Development Division of the Port of San Francisco. I am the Port's historic resource specialist, project coordinator for the creation of the Northern Waterfront National Register Historic District, the Port's liaison to the State Historic Preservation Office (SHPO) and the National Park Service and the Port's overall day-to-day coordinator for issues involving the proposed Potrero Unit 7 power plant. Prior to joining the Port, I was a Preservation Planner for the San Francisco Planning Department and Secretary to the San Francisco Landmarks Preservation Advisory Board. I have also served as an Associate Planner for the Planning and Community Development Department of the City of Berkeley and a Planning Technician for the City of Sausalito.

I earned a Bachelor's degree in City and Regional Planning at Sonoma State University.

Question 2: What is the purpose of your testimony?

Response 2: The purpose of my testimony is to respond to specific questions raised during the Cultural Resources evidentiary hearings on July 22 and 23, 2002.

Question 3: Were you in the hearing room on July 22 and 23, 2002 during the Cultural Resources evidentiary hearings?

Response 3: Yes.

Question 4: Have you reviewed and are you familiar with the written testimony of all the previous cultural resources witnesses and the transcripts from the July 22 and 23, 2002 Cultural Resources evidentiary hearings?

Response 4: Yes.

Question 5: What is the status of the designation of Pier 70 as a historic district?

Response 5: In preparation of the Port's Waterfront Land Use Plan, the Port retained two historic resource consultants to evaluate the historic resource potential of Pier 70. This evaluation resulted in a finding that Buildings 101, 102, 104 & 113/114 on Pier 70 are individually eligible for the National Register and that the entire Pier 70 area is an eligible historic district.

In 1989, the Federal Emergency Management Agency (FEMA) and the SHPO made similar findings in response to FEMA's determinations of the seismic repair that was required after the 1989 Loma Prieta earthquake in San Francisco.

In 2001, the Port participated in the San Francisco Planning Department's preparation of a Central Waterfront Cultural Resource Survey which reevaluated the Port's historic resources at Pier 70. The survey validated the previous studies and findings regarding the eligibility of Pier 70 resources for listing on the National Register.

In 2001, the Port issued a request for proposal (RFP) for the development of the Pier 70 Mixed-Use Opportunity Area and, with the assistance of the Pier 70 Citizen's Advisory Group, included goals and objectives in the RFP that called for the rehabilitation of historic resources to the United States Secretary of the Interior standards for the treatment of historic properties.

In summary, although the Pier 70 Area is not formally designated as an historic district, the Port treats the area as an historic district in its Pier 70 interim use, leasing, land use and planning activities, including environmental review pursuant to the California Environmental Quality Act (CEQA).

However, due to the decline in the Bay Area economy and the feasibility of proposals the Port received in response to the 2001 RFP, the Port has decided to engage in a comprehensive planning process for the entire Pier 70 area that may better position the Port to optimize development opportunities when there is an upturn in the Bay Area economy. The Port therefore has determined that it is not be prudent to utilize its limited resources to formalize the Pier 70 historic district at this time.

Question 6: What is the status of the designation of Dogpatch as a historic district?

Response 6: An ordinance designating the Dogpatch Historic District has been introduced by three members of the San Francisco Board of Supervisors and pursuant to Section 1004 of the San Francisco Planning Code has been referred to the Planning Commission and the Landmarks Preservation Advisory Board for approval.

Question 7: What is the status of the Central Waterfront Cultural Resources Survey?

Response 7: The Central Waterfront Cultural Resources Survey was endorsed by the San Francisco Planning Commission on June 13, 2002 by Motion No 16300, which is attached hereto as Exhibit B.

Question 8: During the Cultural Resources evidentiary hearing in July 2002, witnesses for CCSF indicated that there should be a Potrero Point Historic District. What is the status of this proposed District?

Response 8: The Pier 70 Citizen's Advisory Group has enlisted the San Francisco Landmarks Preservation Advisory Board to review and incorporate the data, findings and recommendations related to the proposed Potrero Point Historic District into the Central Waterfront Cultural Resources Survey for recognition and use in the historic preservation work of the Landmarks Preservation Advisory Board.

Question 9: During the Cultural Resources evidentiary hearing in July 2002, witnesses for CCSF indicated that an appropriate mitigation for the proposed destruction of the cultural resources on the Potrero Power Plant site would be a contribution toward the retrofit of Building 113 on Pier 70. For the continued evidentiary hearings, the Port of San Francisco was asked to have an estimate of the cost to rehabilitate Building 113 to the United States Secretary of the Interior standards for the seismic rehabilitation of historic resources. What is the estimated cost of the rehabilitation of Building 113?

Response 9: In January 2002, URS prepared for the Port of San Francisco a document entitled "Seismic Evaluation and Concept Level Retrofit Design for Building 113 at Pier 70, San Francisco." URS estimated that the construction cost to make the improvements necessary to comply with the San Francisco Building Code was $7,284,710. The cover letter and introduction to the report, the seismic evaluation section of the report (pages 20-28) and the cost summary are attached hereto as Exhibit C.

Question 10: Does this complete your testimony?

Response 10: Yes it does. Thank you.

Executed on November 27, 2002

Mark R. Paez

Mark R. Paez

Education: Sonoma State University, B. A. City & Regional Planning, 1985

April 2000 – Present, Port Planner, Planning & Development Division, Port of San Francisco

- Serve as the Port's Historic Resource Technical Specialist
- Project Coordinator for the preparation of a Northern Waterfront Historic District National Register of Historic Places nomination
- Act as the Port's liaison to the State Office of Historic Preservation and San Francisco Preservation community
- Pier 70 Citizens Advisory Group Coordinator
- Port representative for the Potrero Power Plant project
- Project Coordinator for Fish Alley Study Area Historic Resources Evaluation and Design Recommendations Report

September 1990 to April 2000, Preservation Planner, Neighborhood Planning Division, San Francisco Planning Department

- Served as the Secretary to the Landmarks Preservation Advisory Board
- Responsible to coordinate the entitlement process for development project and Landmarks Board review and approval
- Served as the Section 106 Federal Historic Preservation review and consultation coordinator for The Mayor's Office of Community Development and the Planning Department for the City's administration of the Community Development Block Grant
- Affordable Housing Policy Development Coordinator
- Staff Planner at the public Planning Information Counter and conducted building permit review

September 1985 to August 1990, Associate Planner, Zoning Division, Berkeley Planning and Community Development Department

- Secretary to the Landmarks Preservation Commission
- Staff Planner South Berkeley Neighborhood Planning Team
- Processed all development projects requiring entitlements from the Landmarks and Planning Commission's as well as the City Council
- Provided public information at the Zoning Information Counter
- Represented the Landmarks Commission and Department on all local, state and federal historic preservation matters

June 1983 to August 1985, Planning Technician, Planning Department, City of Sausalito

- Reviewed and analyzed development permit applications for the Department and presented reports and recommendations to the Planning Commission and City Council
- Conducted residential and commercial rezoning studies
- Participated in the preparation of environmental review documents
- Drafted the City's Second Unit Ordinance

May 1982 to June 1983, Graphic Technician, Environmental Science Associates, San Francisco

- Assisted Cartographer in the preparation of graphic and maps for environmental impact reports and planning documents
- Managed the firm's resource document and map library
- Coordinated report reproduction and printing

Exhibit A

SAN FRANCISCO

PLANNING COMMISSION

MOTION NO. 16300

ADOPTING FINDINGS RELATED TO THE ENDORSEMENT OF THE CENTRAL WATERFRONT CULTURAL RESOURCE SURVEY AND DRAFT CONTEXT STATEMENT, AND THE DOGPATCH CULTURAL RESOURCE SURVEY AND CONTEXT STATEMENT.

Preamble

In October 2000, the City and County of San Francisco, through the San Francisco Planning Department, accepted a $15,000 grant to partially fund an historic resource survey in the Central Waterfront area. Located within the larger Central Waterfront survey boundaries is the Dogpatch neighborhood, which was surveyed separately. The Certified Local Government (CLG) agreement between the City of San Francisco and the California Office of Historic Preservation dated August 18, 1995, requires the CLG to "Maintain a system for the survey and inventory of historic properties."

Between October 2000 and October 2001, the Planning Department, working with the Dogpatch Neighborhood Association, San Francisco Architectural Heritage and Page and Turnbull, Architects, have jointly developed the Central Waterfront Cultural Resource Survey and Draft Context Statement, and the Dogpatch Cultural Resource Survey and Context Statement.

Both the Central Waterfront and Dogpatch Context Statements describe the boundaries of the survey area, historic themes and time periods, property types found in the area, and the goals and priorities of the survey, which justify its endorsement. Both surveys were conducted according to the California Office of Historic Preservation's *Instructions for Recording Historic Resources* and the National Register of Historic Places criteria and methodology, as identified in National Register Bulletin No. 24, *Guidelines for Local Surveys.* Both surveys employed California Department of Parks and Recreation Survey Forms (DPR 523A and 523B) on resources within the survey boundaries.

The Central Waterfront and Dogpatch Cultural Resource Surveys are the first phase of a multi-year effort to document resources found in neighborhoods throughout San Francisco through the Planning Department's Citywide Cultural Resources Survey Program.

In September 2000, Planning Department staff gave informational presentations to both the Planning Commission and the Landmarks Preservation Advisory Board on the concept of a cultural resource survey, with specific information on the Central Waterfront and Dogpatch Cultural Resource Surveys also provided.

In August and September 2001, property owners within the survey boundaries were notified of their property's inclusion, provided with DPR 523A and 523B -- descriptive and evaluative survey forms relating to their property -- and were given 30 days to comment on the survey findings. To date, the Planning Department has received 10 inquiries from property owners, with two objections to the survey results received. Those resources, 3201 3rd Street and 651 Illinois, have been held out of the Central Waterfront Cultural Resource Survey endorsement process for further study, but will return to the Landmarks Board and Planning Commission for future endorsement.

Through historical research and photographs, the Central Waterfront Cultural Resource Survey documented 140 buildings, structures, sites and objects found within the following boundaries (excluding the Dogpatch neighborhood): 16th Street to the north, Interstate 280 to the west, Islais Creek to the south and San Francisco Bay to the east, Block/Lots: Block 3941; 3942/2, 3; 3943/3; 3944/4; 3992/2; 3994/1B, 1C, 2, 3; 3995/7, 15; 3996/ 4-6, 15, 18; 3997/3; 3998/17-18; 4042/2; 4043/12A, 13, 16; 4044/2A, 2-4; 4045/2; 4046/1; 4052/1; 4058/5, 9-10; 4059/1A, 1B, 1C, 2B, 9; 4105/9; 4108/3, 3A, 3B, 3D, 3F, 3J, 3M, 3N, 3O, 3R; 4109/1; 4111/1; 4172/3-5, 7, 15-16, 18-21; 4173/1; 4227/31; 4228/10; 4229/2-4; 4231/2; 4241/2-4; 4244/3-4; 4245/1-2; 4246/1; 4247/2; 4296/5; 4310/3; 4314/1A; 4316/2; 4352/7; 4353/9; 4355/6; 4357/3; 4358/7, 9; 4377/1; 4378/6; 9900/1, 68, 70, 84.

The Central Waterfront Draft Context Statement provides a history of San Francisco's Central Waterfront area, which includes the San Francisco Yard/Pier 70. The San Francisco Yard is one of San Francisco's earliest industrial complexes and is important nationally for production of military vessels for the Spanish American War, World War I and World War II.

Through historical research and photographs, the Dogpatch Cultural Resource Survey documented 123 buildings and structures found within the following boundaries (separate from the Central Waterfront Cultural Resource Survey): Minnesota and Tennessee Streets, odd and even addresses, from 18th Street to Tubbs Street, Blocks/Lots: 3996/4; 4043/1, 5-7, 9-14, 17; 4060/15; 4106/1-3, 14-16, 2E, 2F, 2G, 2L, 2M, 2O, 25; 4107/1-21, 2H, 5A, 9A, 11B; 4108/1-5, 12-15, 18-19, 1B, 2A, 2B, 2C, 2I, 2J, 2K, 2N, 3C, 3E, 3G, 3H, 3O, 3P, 14A; and 4171/2-3, 6-11, 34, 34B, 36; 4172/2, 4, 5, 6, 11, 13, 18, 25, 27-29, 32, 35, 011B, 018A, 031, 032.

The Dogpatch Context Statement provides a unique history of San Francisco's Dogpatch neighborhood. It finds the Dogpatch neighborhood significant as the oldest and most intact surviving concentration of industrial workers' housing in San Francisco.

Findings

Having reviewed all the materials identified in the recitals above, and having heard oral testimony and arguments, this Commission finds, concludes and determines as follows:

1. The Central Waterfront and Dogpatch Cultural Resource Survey information will be used by the Planning Department to:

a. Review building permit applications. Prior to the issuance of a building permit for work to be performed on a resource located within the boundaries of an adopted or endorsed cultural resource survey the Neighborhood Planning Unit, in consultation with a Planning Department historic preservation technical specialist, will review how the proposed work will impact the surveyed property.

b. Review projects under the California Environmental Quality Act (CEQA). CEQA requires evaluation of the potential for adverse impacts on historical resources eligible for listing in the California Register of Historical Resources. Such analysis would generally entail identification of the resource, description of the character defining features which make the resource historic, analysis of the potential adverse effects from a proposed alteration to or demolition of the resource, and, where appropriate, potential measures to reduce or avoid impacts to the resource.

c. Review projects under Section 106 of the National Historic Preservation Act. Under Federal Section 106, public agencies whose project sponsors are required to determine whether a proposed "undertaking" is a type of activity that could affect historic resources eligible for listing or included in the National Register of Historic Places.

2. The Central Waterfront and Dogpatch survey findings will increase property owner's potential eligibility for tax credits, grants and other preservation incentives by facilitating nomination of significant resources to local, state and national historic registers.

3. Survey findings will make it possible for property owners to request that the provisions of the State Historic Building Code, a performance rather than a prescriptive-based code that promotes a more sensitive approach to the renovation and preservation of historic structures, be applied to any project for the preservation of existing character-defining features and historic fabric and materials, on both the interior and exterior of the structure.

4. The Central Waterfront and Dogpatch survey findings may aid in the protection of historic resources located within the survey boundaries if resources are designated as landmarks or an historic district through the provisions of Article 10 of the Planning Code.

5. Survey findings will assist the Planning Department with the on-going creation of a specific plan for the Central Waterfront area and the Dogpatch neighborhood as a component of the City's Better Neighborhoods 2002 project because they provide information regarding architectural and historic resources.

6. The Central Waterfront Cultural Resource Survey and the Dogpatch Cultural Resource Survey will be forwarded to the California Office of Historic Preservation for inclusion in the California Historical Resources Information System (CHRIS) – the State's official database of historic resources.

7. The Landmarks Preservation Advisory Board (Landmarks Board), at its regular meeting of October 17, 2001, reviewed the Dogpatch Cultural Resource Survey forms and Context Statement and reviewed correspondence and heard oral testimony on matters relevant to the endorsement of the Dogpatch Cultural Resource Survey and Context Statement. The Landmarks Board recommended that the Planning Commission adopt a motion endorsing the Dogpatch Cultural Resource Survey and Context Statement, pursuant to Article 10 of the Planning Code, by Landmarks Board Resolution #545.

8. The Landmarks Board, at its regular meeting of December 5, 2001, adopted Resolution #549, establishing procedures under which a property owner may request a review of the survey findings related to his or her property, and under which those findings may be amended through recommendation by the Landmarks Board and approval of the Planning Commission to reflect additional information presented by the property owner.

9. The Landmarks Board, at its regular meeting of December 5, 2001, reviewed the Central Waterfront Cultural Resource Survey forms and Central Waterfront Draft Context Statement and reviewed correspondence and heard oral testimony on matters relevant to the endorsement of the Central Waterfront Cultural Resource Survey and Central Waterfront Draft Context Statement. The Landmarks Board recommended that the Planning Commission adopt a motion endorsing the Central Waterfront Cultural Resource Survey and Draft Context Statement, *with the exception of 3201 3rd Street and 651 Illinois,* pursuant to Article 10 of the Planning Code, by Landmarks Board Resolution #548. Those resources, 3201 3rd Street and 651 Illinois, have been held out of the Central Waterfront Cultural Resource Survey endorsement process for further study, but will return to the Landmarks Board and Planning Commission for future endorsement.

10. The Landmarks Board, at its regular meeting of December 5, 2001, recommended that a global clarification on the assessment of physical condition on all surveyed resources be added that reads: *Information on the apparent physical condition of surveyed resources is not meant to suggest actual structural integrity.*

11. The Planning Commission at its regular meeting of December 13, 2001, heard public testimony from the San Francisco Port Commission and received Port Commission Resolution No. 01-99, which requests: "Therefore, (Port) staff recommends that the

survey forms for all Port-owned resources be modified to include the following standard qualification statement: *This building condition information is subject to confirmation following a detailed analysis of the resource by a licensed structural engineer."*

12. After consultation with the California Office of Historic Preservation and Port staff, the Planning Department has elected to remove physical condition from the Central Waterfront survey forms (excluding the Dogpatch Survey forms), because physical condition is not a requirement of the survey, or the CLG agreement by the state and the City and County of San Francisco.

Relevant Planning Code

Article 10, Section 1002(b)(1) authorizes the Planning Department and the Planning Commission to carry out, assist and collaborate in studies and programs designed to identify and evaluate structures, sites and areas worthy of preservation. A complete inventory of important cultural resources has been identified as Objective One in the Draft Preservation Element of the General Plan (dated June 2001).

DECISION

That based upon the Record, the submissions by the staff of the Planning Department and other interested parties, the oral testimony presented to this Commission at the public hearing, and all other written materials submitted by all parties, the Planning Commission hereby **ENDORSES** the Dogpatch Cultural Resource Survey (California Department of Parks and Recreation Survey Forms DPR 523A and 523B) and Context Statement, with the exception of 1155-1163 Tennessee and moved to endorse the Central Waterfront Cultural Resource Survey (California Department of Parks and Recreation Survey Form DPR 523A) for all resources contained within the Central Waterfront survey boundaries, and Draft Context Statement, with the exception of 3201 3rd Street, 651 Illinois, 590 Minnesota, 690-698 Minnesota, and 2085 Third Street and that it hereby **DIRECTS** that the findings of both surveys be forwarded to the California Office of Historic Preservation for inclusion in the California Historical Resources Information System (CHRIS); and that the findings of both surveys be incorporated into the Planning Department database for use in reviewing building permit applications, as well as all other Planning Department actions.

I hereby certify that the foregoing Motion was ADOPTED by the Planning Commission on December 13, 2001.

Linda D. Avery
Commission Secretary

AYES: Theoharris, Chinchilla, Fay, Joe, Lim, Salinas

NOES: None

ABSENT: Baltimore

ADOPTED: **December 13, 2001**
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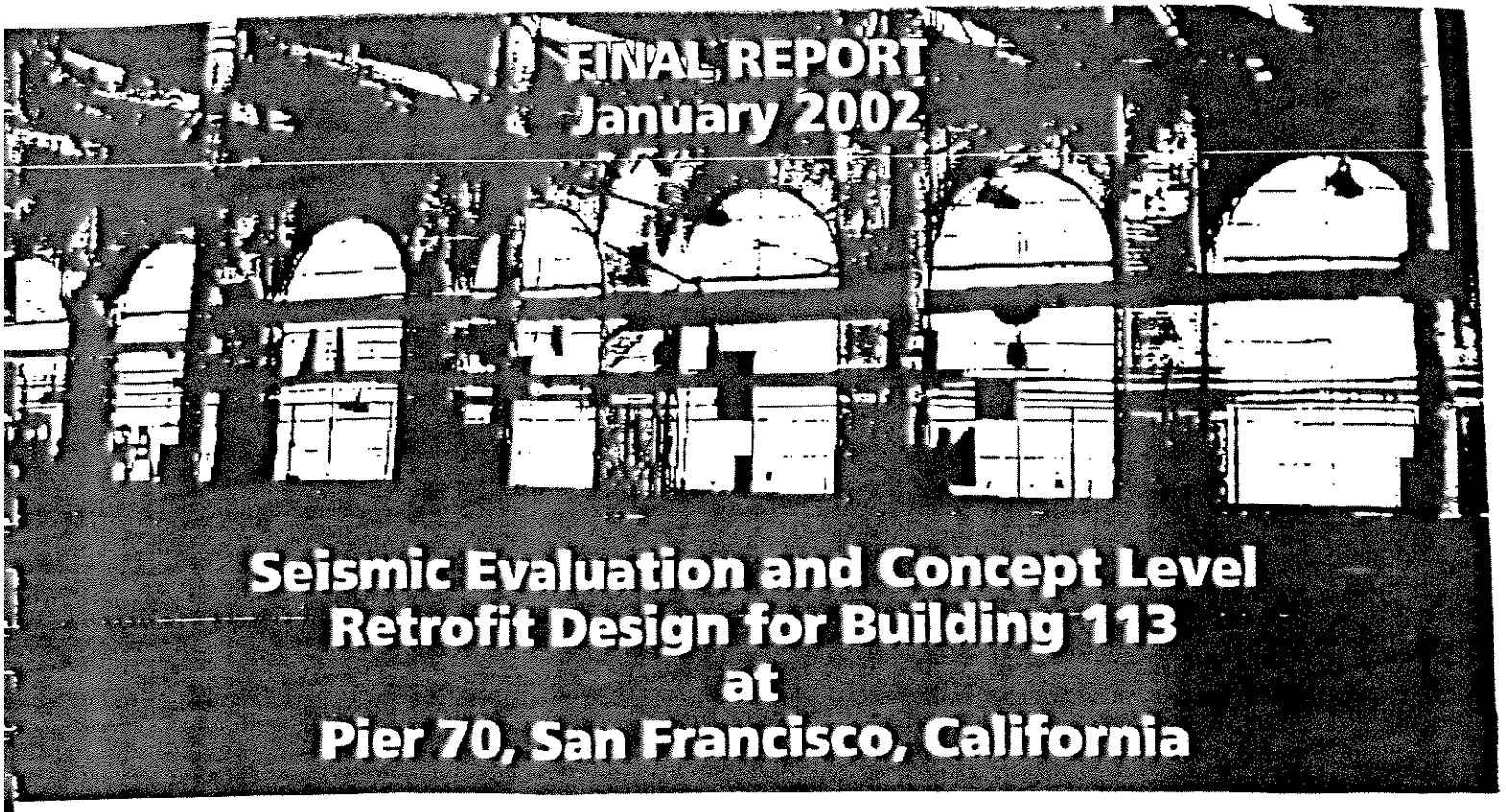
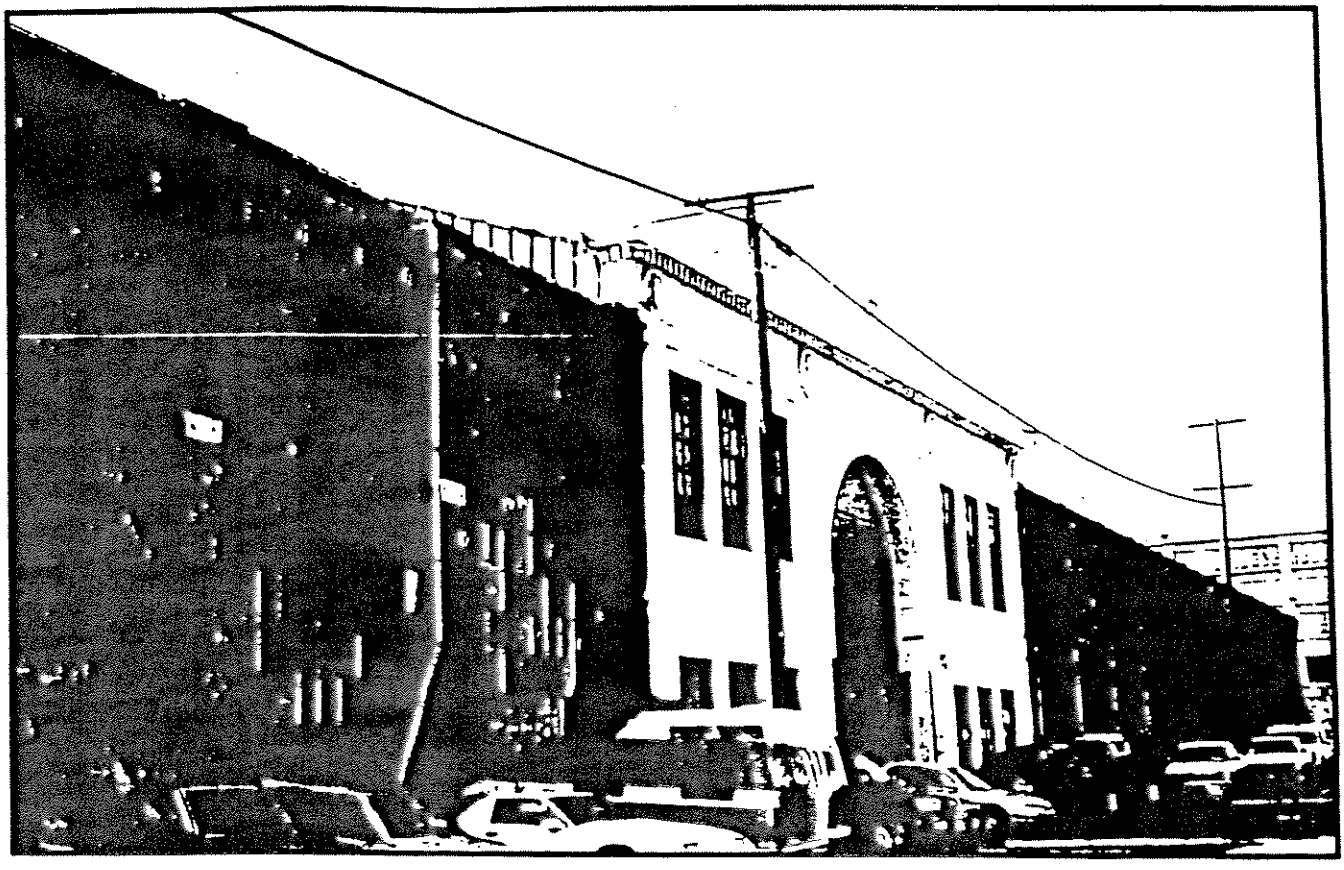


FINAL REPORT
January 2002

Seismic Evaluation and Concept Level Retrofit Design for Building 113 at Pier 70, San Francisco, California



Prepared By:

URS
221 Main Street, Suite 600
San Francisco, CA 94105-1917
415.896.5858
www.urscorp.com

Prepared For:

Exhibit C

PORT OF

URS

January 14, 2002

Mr. Edward Byrne, S.E.
Senior Civil Engineer
Port of San Francisco, Pier 1
San Francisco, CA 94111

RE: Seismic Evaluation and Concept Level Retrofit Design for Building 113, Pier 70, San Francisco, California

Dear Edward:

URS is pleased to submit two copies of the seismic evaluation report for Building 113 at Pier 70, San Francisco, California.

The results of our study revealed that the existing building has several specific weaknesses, each of which would prevent the building from meeting the Life Safety Performance Level that is explicit in the requirements of Chapter 16C of the San Francisco Building Code. The deficiencies are as follows:

1. The building does not contain a complete load path for seismic forces in both the horizontal directions to transfer the inertial forces from the building mass to the foundation.

2. The south end of the building shares a common wall with Building 116.

3. Existing brick piers were found to be overstressed for code-level seismic forces.

4. The out-of-plane wall anchorage of the brick bearing walls is inadequate.

5. The height-to-thickness ratio of the one-story brick bearing walls exceeds the allowable values given in Table 16C-B of the San Francisco Building Code.

6. In approximately 20 percent of the brick surface area, both the inside and outside have eroded mortar joints, and would require repointing. Also, at several locations above windows, diagonal cracks larger than 1/8 inch were detected.

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105-1917
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Fax: 415.882.9261

7. The existing wall footing along Column Line A has failed. The existing soil beneath the middle portion of the building has a potential for liquefaction, due to the weak fill layer.

The proposed strengthening scheme to compensate for the above deficiencies consists of strengthening the existing brick bearing walls with a layer of shotcrete, and developing an adequate load path to resist seismic forces. The estimated construction cost for these improvements is $7,284,710; details of this estimate are provided in Appendix F. Note that the above construction cost does not include design, construction management or inspection costs but does include a 25 percent design contingency.

If you have any questions, please contact me at (415) 243-3710.

Sincerely,

Joseph Baldelli
Project Manager

URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105-1917
Tel: 415-896-5858
Fax: 415-882-9261

1.0 INTRODUCTION 1

1.1 Purpose 1
1.2 Building Description 1
1.3 Vertical-Load-resisting System 2
1.4 Lateral-Load-Resisting System 3
1.5 Existing Soil and Foundation Conditions 3
1.6 Building Description 4
1.7 Purpose 5

2.0 SEISMIC EVALUTAION OF EXISTING BUILDING 20

2.1 Evaluation Procedure 20
2.2 Results of Evaluation 20
2.3 Summary of the Evaluation Results 23

3.0 RECOMMENDED REHABILITATION 24

3.1 Rehabilitation Design Criteria 24
3.2 Improved Load Path 25
3.3 Brick Perimeter Walls are Overstressed 26
3.4 Rebuild the Wall-to-Diaphragm Connections 27
3.5 Develop Collectors and Continuity Members 27
3.6 Separate Building 113 from Building 115 27
3.7 Non-Structural Summary 28

APPENDICES

A **Geotechnical and Foundation Report**

B **Results of In-Place Shear Tests**

C **Rehabilitation Drawings**

D **Hazardous Material Report**

E **Accessibility and Life Safety Study**

F **Construction Cost Estimate**

G **Structural Calculations**

1.0 INTRODUCTION

1.1 Purpose

The Port of San Francisco has retained URS to conduct seismic evaluations, and if necessary, prepare concept-level retrofit designs for two buildings at Pier 70 in San Francisco, California. This report presents the findings of URS' evaluation of Building 113 at Pier 70, and delineates the proposed concept-level retrofit design. A cost estimate for this strengthening scheme is provided in Appendix F of this document.

An additional purpose of this report was to determine if any existing hazardous material would be effected by the proposed strengthening design, and to review the existing building for code requirements with regard to life safety requirements related to egress and accessibility. Costs to remove or encapsulate existing hazardous material or the needed upgrade to meet life safety and accessibility requirements are included in the construction cost estimate.

Chapter 16C of the 1998 San Francisco Building Code contains the criteria used for the seismic evaluation. For the strengthening design, new members will be designed for 75 percent of the force requirements of Sections 1626 through 1634 of the 1997 Uniform Building Code (UBC). The life safety and accessibility study also followed the requirements of Chapter 16C of the 1998 San Francisco Building Code.

1.2 Building Description

Building 113 is a composite of three separate structures built over a period of 30 years. The three structures will be referred to in the report as Buildings A, B, and C and are shown in plan in Figure 1. Building A (Column Lines 15 through 26 and A through D) was constructed in 1885, and is approximately 200 feet by 134 feet in plan. Building A was originally constructed as a one-story industrial building, and was supported by four brick bearing walls along its perimeter. Along the longitudinal direction, walls were approximately 32 feet high and 22 inches thick, and supported roof trusses at approximately 18 feet on center. Large arch windows, 12 feet by 20 feet, are spaced between the roof trusses. Two lines of cast iron columns support the roof trusses in the center of the building at Column Lines B and C. Besides supporting the roof trusses, each line of columns also supports a continuous 3-foot-deep plate girder, which in turn supports a 50-ton bridge crane. The continuous plate girders are supported laterally by a series of wood bracing members connected to a parallel bearing wall. The roof is constructed of corrugated metal decking and is braced with a series of diagonal rod bracing in the top chord of the roof trusses. The rod bracing is shown in Figure 2, and a typical building section between Column Lines A and D is shown in Figure 3.

Building C was constructed one year after Building A. Similar to Building A, Building C was a separate structure with brick bearing walls around its perimeter. Building C differs

from Building A in that it is larger and was constructed with two additions. These additions are located between Column Lines F and D, and are shown on Figure 3. Building C also has a mezzanine that runs the full length of the building, and is located between Column Lines A and B. Building C, like Building A, was built to service the ship yard as a machine shop, a building function that remains in operation today.

In 1914, Buildings A and C were joined to form one structure by the addition of a new structure (Building B). This was accomplished by removing the east end wall of Building C and the west wall of Building A. The two building were then joined with a new structure that tied the three structures into one building: Building 113. The bridge crane girders on Column Lines B and C are now continuous through all three structures. Building B was constructed with reinforced concrete bearing walls on its north and south sides, with truss frames spanning between these walls. The exterior wall elevations of Buildings A, B, and C combined are shown in Figures 4, 5, and 6.

In 1917, the Foundry Building, Building 115, and the Maintenance Shop, Building 116, were constructed adjoining Building C. During construction of these two reinforced concrete buildings, the brick bearing wall at Column Line F was removed and new steel columns were installed to support the roof trusses. Later, these columns were encased in a reinforced concrete wall that consequently made Building 113 grow to now include Buildings 115 and 116, as well. In an earthquake, these combined buildings would resist seismic forces as one structure.

1.3 Vertical-Load-Resisting System

The vertical-load-resisting system for Building 113 includes the perimeter bearing walls and four lines of interior columns. The perimeter bearing walls of the older 1885-era buildings (Buildings A and C) are constructed of unreinforced brick, while the newer (1917) addition walls, on Column Lines A and D, are constructed of reinforced concrete. Interior columns are either cast iron or rolled steel shapes, and support the roof structure and the crane ways for seven bridge cranes ranging in size from 5 to 50 tons each.

The roof structure is corrugated metal deck spanning 6 feet to 8-inch wide-flange roof purlins. Roof purlins are supported on steel roof trusses that are spaced at approximately 18 feet on center. Roof trusses, as shown in Figure 3, are constructed of light 6-inch channels and ¾-inch-diameter rods (the bottom chords are rods). The roof trusses were apparently designed to resist dead-load forces only. The corresponding roof trusses in the newer Building B portion were constructed of double angles, and are capable of resisting both dead-load forces and lateral-load forces.

On Column Line F, a common wall shares the vertical loads from both the adjacent 1917 addition and the tributary roof weight of Building 113 between Column Lines F and E.

1.4 Lateral-Load-Resisting System

The building resists earthquake forces as a box-type system. The perimeter bearing walls are shear walls that transfer roof diaphragm shear forces into the ground. The capacity of the lateral-load-resisting system is limited by both the strength of its elements and the completeness of its load path. Unfortunately, Building 113 has a compromised load path, because the existing roof diaphragm is not continuous between lateral-load-resisting members. The roof diaphragm is interrupted with continuous skylights that run parallel with the roof ridge and transverse to the roof ridge at Column Lines 12 and 15. At these interruptions, there is a lack of bracing to transfer diaphragm shear forces. Besides the lack of bracing at the interruption in the roof diaphragm, the existing rod bracing is placed in an incomplete orientation for transferring roof diaphragm shear forces (see Figure 2). Without a complete load path, distribution of roof shear forces to shear resisting elements cannot be expected, and the true performance of the building during a large earthquake cannot be predicted.

1.5 Existing Soil and Foundation Conditions

As stated in Appendix A, the subsurface conditions under Building 113 consist of 9 to 12 feet of old fill. This material consists primarily of decomposed serpentine rock. Portions of the fill are expected to be quite porous and probably contain large voids. The fill is underlain by a 5- to 10-foot-thick layer of soft clayey Bay deposits. Stiff clays and/or rock formations underlie the soft Bay deposits.

The bedrock in the east side of Building 113 is at a depth of about 7 feet, and the depth to bedrock significantly increases in the west side of the building. The bedrock depth under the west side of the building is estimated to be greater than 50 feet.

Two test pits were dug as part of this investigation. The existing bearing walls are supported on a brick/concrete and stone block footing. The columns that support the continuous crane-ways on Column Lines B, C, D, and E are also supported on isolated concrete pedestal footings. See Appendix A for a full description of the existing foundation system as determined from the two test pits.

1.6 Sources of Information

Information used for this report was obtained from several site visits, as well as from a review of the following documents furnished by the Port of San Francisco:

1998 — Site Plan and Vicinity Map, Figure 2, Tetra Tech Source.

Rev. 1986 — Lease Drawing – Mariposa Street to 25th St., Drawing No. 9672 Port of San Francisco.

Feb. 1973, Rev. June 1979 — Floor Plan and Transverse Sections, General Data, Utility Service, Entrance and Legend, Sheet 1 of 3, Bethlehem Steel Co.

Feb. 1976, Rev. June 1979 — Floor Plan West Section, Machine Tool and Crane Schedule, Drawing 11215-70-1, Sheet 2 of 3,Bethlehem Steel Co.

Feb. 1976, Rev. Nov. 1977 — Floor Plan East Section, Machine Tool and Crane Schedule, Drawing 11216-70-1, Sheet 3 of 3, Bethlehem Steel Co.

Feb. 1945, Rev. June 1979 — Buildings 114,115, 116, and 117, Floor Plan, General Data, Tools and Equipment and Utilities, Sheet 1of 2, Bethlehem Steel Co.

Feb. 1945, Rev. Nov. 1976 — Buildings 114,115, 116, and 117, Longitudinal and Transverse Sections, Sheet 2of 2, Bethlehem Steel Co.

1.7 Photographs and Figures of Existing Building

List of Photographs

1. Building North Elevation
2. Building West Elevation
3. Building East Elevation
4. Inside Building between Column Lines B and C, Looking East
5. Inside Building between Column Lines B and C, Looking West
6. Column Line D, Looking West
7. Column Lines D and 12, at Location of Proposed New Concrete Shear Wall
8. Roof Framing between Column Lines B and C, Looking East
9. Thirty-Ton Bridge Crane
10. Existing Crane Girder Bracing between Column Lines A and B, Looking West
11. Mezzanine between Column Lines A and B, Looking West
12. Between Column Lines E and F, Looking West

List of Figures

1. Existing Ground Floor Plan (S-1)
2. Existing Roof Plan (S-3)
3. Building Section (S-4)
4. Exterior Building Elevations (S7.1)
5. Exterior Building Elevations (S7.2)
6. Exterior Building Elevations (S7.3)

2.0 SEISMIC EVALUATION OF EXISTING BUILDING

2.1 Evaluation Procedure

Building 113 is an unreinforced masonry bearing wall building. The owner, Port of San Francisco, is required by Section 1604B of the 1998 San Francisco Building Code to commission a registered civil or structural engineer or licensed architect to analyze the existing building within the scope of Chapters 16B and 16C of the same code. URS was directed to perform the structural analysis according to the provisions of the above chapters.

The required analysis, and if necessary, recommended retrofit design, must meet the minimum acceptance criteria as stated in Chapter 16C, and listed in detail in Table 16C-A. In Table 16C-A, each of the elements of the existing (or modified) building lateral-load-resisting system must meet the limitations of designated sections of Chapter 16C. Table 16C is also divided into four evaluation / design procedures. Building 113 was analyzed using the requirements of the General Procedure. This procedure was appropriate for this building because of the complexity of the building and the absence of a wood diaphragm.

In the analysis, the code requires that the in situ brick shear be established by field testing, as defined in Section 1607C. This was done, and the results of those tests are presented in Appendix B. Also, since drawings of the existing foundation system are not available, test pits were needed to determine the composition and configuration of the existing foundation. This was also done, and the results of these explorations are presented in Appendix A. In both testing programs, the results were used in the evaluation detailed in the following section.

2.2 Results of Evaluation

The results of the evaluation are listed below per line item of Table 16C-A. Note that evaluation calculations are given in pages 2 through 41 of Appendix G.

Masonry Shear Strength (Section 1606C.3.3)

In situ brick shear tests were required per Section 1606C.3.3. The in situ shear tests were performed by Signet Testing Labs at 16 locations, and are a fair representation of the mortar strength throughout the entire building. The location of the 16 tests and the recorded bed joint shear strengths are given in the Signet report in Appendix B, and are also listed in Calculation Sheets 5 and 6. The recorded mortar shear strengths varied from a low of only 21 psi to a high of 297 psi. At two of the 16 locations, the recorded shear strengths were less than the code minimum of 30 psi; at those locations as well as at approximately 20 percent of both the inside and outside surface of the total brick walls, either removal or repointing will be required, according to provisions of Section 1606C.3.3.4.

The average mortar shear strength (v_t) was calculated as 31.5 psi, and the resulting allowable shear strength was approximately 6 psi. The results varied depending on the height of brick wall above. See Sheet No. 4 of the calculations.

Diaphragms (Section 1610C.1)

The minimum design lateral forces assumed to be resisted by the roof diaphragm were calculated using Equation 16C-3. The calculated diaphragm shears are given in Calculation Sheet 8. The roof diaphragm shear force, assuming a continuous diaphragm, would be a maximum of approximately 400 plf at the building east wall. The allowable shear value of the existing roof diaphragm, at most, would only be 100 plf. This result is misleading, since the roof diaphragm is not continuous, nor is it reinforced with an adequate network of rod bracing in the plane of the roof diaphragm. What is important is that the retrofit scheme must include a new bracing system to withstand at least these forces.

Diaphragm Shear Transfer (Section 1613C.2)

In Section 1613C.2, the minimum spacing is 6 feet on center, and must be capable of transferring the in-plane shear forces into the perimeter bearing walls. The existing through-bolts are not shear transfer bolts, but bolts to anchor the wall for out-of-plane forces. It is unlikely that the existing through-bolts for the timber bracing system can transfer the required shear force.

Chords (Section 1611C.4)

This Section refers to buildings with wood diaphragms. Building 113 has a metal diaphragm; consequently, this section does not apply.

Collectors (Section 1613C.3)

There are no collectors in the building that transfer seismic forces to shear resisting elements.

Analysis of Vertical Elements (Section 1612C)

As calculated in Sheet No. 19 of the Calculations, the west end wall and the wall on Column Line 12 were controlled by shear and were found to be overstressed. These two walls will need to be strengthened.

Shear Walls (Sections 1610C.3)

Brick bearing walls on Column Line A, below the mezzanine and the west end wall, were calculated to be overstressed, as summarized in Sheet No. 28 of Calculations. Both walls will need to be strengthened.

Out-of-Plane Wall Anchorage (Section 1613C.1)

The existing timber bracing system between Column Lines A and B and between C and D was apparently intended to provide lateral bracing to the overhead crane girders. The effectiveness of the timber bracing to provide out-of-plane bracing for the exterior walls on Column Lines A and D is questionable, because the resisting elements would be the walls on Column Lines 1 and 26. The exterior walls on Column Lines 1, 12, and 26 currently have no provisions for out-of-plane bracing.

Ties and Continuity (Section 1613C.4)

The building lacks ties and continuity members to act as collectors for tying the building together.

Wall Bracing (Section 1613C.5)

The allowable values-height-to-thickness ratios of all the perimeter walls exceed the allowable values as shown in Sheet No. 37 of the calculations. The walls will need to be either braced or shotcreted.

Parapets (Section 1613C.6)

There are no parapets in the building; therefore, this section does not apply.

Veneer (Section 1613C.7)

There is no veneer in this building; therefore, this section does not apply.

Nonstructural Masonry Walls (Section 1613C.8)

There are no nonstructural masonry walls in this building; therefore, this section does not apply.

Truss & Beam Supports (Section 1613C.9)

The roof trusses are supported on the masonry bearing walls. The end reactions are not large, and if the walls were shotcreted as part of the retrofit solution, the truss reaction would be carried by the new shotcreted wall.

Adjacent Building (Section 1613C.10)

At Column Line F, both Building 113 (this portion of the existing building is referred to as Building 114) and Building 115 share a common wall; therefore the 5-inch separation requirement would be violated. It is proposed to separate the two buildings and to provide a new line of braced frames adjacent to Column Line F to resist vertical and lateral loads associated with Building 114.

2.3 Summary of the evaluation results

Elements	Section	General Procedure	Evaluation / Summary
Masonry Shear Strength	1606C.3.3	X	v_s = 6.9 psi for wall depth at 30 feet. v_s = 5.15 psi for wall depth at 16 feet.
Diaphragms	1610C.1	X	W_{Trans} = 3097 kips, V_{Trans} =310 kips. W_{Longit}= 3566 kips, V_{Longit} =357 kips.
Diaphragm Shear Transfer	1610C.1 1611C.5 1613C.2	X	There is no diaphragm shear transfer.
Chords	1611C.4	X	There is no wood diaphragm.
Collectors	1613C.3 1611C.4	X	This building lacks collector. Need new collectors for retrofit.
Analysis of Vertical Elements	1612C	X	Walls 4 and 5 (shear controlled mode) need strengthening.
Shear Walls	1610C.3 1611C.6	X	Walls 3 and 4 have D/C ratios exceeding 1.
Out-of-Plane Wall Anchorage	1613C.1	X	This building lacks out-of-plane wall anchorage, which will be addressed in the retrofit scheme.
Ties & Continuity	1613C.4	X	This building lacks ties and continuity. It will be addressed in retrofit scheme.
Wall Bracing	1613C.5	X	The h/t ratios of all walls exceed the allowable. Needs wall bracing for retrofit.
Parapets	1613C.6	X	There is no parapet.
Veneer	1613C.7	X	There is no veneer.
Nonstructural Masonry	1613C.8	X	There is no nonstructural masonry wall.
Truss & Beam Supports	1613C.9	X	This building lacks independent secondary columns, which will be addressed in retrofit scheme.
Adjacent Buildings	1613C.10	X	The h/t ratio for adjacent building exceeds the allowable.

3.0 RECOMMENDED REHABILITATION

3.1 Rehabilitation Design Criteria

The next phase of the evaluation was to design a concept-level rehabilitation scheme that would remove all the deficiencies listed in Section 2 of this report. The cost-efficient design will ensure that the complete building meets the minimum force requirements of Chapter 16 of the 1998 San Francisco Building Code. Section 1605.4.3(5) of Chapter 16 permits a design limit of 75 percent of the 1997 Uniform Building Code (UBC) force level, as defined in Sections 1626 through 1634. The base shear (V_{max}) will be determined from the site-specific geotechnical properties of the site, as well as the physical properties of the building, as shown as in Table 3 below:

Table 3
Design Base Shear

Static Design Base Shear: V_{max}

$V = ((C_v * I)/(R*T)) * W =$	0.300 W	97UBC, Eq. 30-4
$V_{max} = (2.5C_a * I / R) * W =$	0.222 W <-- **Governs**	97UBC, Eq. 30-5
$V_{min} = (0.11C_a * I) * W =$	0.044 W	97UBC, Eq. 30-6
V_{min} (Zone 4) $= (0.8 Z N_v * I / R) * W =$	0.074 W	97UBC, Eq. 30-7

Structural Period, T:

$T = C_t (h_n)^{3/4}$ = 0.43 sec — 97UBC, Eq. 30-8; $C_t = 0.02$; h_n (ft)= 60.00

Base Shear parameters:

Z =	0.4	Seismic Zone 4
Soil Type =	S_C	Soil Type C
Source Type =	A	Type A for San Andrea Fault
Source Distance =	14 km	Closest distance from the Fault
N_a =	1	97 UBC Table 16-S
N_v =	1.04	97 UBC Table 16-T
C_a =	0.4	$C_a = 0.40 N_a$ per 97UBC Table 16-Q
C_v =	0.58	$C_v = 0.56 N_v$ per 97UBC Table 16-R
I =	1	Standard occupancy structure
R =	4.5	R = 4.5 for Concrete Shear Wall per 97 UBC Table 16-N

Per 1998 San Francisco Building Code, Section 1605.4.3 (5), use 75% of Base Shear:
$V_{max} = 0.75 * (2.5C_a * I / R) * W = 0.167$ W for East Side of Building 113

The soil properties vary from the east end of the building to the west end (see Appendix A). Of the two response spectra developed (one for each end), the response spectra for the east side would produce the higher base shear, and is therefore the one used in Table 3 above.

From the Table in Section 2.3, the elements that are deficient can be grouped into five categories that require strengthening:

1. Inadequate load path;
2. Overstressed brick piers;
3. Inadequate wall-to-diaphragm connections;
4. Inadequate out-of-plane bracing;
5. Inadequate collector, ties, and continuity members; and
6. Building 115 shares common wall with Building 113.

Each of the five deficient categories will be corrected in the recommended retrofit scheme detailed below.

3.2 Improved Load Path

A major deficiency in the existing building is the lack of an adequate load path to resist lateral forces throughout the building. Without a defined load path, it is impossible to predict how the building would respond to a major earthquake. To improve the load path, the first step was to develop a defined load path. This was accomplished by construction of a horizontal truss in the plane of the existing crane girders. Currently, the continuous crane girders on Column Lines B and C are supported laterally by a network of wooden diagonals. The proposed new trusses, made up of wide-flange members, would replace the existing wood members. The existing network of wood members is lacking in both continuity and strength to work as a horizontal truss. In addition to the two lines of horizontal trusses between Column Lines A and B and Column Lines C and D, a third horizontal truss will be needed between Column Lines E and F. The new bracing system will extend the entire length of the exterior walls on Column Lines 1, 12, and 26 to provide out-of-plane support for those walls, and to distribute the in-plane shear reaction from the longitudinal trusses.

The new trusses, shown in plan in Drawing SR-2 (Appendix C), and in detail in Drawing SR-9, would transfer north-south lateral forces into the new shear walls on Column Lines 1, 12, 15, and 26. The existing building end walls and Column Lines 1 and 26 will be reinforced with shotcrete so that they can resist the end reactions from the horizontal trusses. In Column Lines 12 and 15, new concrete shear walls will be required. The proposed new walls (two on Column Line 12 and one on Column Line 15) would be 12-inch concrete walls supported on a pile foundation. An elevation of each column line is shown on Drawing SR-8. Note that a system of collector members will be necessary to tie the walls together.

In the building's longitudinal direction, east-west earthquake forces will need to be resisted by a collection of stacked cross braces, as shown in elevation in Drawing SR-6, and in detail in Drawing SR-11. The new cross chevron-braced towers will be connected

to the existing horizontal crane rail girders on Column Lines B, C, D, and E. The connection of the tower and crane girder must be designed to resist lateral forces in the plane of the tower, and not vertical loads. Also, each cross-braced tower will be supported by two drilled caissons, and the new foundation must be separated from the existing footings. The existing rod bracing above the crane rail girders will need to be replaced with structural steel members for the first bay adjacent to Column Lines 1, 12, 15, and 26. The existing rod bracing beyond the first bay is adequate, and need not be replaced.

The existing roof diaphragm needs to be strengthened with new rod bracing in both directions to resist earthquake forces. For the location of the existing and proposed new bracing, see the roof plan in Drawing SR-3.

3.3 Brick Perimeter Walls are Overstressed

The existing brick perimeter walls on Column Lines 1, 12, and 26 were found to be overstressed in shear during the evaluation. The inside surface will be therefore be shotcreted following the removal of a single wythe of brick, which will be replaced with a 5-inch thickness of shotcrete reinforced with #4 rebar in both directions, and connected to the brick wall with epoxy anchors.

Also, Walls 1, 12, and 26 on Column Lines A and D (between 15 and 26) were calculated to have excessive height/thickness ratios (h/t). Walls are required by the San Francisco Building Code, Section 16C, to be either braced or strengthened. For the out-of-plane forces on the brick piers in Column Lines A and D (between Columns 15 and 26) and walls 1, 12, and 26, a new concrete rib would be constructed inside of the existing brick piers by removing a vertical slot 12 inches deep and 16 inches wide from foundation level to the level of the horizontal truss at the top of the wall. The new concrete beam would be designed to take 100 percent of the seismic forces perpendicular to the wall, and will be connected to the brick piers with epoxy anchors. See Section 3 on Sheet SR-9 for details.

Since the existing mortar in the 120-year-old building is in poor condition, 30 percent of the exterior wall surface will require repointing. In addition to repointing the exterior face of the brick walls, the brick walls must be prevented from developing a laminar failure. To prevent the wall from delamination, new rebar dowels will be drilled and epoxied in place from the interior face of the wall to within 1 inch of the exterior face. Dowels will be spaced at 2 feet on center, each way, throughout the full extent of the brick surface. The interior surface will also be covered with a 5-inch thickness of reinforced shotcrete, or a 1-inch thickness of membrane shotcrete. The membrane shotcrete will contain metal fibers and shall be applied to a sandblasted surface of the brick walls. The membrane shall also be applied to the window returns.

3.4 Rebuild the Wall-to-Diaphragm Connections

The existing perimeter walls will need to be connected to the new horizontal truss so that this connection is good to transfer both shear forces parallel to the wall, as well as out-of-plane forces perpendicular to the wall. For in-plane forces, a continuous 12-inch channel around the perimeter of the building will connect the horizontal trusses to the perimeter walls. The channel will be connected to the shotcrete and brick wall with epoxy anchors.

For the out-of-plane connections, the code recommends through-bolts whenever possible to resist out-of-plane forces. Because the existing wood bracing members are connected to the walls with through-bolts, the new scheme will be to use these bolts and exposed escutcheon plates as much as possible to tie the existing wall into the new, continuous 12-inch channel (see Drawing SR-9 for details). The existing mezzanine concrete slab will also need to be anchored to the exterior wall on Column Line A.

3.5 Develop Collectors and Continuity Members

Collectors and continuity members are necessary to ensure that the building works as one structure. The main zones requiring collectors are at Column Lines 1, 12, 15, and 26. At these locations, the horizontal trusses are anchored to a reaction element, at the end walls at Column Lines 1 and 26, or the new shear walls at Column Lines 12 and 15. At these locations, the existing roof trusses will be replaced with new collector trusses made up of larger structural shapes. The new collector trusses will be designed to take the collector forces (both tension and compression forces) between the walls on Column Lines A and D.

Besides the four lines of collectors, there will be four lines of continuity trusses, at Column Lines 5, 8, 19, and 23. Unlike the four lines of collectors that anchor the horizontal trusses, the collector or continuity trusses are needed for two reasons: to strengthen the existing roof diaphragm so that the maximum length of diaphragm in the transverse direction is only 75 feet; and to laterally brace the bridge crane girder between Column Lines B and C, as well as between Column Lines D and E.

3.6 Separate Building 113 from Building 115

Building 113 needs to be separated by an expansion joint from Building 115. In 1917, when Building 115 was constructed, the south end of Building 113 at Column Line F was removed, and a new concrete wall with embedded columns was constructed. The columns supported the roof weights form Building 113, as well as the roof weights from Building 115. The existing bracing struts also laterally supported the bridge crane rails in both buildings. By tying both buildings together, not only do they share the roof dead loads and lateral bracing of adjacent bridge crane rails, they also share seismic lateral forces. Since the two building end walls on Column Lines 1 and 12 are connected,

seismic forces are mutually shared, based on their relative rigidities. It is proposed to separate the two buildings and to provide a new line of braced frames adjacent to Column Line F to resist vertical and lateral loads associated with Building 114.

3.7 Non-Structural Summary

Summary of Accessibility and Life Safety Study

The primary path of egress will consist of new public lobbies, located on each floor, and will incorporate a new elevator. Upgrades are required along the path of travel for both egress and accessibility pursuant to the San Francisco Building Code, 1998 Edition. Refer to Appendix E for a detailed description of the current deficiencies and the required upgrades necessary to comply with the current codes.

Hazardous Material Report Summary

Architectural surfaces in Building 113 that may be disturbed as part of the seismic renovation project were sampled and analyzed for asbestos and lead content. The plaster and wallboard on the mezzanine restroom wall were found to contain trace levels of asbestos. All painted surfaces that are likely to be disturbed as part of the project were found to contain lead.

Samples of soil and groundwater collected from below the floor slab were found to contain high levels of petroleum hydrocarbons quantified as diesel and motor oil.

A copy of the hazardous material report prepared for the project is found in Appendix D.

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE
SUMMARY

1/10/2002

CSI	DESCRIPTION		TOTAL $	COST/SF 88,000
2000	DEMOLITION/SITEWORK		512,574	5.82
2000	HAZARDOUS MATERIAL		22,500	0.26
3000	CONCRETE		522,966	5.94
4000	MASONRY		17,500	0.20
5000	METALS		1,223,215	13.90
6000	WOOD & PLASTICS		7,500	0.09
7000	THERMAL & MOISTURE		1,116,500	12.69
8000	DOORS & GLAZING		277,400	3.15
9000	FINISHES		64,000	0.73
10000	SPECIALTIES		0	
11000	EQUIPMENT		0	
12000	FURNISHINGS		0	
13000	LIFE SAFETY & ACCESSIBILITY		454,560	5.17
14000	CONVEYANCES		0	
15000	MECHANICAL		120,000	1.36
16000	ELECTRICAL		205,000	2.33
	DIRECT COST SUBTOTAL		**4,543,715**	51.63
	GENERAL CONDITIONS	10%	454,371	5.16
	G.C. MARK UP & BOND	10%	499,809	5.68
	ESTIMATE/DESIGN CONTINGENCY	25%	1,374,474	15.62
	SUB TOTAL		**6,872,368**	78.10
	ESCALATION TO 2002=2YRS@3% P.A.	6%	412,342	4.69
	TOTAL CONSTRUCTION COST		**7,284,710**	82.78
	DESIGN COST	8%	582,777	6.62
	CONSTRUCTION MANAGEMENT	3%	218,541	2.48
	OWNER INSPECTION	2%	145,694	1.66
	TOTAL PROJECT COST		**$ 8,231,723**	93.54

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE

DATE: 1/10/2002

NO.	DESCRIPTION	QUANTITY	UNIT	RATE $	AMOUNT $
	BUILDING 113				
2000	**DEMOLITION/SITEWORK**				
	MOBILIZE/DEMOBILIZE	1	EA	5,000.00	5,000
	DRILLED CAISSONS, 18" DIA.	2,184	LF	34.00	74,256
	ADD ROCK EXCAVATION	120	LF	225.00	27,000
	ADD CASING	1,140	LF	6.00	6,840
	DISPOSAL, CONTAMINATED SPOILS, ALLOWANCE	200	CY	100.00	20,000
	SAW CUT FLOOR	950	LF	5.00	4,750
	DEMO FLOOR SLAB	48	CY	250.00	12,000
	EXCAVATE, HAND, PILE CAPS, GRADE BEAMS	96	CY	60.00	5,760
	DISPOSE, HAUL, CONTAMINATED SPOILS.	96	CY	150.00	14,400
	BRICKWORK, 1 WYTHE	11,252	SF	4.00	45,008
	HAUL, DISPOSE, BRICK & CONCRETE	400	CY	20.00	8,000
	DEMO BRICK CORBEL	11	EA	100.00	1,100
	SAW CUT BRICK, 12" DP. FOR RIBS	640	LF	10.00	6,400
	DEMO/CUT OUT BKWK FOR RIBS	425	CF	20.00	8,500
	SAW CUT FLOOR SLAB POCKETS 10 EACH	40	LF	10.00	400
	CUT OUT FLOOR SLAB POCKETS	10	EA	300.00	3,000
	SAW CUT BK FOR 12" RIBS	1,032	LF	10.00	10,320
	CUT OUT BK FOR 12" RIBS	387	CF	20.00	7,740
	ROOF PURLIN SHORING FOR NEW TRUSSWORK	1	LS	25,000.00	25,000
	DEMO EXISTING ROOF & SKYLIGHTS, DISPOSE	80,000	SF	2.00	160,000
	DEMO EXISTING DOORS & WINDOWS, DISPOSE	154	EA	150.00	23,100
	DEMO INT.OFFICE BUILDINGS, PARTIAL	3	EA	3,000.00	9,000
	SPECIAL PROTECTION FOR 2 PHASES.	1	LS	10,000.00	10,000
	MISC DEMO	1	LS	25,000.00	25,000
	SUB TOTAL				512,574

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE

DATE: 1/10/2002

NO.	DESCRIPTION	QUANTITY	UNIT	RATE $	AMOUNT $
2000	HAZARDOUS MATERIAL REMOVAL				
	REMOVE LEAD PAINT - ALLOWANCE	1	LS	5,000.00	5,000
	REMOVE ASBESTOS, PIPE LAGGING - ALLOWANCE	500	LF	30.00	15,000
	TESTING	1	LS	2,500.00	2,500
	SUB TOTAL				22,500
3000	CONCRETE				
	PILECAPS, REBAR, FORMS,FINISH	53	CY	200.00	10,600
	GRADEBEAMS, REBAR, FORMS,FINISH	43	CY	250.00	10,750
	SHOTCRETE, 5" TH., DOWELS, REBAR, FINISH	11,252	SF	15.00	168,780
	SHEARWALL 12", REBAR, FORMS, FINISH	2,250	SF	35.00	78,750
	COLUMNS, 2'X 2', REBAR, FORMS, FINISH	120	LF	115.00	13,800
	SHOTCRETE BAND, 6", 36" WIDE	1,200	SF	13.00	15,600
	DRILL & EPOXY #5 DOWELS	400	EA	35.00	14,000
	REBAR, #4	1,800	#	2.00	3,600
	SHOTCRETE RIBS, 12" THICK, NORTH WALL A & B	15	CY	600.00	9,000
	DRILL & EPOXY #4 DOWELS	2,560	EA	35.00	89,600
	REBAR #6	3,200	#	1.75	5,600
	REBAR #3 TIES	500	#	2.00	1,000
	SHOTCRETE, 1", PLASTER	3,360	SF	6.00	20,160
	WIRE MESH, SHOTPINNED	3,360	SF	2.00	6,720
	CONCRETE IN RIB POCKETS, 2' X 2' X 12"	10	EA	150.00	1,500
	DRILL & EPOXY #8 DOWELS	20	EA	45.00	900
	REBAR #6	300	#	1.75	525
	REBAR #3 TIES	50	#	2.00	100
	SHOTCRETE RIBS, 12" THICK, WEST WALL	30	CY	600.00	18,000
	REBAR #6	4,774	#	1.75	8,355
	REBAR #3 TIES	1,258	#	2.00	2,516
	DRILL & EPOXY #4 DOWELS	186	EA	35.00	6,510
	CONCRETE INFILL, 18" THICK	6	CY	350.00	2,100

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE

DATE: 1/10/2002

NO.	DESCRIPTION	QUANTITY	UNIT	RATE $	AMOUNT $
	DRILL & EPOXY , 3/4" DOWELS	100	EA	45.00	4,500
	MISC. CONCRETE	1	LS	30,000.00	30,000
	SUB TOTAL				522,966
4000	**MASONRY, ALLOWANCE**				
	REPOINT EXISTING BRICKWORK, 20%	7,000	SF	1.50	10,500
	SCAFFOLDING, MOVABLE	1	LS	5,000.00	5,000
	MISC. MASONRY	1	LS	2,000.00	2,000
	SUB TOTAL				17,500
5000	**METALS**				
	W14 X 68 COLUMNS	9	TN	3,000.00	27,000
	W14 X 68 BEAMS	14	TN	3,000.00	42,000
	W14 X 40 TRUSS COLLECTOR	22	TN	3,500.00	77,000
	W6 X 20 DIAGONAL BRACING	55	TN	3,500.00	192,500
	C12X 30 COLLECTOR	14	TN	3,500.00	49,000
	W10X 17 COLLECTOR	4	TN	3,500.00	14,000
	W12 X 26, ROOF TRUSS	15	TN	3,500.00	52,500
	W6 X 9, ROOF TRUSS	3	TN	3,500.00	10,500
	W6 X 20, ROOF TRUSS	5	TN	3,500.00	17,500
	W10 X 19, ROOF TRUSS	3	TN	3,500.00	10,500
	W6 X 8, ROOF TRUSS	1	TN	3,500.00	3,500
	W12 X 40, ROOF TRUSS	4	TN	3,500.00	14,000
	3/4" DIA ROD BRACING, 30' LONG	112	EA	300.00	33,600
	3/4" DIA ROD BRACING, 40' LONG	44	EA	350.00	15,400
	BOLTS, 3/4", THRU INC WASHERS	1,600	EA	60.00	96,000
	W12 X 40 COLUMNS, BRACED FRAMES	30	TN	3,000.00	90,000
	TS 4X4	10	TN	4,000.00	40,000

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE

DATE: 1/10/2002

NO.	DESCRIPTION	QUANTITY	UNIT	RATE $	AMOUNT $
	ANGLE, 4X4,	7	TN	4,000.00	28,000
	3/8" GUSSET PLATES	1,152	EA	55.00	63,360
	BASE PLATES	384	EA	150.00	57,600
	BOLT SETS, COLS	384	EA	95.00	36,480
	C12 X 20.7 END WALLS	3	TN	4,500.00	13,500
	C6 X 8.2	1.00	TN	5,000.00	5,000
	W12 X 26	1	TN	4,500.00	4,500
	W6 X 9	1.50	TN	5,000.00	7,500
	W10 X 19	3.00	TN	4,500.00	13,500
	DRILL & EPOXY , 3/4" DOWELS	302	EA	55.00	16,610
	DRILL & EPOXY #4 DOWELS	528	EA	55.00	29,040
	W12 X 26, COL LINE 15 & 12	8	TN	4,500.00	36,000
	W12 X 40	1	TN	4,000.00	4,000
	W6 X 9	1	TN	5,000.00	5,000
	W6 X 20	2	TN	4,500.00	9,000
	W10 X 19	2	TN	4,500.00	9,000
	C6 X 8.2	1	TN	5,000.00	5,000
	EXPANSION JOINT, 12", LINE F	200	LF	85.00	17,000
	THRU RODS, 1/4" DIA, 21" LONG	1,925	EA	25.00	48,125
	MISC METALS	1	LS	30,000.00	30,000
	SUB TOTAL				1,223,215
6000	WOOD & PLASTICS				
	BLOCKING, MISC.	1,000	BF	4.00	4,000
	PLY. MISC	1,000	SF	3.00	3,000
	MISC.	1	LS	500.00	500
	SUB TOTAL				7,500
7000	THERMAL & MOISTURE				
	METAL ROOF, GALV.	80,000	SF	6.00	480,000
	ROOF PLY, 1/2" CDX	80,000	SF	1.80	144,000

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE

DATE: 1/10/2002

NO.	DESCRIPTION	QUANTITY	UNIT	RATE $	AMOUNT $
	FELT MEMBRANE #15	80,000	SF	0.50	40,000
	RIGID INSULATION, 3", R15	80,000	SF	1.25	100,000
	SKYLIGHTS	6,000	SF	50.00	300,000
	RAINWATER GUTTERS & DOWNSPOUTS	1	LS	20,000.00	20,000
	FLASHING	1	LS	10,000.00	10,000
	CAULKING & SEALING	1	LS	7,500.00	7,500
	MISC. ROOFING	1	LS	15,000.00	15,000
	SUB TOTAL				1,116,500
8000	DOORS & GLAZING				
	WINDOWS, CUSTOM, LARGE, 24'X12' AV.	30	EA	3,500.00	105,000
	WINDOWS, CUSTOM, LARGE, 12'X10' AV.	16	EA	1,500.00	24,000
	WINDOWS, CUSTOM, LARGE, 6'X12' AV.	88	EA	900.00	79,200
	WINDOWS, CUSTOM, SMALL, 4'X2' AV.	6	EA	500.00	3,000
	ROLL UP DOOR 32X30	2	EA	20,000.00	40,000
	ROLL UP DOOR 10X12	1	EA	3,000.00	3,000
	SINGLE DOORS	11	EA	1,200.00	13,200
	MISC.	1	LS	10,000.00	10,000
	SUB TOTAL				277,400
9000	FINISHES				
	PAINTING ALLOWANCE	1	LS	30,000.00	30,000
	CUT & PATCH, ALLOWANCE	1	LS	10,000.00	10,000
	REBUILD INT. OFFICE BUILDINGS	3	EA	8,000.00	24,000
	SUB TOTAL				64,000
13000	LIFE SAFETY & ACCESSIBILITY				
	EXTERNAL ALLOWANCES				

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113
CONCEPTUAL ESTIMATE

DATE: 1/10/2002

NO.	DESCRIPTION	QUANTITY	UNIT	RATE $	AMOUNT $
	RECONFIGURE PARKING, STRIPING	1	EA	5,000.00	5,000
	REWORK WALL & ENTRY DOORS	1	LS	5,000.00	5,000
	PANIC HARDWARE	7	EA	1,000.00	7,000
	SAWCUT, CURB RAMP, DOOR RAMP	1	LS	10,000.00	10,000
	LIGHT FIXTURES	4	EA	750.00	3,000
	HANDICAP SIGNAGE	1	LS	5,000.00	5,000
	INTERNAL ALLOWANCES				
	EXIT SIGNS & SIGNAGE	1	LS	15,000.00	15,000
	REMOVE & REPLACE HANDRAILS	1	LS	5,000.00	5,000
	RESTROOMS, ADA, UNISEX	1	EA	25,000.00	25,000
	OFFICE RAMPS	1	LS	15,000.00	15,000
	AUTOMATIC FIRE SPRINKLER SYSTEM	88,640	SF	4.00	354,560
	ELEVATOR, UPGRADE CONTROLS	1	LS	5,000.00	5,000
	SUB TOTAL				454,560
15000	**MECHANICAL ALLOWANCES**				
	RELOCATE NATURAL GAS LINES	1	LS	25,000.00	25,000
	RELOCATE STEAM LINES	1	LS	25,000.00	25,000
	RELOCATE COMPRESSED AIR LINES	1	LS	25,000.00	25,000
	RELOCATE WATER LINES	1	LS	25,000.00	25,000
	MISC. MECHANICAL	1	LS	20,000.00	20,000
	SUB TOTAL				120,000
16000	**ELECTRICAL ALLOWANCES**				
	RELOCATE POWER FEEDERS	1	LS	50,000.00	50,000
	RELOCATE PANELS & SWITCHES	1	LS	75,000.00	75,000
	RELOACATE POWER DISTRIBUTION	1	LS	25,000.00	25,000
	RELOCATE LIGHTING DISTRIBUTION	1	LS	25,000.00	25,000
	RELOCATE LIGHT FIXTURES	1	LS	10,000.00	10,000
	MISC. ELECTRICAL	1	LS	20,000.00	20,000
	SUB TOTAL				205,000

PORT OF SAN FRANCISCO
PIER 70
BUILDING 113

1/10/2002

QUALIFICATIONS

1 The estimate is based on Drawings 10/24/01 S1 thru S12. No Specifications were available. Information also as provided by URS Corp.
2 The cost in this current estimate are 2002 dollars.
3 Estimate is Order of Magnitude
4 Life Safety & ADA upgrades are included per report 12/12 2001.
5 Allowances included for removal of Contaminated Materials
6 No allowance for removal or replacement of deteriorated /rotted/termite framing or material
7 All the work will be performed during the normal construction hours.
8 No costs relating to Agency security are included.
9 No overtime or acceleration costs are included.
10 No special seismic connections and conditions are included other than those itemised.
11 Construction costs do not include Specialties, Equipment & Furnishings.
12 Replacement costs are based on original construction design.
13 Estimate does not include any required code upgrades.
14 This estimate represents an opinion of probable construction costs based on professional experience and qualifications. Since we have no control over the cost of labor, materials or equipment, services furnished by others, contractor's method of pricing and carrying out of work, design work still to be completed or competitive bidding or market conditions, we cannot guarantee that bid or final construction costs will not vary from this opinion of probable costs.

EXCLUSIONS

1 Permitting Expenses and fees
2 Other Regulatory Agencies fees and expenses.
3 Environmental Impact taxes, fees and expenses
4 Plan check fees and expenses
5 Any City, County, State and Federal Taxes, other than payroll, income and sales tax.
6 Financing Charges.
7 Interests on Loans.
8 Municipal Capital Bond fees and expenses
9 Any other soft costs.

PORT OF SAN FRANCISCO

May 21, 2001

Richard Hillis
Director Mayor's Office of Economic Development
Suite 436, City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94111

SUBJECT: Proposed Expansion of the Potrero Power Plant

Dear Mr. Hillis:

As you are aware, Mirant Corporation's proposal to expand the operations of the Potrero Power Plant will have significant impacts on the City's resources and residents. Many of these impacts will most severely affect resources and residents located on or near Port property.

As such, Port staff has been actively working to identify the impacts of and appropriate mitigations for the proposed expansion. The bases for staff's analysis have been the Application for Certification (AFC), responses to data requests, and related supporting documentation filed with the California Energy Commission (CEC) by Mirant. Staff has also sought input on this topic from its Pier 70 Advisory Group through a series of meetings. In addition, as a reference guide, staff has consulted sample conditions/mitigations imposed on other plants by CEC throughout the state, including the Cogeneration Plant on the Pier 90-94 backlands site certified by CEC in 1996.

The results of the Port's efforts are attached to this letter. For convenience, the impacts and mitigations are broken down into the following eight general categories:

- Environmental Justice
- Air Quality/Emissions
- Water Quality/Biology
- Public Access/Open Space
- Cultural Resources
- Land Use/Visual Resources
- Transportation
- Noise

Of course, some of identified impacts and mitigations may appropriately relate to more than one category.

We understand that your office is coordinating with different City agencies and departments to identify and develop an aggregate set of impacts and mitigation measures for submittal to the CEC on behalf of the City. We request that you incorporate the attached impacts and mitigations identified by the Port into this comprehensive package. The Port will not separately send to the CEC the attached list of impacts and mitigations.

We note, however, that the attachment is only the Port's current position on the proposed expansion. Mirant continually submits new information to the CEC and many details of the proposed expansion remain unclear. The Port is likely to identify additional impacts and mitigations and/or modify the noted ones as the certification process moves further along and more information about the project is revealed.

More importantly, the attachment does not reflect the terms the Port may impose on any agreement it enters into with Mirant for use of Port property. The AFC currently proposes the construction of a new cooling water system with new intake and discharge structures as well as a subterranean power transmission line from the Potrero Plant to the existing Hunters Point Switch Yard Substation distribution system. As currently proposed, both of these facilities are partially located on Port property. Mirant will have to enter into an agreement with the Port, acting in its proprietary interest, to construct both of the proposed facilities. As Mirant has not yet commenced negotiations with the Port specifically regarding the proposed facilities, the terms of such an agreement remain to be determined.

I would be happy to answer any questions you may have on this matter. Please feel free to contact me at 274-0546.

Sincerely,

Byron Rhett
Director of Planning and Development

Attachment

cc: Supervisor Sophie Maxwell

PORT OF SAN FRANCISCO

Mitigation Proposals for the Potrero Power Plant Expansion Project

This following list of impacts and possible mitigation measures were developed with the input of 1. The Pier 70 Advisory Group following a workshop and discussion of the topic on March 14th and April 25th, 2001; 2.The California Energy Commission (CEC) 1996 certification of the Cogeneration Plant for the Pier 90-94 backlands site; 3. A review of a list prepared by Gregg Wheatland, Deputy City Attorney, of sample CEC conditions/mitigations imposed on plants certified throughout the state; and 4. Port staff, upon review of the Application for Certification (AFC), the proposal, and related supporting documentation filed with the CEC by Mirant for the Potrero Power Plant.

Some of the identified impacts and mitigations may appropriately relate to more than one topic. The eight topics areas follows:

- Environmental Justice
- Air Quality/Emissions
- Water Quality/Biology
- Public Access/Open Space
- Cultural Resources
- Land Use/Visual Resources
- Transportation
- Noise

Environmental Justice

Impact:

Historically the southeast sector of the city, including the Central Waterfront, Bayview Hunters Point and Potrero Hill have received the primary impact from the operation of the Potrero and Hunters Point Power Plants to the benefit of the entire city.

Mitigations:

Require Mirant to give the City a percentage of the revenue resulting from the sale of excess power generated at the Potrero Plant to help fund programs and improvement projects in the southeast sector of the city. This could include education programs in natural history, energy efficiency and environmental justice at Heron's Head Park (Pier 98) through the non-profit organization, Literacy for Environmental Justice (LEJ). LEJ currently provides education programs at Heron's Head Park and proposes to use a new energy-efficient classroom at the park (funded, proposed for construction Fall 2001) to develop and implement ongoing and new educational programs. Mitigation includes three years support for Environmental Programs Coordinator at LEJ, educational materials and community outreach efforts for a total of $190,000

Contribute funding to the SF-ROCKS Program, a new collaboration between San Francisco State University, City College, and the San Francisco public school system. The program is specifically geared toward increasing diversity within the earth sciences (geology, hydrology, oceanography, and meteorology). It is designed to reach its goals by introducing high school students in the southeast part of the City to science applied locally to environmental issues. Hands-on experience collecting and interpreting environmental data forms the core of the program. An academic path will be developed from high school to City College to San Francisco State, with older students serving as peer mentors to those just entering the program. This program is currently awaiting an initial funding decision, due in July, by the National Science Foundation. Mitigation should provide full program funding of at least $300,000.

Fund on-going job creation and training programs for the residents of the southeast sector of the city.

Water Quality/Biology

Impact:

Storm water discharge into City's combined sewer system

Mitigations:

Complete on-site containment and treatment, or

Require Mirant to contribute to the City and Port efforts to improve storm water management capability in the Southern Waterfront to protect water quality in the Bay. Such contribution should be consistent with the additional demand for storm water treatment or management associated with the power plant site.

Contribute $300,000 towards the enhancement of three to four to acres of salt marsh at Pier 94, of which approximately one acre has been filled with concrete, asphalt and tires. Work would include three phases: delineation of the wetland and upland areas and a hydrology assessment; debris removal (concrete, asphalt, tires, and metal) from the wetland to enhance tidal flow; and construction of a low post-and-cable fence to mark the area and prevent neighboring industrial uses from encroaching on the site. The wetland is located along the northern and eastern shore of Pier 94 in San Francisco, and offers valuable foraging and roosting habitat to several species of birds and other wildlife. This wetland is on the San Francisco Bay Joint Venture list of priority sites targeted for restoration.

Annually contribute to the Port's petroleum release prevention/petroleum recycling program. The Port has implemented a successful oil-recycling program along the waterfront. The program addresses the recycling of motor oil and other petroleum products from both commercial fishing boats and private pleasure boats. The program has a direct positive effect in terms of reducing the amount of used oil that goes into the Bay. The success of the program, in terms of

volume of oil collected for recycling, has far exceeded the Port's expectations, and the Port's existing staff is pressed to keep up with the demands of the program. Funding for an additional full-time Port technician on an annual basis, approximately $65,000 per year would assist the Port to continue this successful program.

Impact:

Project construction would require dredging of contaminated Bay sediments and on-site excavation of contaminated soil.

Mitigations:

On a continuing basis, the Port addresses numerous issues pertaining to contaminated sediments along the waterfront. Such sediments may be encountered during dredging projects, wetland restoration projects, and redevelopment projects. The Port and the regulatory agencies that oversee contaminated sediment issues have established a good working relationship to address these sediments when they are encountered. All parties agree that there are unanswered questions regarding contaminated sediments, such as the toxicity of different compounds, how chemicals are transported in the Bay, how specific compounds affect the food web, and others. Periodically, the Port has been able to provide consulting expertise to help address issues that are of interest to the regulatory community and that have direct or indirect impacts on Port operations. Providing at least $150,000 in funding to the Port for use on an "as-needed" basis to fund laboratory chemical and toxicity studies would enable the Port to continue this proactive relationship with the regulatory community.

Fund scholarships for two or three Masters' degree students to complete thesis projects related to environmental topics along the Southern Waterfront. Thesis topics would be science-oriented and could pertain to studies of surface water, sediments, groundwater, air, ecology, wetland and watershed issues, etc. Funding should be directed, where feasible, to a public university located in San Francisco. Each two-year scholarship would provide tuition wavier, stipend, and research funds for each student. Projects would be completed in collaboration with the Port. $90,000 per student; Total $180,000 to $270,000.

Air Quality/Emissions

Impact:

The power plant operations, including vehicle operations would emit odors and SO2, PM10, VOCs, CO2, Nox and diesel emissions.

Mitigations:

Certification of the proposed Potrero Unit No. 7 in accordance with the following operational requirements to be accomplished as soon as the proposed Unit 7 is operational:

1. *Decommission and require the complete closure of the existing Hunters Point Power Plant; and*
2. *Conversion of the existing Potrero Unit No. 3 to cleaner alternative fuel sources using the best available technology such as Liquified Natural Gas (LNG) and limit to a back-up emergency operations basis, not to exceed a maximum of 877 hours per year; and*
3. *Decommission the existing Potrero "peaker" Units No. 4, 5 & 6.*

Mirant to install and maintain air quality monitoring facilities and to continuously monitor local air quality in the Illinois Street corridor, Pier 70 and Dogpatch areas.

Instead of purchasing local air quality off-sets Mirant should develop a program for the retrofit of existing vehicles to use of alternative fuel sources such as electricity, Compressed or Liquid Natural Gas (CNG or LNG), and financial contributions towards construction of alternative fuel facilities for use by industrial uses and MUNI in the Southern Waterfront, and throughout the City. The fueling station should be sited so as to permit utilization by ferry and excursion vessels.

Mirant should provide funding to the Port for the creation of a separate bicycle lane on the proposed Islais Creek Truck/Rail Bridge.

Contribute funds to be used in promoting less polluting means of transportation and e.g. increased MUNI ridership via a revenue stop in the Mission Bay Shortline Turnaround Loop and construction of bicycle lanes.

Implement particulate "scrubbers," catalytic conversion or other technologies on on-site diesel operated emergency generators and equipment.

Mirant funding of on-going or new programs to develop alternative commercial and residential energy sources and associated technology for local usage of solar and wind power.

Public Access/Open Space

Impact:

The proposed power plant expansion does not include provision of open space and shoreline public access on-site or in close proximity.

Mitigations:

Create shoreline and Bay public access, including non-motorized small boat access, by assisting the Port to include in its future development of Pier 70 a "Mirant Park" and "Mirant public boathouse." The development of a public park at Pier 70 are estimated to be approximately $ 2.5 million per acre.

Mirant should contribute to the enhancement of existing, and development of new, open space, shoreline and Bay public access, including non-motorized small boat access, and parking areas for visitors, in the Southern Waterfront, including but not limited to Warm Water Cove Park, Pier 70, Pier 90-94 and the Islais Creek shoreline.

Develop the San Francisco Bay Trail in vicinity of the Potrero Plant and proposed transmission line to Hunter's Point. Provide spur trails to waterfront where feasible, preserve right-of-way for future shoreline access where feasible. Provide funding for the Islais Creek Spur Trail, which will create a new trail construction along Islais Creek, including landscaping, lighting, interpretive signs, and public artwork at an estimated cost of $155,000.

Fund Port creation of ferry and excursion vessel facilities on the Southern Waterfront as a means to provide alternative modes of transportation and to provide public access to the shoreline and Bay.

Cultural Resources

Impact:

Demolition of structures determined to be historic resources due to their significance as remnants of the industrial power production and transmission and eligible for the California Register of Historical Resources and the National Register of Historic Places, individually and/or as contributors to an historic district. Demolition of historic resources is considered a substantial adverse impact that cannot be mitigated to a level of insignificance.

Demolition of the significant structures on the power plant site would affect the setting of adjacent significant historic resources, the 1923 Western Refining Sugar Warehouse and the Pier 70 historic district both of which are eligible for the National Register of Historic Places.

Mitigations:

1. *Recordation of Power Plant Site as last resort to Adaptive Use:*

Adaptive use of the extant power plant facilities should be the first priority. If historic resources on the power plant site are compromised by the expansion project Mirant should mitigate this impact by providing financial resources to identify and protect neighboring historic structures in the Pier

70 area, as this area shares the same historical context and significance as the power plant site. Additionally, prior to demolition the resources on the power plant site should be recorded in accordance with Historic American Engineering Record standards as developed by the US Department of the Interior and the Library of Congress. This could include, but is not limited to, a building inventory, written architectural descriptions, accurate, architectural and engineering "as-built" drawings of extant interior and exterior features of the site, structures and equipment; and large format interior and exterior photography.

Upon acceptance of completed work, copies of the documents should be placed in local, and state repositories as well as the required filing with the Library of Congress.[1]

2. Transfer of Seismic Mitigation Costs to Pier 70 Historic Resources:

The Meter House and Compressor House located on the Potrero Power Plant Site appear to be eligible for individual listing on the National Register of Historic Places.[2] *These structures are unreinforced masonry structures subject to San Francisco's UMB ordinance.*[3] *Therefore, a reasonable mitigation measure would provide an amount equal to the approximately estimated costs ($ to be provided) for the seismic mitigation of these two buildings be contributed to seismic mitigation of Pier 70 historic resources, including but not limited to Buildings 104, 111 and 113. While the seismic retrofit and repair costs for Building 104 and 113 are being prepared by the Port, it has been estimated that Building 111 seismic retrofit and repair alone would cost approximately $5 million.*

3. Education: Exhibition of Central Waterfront Development:

The Dames & Moore Report describes the Potrero Power Plant as a component of the larger historic industrial complex that makes up the Pier 70 Area. The contribution to the history and architecture of the facility should be a part of any educational exhibition proposed for the Pier 70 Area. Therefore, it would be a reasonable request to ask that the Power Plant create or be the major contributor to the exhibition of the central waterfront developmental history.

The historical, architectural/engineering significance of the power plant site should be evaluated for eligibility to the National and/or California Registers as a historic district. If it is determined to be an eligible historic district any impacts associated with the expansion project should be mitigated by requiring Mirant to fund the necessary intensive historic resources evaluation and documentation to allow the Port to nominate a Pier 70 Historic District to the National Register of

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[1] Office of Historic Preservation, California Department of Parks & Recreation; City of San Francisco Public Library, and College of Environmental Design, University of California, Berkeley.
[2] Dames & Moore with Hill & Shoup, Draft Historic Architecture Report, Station A, Potrero Power Plant in the City of San Francisco, Dec. 99.
[3] Ordinance No. 225-92, City of San Francisco.

Historic Places. The evaluation and documentation needs of the eligible Pier 70 Historic District are estimated to be approximately ($ to be provided).

Mirant should be required to create a salvage component to any demolition plan in coordination with the local community and historic preservation organizations to provide for the potential reuse of architectural elements and building materials that would otherwise not be recovered for use by the community.

Impact:

On- and off-site excavation may encounter significant ethnic resources, historic and prehistoric materials.

Mitigation:

Mirant should retain a designated resource specialist to develop an Archeological Resources Treatment Plan and to monitor on- and off-site excavation activities.

Land Use/Visual Resources

Impact:

Demolition of the site's historical resources would be inconsistent with the Policies and Objectives of the City's Draft Preservation Element of the General Plan.

Mitigation:

Mirant should fund preservation activities at Pier 70 and in the Dogpatch Neighborhood.

Impact:

The proposed Potrero Power Plant expansion project would affect the potential non-industrial use recommendations from the Better Neighborhoods 2002 Land Use Study and would be in conflict with the recent development of live/work spaces that strengthen the residential aspects of the area and create additional demand for residential amenities and neighborhood services.

The historic industrial character of the Central Waterfront is changing to a mixture of industrial, commercial and residential/live-work uses. The analysis of the proposed power plant expansion project impacts should recognize diversity of uses in the area, especially the residential aspects of existing live-work developments in the immediate vicinity.

Mitigations:

Mirant should be required to support community efforts to enhance the livability of their neighborhood by contributing resources to enhance and maintain existing public access and open space areas such as Espirit and Warm Water Cove Parks, as well as to the creation of new the public access and open spaces such as at Pier 70, and the Islais Creek shoreline.

Mirant should work with the local community and neighboring property owners to determine an appropriate treatment for the proposed construction on Unit 7 (express the structural framing or enclose in a building), as well as to develop and fund a plan for urban design/streetscape improvements and treatments that would help soften the power plant's industrial character and to buffer locally incompatible land uses in the Southern Waterfront.

Mirant should be required to underground existing utility lines in the Potrero Hill, Dogpatch and Bayview Hunters Point areas.

Impact:

Expansion of the power plant may discourage development of housing in the Southern Waterfront and generate additional demand for housing in the City.

Mitigation:

This impact could be appropriately mitigated by imposing a Housing Impact Fee on the power plant, or by requesting Mirant to contribute to City housing programs.

Impact:

The proposed power plant and smokestacks would be visible from sensitive viewing areas such as Warm Water Cove and Agua Vista Parks.

Mitigation:

Mirant should fund the restoration or removal of the derelict piers that make up the eastern portion of Pier 70, including the removal of Pier 5 within the San Francisco Drydock leasehold at an estimated cost of $500,000 to 750,000.

Impact:

The PG&E SwitchYard and Substation bounded by Humboldt, Illinois and 23rd Streets is unsightly.

Mitigation:

Mirant should develop and implement an appropriate screening plan in collaboration with the community and neighboring property owners. The screening plan should include but not be limited to physical improvements such as walls, structures, fencing and landscaping.

Impact:

The two proposed 180-foot smokestacks would negatively impact the visual quality of the Southern Waterfront.

Mitigation:

Establish an urban forestry and/or similar landscape improvement projects throughout the Dogpatch neighborhood, Pier 70 area and Southern Waterfront.

Impact:

Nighttime illumination of the power plant would increase the backscatter to the sky.

Mitigation:

Develop and implement a lighting plan with community representatives and neighboring property owners to minimize the trespass of unwanted glare visible from residential areas.

Transportation

Impact:

The construction activities associated with the expansion of the power plant, and the construction the transmission line between Potrero and the Hunters Point Switch Yard Substation, would increase in traffic congestion in the area, disrupt existing businesses and conflict with the construction of the MUNI Metro Third Street Light Rail on Third Street, the Metro East MUNI Maintenance Facility, the Islais Creek Truck/Rail Bridge and the development of the Pier 70 Mixed Use Opportunity Area.

Mitigations:

Mirant should develop and implement a plan to minimize localized traffic congestion near the plant and along the route of the transmission line and to fund necessary infrastructure improvements recommended by the plan (e.g. street improvements including but not limited the re-paving of portions of Illinois Street, Amador Street and Cargo Way, installation of traffic signals and street signage). The plan should be developed in coordination with the Port, MUNI, and the

Department of Parking & Traffic and must address localized traffic congestion associated with the plants construction activities including but not limited to, emergency access, street closures, temporary lane closures, maintaining access to adjacent property owners and businesses during construction, removal of on-street parking, transit access and deliveries routes.

Mirant should provide funding to the Port for the improvement the former 22nd Street right-of-way at Pier 70 in order to provide two-lane vehicular access connecting with the eastern terminus of 20th Street, via a loop through the Pier 70 area. The 22nd Street improvement project has been estimated to cost approximately $ 50,000.

Mirant should contribute funding to Caltrain to support their efforts to convert from diesel to electric trains.

Noise

Impact:

The construction activity necessary to expand the power plant would generate undesirable noise emissions that would affect existing part- or full-time live/work and daytime populations that reside or work near the power plant.

Mitigation:

Develop a noise control program that would limit hours of construction activity to the typical hours of the business day (e.g. 8 a.m. to 5:30 p.m. excluding weekends) and establish operational standards and physical improvements to reduce the generation and emission of noise from the site.

OFFICE OF THE
CITY ADMINISTRATOR

Gavin Newsom, Mayor
Edwin M. Lee, City Administrator

COPY

July 7, 2006

Ken Strelo
City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, CA 94565

Dear Mr. Strelo:

Please find enclosed comments from the Power Plant Task Force (PPTF), an advisory body to the San Francisco Board of Supervisors (SFBOS), regarding the Draft Environmental Impact Report (DEIR) on the Trans Bay Cable Project (TBC).

We are grateful to the City of Pittsburg and the project sponsor for extending the comment period so that we could enter these comments into the record. We are newly reconstituted and have the specific charge from the SFBOS to review the TBC. The two-week time period afforded us did not permit the careful review that we would have wanted to make, however, we appreciate the opportunity to be heard. And while the opportunity for public comment was largely unknown to the public, we hope our comments provide some community input. **22-85A**

Should the incompleteness and inadequacy of the DEIR, coupled with the inadequacy of public notice require a new issuance, we will undertake a more thorough review and attempt to assist in public participation

Very truly yours,

Philip DeAndrade, Chair
Power Plant Task Force

CC: Supervisor Sophie Maxwell
Deputy City Attorney Theresa Mueller

SECOND AND FINAL AMENDED VERSION

Power Plant Task Force, City and County of San Francisco:
Comments On The Draft EIR on the Direct Current Transbay Cable Project

22-85B

1. The Association of Bay Area Governments (ABAG) is the official comprehensive planning agency for the San Francisco Bay region. Several references are made to ABAG, and yet there seems to be no pro-active outreach to the organization. Considering the number of jurisdictions that are referred to in the DEIR outreach, it appears that this resource was not contacted. Since this DEIR was published through the State Clearing House, the letter of the law has been met, but the spirit has not.

22-85C

2. The Context Photos of the San Francisco sites do not include any views from the water. This is incomplete.

22-85D

3. *The "Local Ordinances and Regulations" inventory and analysis is inadequate.* The City and County of San Francisco (CCSF) has adopted a large number of energy-related ordinances and policies that could be adversely impacted by the TBC. These include the "Maxwell" ordinance; the *Electricity Resource Plan*; voter-approved energy efficiency and bonding capacity; Community Choice Aggregation; the "Precautionary Principle;" as well as efforts to develop tidal power. A comprehensive inventory of CCSF ordinances, regulations, and executive agency polices should be included in the DEIR, as well as an analysis of the interaction between these policies and the TBC.

22-85E

4. Section 4.0 Environmental Setting, Impacts and Mitigations

(4.7-2) The historic architectural inventory paragraph states "No additional historic architectural resources were identified…" This totally ignores the identified historic district potential identified by Groth, Chase and Paez during the City and County of San Francisco's testimony (CEC 00 AFC - 4 Mirant Unit 7). Clearly, starting with the creation of the Dogpatch Historic District, whose significance is, in part, based on the housing it provided for workers of Union Iron Works, PG&E gas and electric manufacturing, and the Spreckels Sugar Refinery, and the completion of a Central Waterfront comprehensive historic resource survey, the context of the entire area needs to be included in the DEIR. The entire body of work to date is leading to the creation of a larger industrial historic district. Those efforts are continuing along with the San Francisco Planning Department's "Eastern Neighborhoods Planning Process" which has been underway for over 6 years and due for completion early in 2007.

22-85F

(4.7-3) An additional significant element of the sugar warehouses is the technological advancement of those structures - reinforced concrete that provided dry storage of finished sugar, located directly at the waters edge.

22-85G

(4.7-4) In reference to the Mirant Station A complex, it should be noted that Mirant must undergo an EIR for the demolition of their unreinforced masonry building.

In the discussion of the various components of Station A, the DEIR leaves out the concrete Office/Laboratory building that faces Humbolt street and lies between the Station A and Compressor Room buildings. This needs to be identified as a separate building. **22-85H**

(4.7-5) The reference to the conclusions of the evaluations of the Station A to the Mirant project sponsor's historian's conclusions. In fact, the CEC staff concurred with the testimony on behalf of the City. **22-85I**

The status "7" indicates that no conclusion has been drawn regarding a historic district or, in other words, it is a work in progress. See comment for (4.7-2) above. **22-85J**

(4.7-9) The list of historic regulations should include an additional list of: City and County of San Francisco. **22-85K**

(4.7-14) The mitigations for Impact CUL-2a through 2d (HWC) are totally inadequate. Adaptive re-use must be studied. If re-use is not feasible, an additional monetary solution must be developed. **22-85L**

In addition to the mitigations listed for the potential demolition of the HWC site, it seems logical that at this time the project sponsor would develop, as part of the DEIR, a set of mitigations for the potential demolition of the Station A complex, thus avoiding the need to publish an SEIR for that site at a later date. **22-85M**

5. Comparison of Alternatives (6.0)

The draft EIR's "Alternatives Analysis" is inadequate, as follows:

a) The draft EIR does not seriously consider significant alternative in-City electricity capacity sources. These include "distributed energy resources," (DER) such as enhanced energy efficiency measures; demand-response (DR) programs; load-shifting initiatives; micro-turbines; fuel cells, and small-scale storage devices (e.g., ice machines; compressors; batteries). Notably missing are projects that have already been funded or are in the advanced development stage (e.g., California Public Utility Commission-funded DR programs; the University of California, San Francisco's distributed generation project). Available evidence, and City and County of San Francisco energy policies, indicates that an additional 200 MW of DER-related capacity could be obtained by 2010, essentially eliminating the need for the TBC until 2018 or later. **22-85N**

b) The draft EIR provides an inadequate analysis of solar potential. The document provides no analytic support for its assertions related to the amount of space required for photovoltaic (PV) facilities; excludes consideration of the large number of public and private sites that would be suitable locations for PV; and implies that solar generation's ability to produce electricity during daylight hours is a significant liability, when under any circumstances over the next decade the only plausible need for the TBC is during peak hours – exactly when solar is likely to be producing the greatest amount of electricity. **22-85O**

c) The draft EIR provides no analytic basis for its elimination of demand management strategies as a viable alternative. The draft EIR states that "the **22-85P**

development of this [demand management] option is beyond the capability and control of the proponents of the proposed Project"[1] Yet the parties responsible for paying for the project – investor-owned utility ratepayers – are fully able to develop this option, through the same mechanism that will be used to finance the TBC – California Public Utility Commission-endorsed utility rates.[2] Likewise, the draft EIR asserts that "this alternative is likely not a feasible alternative to the Project because available energy savings from DMO programs are insufficient to supply necessary long-term needs" without presenting *any* evidence to support this statement, and with ample data available to indicate the contrary.

22-85P

d) The draft EIR provides no basis for its elimination of distributed generation (DG) strategies as a viable option. The draft EIR states that "…it is likely not yet technically feasible to construct and operate sufficient quantity [of DG] to meet project demand"[3] without providing *any* data related to how much demand might have to be met at what date by the TBC, DG, or other energy resources; any indication that any of the voluminous data developed by the California Energy Commission and others related to DG's cost-effective potential to provide beneficial capacity have been examined; or an assessment of DG projects already under development.

22-85Q

6. Environmental Justice

a) From an environmental justice perspective, there is inadequate consideration given to alternatives to the TBC project. CEQA requires a range of reasonable alternatives to the project be considered. This DEIR is centered on transmission projects and concludes that the TBC project is the only feasible alternative. New generation alternatives were determined to be not feasible because they would not meet project objectives. Project objectives cite that no new generation in the city of SF is anticipated and therefore a transmission alternative is required.

22-85R

Alternatives such as renewable energy sources, conservation efforts, and peaker CTs are dismissed as individually inadequate of meeting the needs forecast by CAISO. The collective impact is not analyzed.

Air quality concerns during operational phase were deemed less than significant. The TBC project does not generate any new energy production capability. Added capacity would be generated from fossil fuel burning plants in other locations. Public funds would be better spent on a renewable energy alternative.

22-85S

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[1] A.8.3.5.15.

[2] Though the TBC escapes CPUC jurisdiction because of its location in a municipal utility's service territory. As a result, unlike virtually every other significant project paid for by California IOU ratepayers, the TBC will not be subjected to examination by any governmental agency that has at its core mission the protection of energy consumers from economically disadvantageous projects.

22-85T

[3] A.8.3.5.15.

b) The Community Survey Report for the Bayview Hunters Point Health and Environmental Assessment Task Force, a representative study of health and attitudes about the environment published in 2001, found that 14% of residents of Bayview Hunters Point eat fish caught in the San Francisco Bay. Bayview Hunters Point, a largely African American population is one of the poorest communities in SF and families rely on fish from the Bay for subsistence. Any disturbance of bay sediment known to be contaminated, is a potential health threat and must be considered before a project such as this is approved. **22-85U**

Communities in other parts of the Bay Area have populations equal to or greater than BVHP who rely on fish from the Bay for subsistence. The universe of that population should be determined and proper mitigation identified.

RESPONSE TO COMMENTS

Comment Number	Response
22-1	The City of Pittsburg as CEQA Lead Agency appreciates the CCSF review of the Draft EIR for the Trans Bay Cable Project. The City of Pittsburg looks forward to further, ongoing coordination with CCSF representatives regarding this important Project and its objective of helping secure the long-term electrical system reliability in the CCSF.
22-2	Comments noted. The City of Pittsburg respects and acknowledges the CCSF's expertise regarding environmental protection in San Francisco, and its important role in the CEQA review process and subsequent permitting approvals for this Project, as applicable. The San Francisco Stakeholder's Study Group, California Independent System Operator, and California Energy Commission's assessments of the formidable energy supply and reliability issues facing the CCSF area in the future strongly indicate and support the timely implementation of the Trans Bay Cable Project as an integral part of the solution to the issues facing the CCSF area. Please refer to Appendix C of the Draft and Final EIRs for key pertinent CAISO and CEC documents supporting the need and expressing support for the Trans Bay Cable Project. The City of Pittsburg appreciates that based on early City of Pittsburg consultation with the CCSF regarding CEQA compliance and possible CCSF involvement in the Draft EIR preparation process, the CCSF declined to be involved and deferred full responsibility for preparation of the Draft EIR to the City of Pittsburg. The City of Pittsburg appreciates the informal input provided by the CCSF Planning Department to the City of Pittsburg in 2004 following issuance of the Notice of Preparation and the associated scoping phase for the Trans Bay Cable EIR regarding the issues and desired scope of the EIR.
22-3	The City of Pittsburg consulted with the San Francisco Planning Department to confirm land use consistency and the Draft EIR Section 4.8 as well as Final EIR Section 4.A.8 evaluate the Project's consistency with the General Plan. In addition, the City of Pittsburg agrees that an Application for General Plan Referral will be submitted concurrently with other Project applications.
22-4	Comments noted. All of the graphics presented in the Draft EIR are available via the web-based version on the City of Pittsburg's website by going to the applicable table of contents of the Draft EIR on the website and double clicking on the applicable figure number/name. Many of the figures are very large in terms of file size, thus they are only accessible individually versus as a group on the website. In the published hard copy of the Draft EIR, the figures are placed at the end of the individual applicable sections (e.g., Appendix A). This convention also facilitates efficient downloading of text and figures from the web-based version by individuals/computers with various memory and download capabilities, as available to the wide range of potential EIR reviewers. The City of Pittsburg as CEQA Lead Agency ensured that the Draft EIR information on the City's website is as accurate and up to-date as possible; any discrepancies with the Project proponent's website are beyond the City's control and are likely related to the frequency with which the Project proponent updates its website information. Please refer to the City of Pittsburg's website and/or a hard copy or CD version of the Draft EIR for accurate representations of the proposed and alternative project component locations as germane to the assessment in the Draft EIR.

RESPONSE TO COMMENTS

Comment Number	Response
22-5	Comments noted. The City of Pittsburg recognizes that the Draft Central Waterfront Neighborhood Plan proposes to re-zone the area west of Illinois Street from current M-2 to mixed use residential. Draft EIR Sections 4.8.2.3.3 (Central Waterfront Area Plan), 4.8.2.3.4 (Central Waterfront Neighborhood Plan [Draft]), and 4.8.3.2.2 indicate and conclude that the proposed Project is consistent with both existing and proposed land use plans and zoning in San Francisco, including the production, distribution, and repair (PDR) district and mixed use residential shown on the Draft Plan. Upon adoption of this Draft Plan, possible future residences could be located 445 feet west of the Mirant sites (Alternatives 1 and 2) and directly across Illinois Street (approximately 80 feet) from the HWC (Mitigated) site. Given the status of the proposed land use changes in the area, construction of the proposed Project would likely occur prior to the residential development in this area. Thus, the construction phase of the proposed Project would not impact the future residences directly across Illinois Street. Calculations were performed using linear octave band sound power levels as inputs from each noise source for the proposed and converter stations using the same equipment as the once-proposed HWC Converter Station. As discussed in the Draft and Final EIRs, calculated sound levels for the Mirant L-configuration at the west property line would be 63 A-weighted sound level (dBA) equivalent sound level (Leq), 71 dBA Leq for the Mirant rectangular configuration, and 63 dBA Leq for the HWC (Mitigated) site. Based on direct line-of-sight distance, the estimated sound levels from the converter stations at the future residences would be approximately 51 dBA Leq from the Mirant L-configuration, 58 dBA Leq from the Mirant rectangular configuration, and 61 dBA Leq from the HWC (Mitigated) site. Based on the San Francisco Noise Ordinance, the noise limits for fixed sources (such as the converter stations) at the property lines of residential/commercial land uses depend on the zoning of the property, as shown in Table 4.11-4 in Section 4.11.2.3.1 of the Draft EIR. Because the potential future development would be mixed use, it is assumed that the property would not be zoned R-1 or R-2; thus, the nighttime limits at the possible future development would be 55 or 60 dBA. In addition, the Noise Ordinance requires that interior noise levels in the sleeping/living rooms not exceed 45 dBA in the nighttime hours. Therefore, the estimated direct line-of-sight calculated sound levels would exceed the nighttime limits at the future development for the Mirant rectangular site and the HWC (Mitigated) site. However, based on the San Francisco Transportation Element of the General Plan and the California Code of Regulations, Title 24: Noise Insulation Standards, future residential structures require an acoustical analysis for multifamily dwellings in an area exceeding 60 dBA CNEL. As stated in Policy 10.2 of the San Francisco Transportation Element, “builders should be encouraged to take into account prevailing noise levels and to include noise insulation materials as needed to provide adequate installation.” The Element also recommends using building setbacks, buildings sited with their narrower dimensions facing the noise sources, and to design the interior layout so that rooms that require quiet (i.e., bedrooms) are away from the noise source. Therefore, future development would need to take into account the existing noise sources, including the converter station, in their design to be submitted to the City’s Building Inspection Department to be in compliance with both local and state regulations regarding new residential developments.

RESPONSE TO COMMENTS

Comment Number	Response
22-6	Comments noted. Please refer to Response 22-5, as well as Sections 4.A.8, 4.A.11, and 4.A.13 of this Final EIR. Please refer to Response 22-5 for noise-related impacts to future mixed use residential. The Draft Central Waterfront Neighborhood Plan proposes to change land uses to mixed use residential at the northwest and southwest corners of the 23rd Street and Illinois Street intersection. In the current Draft Plan, residences would be permitted on all stories of buildings. Neighborhood retail, housing compatible with production, distribution and repair uses, and small office uses would be principally permitted uses on the ground floor. Residences are the only uses allowed on the third floor and above. Landscaping and architectural design features would be added to ensure that the converter station site is more consistent with proposed future mixed uses in the area. However, given the height of future residences (third floors and above), it is likely that residences on the third floor and above would still have views of the converter station site despite installation of visual barriers. However, this impact is not expected to be significant based on the existing industrial land uses that surround the site, including the PG&E substation.
22-7	The City of Pittsburg and the Project proponent fully expect that the CCSF would require building permits from the CCSF, rather than the State Architect.
22-8	Comments noted. CEQA does not include a requirement to address environmental justice issues (i.e., this is typically a National Environmental Policy Act requirement for federal projects). Regardless, the proposed Trans Bay Cable Project would not be expected to result in any significant, unmitigable disproportionate impacts on minority or low income populations in either San Francisco or Pittsburg. It should be noted that based on early consultation in 2004 with senior San Francisco Planning Department officials regarding the scope of the EIR for the Project, City of Pittsburg representatives were told by CCSF that CCSF as a matter of policy does not address environmental justice issues in their EIRs.
22-9	Comments noted. Since this comment provides no specific examples, it is difficult for the City of Pittsburg as CEQA Lead Agency to respond. The mitigation and monitoring measures presented in the Draft and Final EIRs are presented as appropriate to the specific site/project component and relevant potentially significant impact regardless of geographic location or jurisdiction. Without more specific examples, it is not possible to respond further to this comment. The City of Pittsburg as CEQA Lead Agency has the overall responsibility for ensuring that the stated mitigation and monitoring measures are adequate, implemented, and monitored properly. The City of Pittsburg will work together with the CCSF and other responsible agencies to make sure that the appropriate mitigation measures are implemented properly by the appropriate, qualified entity and that the documentation of the mitigation measures effectiveness and/or remedial action needed is properly recorded, reported, and/or implemented. To the extent that the CCSF or its designee needs to be involved for Project components in San Francisco, the details will need to be worked out, in part, based on final permit negotiations and/or forthcoming agreements, as applicable and appropriate.
22-10	The proposed Trans Bay Cable Project will not require a permit from the Federal Energy Regulatory Commission (FERC). FERC's role on the Project includes approval of the financing for construction and setting of the appropriate tariff rate for the Project. The primary federal permitting action for the Project is associated with the USACE permitting (e.g., related to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act) for the proposed submarine cable installation in the Bay. As discussed in Table 2-1, Section 4.4.2, 4.7.2, and Appendix G of the Draft EIR, the USACE permitting

RESPONSE TO COMMENTS

Comment Number	Response
	process for the Project will likely include Section 7 (of the Endangered Species Act) consultation with other federal agencies such as the U.S. Fish and Wildlife Service and NOAA Fisheries as well as the State Historic Preservation Office relative to Section 106 (of the National Historic Preservation Act) compliance. Based on City of Pittsburg and Project proponent informal consultation with USACE representatives in 2004, the USACE does not plan to prepare an EIS for this Project, but will instead prepare an Environmental Assessment (EA) based in part on the Final EIR for the Trans Bay Cable Project.
22-11	Comments noted. Section K.1 of Appendix K of the Draft EIR accurately states that there are currently no federal or State CEQA standards for defining health risk from electromagnetic frequencies (EMF) or for limiting human exposure to EMFs from transmission lines or substation facilities in California. Moreover, the California Public Utilities Commission's (CPUC's) EMF policies do not apply to the proposed Trans Bay Cable Project. As discussed in Draft EIR Section A.3.6, preliminary modeling estimates of EMF levels have been performed and the estimated electric and magnetic fields from the submarine DC cable and at the converter station fence lines would be negligible. DC electric and magnetic fields have never been associated with health effects. Also, as discussed in Draft EIR Section A.3.6, the preliminary modeling estimates of AC electric and magnetic field levels at the converter station fence line would also be negligible. Finally, as presented in Section A.3.6 of the Draft EIR, the estimated AC electric and magnetic field EMF levels above the proposed buried DC and AC cables in San Francisco and Pittsburg would also be minimal at the ground surface above the buried cables. The California Public Utility Commission's EMF policies do not apply to the proposed Trans Bay Cable Project. However, the proposed Project design already incorporates EMF mitigating factors since much of the converter station electrical facilities are enclosed within a steel building that provides shielding, and the onshore transmission system employs underground cables as opposed to overhead lines. Cables are proposed to be buried in conduit or duct banks which include concrete casings. In addition, it is expected that the converter station in San Francisco will be surrounded by a masonry wall which will help mitigate noise impacts, EMF, and visual impacts. No further EMF modeling is necessary and no further mitigation is warranted beyond that already included in the Project design.
22-12	Comment noted. As discussed in the Draft EIR, the CAISO selected the proposed Trans Bay Cable 400 MW HVDC Project along with the Jefferson-Martin Transmission Line and the San Francisco Electric Reliability Project as the trio of projects needed to solve San Francisco's short-term and long-term electrical supply and reliability needs. The CAISO assessed the Moraga-Potrero alternative and determined that the proposed Trans Bay Cable Project was preferable. As discussed in Draft EIR Section A.8.3.5.5, the Moraga-Potrero alternative was determined to likely be infeasible due to the significant constraints that exist for getting the line to the East Bay shoreline and the difficulty in getting the line across the Bay to San Francisco/Potrero (i.e., would likely require a submarine cable since it could not be placed on the bridge or within BART tube). CEQA does not require detailed analysis of alternatives that are deemed to be infeasible. In addition, the environmental impacts of the Moraga-Potrero alternative are expected to likely be greater than the proposed TBC Project since it would involve construction through the East Bay hills and through highly populated urban areas as well as installation of a submarine cable component similar to the proposed Project. Please refer to Responses 11-2 and 19-5 for more information.
22-13	Comments noted. Please refer to Responses 3-1 through 3-6.
22-14	Comments noted. Section A.8.3 of the Draft EIR considers multiple transmission and non-transmission

RESPONSE TO COMMENTS

Comment Number	Response
	alternatives for meeting current and projected electrical supply and reliability needs in San Francisco. None of the various alternatives considered were deemed to be capable of meeting all of the Project objectives and the related screening criteria for feasibility and environmental impacts avoidance. CEQA does not require detailed analysis of alternatives that are infeasible, incapable of meeting the Project's objectives, or that are speculative. The alternatives analysis presented in Draft EIR Section A.8.3 is adequate and reasonable.
22-15	Comments noted. Potential cumulative impacts with the BART earthquake safety program are addressed in Draft EIR Section 7.2.2.12.2. The primary potential concern from a cumulative impact standpoint given the geographical locations of the BART retrofit project components and the proposed Trans Bay Cable Project is the area where the proposed Trans Bay Cable route crosses the BART trans bay tube in the Bay (refer to Map A.2-1, Sheet 1 of 10, milepost 3.5).The proposed onshore TBC Project components are located several miles south of the BART seismic retrofit project's western terminus at the Montgomery station in San Francisco (source: Environmental Assessment/Finding of No Significant Impact , BART Seismic Retrofit Project, Berkeley Hills Tunnel to the Montgomery Street Station; USDOT, Federal Highway Administration et al., August 2005) components in San Francisco, thus, the potential for cumulative impacts to occur during the construction phases is minimal. BART's schedule for performing the retrofits to the trans Bay tube in the Bay indicates that BART's in-bay work would be completed prior to the initiation of the submarine cable installation component of the proposed Trans Bay Cable Project which would not begin until at least the summer of 2008. Therefore, the potential for significant cumulative construction phase environmental impacts between the two projects is negligible. However, the cumulative impact assessment presented in Section 7.2.2.12.2 of the Draft EIR recognizes the potential for system and maintenance conflicts between the two systems and the Project proponent for the Trans Bay Cable has, and will continue to, coordinate with BART engineers to resolve applicable issues prior to final design and construction of the proposed Project. Please refer to Responses 5-1 through 5-5 for more information.
22-17	Comments noted. Please refer to Response 9-1.
22-18	Comments noted. Please refer to Response 2-1A. As noted in Comment Response 2-1A, the electrical sources that would feed the proposed Trans Bay Cable Project via the existing PG&E Pittsburg Substation include a variety of previously permitted ad mitigated sources that varies over time. It is not known what specific sources would supply the PG&E Pittsburg Substation in the future nor what impact, if any, the proposed Project would have on the operation of these sources as these factors involve decisions to be made by the CAISO based on future conditions such as supply and demand. To try and make assumptions about how the grid would be supplied and operated in the future (i.e., in order to form the basis for any air quality impact modeling) would be speculative which is discouraged under CEQA. Given that the proposed Project is a transmission project, not a generation project, speculative indirect operational phase air quality impact modeling is not appropriate. As also noted in Comment Response 2-1A, there is sufficient generation in the electrical grid to provide the energy that would be transmitted by the Project. The TBC Project is not expected to encourage or facilitate any new generation projects. The Project is actually expected to reduce demand for generation because of an estimated 20 MW savings in transmission line losses as a result of the proposed Project.
22-19	Comments noted. Please note that the proposed TBC Project is a transmission project not an electrical generation project. There are no operational phase "generation" related emissions associated with the proposed Project. Please refer to Responses 2-1A and 22-18.

RESPONSE TO COMMENTS

Comment Number	Response
22-20	Comments noted. Neither CEQA nor the BAAQMD require air quality modeling for mobile sources such as the submarine cable-laying vessel which would install approximately 52 miles of submarine cable in the Bay over a 3- to 4-month period. Therefore, modeling of mobile marine vessel construction emissions is not necessary. The comment regarding the Project's emissions relative to the BAAQMD's definition of a "major new source" is not pertinent since this regulation pertains to qualifying stationary sources that typically emit specific criteria pollutants over the long term not a brief construction period. The Draft EIR includes mitigation measures for temporary marine vessel emissions as discussed in Section 4.2.3.4 under Mitigation Measure AIR-3, Marine Vessel Emission Controls. With implementation of the stated mitigation measure, no significant air quality impacts are expected to occur associated with short-term marine vessel emissions. As discussed in Section 4.2.3.2.2 of the Draft EIR (see Table 4.2-12), a long term air quality-related benefit of the proposed TBC Project would be the expected savings of 20 megawatts of electricity that is currently lost due to line losses/transmission grid congestion. The term "regional air quality" in this context is assumed to mean large scale (i.e., district-wide) modeling of ozone precursors (i.e., nitrogen oxides NO_x] and volatile organic compounds [VOCs]) that undergo reactions in the atmosphere and contribute to the formation of ozone. The potential effect to regional air quality from marine vessel emissions was addressed in the Draft EIR. [It was correctly pointed out that the Project's contribution to regional emissions from the marine cable installation phase would likely be too small to be discernible to the results of regional ozone modeling (see Draft EIR, page 4.2-26). This is not only the applicant's position, it is the BAAQMD's position as well. As stated in an email received by URS following a meeting held with BAAQMD on the TBC Project wherein the estimated NOx emissions of the cable-laying ship were stated to be over 1,000 pounds per day, "Modeling would not show increased ozone levels resulting from 1000 lb/day - that's way too small to show up in photochemical models" (Henry Hilken, BAAQMD Director of Planning, 01/24/06). The term "localized air quality" in this context is assumed to mean small scale (i.e., within about 10 km) modeling of pollutants in a non-reactive mode (again including NO_x) to determine those emissions' contributions to existing ambient air quality levels and compare the total to established ambient air quality standards (AAQS). The potential effect on localized air quality of a ship allegedly being in the proximity of a given point for 20 days as suggested in the comment is nebulous because there are no federal or state AAQS having a 20-day averaging time, or even close to a 20-day averaging time. Therefore, there are no criteria for the results of the localized air dispersion modeling requested in the comment to be compared with. NO_2 has an AAQS for both a 1-hr and an annual averaging time. It is quite possible that the vessel could remain in the same position for periods of one hour or longer but the annual standard is clearly not applicable to this project due to the temporary nature of the construction phase. Air dispersion modeling was conducted using the USEPA SCREEN3 computer model for the NO_x emissions from the cable ship Giulio Verne. The SCREEN3 model looks at emissions from a single stack and evaluates downwind impacts over a full array of all possible meteorological conditions. Several highly conservative and in some cases impractical assumptions were used which would tend to make the modeled results higher than what would actually occur. First, each of the four engines in service on the vessel was assumed to be operating at maximum rated output of 2,268 brake horsepower per engine @ 0.0109 pound of NO_x per brake horsepower hour unit emission rate, an emission rate from the vessel equal to 99 pounds per hour of NO_x. Second, the ship was assumed to be stationary for one full hour even at this maximum engine output. Third, it was assumed that all NO_x is emitted as NO_2 - a highly conservative assumption in that it is likely that only about 10 percent of the emissions would be NO_2.

RESPONSE TO COMMENTS

Comment Number	Response
	The maximum-modeled impact occurred at about 875 meters downwind from the vessel and was 53 micrograms per cubic meter. Concentrations at other locations and during other operating conditions all would be lower. The 1-hr California AAQS for NO_2 is 470 micrograms per cubic meter. The highest measured background was 141 micrograms per cubic meter (see Draft EIR Table 4.2-3, Arkansas Street, San Francisco, Nitrogen Dioxide Maximum1-hr Average for year 2002 = 0.075 parts per million (ppm), which is equivalent to 141 micrograms per cubic meter). Therefore, the sum of the worst-case modeled project impact plus background is 53 + 141 = 194, which does not exceed the California AAQS of 470 micrograms per cubic meter. The estimated worst-case project impact plus existing background is only about 40 percent of the applicable standard. Therefore, operation of the Giulio Verne would not cause the California 1-hour NO_2 Ambient Air Quality Standard to be exceeded.
22-21	Please see Response 22-20 regarding ozone modeling.
22-22	Comments noted.
22-23	Please see Response 10-4. The concerns related to emissions from construction equipment operating on land are addressed in the expanded list of mitigation measures added to AQ-2. Please see Response 10-5. The concerns related to emissions from marine operations are partially addressed in the mitigation measure added to AQ-3. It is very feasible to equip the vessel with the infrastructure necessary to allow hook up to shore side power and have this modification completed in time for this project. Shore side power infrastructure currently exists in at least two locations within the SF Bay Area capable of docking this vessel.
22-24	Comments noted. The comment is not clear what "site" the comment is in reference to, but since the comment is provided by the CCSF, it is assumed that the comment is in reference to the proposed San Francisco converter station site as assessed in the Draft EIR. As noted in previous responses to comments received on the Draft EIR, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). Please refer to Section 4.A.3 of the Final EIR for the Geologic Resources and Soils assessment of the now-proposed HWC (Mitigated) site. It should be noted that the geologic resources and soil conditions at the HWC (Mitigated) site are essentially the same as the conditions for the HWC site assessed in the Draft EIR as they are located on the same property. The comments stating that specific geologic conditions and hazards as well as hazardous material contamination conditions need to be clearly stated for the site are currently clearly stated in Sections 4.3 and 4.14 of the Draft EIR as well as the corresponding sections of the Final EIR. See new Sections 4.A.3 and 4.A.14 for information regarding the HWC (Mitigated) site in the Final EIR.
22-25	Comment noted. This comment is non-specific to the portion of the Draft EIR to which the comment is intended to apply and it is difficult to interpret as to its potential validity. This comment response assumes that this comment applies to geologic conditions and potential impacts at the San Francisco converter station site (i.e., Sections 4.3.1.4.1 and 4.3.3.2.1, respectively, of the Draft EIR) and the appropriate building design measures to address the site-specific geologic conditions and hazards. The Draft EIR mitigation measures for geologic hazards are clear with respect to the sites in San Francisco and Pittsburg, that site-specific geotechnical investigation results would be required prior to construction, and that the results would be considered as appropriate in the final converter station designs for the various hazards that potentially exist at each site. The final design process would include adherence to applicable regulations including portions of the Uniform and California Building Codes, and review by the City of Pittsburg and CCSF as part of the building permit review and approval process.

RESPONSE TO COMMENTS

Comment Number	Response
22-26	Comments noted. Section 4.3.3.2 of the Draft EIR addresses potential construction-related impacts and appropriate mitigation measures associated with geologic resources and soils, including potential impacts associated with excavation of naturally occurring serpentinite (asbestos bearing rock)(please refer to Impact GEO-2 and Mitigation Measure GEO-2 in Section 4.3.3.2.1 of the Draft EIR). Draft EIR Section 4.3.1.4.1 clearly states that the San Francisco converter station site is underlain by fill. The potential presence of contaminants in the fill are irrelevant to the assessment of geologic conditions at the site. Please refer to Draft EIR Section 4.14 (Hazardous Materials and Waste Management) and Final EIR Section 4.A.14, which addresses the results of the Phase II hazardous material investigation results for the now-proposed HWC (Mitigated) site and the associated potentially significant environmental impacts related to subsurface contamination and associated mitigation measures to protect the environment, public health, and worker safety. The mitigation measures include consideration of Article 22A (Maher Ordinance) requirements.
22-27	Comments noted. Previous studies of sediments in the vicinity of the Mirant Potrero power plant have detected the highest sediment contamination at the northeast corner of the Potrero site and in surface sediments near the Unit 3 outfall (URS, 2001: Final Offshore Sediment Characterization Report, Potrero Power Plant). Contamination in water deeper than 14 feet below MLLW was not detected. The proposed Trans Bay Cable Potrero shoreline crossing would emerge south, and in 25 feet of water offshore, of these locations. The HDD approach has been adopted to ensure that shoreline contaminants are not encountered and are not introduced to the Bay.
22-28	Comments noted. Please see Responses 10-9 and 10-12. In addition, please note that the total sediment dispersed per mile is a very small volume, between 117 and 234 cubic yards per mile, and will be dispersed at a very slow rate of 1 cubic foot per 16 seconds. The total sediment dispersed within the 10 miles of cable alignment in City and County of San Francisco jurisdiction is between 1,170 and 2,340 cubic yards. This volume is below the 5,000 cubic yard DMMO trigger for sediment sampling.
22-29	Comments noted. Please refer to Response 22-28.
22-30	Comments noted. Please refer to Response 10-10.
22-31	Comments noted. Please refer to Response 19-24.
22-32	Comments noted Please refer to Responses 10-11 and 10-12. In addition, please see Response 22-27 regarding contamination at Potrero and Response 12-6 regarding the use of HDD to avoid known near shore contamination at Potrero.
22-33	Comments noted. As noted in Response 22-27, contamination in offshore sediment near the Potrero power plant is in shoreline and near shore sediments. The Project has been designed to avoid known contamination at Potrero. Specifically, the HDD has been proposed to pass under shoreline contamination and to surface offshore and in deep water (30-35 feet) in order to avoid known near shore contamination. Therefore, the presence of the cable would not conflict with remediation of near shore sediments if it is required in the future.
22-34	Comments noted. As discussed in Draft EIR Section 4.5.1.4.1, the onshore portion of the Project area in San Francisco consists of previously developed and industrialized landscapes characterized as “Disturbed/Developed” habitats. As discussed in Draft EIR Section 4.5.3.2.1, no potentially significant impacts to onshore natural communities, wildlife habitat, wetlands, or special-status species are expected to occur from construction or operations related activities associated with the proposed Project in San Francisco. No further analysis is needed or appropriate.

RESPONSE TO COMMENTS

Comment Number	Response
22-35	Comments noted. No potentially significant impacts to marine biological resources are identified in the Section 4.6 of the Draft EIR for any portions of the Project either in Pittsburg, San Francisco, or elsewhere. Accordingly, no mitigation measures beyond those incorporated into the proposed Project design (e.g., careful routing of cable to avoid potentially sensitive marine biological resources and use of minimally invasive Hydroplow for submarine cable installation) are deemed necessary or proposed. The marine biological resources impact assessment presented in the Draft EIR is comprehensive and not preferential to the Pittsburg portion of the Project.
22-36	Comments noted. As described in Draft EIR Sections 4.12.3.2.2, operation of the converter stations would only require nominal quantities of water for landscaping, drinking, restrooms and maintenance activities. The proposed converter stations would not consume water for cooling (i.e., no cooling water intake or discharges). No impacts to marine biological resources associated with cooling would occur.
22-37	The Dungeness crab fishery within San Francisco Bay is recreational only; no commercial fishing vessel traffic (either crabbers or sport fishing [party] vessels) engage in taking Dungeness crab within San Francisco Bay. Crabbers in transit to other grounds (if any) are considered vessels in transit in Section 4.9.1.3 of the Draft EIR.
22-38	Comment noted. The Draft EIR authors have consulted Caltrans documents (e.g., Baywide Eelgrass report) in preparing the Draft EIR section. Many of the Caltrans documents related to the East Span Replacement Project have very different issues associated with them with respect to topics such as marine mammals and underwater noise, but to the extent that these documents and survey data are applicable, they have been considered.
22-39	Comments noted. See Responses 16-10, 16-11, and 19-11.
22-40	Comments noted. Potential construction-related noise impacts to marine organisms associated with submarine cable installation would be associated primarily with the cable-laying vessels as described in the Noise and Vibration section of the Draft EIR (Section 4.11.3.4.1). Please refer to Draft EIR Section 4.11.3.4.1 for more information, including the anticipated Project noise levels in the marine environment, presentation of NOAA Fisheries' noise guidance for impacts to marine organisms, and the impact finding of less than significant with respect to this issue. Please note that the proposed Project no longer includes dredging activities in New York Slough.
22-41	Comments noted. Section 4.7.1.2.1 and Appendix G of the Draft EIR address the historic architectural resources at the HWC site and the Station A Complex on the adjacent Mirant property. In addition, Section 4.7.1.2.1 and Appendix G of the Draft EIR also discuss the CEC evidentiary hearings associated with the Application for Certification for the once-proposed Potrero Power Plant Unit 7 project, including recognition of the larger potential historic district. It should be noted that as a mitigating action and partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). The HWC (Mitigated) site avoids direct and indirect impacts to the historic buildings on the HWC property, the San Francisco Mirant property (Station A Complex), and to potential historic districts. Please refer to Response 3-7 for more information.
22-42	Comment noted. Partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the City of Pittsburg as CEQA Lead Agency and the Project proponent have considered the potential project impacts on historic resources in San

RESPONSE TO COMMENTS

Comment Number	Response
	Francisco and incorporated a mitigating action into the Project to avoid impacts to the historic buildings on the HWC site and the adjacent Mirant property. Please refer to Response 22-41.
22-43	Comments noted. The mitigation measures presented in the Draft EIR are commensurate with the level of impacts because, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). HWC (Mitigated) will completely avoid direct impacts to the two historic buildings on the eastern portion of the HWC property. This action would not directly or indirectly impact the potential historic district(s) or contributing elements of potential historic district(s) located north of the HWC (Mitigated) site. Refer to Section 4.A.7 of the Final EIR for more information.
22-44	Comments noted. The Project proponent has consulted with the San Francisco Planning Department Historic Preservation Coordinator, and through this coordination, has consulted with the Landmarks Preservation Advisory Board.
22-45	Comments noted. The mitigation measures presented in the Draft EIR are commensurate with the level of impacts because, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site, the Project proponent has negotiated with the landowner at the HWC site and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). Shifting the site location west will completely avoid direct impacts to the two historic buildings on the eastern portion of the HWC property. This action would not directly or indirectly impact the potential historic district(s) or contributing elements of potential historic district(s) located north of the HWC (Mitigated) site. Refer to Section 4.A.7 of the Final EIR for more information.
22-46	Comments noted. Please refer to Responses 22-41 and 22-42.
22-47	Comments noted. Section 4.8.2.3 of the Draft EIR discusses local plans, including the San Francisco General Plan, Central Waterfront Area Plan, and Draft Central Waterfront Neighborhood Plan. Table 4.8-6 of the Draft EIR lists specific policies outlined in these plans that are applicable to the Project, including policies 2.3, 9.1.1, and 7.1 referenced in the comment letter. Sections 4.8.3.2.2, 5.2.8.2, and 5.3.8.2 of the Draft EIR discuss the applicability of the Project with these policies. In addition, an Application for General Plan Referral will be submitted concurrently with other Project applications, whereby a more detailed analysis of consistency with specific objectives and policies of the General Plan and related documents will be conducted.
22-48	Comments noted. Section 4.13 of the Draft EIR, including Figure 4.13-7 which presents a baseline photo and a visual simulation showing the appearance of the converter station site from a viewing point at Warm Water Cove Park looking in a northerly direction, addresses the visual impacts of the proposed San Francisco converter station at the time the Draft EIR was prepared. As discussed in previous comment responses and as assessed in the Final EIR, the Project proponent has negotiated with the landowner at the HWC property and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). As shown in Section 4.A.13 of the Final EIR, the visual impacts on Warm Water Cove Park of the now-proposed HWC (Mitigated) converter station site are even lower than those predicted for the previously-proposed HWC site since the converter station is now further to the west, away from the park and the Bay. In addition, the retention of the existing historic warehouse buildings on the eastern portion of the overall HWC property would screen the vast

RESPONSE TO COMMENTS

Comment Number	Response
	majority of the converter station facilities on the HWC (Mitigated) site as seen from Warm Water Cove Park and as shown on Figure 4.A.13-3 of the Final EIR. As discussed in Draft EIR Section 4.13 and Final EIR Section 4.A.13, none of the proposed or alternative converter station sites under consideration in San Francisco would result in unmitigable significant visual impacts as viewed from Warm Water Cove Park or elsewhere.
22-49	Comments noted. The proposed and alternative converter station sites and ancillary facilities are consistent with the existing (M-2) and proposed (PDR) zoning of the Project area in San Francisco. Section 4.10.3.2 of the Draft EIR identifies that temporary impacts to the Bay Trail may occur during construction of the proposed Project, which could also apply to the HWC (Mitigated) site. Implementation of Mitigation Measure TRAFFIC-3 would ensure that trail closures be coordinated with the San Francisco Department of Parking and Traffic and, as appropriate, signage would be erected for temporary re-routing. No significant impacts to the Bay Trail or access to the Bay shoreline from Project operations were identified in either Section 4.8 (Land Use) or Section 4.10 (Traffic and Transportation) of the Draft EIR. No unmitigable potentially significant impacts to the Bay Trail or recreational opportunities on the Bay are associated with the Trans Bay Cable Project as proposed in the Final EIR, including ancillary facilities and alternatives. Further, the Project would not interfere with access or linkages to other shoreline areas or recreational areas located north or south of the site.
22-50	Comments noted. Draft EIR Sections 4.8.2.3 and 4.8.3.2.4 discuss the applicable general plan policies, including the Draft Central Waterfront Neighborhood Plan. The section discusses that the Draft Plan proposes to change the land uses in the area, including re-zoning of the San Francisco converter station sites from M-2 (Heavy Industrial) to PDR (Production, Distribution, and Repair). Sections 4.8.3.2.2, 5.2.8.2, 5.3.8.2 of the Draft EIR discuss the consistency of the Project with both the existing and proposed land uses.
22-51	Comments noted. The site is currently zoned Heavy Industrial and the HWC Converter Station is consistent with permitted uses within this district. Section 4.8.3.2.2 of the Draft EIR discusses CCSF's policies related to expanding Warm Water Cove Park to the north. Impact LU-1 is identified as a potential conflict between the proposed Project and CCSF/BCDC policies which stress the importance of public access to the Bay. Implementation of Mitigation Measure LU-1 would ensure that requisite conditions of permits from applicable agencies be met, including any conditions to provide Bay access in the vicinity of the Project site. However, the proposed Project has now been shifted in a westerly direction on the overall HWC property (HWC [Mitigated] site), and would not impact the potential implementation of the CCSF General Plan policies regarding improvements to Warm Water Cove Park. Thus, Impact LU-1 is no longer applicable to the HWC (Mitigated) site and Mitigation Measure LU-1 is no longer warranted.
22-52	Comments noted. The proposed submarine cable route, including the portion of the route in San Francisco Bay, was developed in consultation with the USACE and the San Francisco Bar Pilots, among others. In general, the proposed route in San Francisco waters avoids shipping channels and is located in waters that are at least 30 feet deep since this is the approximate minimum depth at which the cable-laying vessel can operate. The proposed submarine cable route avoids portions of ship channels that are routinely dredged or planned to be dredged to maintain adequate vessel draft. The proposed cable would be installed at a typical target burial depth of 3 to 6 feet below the bottom of the Bay and, once installed and buried, would not impact vessel movements in the Bay regardless of water depth. Please refer to Response 18-1 regarding the addition of the cable route (as built) to NOAA charts.

RESPONSE TO COMMENTS

Comment Number	Response
22-53	Comments noted. The proposed submarine cable route was sited to avoid established shipping channels as well as dredge areas, dredge material disposal areas, and sand mining areas. The cable location has been defined in conference with the USACE, U.S. Coast Guard, NOAA, and other authorities knowledgeable about planned future dredged channel depths. It is expected that any future implementation and maintenance of 50-foot-deep shipping channels would occur in existing shipping channels which are avoided by the proposed submarine cable route. No potential conflicts between the proposed submarine cable route and potential future 50-foot navigation channels are anticipated. In the unlikely event that future dredge plans conflicted with the cable route, the cable could be shut down, cut, spliced, and reburied at a lower depth in the applicable location.
22-54	Comments noted. As discussed in Draft EIR Section 4.10.3.2, the transport of oversize loads to the San Francisco converter station site and/or temporary construction laydown areas constitutes a potentially significant impact (Impact TRAFFIC-2, Oversized Loads). With implementation of Mitigation Measure TRAFFIC-2, Coordination of Oversized Loads, this potentially significant impact would be reduced to a less-than-significant level as clearly stated in the Draft EIR. The Project proponent evaluated the potential shipment of oversized equipment to the Port of San Francisco (versus the Port of Oakland) and determined that the Port of Oakland is more appropriate due to its more central location to both Pittsburg and San Francisco and due to the capacity of its facilities for handling oversized loads.
22-55	Comments noted. Please refer to Response 20-1.
22-56	Comments noted. The City of Pittsburg as CEQA Lead Agency and the Project proponent recognize the potential conflicts with San Francisco's planned uses of the Western Pacific site in the future and, accordingly, the proposed Trans Bay Cable Project now anticipates the use of the alternate laydown area at Pier 94/96 as assessed in the Draft EIR. An area of up to approximately 7 acres would be required for the temporary construction laydown area as indicated in Table A.4-5 of the Draft EIR. The Project proponent has not entered into any agreements with the CCSF or the Port of San Francisco at this time regarding the use of Pier 94/96 or other site for temporary construction laydown, but recognizes that agreements for temporary use of such sites would need to be negotiated prior to the initiation of construction.
22-57	Comments noted. As discussed in Response 22-56, the previously-proposed use of the Western Pacific site for temporary construction laydown has been determined to be problematic and the alternate Pier 94/96 laydown site is now considered to be preferable. As discussed in Draft EIR Section 4.10.3.2, use of the Pier 94/96 alternate laydown site would avoid the majority of potential Project-related construction traffic impacts with the Metro Rail operations. The text in Section 4.10.3.2 of the Draft EIR has been revised in response to this comment. Please refer to the new Section 13.0 of the Final EIR for applicable text revision.
22-58	Comments noted. The text in Section 4.10 of the Draft EIR has been revised in response to this comment. Please refer to the new Section 13.0 of the Final EIR for applicable text revision.
22-59	Comments noted. Section 4.10.3.2.1 of the Draft EIR has been revised to further discuss potential parking impacts as follows. In the San Francisco study area, most streets have curb parking on both sides of the street. However, parking is often pre-empted by construction projects that temporarily restrict parking on the surrounding streets. By 9 a.m. on weekdays, most available curb parking in the area is taken. Although the City of San Francisco does not consider limited parking availability to be a significant impact, the Project sponsor will consider providing employee parking at the Pier 94/96 laydown area and

RESPONSE TO COMMENTS

Comment Number	Response
	to shuttle workers to and from the construction site. Please refer to new Section 13.0 of the Final EIR for more information.
22-60	Comments noted. The noise assessments performed for the San Francisco and Pittsburg components of the Project were performed appropriately and in conformance with the applicable noise ordinances and regulations, including applicable noise measurement criteria, that apply in each jurisdiction. To apply City of Pittsburg noise regulations to the analysis for San Francisco would be neither appropriate nor legally defensible. Based on post-Draft EIR consultation with CCSF staff, Section 4.A.11, including Table 4.A.11-2 of the Final EIR, present L_{dn} as well as L_{eq} sound levels for the HWC Mitigated site in San Francisco.
22-61	Comments noted. Please refer to Response 22-60. The noise analysis presented in the Draft EIR is specific to the proposed and alternative facilities in San Francisco and Pittsburg, including consideration of the applicable noise regulations in each jurisdiction. In summary, the only unavoidable adverse significant noise impact identified in the Draft EIR is for construction-related pile driving for the Pittsburg West Tenth Street, Alternative 2 site. Please refer to Draft EIR Sections 4.11 and 5.0 as well as Section 4.A.11 of the Final EIR for more information.
22-62	Comments noted. The noise analysis presented in the Draft EIR considers cumulative noise impacts by definition. As discussed and analyzed in Draft EIR Sections 4.11 and 5.0, the noise assessment considers background noise levels obtained via noise measurements and modeled noise levels with consideration of Project-related construction and operations-phase noise levels. Any potential future projects in the Project vicinity in San Francisco with the potential to generate substantial noise would be expected to be subject to environmental review and permitting (e.g., CEQA compliance) with commensurate mitigation and adherence to applicable noise regulations in San Francisco. Therefore, no significant cumulative noise impacts are anticipated.
22-63	Comments noted. An EIR is required to describe and evaluate a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR does not need to consider every conceivable alternative to a project. The intent of the alternatives analysis in an EIR is to provide a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR is not required to consider alternatives which are infeasible. The proposed and alternative converter station sites under consideration in San Francisco are all in proximity to the PG&E Potrero Substation, to limit the length of the required 115 kV AC interconnection. No other potential alternative sites have been identified and no unavoidable adverse significant visual impacts have been identified for the proposed or alternative converter station sites in San Francisco from any viewing points. The Draft EIR considers multiple alternatives and the alternatives analysis is deemed adequate.
22-64	Comments noted. As stated in Draft EIR Section A.3.6.1.3, the proposed 115 kV AC interconnection in San Francisco is underground and is consistent with San Francisco General Plan Urban Design Element policy regarding undergrounding of new utilities for new projects. The Project description in the Draft EIR does discuss the possible alternative of an overhead 115 kV line as a contingency in the event that there were some insurmountable obstacle to installing an underground line between the San Francisco

RESPONSE TO COMMENTS

Comment Number	Response
	converter station and the PG&E Potrero substation. Based on further analysis by the Project proponent, it has been determined that the proposed underground option is feasible and the overhead option has been dropped from further consideration.
22-65	Comments noted. The design of the converter station includes an automatic fire protection system. Systems will be designed to automatically respond to the detection of both smoke and fire, should a fire occur. The Project proponent will coordinate with the Fire Marshall during design review in San Francisco and automated emergency/fire notification facilities, as appropriate, will be included in the design.
22-66	The facility will be hardened against vandalism with sound walls or chain-link fencing, which will surround the facility except for the access gates. The gates will be kept locked at all times except when authorized personnel need to access the site. Signs with the words "Danger: High Voltage" will be posted near the high-voltage lines and equipment in the facility. Other options that the Project proponent and the City of Pittsburg are considering to enhance security at the HWC (Mitigated) site are as follows: • Security alarms • Security cameras for the guard service or the TBC operators to be located in Pittsburg • Guard service Regarding the need to reduce the storage and use of hazardous materials; transformer oil will be the only hazardous material used in large volume at the HWC (Mitigated) site. The use and storage of other hazardous materials, such as paint and lubricants, will be kept to a minimum. Only minimal amounts of hazardous wastes will be generated at the site, as no chemical processes will be performed onsite. Placards and Signage Warning about the Presence of Hazardous Materials; placards and signage will be used to comply with the Fire Code and other laws and ordinances related to the use, storage, and disposal of hazardous materials. The various applicable laws, regulations, and ordinances are discussed in more detail in the Draft EIR Appendix I (Volume 2). Public Open Space Uses at the Converter Station Sites; both the San Francisco and the Pittsburg converter stations sites will be isolated from adjacent public open spaces, such as 23rd Street and Illinois Streets in San Francisco and West Tenth Street in Pittsburg, by sound walls or fences with locked gates. Neither converter station will have any public open space, and neither converter station will allow the public on the site.
22-67	Comment noted. Storm water runoff and capacity are addressed in Draft EIR Sections 4.4.1.5.1 and 4.4.1.6.1 and Final EIR Section 4.A.4. See also Response to Comment 19-24.
22-68	Comments noted. The Final EIR considers the results of the Phase II investigation that was performed for the HWC (Mitigated) site in Section 4.A.14. Appropriate remediation and mitigation measures are proposed to protect human health, and the environment, including Bay water quality. Please refer to new Section 4.A.14 of the Final EIR.
22-69	Comments noted.
22-70	At the time of Final EIR issuance, the field investigation as part of a Phase II soil and groundwater investigation at the HWC (Mitigated) site and the associated report have been completed. It is clear that

RESPONSE TO COMMENTS

Comment Number	Response
	the site soils and groundwater are impacted from earlier site activities. Site contaminants include heavy metals, polynuclear aromatic hydrocarbons, and heavy petroleum hydrocarbons. The Maher Ordinance analytical criteria were a part of the Phase II analytical program and will be reported in the Phase II soil and groundwater investigation report for the HWC (Mitigated) site. The TBC Project will comply with the provisions of the Maher Ordinance during the redevelopment of the HWC (Mitigated) site. The Project proponent is not responsible for the existing soil and groundwater contamination at the HWC (Mitigated) site. The Project proponent has never had any ownership interest in the property or the former operations at the site that caused the soil and groundwater contamination that currently exists at the site. The Project proponent has entered into an option agreement with the property owner so that should the TBC Project move forward, the Project proponent would enter into a 99-year lease with the property owner. Site-specific waste management plans will be required for the redevelopment of the site to provide the details of the contaminated soil and groundwater collection, storage, transportation, and management. The Project proponent plans to enter into a Brownfield redevelopment agreement with the State of California Environmental Protection Agency (CalEPA) for the redevelopment of the HWC (Mitigated) site. The Project proponent would also be responsible for any contamination caused by the operation of the converter station in the future. As a matter of public policy, Brownfield agreements limit the environmental liability of the developer to the environmental issues resulting directly from the redevelopment to encourage the redevelopment of contaminated properties. At the HWC (Mitigated) site, the Project proponent would be responsible for the management and disposal of the contaminated soil excavated to construct the building foundations and secondary containment structures and for the management and disposal of the contaminated groundwater collected during construction dewatering, if any. The management of the previously existing contaminated soils and groundwater at the site would remain the responsibility of the landowner and/or the other responsible parties that caused the contamination during earlier operations. The implementation oversight of these plans for the redevelopment of the HWC (Mitigated) site would be provided by the State of California (CalEPA). Coordination between the CalEPA agency providing the Brownfield oversight and the San Francisco Department of Health as the Local Oversight Program on the management of contaminated soils and groundwater is expected to be a part of the Brownfield agreement. The City of Pittsburg and the Project proponent also agree that the redevelopment construction involving the excavation of contaminated soils and the collection and management of groundwater will require that the construction contractor prepare a site-specific and contaminant-specific Health and Safety Plan. The Occupational Health and Safety regulations are discussed in more detail in the Draft EIR Appendix I (Volume 2).
22-71	The City of Pittsburg and the Project proponent agree that the redevelopment construction at each converter station site will require a Project-specific and site-specific Storm Water Pollution Prevention Plan (SWPPP). These site-specific plans would address the measures that the construction contractor will take to prevent storm water pollution. These measures, which would be designed to reduce the potential impact of the construction to stormwater, would include, but are not limited to, the following: • Storage and use of hazardous materials during construction such as fuels, solvents, and paints. • Storage of wastes generated during construction, including, waste packaging, contaminated soil,

RESPONSE TO COMMENTS

Comment Number	Response
	and groundwater. Overall waste management would be addressed in more detail in a separate Waste Management Plan. • Prohibition of illicit discharges to storm water drains. • Construction equipment decontamination procedures and street sweeping to control the tracking of contaminated soil offsite by construction vehicles. The construction contractor for each converter station site would develop a site-specific SWPPP and present it to the regulatory oversight agency for each converter station site for review and approval. The City of Pittsburg, as the lead CEQA agency, together with the environmental regulatory agencies for the redevelopment, would provide implementation oversight of the SWPPP.
22-72	The City of Pittsburg agrees that the San Francisco Department of Public Health (SFDPH) is the local oversight agency that administers Hazardous Materials Business Plans (HMBPs) in the CCSF. Similarly, the Contra Costa County Department of Health is the local oversight agency for HMBPs in Contra Costa County. The construction contractor would provide a construction HMBP to meet federal, state, and local requirements for the Project sites in San Francisco and Pittsburg to the City and County of SFDPH and the Contra Costa County Department of Health, respectively. Before the startup of the converter stations, the Project proponent would also provide an operations-phase HMBP plan to the City and County of SFDPH and to the Contra Costa County Department of Health.
22-73	Comments noted. Please refer to Responses 3-1 through 3-6.
22-74	Comments noted. The City of Pittsburg as CEQA Lead Agency and the Project proponent are supportive of renewable energy sources such as solar. The Project proponent has evaluated the potential for placing solar panels on the roofs of the converter stations. The Project proponent plans to coordinate further with CCSF representatives on this issue and solar panels may be incorporated into the final design, if appropriate.
22-75	Comments noted. Please refer to Response 22-56. In accordance with the CCSF's request, the Western Pacific site is no longer proposed for temporary construction laydown due to the conflicts stated in Comment 22-75. The text in the Final EIR has been revised to reflect the deletion of the Western Pacific site from further consideration. Please refer to Section 3.0 of the Final EIR.
22-76	Comments noted. Although several different cable capacities were assessed by the Project proponent and the CAISO during the conceptual project development phase, the CAISO selected and approved the proposed TBC Project with a specific capacity of 400 megawatts (MW) (please refer to Appendix C of the Draft EIR for pertinent CAISO documents). The Project proponent has sized the Proposed project to be consistent with the CAISO's specification of a 400 MW project.
22-77	Comments noted. The Project proponent considered the possibility of installing two cables instead of one. The Project size under a two-cable scenario would be 600 MW, or 300 MW for each cable. CAISO's analysis concluded that 400 MW would accommodate the projected demand in San Francisco. The Board approved CAISO specification of a 400 MW project concluding that the alternative of installing two cables was infeasible due to economic considerations.
22-78	Comments noted. The CAISO evaluated multiple alternatives for meeting San Francisco's long-term electric supply and reliability needs and selected the TBC Project along with the Jefferson-Martin transmission line and the San Francisco Electric Reliability Project. One of the primary benefits of the TBC Project is that it would provide an alternate transmission pathway to serve San Francisco and northern San Mateo County; i.e., would not involve use of existing transmission facilities that come up the Peninsula to San Francisco.

RESPONSE TO COMMENTS

Comment Number	Response
	Neither the No Project Alternative or possible reconductoring of PG&E's transmission lines would provide an alternate transmission pathway, thus they would not provide the same level of reliability provided by the TBC Project.
22-79	Comments noted. Please refer to Response 22-78. Both CAISO and PG&E routinely perform long-term grid transmission planning. The San Francisco Stakeholders Study Group analyzed the greater Bay area for 2 years, during which they evaluated many alternatives including the "No Project" alternative and reconductoring (see Appendices A.8.4 and A.8.3.5.4 of the Draft EIR). They determined that to increase electrical transmission reliability to San Francisco, an alternate pathway was required. Reconductoring would not provide the alternate pathway for added reliability to serve the San Francisco load.
22-80	Comments noted. The CAISO analysis determined that the Jefferson – Martin transmission line would shut down Hunters Point. The Jefferson – Martin transmission line is operational and Hunters Point is shut down. Upon commercial operation of the San Francisco Electric Reliability Project (SFERP), the shut down of the Mirant Potrero Power Plant would seem likely. Mirant solely has the authority to shut the Potrero Power Plant and the CCSF solely has the authority to cause the SFERP to be constructed and placed into operation.
22-81	Comments noted. Sections 1.3.5 and 6.3 of the Draft EIR have been revised to reflect the environmentally superior alternative(s) as being the HWC (Mitigated) site in San Francisco and the temporary construction laydown area on the Port of San Francisco's property at Pier 94/96 as evaluated in the Draft EIR. Please refer to Sections 1.3.5, 4.A,and 6.3 of the Final EIR for the rationale supporting identification of these facility locations as the environmentally superior sites.
22-82	Comments noted. The Babcock & Brown website is not current with respect to the locations of the currently proposed and alternative converter station sites under consideration in San Francisco. The City of Pittsburg's website includes a copy of the Draft and Final EIRs which delineate the accurate locations of proposed and alternative facilities in San Francisco at the time the subject documents were prepared. The site of the Muni Metro East Maintenance Facility is no longer proposed for a converter station site or a temporary construction laydown area and no conflicts between the two projects are expected to occur.
22-83	The City of Pittsburg as CEQA Lead Agency appreciates the reference documents provided by the CCSF relative to the CEC's hearings and prepared testimony for the Mirant Potrero Unit 7 Application for Certification in 2002. The Final EIR for the TBC Project, including responses to pertinent comments (e.g., regarding historical resources) considers these reference documents, as appropriate. Please refer to Responses 15-1 and 22-41, which explain that the proposed HWC (Mitigated) site will avoid any impacts to historic resources.
22-84	The City of Pittsburg as CEQA Lead Agency appreciates the reference letter from the Port of San Francisco dated May 21, 2001 provided by the CCSF relative to the California Energy Commission's consideration of the Mirant Potrero Unit 7 Application for Certification. The Final EIR for the TBC Project, including responses to pertinent comments (e.g., regarding historical resources and mitigation costs) considers this reference document, as appropriate. Please refer to Responses 15-1 and 22-41.

RESPONSE TO COMMENTS

Comment Number	Response
22-85A	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates the San Francisco Power Plant Task Force's (SFPPTF) review of the Draft EIR for the Trans Bay Cable Project. The City of Pittsburg disagrees with the SFPPTF's assertion that the Draft EIR is inadequate and that it was not properly noticed. The Draft EIR was issued, including the Notice of Availability, on May 10, 2006. As noted in the Office of the Administrator's cover letter to the SFPPTF's written comments, the public comment period for the Draft EIR was extended by two weeks (i.e., 59 days total) to accommodate the SFPPTF's request for an extension. The availability of the Draft EIR and the public meetings schedule was posted in the San Francisco Chronicle on May 29, 2006 and in the Contra Costa Times on June 2, 2006, and multiple hard copies and CDs of the Draft EIR were provided directly to applicable regulatory agencies, including CCSF and members of the SFPPTF, as well as to various environmental groups. The Draft EIR is also posted on the City of Pittsburg's website. In addition, public meetings to describe the Project, summarize the Draft EIR findings, and receive oral comments were held in San Francisco (June 8, 2006) and Pittsburg (June 14, 2006). Members of the SFPPTF were present and provided oral comments at the June 8, 2006 public meeting in San Francisco at the Potrero Hill Neighborhood House. Responses to the oral comments received are presented in subsequent responses based on the Public Meeting transcripts.
22-85B	Comments noted. The Association of Bay Area Governments (ABAG) commented on the Draft EIR; please refer Response 20-1.
22-85C	Comment noted. Section 4.13 of the Draft EIR (and Section 4.A.13 in the Final EIR) includes a context photo from the western edge of the Bay at Warm Water Cove Park (key observation point "SF-3"). This location and view represent the worst case view from the Bay towards the applicable San Francisco converter station sites under consideration. The water area of the Bay east of the HWC (Mitigated) site is primarily utilized for heavy shipping given the Port of San Francisco facility nearby to the south. The quality of views from the shipping lane is not a significant visual issue. Recreation sailing further to the east in the central portion of the Bay is relatively distant; the Warm Water Cove Area will blend into the overall industrial character of the shoreline that is prevalent for this area both north and south.
22-85D	Comments noted. Draft EIR Section 4.8 (Land Use and Recreation) has been revised in response to this comment. Please refer to the new Section 13.0 of the Final EIR for applicable text revision.
22-85E	Please refer to Response 10-44 and Response 22-41, which explain that the HWC site has been shifted to the west, and that the now-proposed HWC (Mitigated) site avoids historic resource impacts.
22-85F	The construction of these concrete sugar warehouses was an "improvement" in the storage of refined sugar, but neither the buildings themselves nor the way they are constructed was considered a "technological advancement." Neither building is eligible for its architectural or engineering merit under National Register Criterion C, or California Register Criterion 3. [Source: Corbett, URS Corporation, "Historic Architecture Report for 435 23rd Street, CCSF, California" (2001)].
22-85G	Comment noted.
22-85H	The evaluation of the significance of the Station A Complex does not identify the office building facing Humboldt Street as a separate contributing element of the complex. The building is described as part of the main Station A structure because it was attached to the main building. The evaluation was prepared by an architectural historian who meets the Secretary of the Interior's Standards. The discussion of Station A in the Draft EIR is based on this professional evaluation and adequately describes the contributing elements of the Station A complex for the purposes of identification and impact analysis.

RESPONSE TO COMMENTS

Comment Number	Response
22-85I	Comments noted. The text in Draft EIR Section 4.7.1.2.1 and Appendix G presents the conclusions of the testimony of experts for the CEC, the CCSF, and for Mirant regarding the historical status of the Station A Complex as discussed during the CEC licensing process and hearings for the once proposed Mirant Potrero Unit 7 AFC project. As stated in Draft EIR Section 4.7.1.2.1 and Appendix G, the Station A Complex, whether as a separate resource complex or as a contributor to a potential historic district, is considered to be a historical resource for the purposes of CEQA. The evaluation of Station A was prepared by an architectural historian who meets the Secretary of the Interior's Standards for architectural historian.
22-85J	The Draft EIR correctly states that "Status 7" listing in the State Historic Preservation Office's Historic Property Data File indicates that information has been submitted to SHPO, but there has been no determination of eligibility.
22-85K	The technical reports in Draft EIR Appendix G list the relevant local historic preservation ordinances and Draft EIR Section 4.7.2.2. refers the reader to Appendix G.
22-85L	As stated in the prelude (*Historical Architectural Resources*) to Mitigation Measure(s) CUL-2 (Disturbance of Historical Architectural Resources), these measures apply to construction of the San Francisco HWC Converter Station as originally proposed which would have involved demolition of historical resources. It should be noted that, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the once-proposed HWC site, the Project proponent has negotiated with the landowner at the HWC property and now proposes to shift the San Francisco converter station to the west on the overall HWC property (HWC [Mitigated] site). The HWC (Mitigated) site completely avoids direct impacts to the two historic buildings on the eastern portion of the HWC property. Another advantage of the HWC (Mitigated) site is that it allows the proposed 115 kV interconnection to the PG&E Potrero substation to be installed without impacting the Station A Complex on the adjacent Mirant Potrero property. This action would not directly or indirectly impact the potential historic district(s) located north of the HWC (Mitigated) site. Refer to Section 4.A.7 of the Final EIR for more information. The mitigation measures presented in the Draft EIR that would be undertaken to address alternatives to the proposed Project have been expanded and clarified. The Draft EIR presented three mitigation measures (i.e., Mitigation Measure CUL-2a, Recording Architectural Resources; CUL-2b, Architectural Resource Interpretive Display and/or Interpretive Material; and CUL-2c, Architectural Resource Salvage Opportunities). Mitigation Measure CUL-2d Central Waterfront Historic Preservation has been added to Section 5.2.7 of the Draft EIR for the San Francisco Mirant alternative. Refer to Section 13.0 of this Final EIR for the applicable text revision.
22-85M	Comments noted. Mitigation Measures CUL-2a through -2c in the Draft EIR were intended to apply to the Mirant Station A Complex as well as the HWC buildings, as applicable. Please refer to Final EIR Section 4.A.7 which addresses potentially significant cultural resource impacts and associated mitigation for the three Mirant Potrero alternative converter station layouts under consideration. As noted in responses to previous comments, the HWC site as analyzed in the Draft EIR has been shifted to the west on the HWC property (HWC [Mitigated] site) as a mitigating action. The HWC (Mitigated) site is assessed in the Final EIR, partly in response to comments received regarding potential historic resources impacts associated with development of the Project on the HWC site as defined by the Draft EIR. The HWC (Mitigated) site which is located on the western portion of the overall HWC site would avoid direct impacts to the historic HWC buildings as well as the Station A Complex on the adjacent Mirant property. HWC (Mitigated) will completely avoid direct impacts to the two historic buildings on the eastern portion of the HWC property.

RESPONSE TO COMMENTS

Comment Number	Response
	This action would not directly or indirectly impact the potential historic district(s) or contributing elements of potential historic district(s) located north of the HWC (Mitigated) site. Refer to Final EIR Section 4.A.7 for more information.
22-85N	Comments noted. Please refer to Response 3-3.
22-85O	Comments noted. Please refer to Response 3-4.
22-85P	Comments noted. Please refer to Response 3-5.
22-85Q	Comments noted. Please refer to Response 3-6.
22-85R	Comments noted. Please refer to Responses 3-1 through 3-6 and text revisions to Section 4.8 regarding CCSF's energy-related policies. Refer to the new Section 13.0 of the Final EIR for the applicable text revision. In 2004 the CAISO, working closely with the CCSF, PG&E, and interested stakeholders, established a plan describing the transmission and generation requirements necessary to reliably serve the San Francisco Peninsula Area load while allowing for the release of all existing generation at Hunters Point and Potrero Power Plants from their Reliability Must-Run (RMR) Agreements. This plan, called the "Revised Action Plan for San Francisco" (Action Plan), was adopted by the CAISO Board of Governors in November 2004 and is currently being implemented by PG&E, the CCSF, and the CAISO. Full implementation of the Action Plan is expected by the end of 2007. The CAISO continued to utilize the stakeholder group to establish a long-term (10-year) transmission plan beyond the implementation of the Action Plan. This effort, called the Long Term Phase 2 Study, was initiated by the CAISO in February 2004. Ultimately the CAISO chose the proposed Trans Bay Cable Project as the best long-term transmission solution for San Francisco and the region. The Trans Bay Cable Project is a part of this larger strategy to meet energy demand and decrease pollution in San Francisco while still bringing additional safe, clean, reliable energy to the City's residents and businesses. The Project does not involve any new energy generation. This Project supports San Francisco's goals by finding an innovative way to deliver energy to San Francisco and the peninsula without requiring the development of new power plants in San Francisco or the City of Pittsburg, or elsewhere in the Bay Area. The electricity conveyed for the Project would be taken from the Pittsburg substation and transmitted under the Bay to San Francisco. The Pittsburg substation receives power directly from several local power plants, as well as through transmission lines from many other power plants in California and the Western U.S. Because of the diversity of that substation's energy sources, the source of power to the Project cannot be specified; however, renewable energy sources such as hydropower, geothermal, wind, and solar are included in the mix of resources supplied to the Pittsburg substation from the transmission system.
22-85S	Comments noted. Please refer to Responses 3-1 through 3-6.
22-85T	Comments noted. As discussed in the Draft EIR (Section 2.0 and Appendix C) and previous comment responses, the CAISO selected and approved the proposed Trans Bay Cable Project on September 8, 2005. The CAISO studied various alternatives as part of the San Francisco Stakeholders Study Group process of which the San Francisco Power Plant Task Force was a participant. The CAISO considered the cost of the TBC Project in its evaluation process. In addition, the Federal Energy Regulatory Commission (FERC) will set the rate tariff structure for the Project.
22-85U	Comments noted. Please refer to Response 21-1.

July 10, 2006

Ken Strelo
City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, CA 94565

via facsimile: 925 252-4814

Subject: Draft EIR for the Trans Bay Cable Project

Dear Mr. Strelo:

Thank you for the opportunity to comment on this important project. Livable City is a membership organization that advocates for a more livable and sustainable San Francisco. We have been active in the City's planning efforts in the Central Waterfront neighborhood, and are a member of the Blue Greenway Task Force.

We are concerned that the proposed project could interfere with the City's ability to extend the Bay Trail along the waterfront between Terry François Boulevard and Warmwater Cove Park. The current alignment of the Bay Trail in this area is along Illinois Street, as referenced in the DEIR when discussing the San Francisco Bay Plan (Section 4.8.2.3.6—Land Use and Recreation) the "San Francisco Bay Trail sections should be located near the shoreline unless that alignment would have significant effects on Bay resources; in this case, an alignment as near to the shore as possible should be provided consistent with Bay resource protection". This is also a central point of the San Francisco Bay Trail Plan, which states as its first policy that purpose of Bay Trail program is "to develop a continuous trail which...is situated as close as feasible to the shoreline..." (*The Bay Trail — Planning for a Recreational Ring Around San Francisco Bay*, July 1989). The Final EIR should discuss the proposed project in the context of the Bay Trail Plan and its policies. 23-1

That the Bay Trail should run along the waterfront is consistent with the current planning for the Blue Greenway, which has settled on Illinois street in the near term, but seeks to expand the Blue Greenway along the waterfront through Pier 70 and the Potrero Power Plant site. The Pier 70 planning is currently underway, but is also looking at options which allow the Bay Trail to pass closer to the water's edge through the Pier 70 site.

While the document seems to recognize that public access to the shoreline is an important—and likely required—amenity, the DEIR states that the use of the site as a converter facility precludes the development of public access amenities due the facility's industrial nature and public safety concerns. The proposed mitigation measure for this potentially significant impact is to "obtain any necessary permits from applicable agencies, including BCDC, and meet requisite

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Complete Neighborhoods

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conditions of approval including any conditions to provide Bay access in the vicinity of the Project site" (Section 4.8, Land Use and Recreation).

While BCDC may in fact require public access on the project site or in the immediate vicinity, it is not appropriate to rely on a future permit negotiation as a mitigation measure in an environmental review document. The purpose of the California Environmental Quality Act is to disclose to the public the significant impacts a project may impose, and offer specific mitigation measures to address the impacts. The DEIR identifies the proposed project as being in "potential conflict with public access improvements"—a potentially significant impact. It is not possible for interested parties to effectively comment on the appropriateness of proposed mitigation measures if they are not clearly stated in the document. Please include specific plans for public access to the shoreline in the Final EIR.

23-1 It is our understanding that fencing associated with security and public safety concerns will surround the site, thereby blocking any potential future public access. It is important to the Bay Trail and Blue Greenway projects that a potential waterfront trail alignment connecting to existing shoreline access at Warm Water Cove Park not be precluded by the proposed project. The Bay Trail has an existing 8-10 foot-wide pathway on the Bay side of PG & E's Hunter's Point Power Plant that connects Heron's Head Park and India Basin Shoreline Park. The path is separated from the facility by a 10-12 foot cyclone fence, and was in use while the power plant was in operation. In addition, a segment of Bay Trail in Palo Alto is similarly located adjacent to a PG & E substation, and a pathway in Pinole directly borders a functioning water treatment plant. We believe that it is entirely feasible for a similar arrangement to be employed at any one of the three alternative sites chosen for the converter station.
We ask that the final EIR include a detailed description, including graphics, of such a layout.

If you have any questions, or if I can be of any assistance, please do not hesitate to contact me at (415) 344-0489, or by e-mail at tom@livablecity.org.

Sincerely,

Tom Radulovich
Executive Director

cc: Marshall Foster, Mayor's Office of City Greening
David Beaupre, Port of San Francisco
Jeff Condit, San Francisco Neighborhood Parks Council
Maureen Gaffney, ABAG
Will Travis, BCDC
other interested parties

RESPONSE TO COMMENTS

Comment Number	Response
23-1	Comments noted. Please refer to Response 20-1.

"Ken Strelo"
<KStrelo@ci.pittsburg.ca.us
>
07/11/2006 02:48 PM

To "Trudi Opton Loscotoff" <tloscotoff@bergdavis.com>, "David Parquet" <David.Parquet@babcockbrown.com>, "Joan Lamphier" <jlamphier@lamphier-gregory.com>, "Michael
cc
bcc
Subject FW: Comment on Draft EIR for the Trans Bay Cable Project

Late comment in email from SF Neighborhood Parks Council.

Ken

-----Original Message-----
From: Dawn Pillsbury [mailto:dpillsbury@sfneighborhoodparks.org]
Sent: Tuesday, July 11, 2006 2:43 PM
To: Ken Strelo
Cc: marshall.foster@sfgov.org; david_beaupre@sfport.com
Subject: Comment on Draft EIR for the Trans Bay Cable Project

July 11, 2006

Ken Strelo
City of Pittsburg Planning Department
65 Civic Avenue
Pittsburg, CA 94565
kstrelo@ci.pittsburg.ca.us

Re: Draft EIR for the Trans Bay Cable Project

Dear Mr. Strelo,

I am writing on behalf of my organization, the San Francisco Neighborhood Parks Council, which represents 120 park groups throughout San Francisco. We are also the co-organizer of the Blue Greenway trail project and a member of the Mayor's Task Force, as well as advocates of urban green space in our City.

The Trans Bay Cable's proposed impact on the Bay Trail is of great concern to the NPC, as well as to the thousands of park users we represent. It is not acceptable to preclude public access to part of the Bay. I ask that you consider siting the converter station so as to not block the future expansion of the Bay Trail and subsequent public access to our shoreline. **24-1**

It is a vital part of the Bay Trail and Blue Greenway vision that the public be able to access as much of our prized coast as possible. We must add space to the San Francisco part of the trail, not take it away.

The Bay Trail enjoys the support <http://baytrail.abag.ca.gov/links.html> of coast-lovers from the Mayor's office to the Audubon Society. Please consider this as you finish the cable planning process.

Sincerely,
Isabel Wade
Executive Director
San Francisco Neighborhood Parks Council

Cc: Marshall Foster, Mayor's Office of City Greening
David Beaupre, Port of San Francisco

RESPONSE TO COMMENTS

Comment Number	Response
24-1	Comments noted. Please refer to Response 20-1.

California Regional Water Quality Control Board
San Francisco Bay Region

25

Linda S. Adams
Secretary for
Environmental Protection

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.waterboards.ca.gov/sanfranciscobay

Arnold Schwarzenegger
Governor

July 27, 2006

Ken Strelo, Project Planner
City of Pittsburg,
65 Civic Avenue
Pittsburg CA 94565

RECEIVED
JUL 31 2006
PLANNING DIVISION
PLANNING AND BUILDING DEPT
CITY OF PITTSBURG

Dear Mr. Strelo:

Subject: Trans Bay Cable Draft EIR

I reviewed the draft EIR, and have the following comments:

The basic approach proposed for installing the cable is acceptable. At both ends of the cable, Pittsburg and San Francisco, we will have further comments through the appropriate permitting processes. These will be based on more specific designs at that time. These will likely cover both the on land activities, to deal with any contaminated soil or groundwater, and near shore activities for installing the cable, and its potential impact on contaminated sediments. **25-1**

I did note a couple of items in the draft EIR that should be corrected:

1. On page 4.4-14, under "Section 401". Note that the authority to grant 401 Water Quality Certifications has been delegated to the Regional Water Boards, and no longer needs to be granted by the State Water Board. **25-2**
2. On page 4.14 -33, our phone number is incorrect, it should be 510-622-2300. **25-3**

Call or e-mail me if you have any questions.

Wil Bruhns, Chief
North Bay Watershed Division
San Francisco Bay Regional Water Quality Control Board
(510) 622-2327
wbruhns@waterboards.ca.gov

RESPONSE TO COMMENTS

Comment Number	Response
25-1	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates the SFRWQCB's review of the Draft EIR and understands that the Board may exercise conditions on the Project relative to its permitting jurisdiction.
25-2	Comments noted. The text in Section 4.4 of the Draft EIR regarding the responsibility for 401 Water Quality Certification has been revised in response to this comment. Please refer to the new Section 13.0 of the Final EIR for the applicable text revision.
25-3	Comment noted. Table 4.14-8 in Draft EIR Section 4.14 has been revised in response to this comment to specify the listed telephone number of 510-622-2300. Please refer to the new Section 13.0 of the Final EIR for the applicable text revision.

VALERO
BENICIA REFINERY
3400 East Second Street • Benicia, California 94510-1005 • Telephone (707) 745-7011 • Facsimile (707) 745-7514

July 9, 2006

Ken Strelo
Project Planner
Planning Department
City of Pittsburg
65 Civic Avenue
Pittsburg, CA 94565

Subject: ***Comments on the Draft Environmental Impact Report ("Draft EIR") For The Trans Bay Cable Project (SCH# 2004082096) ("Project")***

Dear Mr. Strelo:

I am writing to you on behalf of Valero Refining Company – California ("Valero") located in Benicia, Solano County, California. As noted in Table A.2-1 entitled "Known Utility Crossings," Valero is the operator of two petroleum pipelines and one products line (Cable Route Milepost 37.6-37.8) that the proposed Project will crossover. These pipelines are an integral part of Valero's refining operation and its ability to provide cleaning burning fuels to the California market, particularly Northern California.

Valero has identified several concerns with the Project. Some of its main concerns with the Project are:

- How will the Project crossover Valero's pipelines, i.e., how will the mattressing system be placed and secured over the pipelines?
- What are the Project mitigation measures in the event the Project's installation, operation, and maintenance activities damage Valero's pipelines and spill or release occurs? What entity is responsible for these mitigation measures in the event of a spill or release?
- Will the Project impact the cathodic protection[1] of the pipelines? If the cathodic protection fails due to electromagnetic interference from the Project, accelerated corrosion on the pipelines could result in a leak? What studies are being done to address this issue?
- How will the Project accommodate Valero's mandatory maintenance activities for those sections of its pipelines crossed, i.e., covered by the mattressing system?

26-1

[1] Cathodic protection is a technique to control the corrosion of a metal surface by making that surface the cathode of an electrochemical cell. It is a method used to protect metal structures from corrosion. Cathodic protection systems are most commonly used to protect steel, water, and fuel pipelines and tanks; steel pier piles, ships, offshore oil platforms, and onshore oil well casings.

To this end, Valero has been cooperatively and actively involved in the Bay Planning Coalition workgroup meetings were the Project has been discussed. In this forum, Valero has willingly offered its input and aired its concerns with the Project.

Valero has been willing to work cooperatively with Trans Bay, the Project Proponent, and the City of Pittsburg (the "City"), as the Project Lead Agency and the ultimate operator of the Project, regarding its concerns and how they should be addressed. However, Valero has only recently had substantive discussions with Trans Bay regarding obtaining Valero's consent to crossover its pipelines and its concerns with the Project. In a telephone conference call with Trans Bay on June 30, 2006, Valero was surprised to learn that the concerns listed above were not being analyzed in the Draft EIR for the Project and that the Project was on a fast track to have the EIR certified and the necessary entitlements by the end of the year. 26-1

It is not Valero's intent to slow down this Project, but to work cooperatively with Trans Bay and the City to resolve its concerns with the Project. However, Valero believes its concerns with the Project are substantial and warrant careful and full consideration by Trans Bay and the City, particularly in the Draft EIR. Although Valero had hoped it would not have to comment on the adequacy of the City's Draft EIR and CEQA[2] process, in order to protect its interests, Valero feels compelled to submit into the administrative record the following comments on the City's Draft EIR and CEQA process.

Valero understands that the City has extended the original close of comment period for the Draft EIR from June 26, 2006 until July 10, 2006. Accordingly, Valero's comments should be considered timely submitted.

I. SUMMARY OF VALERO'S CONCERNS WITH THE DRAFT EIR

Valero's and its legal counsel's review of these documents reveals that the City's Draft EIR and CEQA process suffer from the following deficiencies:

- Inadequate Project Description: The description of the Project is incomplete and misleading due to the fact that the Project does not describe the mattressing system and how it will be installed. Further, the Draft EIR fails to include all pipelines that could be crossed by the Project. The Draft EIR fails to mention or discuss that Kinder Morgan's pipelines, which are adjacent to Valero's pipelines, will also be crossed over. 26-2

- Inadequate Project Setting: The Draft EIR fails to adequately and completely describe the regulatory setting associated with the operation and maintenance of submerged pipelines in a marine setting. If this was included, it would provide the impetus for analyzing potential impacts associated with the operation and maintenance of pipelines crossed by the Project. 26-3

[2] For the purposes of this letter the California Environmental Quality Act will be referred to as "CEQA," Public Resources Code § 21000 et seq., and its Implementation Guidelines will be referred to as the "CEQA Guidelines," 14 California Code of Regulations § 15000 et seq.

- Failure to Identify or Analyze the Full Extent of Significant Environmental Impacts: The Draft EIR fails to adequately and completely analyze the potential significant adverse impacts (i.e., biological resources, water quality, public services and utilities, etc.) that could result from the implementation of the Project associated with the crossing of various pipelines. For example, there is no analysis of (1) how will the mattressing system will be placed and secured over the pipelines and in doing so what if the pipelines are damaged; (2) what would be the impacts if the pipelines are damaged during installation, operation, and maintenance activities; (3) what would be the impacts if the Trans Bay cable creates interference with the cathodic protection of the affected pipelines; and (4) what would be the impacts associated with the changed maintenance procedures for those sections of its pipelines covered by the mattressing system. These potentially significant adverse impacts cannot be ignored and must be considered in the Draft EIR. **26-4**

- Inadequate Cumulative Impacts Analyses: The Draft EIR's cumulative impacts sections are inadequate. The Draft EIR contains no analysis of the cumulative impacts (i.e., biological resources, water quality, public services and utilities, etc.) associated with the numerous pipelines crossed by the Project. When taking into account the true potential impacts of the Project as discussed more fully below and the geographic scope of the Project's impacts, CEQA mandates that a true assessment of the project's cumulative impacts be adequately considered. **26-5**

The Draft EIR for the Project should be of the highest quality, and should give both the decision-makers and the public a full opportunity to analyze and understand the environmental impacts of the Project and to compare them to the other less intrusive alternatives. Unfortunately, the Project's Draft EIR fails to live up to this mandate in the context of pipelines crossed. **26-6**

A revised EIR needs to be prepared to remedy the deficiencies highlighted above and more fully discussed below. Only that way can the public and the public agencies be adequately informed of the environmental repercussions of the Project.

I. THE DRAFT EIR FOR IS INADEQUATE IN THE CONTEXT OF PIPELINES CROSSED OVER BY THE PROJECT

The EIR for the Project fails to satisfy CEQA's requirements. The purpose of an EIR is to "alert the public and its responsible officials to environmental changes before they have reached ecological points of not return." *(Laurel Heights I,* 47 Cal.3d at 392; *Santiago City Water Dist. v. City of Orange* (1981) 118 Cal.App.3d 818, 822). Thus, an EIR must "provide public agencies and the public with detailed information about the effect which a proposed project is likely to have on the environment; … list ways which the significant effects of the project might be minimized; and … indicated alternatives to such a project." (CEQA §, 20161; CEQA Guidelines §,15002; *Laurel Heights I*, 47 Cal.3d at 392). **26-7**

Moreover, an EIR must provide a degree of analysis and detail about the project's environmental impacts that will enable decision-makers to make intelligent judgments in light of the environmental consequences of their decisions. (CEQA Guidelines §, 15151; *Kings City Farm Bureau v. City of*

Hartford (1990) 221 Cal.App.3d 692 ("Kings City")). To this end, the lead agency must make a good faith effort at full disclosure of environmental impacts. In order to accomplish this requirement, it is essential that the project is adequately described and that existing setting information is complete. (See *City of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 199).

Both the public and decision-makers need to fully understand the implications of the choices that are presented related to the project, mitigation measures, and alternatives. *(Laurel Heights Improvement Ass'n v. Regents of Univ. of California* (1988) 6 Cal.4th 1112, 1123 (1988) *("Laurel Heights II"))*. Accordingly, an EIR's "purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.' " *(Berkeley Keep Jets Over the Bay Committee v. Bd. of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1354 (*"Berkeley Jets") citing Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564). **26-7**

Importantly, CEQA mandates that environmental impacts be identified and analyzed in the EIR, not at a later date. *(See Sundstom v. City of Mendocino* (1988) 202 Cal.App.3d 296 (holding that a negative declaration was invalid when City approved a project while postponing the resolution of uncertainties regarding environmental impacts to a later date)).

In this case, the Draft EIR in the context of pipelines crossed fails to provide sufficient information to enable informed decision-making by the City and the public for all of the reasons set forth below.

A. The Draft EIR Contains An Inadequate Project Description

CEQA mandates an accurate project description. *(San Joaquin Raptor/Wildlife Rescue Center v. City of Stanislaus* (1994) 27 Cal.App.4th 713, 730.) A complete project description is necessary to assure that the project's environmental impacts are considered. *(City of Santee v. City of San Diego* (1989) 214 Cal.App.3d 1438, 1450.) A project description must include all relevant parts of a project, including reasonably foreseeable future expansion or other activities that are part of the project. *(Laurel Heights I,* 47 Cal.3d at 396.) The lack of one, concrete project description violates CEQA in that it precludes the public from intelligent participation in the analysis of the project. (*City of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 197.)

Further, "[a]n accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity." (*Burbank-Glendale-Pasadena Airport Authority v. Hensler* (1991) 233 Cal.App.3d 577, 592.) "A curtailed, enigmatic or unstable project description draws a red herring across the path of public input." *(City of Inyo,* 71 Cal.App.3d 185 at 193; *McQueen v. Board of Directors* (1988) 202 Cal.App.3d 1136, 1143; *Mira Monte Homeowners Association v. City of Ventura* (1985) 165 Cal.App.3d 357, 365.) **26-8**

"The defined project and not some other project must be the EIR's bona fide subject." (*City of Inyo*, 71 Cal.App.3d at 185). An accurate and complete project description is indispensable because, "[a] curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of

terminating the proposal … and weigh other alternatives in the balance. An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." (*Id.* at 192 (emphasis added)).

26-8

The description of the Project in the Draft EIR is incomplete due to the fact that the Project does not, except for a brief mentioning in Section 4.6.3.2.8, describe in detail the mattressing system that crosses the pipelines and how it will be installed. Further, the Draft EIR fails to include all pipelines that could be crossed by the Project. The Draft EIR fails to mention or discuss that Kinder Morgan's pipelines, which are adjacent to Valero's pipelines, will also be crossed over. As a result, the Draft EIR's project description lacks or obfuscates details about the Project that are critical to an adequate analysis of project-related and cumulative environmental impacts.

26-9

B. The Draft EIR Contains Inadequate Baseline/Setting Information

An EIR must describe the environmental setting of a project in terms of existing physical conditions of a project site and its surrounding. (CEQA §, 21151(b); CEQA Guidelines §, 15125(a); *Cadiz Land City v. Rail Cycle* (2000) 83 Cal.App.4th 74, 86; *San Joaquin Raptor Wildlife Reserve Center v. City of Stanislaus* (1994) 27 Cal.App.4th 714, 722; *Kings City Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712). The environmental setting serves as the baseline against which project impacts are determined. (CEQA Guidelines §, 15125). "[W]ithout such a description, analysis of impacts, mitigation measures, and project alternatives becomes impossible." (*City of Amador v. El Dorado City Water Agency* (1999) 76 Cal.App.4th 931, 953).

26-10

The Draft EIR fails to adequately and completely describe the regulatory setting associated with the operation and maintenance of submerged pipelines in a marine setting. For example, Department of Transportation regulations Title 49 Code of Federal Regulations, Parts 195 and 199 contain specific mandates regarding the operation and maintenance of submerged pipelines. If this information as well as other regulations were included, this would provide the impetus for analyzing potential impacts associated with the operation and maintenance of pipelines crossed by the Project. The Draft EIR includes analysis of other regulations, and therefore, these pipeline regulations should get equal consideration.

26-11

This requirement derives from the principle that without an adequate description of the project's local and regional context, the EIR, and thus the decision-makers and the public who rely on the EIR, cannot accurately assess the potentially significant impacts of the proposed project. Without an adequate and accurate environmental setting, such a "full and fair discussion" is not possible.

26-12

C. The Draft EIR Fails to Identify or Analyze the Full Extent of Significant Environmental Impact

An EIR must address a proposed project's "significant effect on the environment." (CEQA §, 21100(b); See also CEQA Guidelines §, 15126(a) (the EIR "shall identify and focus on the significant environmental effects of the proposed project.")). A significant effect on the environment is defined as a substantial or potentially substantial adverse change in the environment. (CEQA §§ 211068, 21100(d)). Direct and indirect significant effects of the project must be identified and described in the EIR, with

26-13

consideration given to both short-term and long-term effects. (CEQA Guidelines §, 15126.2(a)). Identification of a project's significant environmental effects is on of the primary purposes of an EIR and is necessary to implement the stated public policy that agencies should not approve projects if there are feasible mitigation measures or project alternatives available to reduce or avoid the environmental
26-13 impacts. (CEQA §§ 21002, 21002.1(a)).

The Draft EIR fails to adequately and completely analyze the potential significant adverse impacts (i.e., biological resources, water quality, public services and utilities, etc.) that could result from the implementation of the Project associated with the crossing of various pipelines.

1. The Biological Resources Impacts Analysis Is Inadequate

Section 4.6.3.2.8 of the Draft EIR provides that at several locations the cable would either cross existing cable or pipelines, or pass through rocky substrate. Because trenching machines cannot be used in these locations, protective concrete mattresses or comparable materials would be used to provide cable cover. Where an existing cable or pipeline is exposed, protective mattresses would be placed on the Bay floor on top of the existing pipe or cable before the cable is laid in order to provide a physical separation between the utility to be crossed and the Project cable bundle.

26-14 The Draft EIR goes on to say that placement of protective mattresses would bury the benthic community beneath the mattress. New communities would be expected to recolonize over time. However, the type of organisms recolonizing over the mattresses may differ from the original benthic community if portions of the original substrate were soft sediment. In general, however, protective mattresses would only be used in areas where the substrate already consists of hard bottom (and sometimes at existing utility crossings) and the communities recolonizing the new hard bottom created by the mattresses would be expected to be similar to what had occurred previously. This impact is considered adverse, but less than significant.

This is the only section of the Draft EIR that analyzes any impacts associated with installing the mattressing system over pipelines. However, this analysis does not analyze the Project's potentially
26-15 significant adverse impacts to Biological Resources in the event that pipelines are damaged during the installation of the mattressing system. In such a case, pipeline contents could be released to the marine environment causing potential damage to Biological Resources.

Additionally, in reviewing the Biological Resources section of the Draft EIR (Section 4.6), the Draft EIR fails to analyze the Project's Biological Resources impacts regarding: (1) what are the potential
26-16 impacts if the pipelines are damaged during cable operation and maintenance activities; (2) what are the potential impacts if the cable operation interferes with the cathodic protection of the pipelines; and (4) are the potential impacts associated with the changed maintenance procedures for those sections of its pipelines covered by the mattressing system.

The EIR concludes without any quantification that construction- and operational-related impacts are
26-17 insignificant, even without mitigation. However, a close examination of this reveals that the air quality impacts of the Project are likely significant.

Accordingly, the Draft EIR must conduct the appropriate analyses to determine of if the potential impacts above are significant, and if so, what are the appropriate mitigation measures to reduce these impacts to the maximum extent feasible. **26-18**

It should be noted that because Valero is so concerned with the Project's potential interference with the cathodic protection of its pipelines, it has undertaken its own study. It expects that the results of this study will be available within the next month and will share these results with the City and Trans Bay. However, this should not preclude the City from undertaking it own study. **26-19**

2. The Water Quality Impacts Analysis Is Inadequate

Section 1.2.3 of the Draft EIR indicates that the proposed installation of the offshore submarine cable system would involve the use of marine vessels, which could result in an accidental vessel fuel spill. Section 4.4.3.4.1 further states for construction-related Project impacts that marine oil spills can result from leaks or breaks in vessel fueling equipment, vessel accidents, mechanical or structural failures, or human errors such as valves left open or misaligned. As a result, the Draft EIR concludes that a potentially significant spill could occur, and therefore, this would constitute a potentially significant impact.

To mitigate against this impact the Draft EIR includes Mitigation Measure WATER-7, which requires a Vessel Fuel Spill Response Plan. The mitigation measure also requires that all vessel operators associated with the proposed Project shall update their contingency plans and continue to use emergency response services for pollution incidents. Review of updates and modifications to plans shall be done under the USCG's regular oversight of oil spill contingency plans. The work of updating and expanding the spill response plans shall be based on NOAA's Environmental Sensitivity Index (ESI), which involves the systematic compilation in a standardized format of information related to coastal shoreline sensitivity, biological resources, and human uses. The implementation responsibility for this mitigation measure is the Project proponent/vessel operator. **26-20**

Despite the recognition that significant adverse water quality impacts could occur from fuel spills associated with vessels installing the cable, the Draft EIR is silent on even a more potentially significant impacts related to pipeline content releases due to damaged pipelines. For example, there is no analysis of (1) how will the mattressing system will be placed and secured over the pipelines and in doing so what if the pipelines are damaged; (2) what would be the potential impacts if the pipelines are damaged during cable operation and maintenance; (3) what would be the potential impacts if the pipeline interfered with the cathodic protection of the pipelines; and (4) what would be the potential impacts associated with the changed maintenance procedures for those sections of pipelines covered by the mattressing system.

These potentially significant adverse impacts can not be ignored and must be considered in the Draft EIR. Accordingly, because these impacts are not even mentioned and analyzed the Draft EIR, any conclusions that these impacts are insignificant are unsupported by facts and analysis. The Draft EIR must conduct the appropriate analyses to determine if these potential impacts are significant, and if so, what are the appropriate mitigation measures to reduce these impacts to the maximum extent feasible.

3. The Public Services and Utilities Impacts Analysis Is Inadequate

Section 1.2.11 of the Draft EIR indicates that the construction and operation of the proposed Project have the potential to require and adversely impact public services (e.g., fire, police, medical facilities, schools) and utilities (e.g., water, wastewater, and electrical supply). Section 4.12.3.4 states that impacts could occur if the cable route crossed or coincided with existing utility lines and affected or disrupted delivery of service. Known utility and structure crossings are presented in Tables A.2-1 and A.2-2. To reduce the potential for a significant impact, a detailed survey of the Bay floor will be conducted over a study corridor centered on the proposed DC cable alignment. Sonar devices will be used to detect both natural and man-made objects. Electromagnetic devices will be used to detect and precisely locate existing cables and pipelines that cross the cable path. The design of the Project would use research data and precise field verification measures to determine the best location, method, and protection schemes for installation of the cable. Based on the precautions incorporated within the project design for installation of the offshore cable, no significant impacts would be expected to existing utilities within the submarine cable corridor.

26-21

However, this determination is conclusory as the Draft EIR does not address the emergency response or the disruption in gasoline production and/or natural gas delivery in the event pipelines are damaged during cable installation, operation, and maintenance or as a result of changed maintenance procedures mandated for those sections of pipelines covered by the mattressing system. Accordingly, the Draft EIR must conduct the appropriate analyses to determine of if these potential impacts are significant, and if so, what are the appropriate mitigation measures to reduce these impacts to the maximum extent feasible.

4. The Draft EIR's Conclusions Are Not Supported By Substantial Evidence

This type of "short-shrift" analysis is improper under CEQA. CEQA requires that the City's findings on this issue be supported by substantial evidence in the record. (CEQA Guidelines §, 15091(b)). "Substantial evidence" means "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines §, 15384(a); *Laurel Heights I,* 47 Cal.3d at 393). Such substantial evidence may include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts, but not argument, speculation, unsubstantiated opinion, or clearly erroneous evidence. (CEQA §§ 21080(e), 21082.2(c); CEQA Guidelines §§ 15064(g)(5)-(6), 15384). Because biological resources, water quality, and public services and utilities impacts associated with crossing pipelines are not even mentioned and analyzed in the Draft EIR, the EIR analyses does not constitute a fair argument supporting the City's conclusions in the Draft EIR.

26-22

Valero believes that at a minimum the Draft EIR, in the context of the Project crossing existing petroleum pipelines, must analyze and disclose the Project's full direct and indirect impacts on biological resources, water quality, and public services and utilities. Until such analyses are conducted, the Draft EIR's conclusions regarding these impacts are unsupported by facts and analysis.

An EIR must provide a degree of analysis and detail about the project's environment impacts that enable decision-makers to make intelligent judgments in light of the environmental consequences of their decisions. (CEQA Guidelines §, 15151; *Kings City Farm Bureau v. City of Hartford* (1990) 221 Cal.App.3d 692). Otherwise the EIR cannot inform the public and its responsible officials of the environmental consequences of their decisions before they are made. (*Berkeley Jets,* 91 Cal.App.4th at 1354). In this case, the Draft EIR is wholly inadequate. **26-22**

D. The Draft EIR Contains Inadequate Cumulative Impacts Analysis

The cumulative impacts concept recognizes that "[t]he full environmental impact of a proposed … action cannot be gauged in a vacuum." *(Whitman v. Board of Supervisors* (1997) 88 Cal.App.3d 397, 408). The requirement of a cumulative impacts analysis of a project's regional impacts is considered a "vital provision" of CEQA. *(See Bozung v. Local Agency Formation Comm'n* (1975) 13 Cal.3d 263, 283).

26-23

Because the Draft EIR concludes improperly that biological resources, water quality, and public services and utilities, the Draft EIR does not address the Project's cumulative impacts. However, as established above, because the Project will potentially result in significant biological resources, water quality, and public services and utilities, a cumulative analysis for these impacts in the context of the Project crossing pipelines should be included in the Draft EIR. Once this is done, it is likely that these impacts will also be cumulatively significant, especially air quality impacts.

II. THE PROJECT MUST NOT BE APPROVED UNTIL VALERO'S CONCERNS ARE ADDRESSED AND THE DRAFT EIR MUST BE REVISED AND POSSIBLY RECIRCULATED

The opportunity for meaningful public review of significant new information is essential "to test, assess, and evaluate the data and make an informed judgment as to the validity of the conclusions to be drawn therefrom." *(Sutter Sensible Planning, Inc. v. Sutter City Board of Supervisors* (1981) 122 Cal.App.3d 813, 822; *City of San Jose v. Great Oaks Water Co.* (1987) 192 Cal.App.3d 1005, 1017). An agency cannot simply release a draft report "that hedges on important environmental issues while deferring more detailed analysis to the final [EIR] that is insulated from public review." *(Mountain Lion Coalition v. California Fish and Game Comm'n.* (1989) 214 Cal.App.3d 1043,1053).

The serious inadequacies of the Draft EIR are symptomatic of fundamental deficiencies in the City's rulemaking process and the Project itself. For these reasons, and those detailed in Valero's separate comments on the Project, the Project should be denied as inadequate and infeasible. **26-24**

In the alternative and at a minimum, the City may not approve the Project unless the Draft EIR is revised and possibly recirculated to fully disclose and analyze the Project's impacts. CEQA contains detailed provisions setting forth the circumstances under which environmental impact reports must be supplemented and recirculated. As specified in CEQA Guidelines §, 15088.5, an EIR must be recirculated where it is revised to include "significant new information."

In order to cure the Draft EIR defects identified in this letter, the City will have to obtain substantial new information to adequately assess the Project's environmental impacts, and to identify effective mitigation measures capable of reducing the Project's significant impacts. CEQA requires that the public have a meaningful opportunity to review and comment upon this significant new information in the form of a recirculated EIR. Based on, the all of the above outlined reasons, a revised EIR is required because the Draft EIR is inadequate and conclusory in nature that meaningful public review and comment are precluded in the context of the Project crossing pipelines.

III. CLOSING COMMENT

As set forth above, the Draft EIR suffers from numerous deficiencies, many of which would independently render it inadequate under CEQA. Taken as a whole, the deficiencies of the Draft EIR necessitate further analyses and potential recirculation for public comment. Valero respectfully requests that the City's Planning Commission and City Council do not approve the Project until the concerns and potential adverse impacts detailed above are addressed. **26-24**

As noted above, it is not Valero's intent to slow down this Project, but work cooperatively with Trans Bay and the City to resolve its concerns with the Project. However, Valero believes its concerns with the Project are substantial and warrant careful and full consideration by Trans Bay and the City and particularly in the Draft EIR.

Because Valero is so concerned with the Project's potential interference with the cathodic protection of its pipelines, it has undertaken its own study of this impact. Valero expects that the results of this study will be available within the next month and will share these results with the City and Trans Bay.

Please do not hesitate to contact me at (210) 345-2871 or Mr. Alfred R. Middleton, Environmental and Safety Director, at (707) 745-7764 if you have any questions regarding our comments.

Very truly yours,

VALERO REFINING COMPANY - CALIFORNIA

Darren W. Stroud
Environmental, Safety & Regulatory Affairs Counsel

cc: Alfred R. Middleton
Clark Hopper
Pete Jackson, Esq.
Elizabeth Bourbon, Esq.

RESPONSE TO COMMENTS

Comment Number	Response
26-1	Comments noted. The City of Pittsburg as CEQA Lead Agency appreciates Valero's review of the Draft EIR for the TBC Project. The City of Pittsburg understands that Project proponent representatives met with Valero representatives on July 25, 2006 and September 26, 2006 and that Valero has provided preliminary pipeline design details that will facilitate design of the proposed Project to plan for and avoid potential impacts on Valero's pipeline facilities. The Project proponent has provided proposed cable-laying sketches and explained the electrical cable design to Valero representatives. The City of Pittsburg understands that the Project proponent and Valero representatives are in the process of negotiating a crossing agreement which would include, among other issues, potential specific crossing methods and measures. The crossing agreement will include provisions for further cooperation and coordination between the representatives in conjunction with the geotechnical study and final design. The crossing agreement is expected to require written procedures for installation of the DC cable in relationship to the Valero pipelines, and Valero's possible future maintenance requirements for Valero's pipelines. Please refer to subsequent comment responses which address the points raised in Valero's comment letter.
26-2	Comments noted. Based on final engineering design/installation drawings provided by Valero to the Project proponent, the Project Proponent understands that Valero's pipelines are buried at a depth of approximately 10 to 15 feet below the bottom of Suisun Bay in the general area of the proposed Trans Bay Cable crossing area. The Project proponent has provided three cable burial options to Valero: 1) typical crossing with pipeline greater than 10 feet below the bottom of the Bay floor; 2) typical crossing with pipeline between the Bay floor but no greater than 10 feet below the bottom of the Bay floor; and 3) typical crossing with the pipeline just below the bottom of the Bay floor or resting on the bottom of the Bay floor. A proposed conceptual mattress design is provided in the options. The Project proponent will determine the specific crossing method and measures to be taken to protect Valero's pipelines and the HVDC cable based on the results of the forthcoming geophysical survey and further consultation with Valero representatives pursuant to the crossing agreement currently under development. Typical mattress installation using an overhead crane is shown on Figure A.4-6 of the Draft EIR and typical mattress deployment for pipeline crossings is shown on Figure A.4-7. General information regarding use of protective mattresses is provided in Section A.4.4.1.4 of the Draft EIR. The Kinder Morgan pipelines were not in the SLC database at the time the SLC's files were reviewed by Project proponent representatives in 2005 during preparation of the Draft EIR. The Project proponent is now aware of the presence of the Kinder Morgan pipelines. Draft Table A.2-1, Known Utility Crossings, and Map A.2-1 have been revised to acknowledge the presence of the Kinder Morgan pipelines in response to this comment. Please refer to the new Section 13.0 of the Final EIR for the applicable text revision. The Kinder Morgan pipelines have been added to Map A.2-1 (Sheet 7 of 10) in Section 3.0 of the Final EIR.
26-3	Comments noted. The proposed Project will be designed so as to not interfere with Valero's operation, maintenance, and repair procedures for its pipelines. Valero representatives indicated that if repairs are required to the exterior of the pipe, then Valero will coordinate with the Project proponent to make the repairs. The Project proponent will coordinate further with Valero representatives prior to final design and submarine cable installation to ensure that adequate measures are in place to protect Valero's pipelines from possible damage associated with HVDC cable installation and operation. The Project proponent recognizes that Valero is required to comply with regulations relative to submerged pipeline operation and maintenance.
26-4	Comments noted. Please refer to Response 26-3. Following review of the results of the forthcoming geophysical survey, the Project proponent will perform the final engineering design for the submarine cable system, including the site-specific crossing plans for submerged utilities, including Valero's pipelines.

RESPONSE TO COMMENTS

Comment Number	Response
26-5	Comments noted. The fact that the proposed submarine HVDC cable system route crosses several pipelines is identified in Table A.2-1, Known Utility Crossings. The final engineering design, including coordination and consultation with owners of other submerged utilities that are crossed, will ensure that significant direct and/or cumulative impacts are avoided.
26-6	Comments noted. The City of Pittsburg as CEQA Lead Agency believes that the Draft and Final EIRs fully address all environmental impacts of the Project and contain sufficient information to inform decision-makers of the potential environmental impacts of the Project. The City of Pittsburg has instructed the Project proponent to coordinate further with Valero to make sure all legitimate issues are satisfactorily addressed prior to the completion of final design and construction.
26-7	Comments noted. Please refer to Responses 26-2 through 26-6.
26-8	Comments noted. Please refer to Responses 26-2 through 26-6.
26-9	Comments noted. Please refer to Response 26-2.
26-10	Comments noted. The fact that the proposed submarine HVDC cable system route crosses several pipelines is identified in Table A.2-1, Known Utility Crossings. The proposed cable crossing locations of Valero's pipelines are shown on Map A.2-1, Sheet 7 of 10 of the Draft and Final EIRs. The information presented in the Draft EIR is adequate for the purposes of environmental assessment in accordance with CEQA requirements. The information presented in the Final EIR will be supplemented with results of the forthcoming geophysical survey which will be considered in the final design, including the specific crossing methods for the Valero pipelines (and other submerged utilities traversed by the cable route).
26-11	Comments noted. Please refer to Response 26-3.
26-12	Comments noted. Please refer to Response 26-10.
26-13	Comments noted. The City of Pittsburg as CEQA Lead Agency believes the Draft EIR does adequately address the potentially significant environmental impacts of the proposed Trans Bay Cable Project. Please refer to subsequent comment responses that address the specific points raised by Valero.
26-14	Comments noted.
26-15	Comments noted. Following review of the results of the forthcoming geophysical survey, the Project proponent will perform the final engineering design for the submarine cable system, including the site specific crossing plans for submerged utilities, including Valero's pipelines. Mattress installation in the vicinity of the proposed Valero pipeline crossings, as applicable, will be designed to avoid the potential for damage to the submerged pipelines. Accordingly, no potential biological impacts associated with pipeline damage would occur.
26-16	Comments noted. Please refer to Response 26-3 regarding potential impacts on Valero's pipeline operation and maintenance activities. Operation of the submarine Trans Bay Cable would not involve any routine maintenance activities, thus no impacts on Valero's pipelines would be expected to occur. Project proponent representatives will incorporate measures in the final design to avoid any impacts on Valero's pipeline cathodic protection system (e.g., maintain adequate distance between cable and anodes and/or install an insulation buffer between the cable and the pipelines).
26-17	Comment noted. Section 4.2 of the Draft EIR presents the estimated construction emissions (onshore and offshore) associated with the Project as well as the thresholds that were used to assess the potential significance of construction emissions. In addition, Section 4.2 of the Draft EIR also quantifies estimated

RESPONSE TO COMMENTS

Comment Number	Response
	emissions during the operational phase from intermittent testing of emergency equipment. In summary, with implementation of mitigation measures, all air quality related impacts would be reduced to less-than-significant levels. Please refer to Response 22-20 for more information that supports the less-than-significant impact conclusions for air quality.
26-18	Comment noted. Please refer to Responses 26-17 and 22-20.
26-19	Comment noted. Based on the information provided in the Draft EIR and discussions with Valero, Valero informed the Project proponent that they were in the process of consulting with an engineer who was preparing a cathodic protection study of the Valero system in conjunction with the DC cable. The Project proponent has not received the results of that study. After receipt and review of the study, the Project proponent will work with Valero to address any issues identified.
26-20	Comments noted. Please refer to Responses 26-3, 26-15, 26-16, and 26-19. The final design of the proposed Trans Bay Cable Project and additional Project proponent consultation with Valero representatives will ensure that Valero's pipelines (and other submerged utilities that are crossed) are not damaged during cable installation and operation and, therefore, water quality impacts associated with a Project-related pipeline break would not occur.
26-21	Comments noted. Please refer to Response 26-20. No impacts on Valero's pipelines or product deliveries would occur associated with the proposed Project.
26-22	Comments noted. Valero's concerns regarding the Draft EIR adequacy relative to biology, water quality, and public services and utilities are based on the premise that installation and/or operation of the proposed submarine cable would damage Valero's pipelines. As discussed in responses to previous comments, the Project will avoid impacts to Valero's pipeline facilities as well as other submerged utility crossings. Please refer to Responses 26-15, 26-16, 26-19, 26-20, and 26-21.
26-23	Comments noted. Please refer to Response 26-22. The final Project design relative to utility crossing plans will ensure that no significant Project specific or cumulative impacts on submerged utilities would occur.
26-24	Comments noted. Please refer to Response 26-6.

1

CLARK REPORTING (510) 486-0700

TRANS BAY CABLE

DRAFT EIR MEETING

Potrero Hill Neighborhood House

953 DeHaro Street

San Francisco, California

June 8, 2006

REPORTER'S TRANSCRIPT OF PROCEEDINGS
BY: JUDY LARRABEE, SHORTHAND REPORTER

CLARK REPORTING

2161 SHATTUCK AVENUE, SUITE 201

BERKELEY, CALIFORNIA 94704

MEETING PRESENTERS

Joan Lamphier, Project Planner

Garrett Evans, Manager, Pittsburg Power Company

Robert Ray, EIR Project Manager, URS

Randy Jerome, Planning Consultant

---oOo---

EXHIBITS

Speaker slips for:

Michael Thériault

Steven Moss

David Fierberg

Mark Klaiman

Joe Boss

Power Point Presentation

---oOo---

PROCEEDINGS

MR. JEROME: GOod evening. I'd like to welcome you all to Potrero Hill Center for the Trans Bay Cable Draft Environmental Impact Report meeting.

First of all, my name is Randy Jerome, and I am the former planning and building director for the City of Pittsburg. I started the Project -- I worked on the project with the applicant Trans Bay Cable back two years ago. So it's been going on quite a time.

I left the city a year ago, but because of my involvement with the Project in terms of the planning environmental function for the City of Pittsburg I've continued on under contract and continued to work with the Project.

One thing you might ask is why is the City of Pittsburg over here in San Francisco dealing with this project? Under the California Environmental Quality Act which is the statutes that govern the Environmental Review for projects within California, there must be what's called a lead agency, and the City of Pittsburg is the lead agency for this particular Project. We're the lead agency because the Project is required to have discretionary actions in the City of Pittsburg such as a design review and there's some other development agreements and so forth that require approval by

Pittsburg's City Council.

This Project is an electrical cable in the Bay, about 57 miles. It runs from a power plant in Pittsburg over to the Potrero plant in San Francisco here, and it's to provide a better movement of the electrical power from the East Bay over here to San Francisco and the peninsula.

As I mentioned, all projects like this are required to go through an enviornmental review process; in this case an EIR is required. This document right here in front of Ian is a result of that.

we do have these available for public review, and we do have discs available if you would like to receive those.

The purpose of this meeting is to receive comments on this Draft EIR both either verbally or in writing that you can put in until the comment period which ends on June 26th I believe it is.

So this is a formal meeting to elicit those comments from people over on this side of the Bay. We will have a meeting similar to this over in Pittsburg next week.

We have actually had a meeting in this very location back in November -- it was called a scoping session -- which was to elicit comments from citizens

and other agencies on what should be put in the particular document. So that was again last year in this very location.

So with that what I'd like to do is introduce Garrett Evans who is the general manager of the Pittsburg Power Company which in the City of Pittsburg.

MR. EVANS: Thank you, Randy. Good evening. As Randy said, I'm Garrett Evans, General Manager of the Pittsburg Power Company.

The Pittsburg Power Company is a municipal utility that has operations in Pittsburg and Mare Island in Vallejo where we run the electrical gas distribution system.

Pittsburg Power Company's involvement with the Trans Bay Cable Project started two and a half years ago. The City of Pittsburg, as Randy said, is the lead agency. The deliberate environmental review process started nearly two years ago with a Notice of Preparation in August of 2004.

Being very brief here so you can get more to the document and to the Power Point presentation, the Pittsburg Power Company really looks at the Trans Bay Cable Project as an excellent opportunity to address transmission congestion throughout the Bay Area. Again thank you for coming. Randy.

MR. JEROME: Thank you, Garrett. Now we're going to go into the kind of formal part of this meeting. I'd like to introduce Robert Ray of the URS Corporation. URS was contracted to prepare the Environmental Impact Report, and he is here with some of his staff and other subconsultants to explain the project itself.

MR. RAY: Thank you, Randy. Again, my name is Robert Ray, and I'm with the URS Corporation and I'm the project manager for the preparation of the EIR. There is quite a few task leaders that helped prepare the EIR here tonight. Their names and their disciplines are on the board over there, and I think some of you have had an opportunity to ask some questions tonight, which is great. Next slide please.

I'm going to go ahead and give an overview of what's in the Environmental Impact Report in terms of how it's organized, a brief description of what the proposed projects and the alternatives are, scope of the environmental analysis and then a summary of the EIR findings.

The Draft EIR was prepared for the City of Pittsburg in accordance with the Notice of Preparation which was issued in August of 2004. Comments were received on the Notice of Preparation from the public

and also informal agency consultation was conducted.

The Draft EIR assesses construction and operation of the proposed Project and alternatives in Pittsburg and San Francisco; includes the converter station sites, one in Pittsburg, one in San Francisco; the onshore electrical cable routes, and temporary construction laydown areas as well as the approximately 56-mile-long submarine high voltage direct current cable that will be buried in the bottom of the Bay. It also includes about 1 mile of onshore cable for a total length of about 57 miles depending on which alternative you're looking at.

I would like to clarify that the Project goes from the PG&E Pittsburg substation which is located in the interior of the Mirant Pittsburg Power Plant property. It does not go from the power plant itself. It goes from the PG&E substation to the converter station and then in the submarine cable which runs down the Bay to San Francisco to the converter station, which would convert the power back to AC and connect into the PG&E Potrero substation.

The Project alternatives that are addressed in the EIR include alternate converter station sites, onshore AC/DC cable routes, and temporary construction laydown areas.

In summary, the proposed Project as defined by the applicant (Trans Bay Cable LLC) is an approximately 56-mile long, 400 megawatt high voltage direct current submarine cable in San Francisco Bay and connecting waterways between a terminus near the City of Pittsburg and a terminus in San Francisco in the vicinity of Potrero Point.

The proposed Project would transmit electrical power from a converter station in Pittsburg to a converter station in San Francisco providing a dedicated connection between the PG&E Pittsburg substation, which is fed by sufficient generating and transmission capacity and the PG&E Potrero substation in San Francisco.

The electrical power that would be delivered to San Francisco by the cable would help meet San Francisco's projected electrical demand for 2012 and beyond, and it's projected that it would be operational for at least 40 years.

The proposed project is designed to be a cost-effective, energy-efficient solution to address San Francisco's need for additional transmission capacity while improving transmission reliability and load serving capability.

The proposed Project is one of three transmission

system reinforcements identified by the California Independent System Operator to meet the long term reliable load serving plan in Northern San Mateo County in San Francisco.

The other two Projects are the Jefferson Martin Transmission Line which was recently approved and the San Francisco Electric Reliability Project which is currently in the CEC licensing process and nearing the end of that process. The CAISO determined that all three Projects, including the Trans Bay Cable Project, are needed.

The primary goal of the Project is to deliver electricity to San Francisco to meet projected demand. The proposed Project would be expected to meet the CAISO Planning and Reliability Standards; decrease transmission grid congestion in the East Bay; reduce transmission losses; increase the overall security and reliability of the electrical system and provide potential savings to ratepayers.

The proposed Project is made up of the following primary components: installation of an approximately 57-mile long new high voltage direct current cable system, which I stated previously is 56 miles submarine, approximately one mile onshore; construction of two new converter stations, one in San Francisco and

one in Pittsburg; installation of approximately 0.3 mile of underground double circuit 115 kV AC transmission cable and/or overhead transmission line in San Francisco; installation of approximately 4.2 miles of new submarine and 1.3 miles of underground/aboveground single-circuit 230 kV high voltage alternating current transmission cable/line in Pittsburg.

There is also involved construction of a new access road to the proposed Standard Oil Converter Station site in Pittsburg, and temporary use of one or more construction laydown areas on previously disturbed sites in San Francisco and Pittsburg.

The contents and organization of the Draft EIR. It's organized in two volumes due to its size. Volume 1 includes the sections that you can see on the screen. I'm not going to read through all of them. And it also includes Appendix A, the Detailed Project Description.

one thing I would like to point out is that the proposed project is addressed in Section 4 and the project alternatives are addressed in Chapter 5 and Section 6. The comparison of alternatives compares all the alternatives, including the proposed Project and the No Project alternative.

Volume 2 includes primary technical appendices,

including the NOP, the Responses, and the Scoping Meetings through Appendix K which presents information on electric and magnetic fields.

The Draft EIR addresses the following environmental resource topics. This is the order that they're presented in: Air quality, geologic resources and soil, water resources and quality, terrestrial biological resources, marine biological resources, cultural resources, land use and recreation, marine transportation and commercial fishing, traffic and transportation, noise and vibration, public services and utilities, visual resources, hazardous materials and waste management, and paleontological resources.

I'm now going to provide a brief summary of the impact findings that are presented in the Draft EIR. Numerous potentially significant environmental impacts are identified in the Draft EIR for construction and/or operation of the proposed Project and alternatives, including the converter stations and the submarine cable system.

with implementation of the proposed mitigation measures, all but one of the identified potentially significant impacts for the proposed Project would be reduced to less-than-significant levels.

With implementation of the proposed mitigation

measures, almost all of the identified potentially significant impacts for the Project alternatives would also be reduced to less-than-significant levels.

The unavoidable adverse significant impact findings that are presented in the EIR for the Proposed Project are as follows: construction of the proposed HWC converter station in San Francisco would require the demolition of two warehouses eligible for listing as historic structures associated with the once-present Western Sugar Refinery complex that date from the 1920s.

The proposed Project would also potentially require demolition of some portion of the Station A Complex on the Mirant Power Plant property that is adjacent to the north of the HWC site, and that would be associated with the routing of the proposed underground cable to the PG&E Potrero substation. Demolition of These structures would constitute a significant impact.

I would point out that there's substantial mitigation that's proposed in the EIR related to impacts to these structures; however, by definition, if you need to demolish them, under CEQA it's typically considered to be an unavoidable adverse significant impact.

Construction of the proposed Pittsburg Standard Oil converter station would not result in any identified unavoidable adverse significant impacts, but it would require dredging in two locations in New York Slough and involve more biological impacts than the other alternatives in Pittsburg that are considered.

Construction and operation of the proposed submarine cable system would not result in any identified unavoidable adverse significant impacts.

Now I'm going to summarize the unavoidable significant impact findings for the Project alternatives.

Construction of the alternative San Francisco Mirant converter station would require demolition of the Station A Complex -- which I mentioned previously -- for the proposed cable route associated with the HWC site as part of the project, unless Mirant demolishes these buildings in advance of the TBC private construction. And the reason I mention that is that Mirant has quite a while ago submitted a demolition permit application to the City and County of San; Francisco and I believe is actively pursuing the demolition of those structures due to seismic concerns and their deteriorating conditions.

The Station A Complex as I mentioned is considered

historic by the City and County of San Francisco. Demolition of these structures would constitute a significant impact.

Construction and operation of the alternative San Francisco Sheedy converter station would not result in any identified unavoidable significant impacts. However, the routing of the cable, the AC cable, from the Sheedy Converter Station site to the PG&E Potrero substation is problematic and it has some questions regarding the feasibility of being able to do that due to the location of existing buried utilities along the route.

Construction and operation of the alternative Pittsburg West Tenth Street Alternative 1, also referred to as East/West based on its layout, and the Pittsburg Mirant converter stations would not result in any identified unavoidable adverse significant impacts.

Construction of the Alternative Pittsburg West Tenth Street Alternative 2 North/South converter station would result in an unavoidable adverse noise impact to the residences south of West 10th Street due to pile-driving activities over an estimated 3- to 4-month period.

Operation of the alternative Pittsburg West Tenth Street Alternative 2 converter station would result in

an unavoidable adverse visual impact due primarily to its proximity to West Tenth Street and the residences to the south of West Tenth Street.

I'm now going to talk about the findings in the EIR regarding the environmentally superior alternative.

The No Project Alternative (i.e. don't build the project; do nothing) would result in the fewest environmental impacts but it is incapable of meeting the Project objectives, including those of the California Independent System Operator.

the proposed Trans Bay Cable Project is considered by the City of Pittsburg to be the only feasible alternative for meeting the Project and CAISO objectives at this point in time.

It is difficult to determine which of the Trans Bay Cable Project converter site alternatives in San Francisco and Pittsburg is the environmentally superior alternative due to their similar environmental impacts.

I'm now going to talk about the pros and cons for the San Francisco converter station sites. The Sheedy site avoids significant impacts to historic architectural resources associated with the proposed HWC and alternate Mirant sites. However, the required electrical connection to the PG&E Potrero substation is problematic due to buried utilities in Illinois Street.

The Project proponent currently only has site control of the HWC site. Locating the converter station on the San Francisco Mirant site would consolidate electrical station facilities at one location which is considered to be desirable.

THe Draft EIR concludes that no one site in San Francisco is clearly environmentally superior to another.

Now I'm going to discuss the pros and cons for the Pittsburg converter station sites. Due to unavoidable significant noise and visual impacts identified for the Pittsburg West Tenth Street Alternate 2, this alternative is the least preferable from an environmental perspective.

The Pittsburg West Tenth Street Alternative 1 and Pittsburg Mirant sites are considered to be environmentally superior to the proposed Pittsburg Standard Oil site, since both sites would avoid the need to dredge in New York Slough and also avoid potential impacts to sensitive biological resources, including those along the onshore cable route associated with the Standard Oil converter station as well as the need to cross Kirker Creek with the proposed access road up to the Pittsburg-Antioch Highway.

The Draft EIR concludes that the Pittsburg West Tenth Street Alternative 1 and Mirant Pittsburg sites are the environmentally superior sites in Pittsburg. And the Final EIR will consider comments received on the Draft EIR including any pertinent comments on the alternatives considered.

And that concludes my portion of the presentation. I'm going to turn it back over to Randy.

MR. JEROME: Thank you, Robert. Now we go on to the real purpose of the meeting tonight which is to elicit comments and maybe questions from the general public.

This meeting is actually optional under the California Environmental Quality Act. However, it's important under CEQA that comments be received from the general public and public agencies which will then go into the document in terms of a Final Environmental Impact Report. So tonight what we're going to be doing is asking for those commence.

At this particular time I would like to introduce Joan Lamphier of Lamphier and Associates. She has been hired by the City of Pittsburg to be the Project planner for processing the Environmental Impact Report as well as the planning entitlements due to the City of Pittsburg for approval. And she will explain the rest

of the process tonight and what we're asking from you.

MS. LAMPHIER: Thank you. Actually, Randy gave most of the comments that I intended to make. But anyway, as he indicated, the purpose is for members of the public to be able to comment on the Environmental Impact Report and not to comment on the Project itself, but to address the document and the adequacy of the environmental analysis and mitigation measures that are addressed in the document.

And so you can either submit verbal comments or you can submit written comments. We have a form that Rebecca Gorton over there can -- you can give her the comments. These comments will all be incorporated into the Final Environmental Impact Report and the consultants will respond to each comment and make any changes that are appropriate to the draft document. And that will be presented first to the City of Pittsburg Planning Commission and then to the Pittsburg City Council to consider certification of the document.

I'm going to ask people if they could limit their initial presentation to three minutes so make sure that we give everybody the opportunity to speak who would like to speak this evening.

Just in case any of you are not aware, we do have a Notice of Availability that is on the table there,

and that indicates all the places where the document is available for public review. It's on the city's website. We have CDs this evening that you can take with you, and also I think there's a copy at the Potrero Hill Neighborhood House where you can come in and read a hard copy.

So the comment period ends June 26th, and if you choose not to present comments this evening you still have an opportunity to write to Ken Strelo and to submit any additional comments that you'd like to.

So I think with that I'll turn it back over to you, Randy. Thank you.

MR. JEROME: Thank you, Joan. Okay. Well with that, if there are any comments that you would like to make now I'd ask you to come up and fill out one of these forms so we have it on the record.

MR. MOSS: I have a question. Can someone explain how this thing will be paid for? And since there appears to be, based upon the forecast, a significant length of time in which the full capacity is needed for the transmission line -- it may never be needed -- I'm wondering how the payment structure is for the -- and I ask this because you put a slide up there saying that this was a cost-effective project.

PM1:1-1

MS. LAMPHIER: You know, We're not going to

be responding to comments in this meeting. You can submit that as a comment and we will respond to that in the Final EIR.

MR. MOSS: Okay. So you're not answering questions?

MS. LAMPHIER: No, we're not going to. The purpose is to take comments. But we will respond in detail in the final document.

MR. JEROME: I do have two speaker slips, and I'd like to ask each of them to come up and bring their comments.

We are recording this, by the way. We do have a court reporter here so talk into the microphone so we can be sure to get those comments.

First is Michael Thériault.

MR. THÉRIAULT: I'm actually with the Secretary Treasurer of the San Francisco Building and COnstruction Trades Council. That's the coalition of construction unions here in San Francisco.

PM1:2-1 And by the usual logic of self interest, this would not be our preferred project. We would prefer a power plant. But we understand well that this eastern half of the city has suffered from the effects of power plants for years, that the power plant would produce a good deal of air pollution, a good deal of traffic that

this Project will not produce.

The air pollution effects of the EIR are minimal. The traffic is minimal. There's a little bit of dust from construction, but apart from that it's a wonderful project for the city. So we will forego our usual self interest and support this project. Thank you. **PM1:2-1**

MR. JEROME: Thank you. Next I have Steven Moss.

MR. MOSS: Since I can't ask questions I'll read the comment. I think some of you have seen I've actually tracked this project for about two years. And I've attended most of the CAISO stakeholder meetings that led up to their approval of the project. **PM1:1-2**

For the record, the project isn't cost effective and CAISO didn't find it to be cost effective. It found that the benefits of the project were deminimus and the costs were quite extraordinary. In fact, when I asked ISO on what basis did they value reliability ISO said, "We value reliability as infinitely valuable." They put an infinite value on this.

We're doing some analysis using city data and CAISO data and actually I think it's well known that this project isn't needed. It may never be needed. It's only needed in 2012 under some assumptions about **PM1:1-3**

contingencies.

We have plenty of supply in San Francisco 'til probably 2020, but because of CAISO's reliability concerns they want redundancies, and those redundancies require that something be done to provide additional supply in the city around 2012. The project is not needed by anybody's count until at least 2012.

PM1:1-3

Based on city data, and based upon city planning for sustainability, there are many options that the EIR does not discuss that would actually deal with CAISO's reliability requirements. There are other transmission opportunities that were part of the CAISO record that should be considered in the EIR and need to be.

PM1:1-4

There's the city sustainability plans, the city consulting reports that point to many lower costs, more sustainable alternatives than the DC line that would make the DC line either irrelevant or at least extremely costly.

So I know everybody in the room. I know my neighbors. I know who is here from the neighborhood and who's not. Most people -- I'm talking to most of the consultants who are paid to be here. So I'm not trying to impact you guys. I'm just putting this into the record. I'll submit my comments.

MR. JEROME: Next we have comments from David

Fierberg.

MR. FIERBERG: I'm a neighbor and I'm a resident here. I'm concerned about the visual impacts of what's going to be on this converter station. As a ratepayer, I'm concerned about the costs of this if it is not fully utilized, how that will be passed on to myself as a ratepayer of PG&E. I'm wondering when the EIR was drafted whether or not you all took into consideration the fact that our neighborhood is the fastest growing neighborhood in San Francisco. There are 4500 units of housing that are going in just right down here. I'm wondering if you talked to UC San Francisco who is promoting the Mission Bay campus.

PM1:3-1

PM1:3-2

PM1:3-3

There are certainly many potential utilizations of the waterfront. I can think of neighborhood and sort of alternative biosciences for this type of property. A converter station would not be the number one on my list.

PM1:3-4

I'm also wondering if there was consideration given to the projections that by 2050 the Bay will be reaching I-280. If the Bay reaches I-280 -- that's just right down here -- that means anything that you all build in the 40 years that you're projecting that this thing will be in service, I would say within the first 15 years it will be about two feet under water.

PM1:3-5

I'm wondering what the environmental impacts of that will be and wonder if that is being considered, if whatever hazardous chemicals that will be utilized or stored there will then flow into the Bay and what the potential impacts of those will be. Thanks.

PM1:3-5

MR. JEROME: Thank you. Next I have Mark Klaiman.

MR. KLAIMAN: Hi. Thanks. Good evening. My name is Mark Klaiman. I run a small business in the Bayview Hunter's Point neighborhood. It's the next neighborhood south of here. We are very close to the old Hunter's Point plant.

I have a couple of concerns regarding the EIR. And the first is I don't think you gave appropriate consideration of alternative energies. There is a very short discussion of why alternative energy won't work, but there's no math to support it. There's no explanation of why the composite alternative energies won't work. There is no discussion of why demand response programs wouldn't work.

PM1:4-1

As a small business in San Francisco, we've committed ourselves and our neighbors to do all sorts of things to limit power consumption. For example, our facility has a 33-kilowatt solar power system. There's no discussion of what other small businesses in the

community are planning. And there's no discussion as to why those alternatives might be more cost effective, might be more reliable.

There's been discussions of transmission congestion, but of course if you produce it in-house there's no transmission congestion at all. **PM1:4-1**

There's issues of reliability. But clearly relying on one transmission cable to bring all of our power or a good portion of our power 57 miles -- if that goes down, if there's a problem there, we're really SOL. We should rely on local power. We should rely on ourselves to be self-reliant with alternative energy ideas. **PM1:4-2**

I'm very concerned about whether this truly is going to bring about potential savings to the ratepayer. This is a very, very expensive project. It may never be necessary. Certainly all 400 megawatts of it may never be necessary. This is a $300 million gamble that we don't necessarily need to be taking. **PM1:4-3**

And lastly I'm kind of dismayed that I hear that this is simply a transmission cable; that it has no real enviornmental impact; we're not relying on fossil fuels; we're not telling you we're going to be creating more fossil fuels. **PM1:4-4**

It starts at a power plant; it ends at a power

plant. It's a $300 million encouragement to continue operating the same old way. If we want to make changes, if we want to be more reliant, if we want to get away from fossil fuels, let's take $300 million and commit them to be self-reliant, to alternative energy, and demand response and lower consumption. Thank you so much.

PM1:4-4

MR. JEROME: Thank you. Does anybody else have any comments? Yes, sir.

MR. BOSS: My name is Joe Boss. Basically the area that I'm going to be chasing after has to do with cultural resources.

We work very hard to make Dog Patch Historic District where I live -- down at the bottom of the hill very close to where the San Francisco site is going to be -- an historic district. We've been working for years on getting an industrial historic district established at Pier 70 right on down through and including the Spreckels Sugar facilities which are those warehouses.

PM1:5-1

So I have not intensely read that part. I will be reading it. I can just go away for two weeks and sit in the desert and read that. But I think it's kind of glossed over when -- yes, you identified it as a non-mitigatable impact and I'm really excited to see

what the mitigations are going to be for that. And I will go fill out a piece of paper. Thank you. **PM1:5-1**

MR. JEROME: Anyone else? Okay. I'll turn it back over to Joan and she'll explain the rest of the process.

MS. LAMPHIER: First of all, I indicated all of the comments that we've received this evening, as well as anything in writing, will be addressed in the final environmental document. And that will be distributed in the same way we did with the Draft. It will be on the city's website, and we will have CDs available for people who request it. We'll put you on our mailing list if you sign in this evening. And we expect that the final document probably will be prepared and available toward the end of July. That's the estimated arrival time.

So I think that that will conclude this meeting at this point, but that there are people -- feel free -- we have a lot of consultants here. We have the project applicant and representatives of the city, myself, Randy Jerome and Garrett Evans. Feel free to walk around and ask us any questions if you have a specific informational item that you would be curious about. And take advantage of all of this talent that you have.

So with that, I'd like to thank you very much for

coming this evening, and we look forward to presenting the Final EIR. Thank you very much.

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REPORTER'S CERTIFICATE

I, JUDITH L. LARRABEE, a Hearing Shorthand Reporter in the State of California, duly authorized to administer oaths, hereby certify:

That I am a disinterested person herein; that the foregoing meeting was reported by me in shorthand and thereafter transcribed by means of computer-aided transcription.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have thereunto set my hand on this 22nd day of June, 2006.

_____

Judith L. Larrabee, Hearing Reporter

RESPONSE TO COMMENTS

Comment Number	Response
PM1:1-1	Comments noted. The TBC Project proponent filed the proposed rate structure with the Federal Energy Regulatory Commission (FERC). The FERC approved the proposed rate structure in July, 2005. Prior to commercial operation of the Project, the costs to engineer, procure, and construct the Project will be filed with the FERC. The FERC has the discretion to either approve the costs as presented or deny costs that are deemed not to be relevant to the Project. The approved costs will be applied to the rate base and passed on to the rate payers in a fashion similar to other projects, e.g., the Path 15 project. The CAISO evaluated five projects during the two-year San Francisco Stakeholder process. CAISO evaluated alternative technical options as well as their associated costs. The CAISO selected the TBC Project as the alternative that would best support the San Francisco reliability issues.
PM1:1-2	Comments noted. Refer to Response PM1:1-1.
PM1:1-3	Comments noted. Please refer to Responses 3-1, 10-1, and 10-2.
PM1:1-4	Comments noted. Please refer to Responses 3-1 through 3-6.
PM1:2-1	Comments noted.
PM1:3-1	Comments noted. The Draft EIR assesses potential Project-related impacts to visual resources in Sections 4.13 and Section 5.0. The San Francisco HWC (Mitigated) site is evaluated in Section 4.A-13 of the Final EIR. With the exception of the Pittsburg West Tenth Street Alternative 2 converter station site in Pittsburg, no unmitigable visual impacts have been identified for the proposed or alternative sites. As discussed in the Final EIR, the Pittsburg West Tenth Street Alternative 2 site is no longer under consideration due to its unavoidable adverse significant visual and noise impacts and, thus, has been withdrawn from further consideration.
PM1:3-2	Comments noted. Please refer to Response PM1:1-1
PM1:3-3	Comment noted. Please refer to Response 10-58.
PM1:3-4	Comment noted. UCSF was not specifically consulted; however, the Mission Bay redevelopment project, which includes the Mission Bay Campus, was considered in the Draft EIR. The Mission Bay redevelopment project is located north of the Potrero Power Plant as shown on Figure 4.8-2 of the Draft EIR. Please refer to Response 10-58.
PM1:3-5	Comment noted. With respect to the potential future inundation of Bay shoreline areas due to a rise in the Bay surface due to global warming, this contention is highly speculative and unlikely to occur to the extent that the San Francisco converter station sites under consideration would be impacted during the life of the Project. Were the Bay to rise to I-280 by 2050 as contended, the impacts would not be limited to the TBC Project, but would be a Bay Area/worldwide problem in coastal areas.
PM1:4-1	Comments noted. Please refer to Responses 3-1 through 3-6.
PM1:4-2	Comments noted. Please refer to Responses 3-1, 10-1, and 10-2.
PM1:4-3	Comments noted; Please refer to Response PM1:1-1.
PM1:4-4	Comments noted. Please refer to Response 2-1A.
PM1:5-1	Comments noted. Please refer to Response 15-1.

TRANS BAY CABLE

DRAFT EIR MEETING

City Council Chambers of City Hall

65 Civic Avenue

Pittsburg, California

June 14, 2006

REPORTER'S TRANSCRIPT OF PROCEEDINGS
BY: JUDY LARRABEE, SHORTHAND REPORTER

CLARK REPORTING

2161 SHATTUCK AVENUE, SUITE 201

BERKELEY, CALIFORNIA 94704

MEETING PRESENTERS

Joan Lamphier, Project Planner

Garrett Evans, Manager, Pittsburg Power Company

Robert Ray, EIR Project Manager, URS

Randy Jerome, Planning Consultant

---oOo---

EXHIBITS

Speaker slips for:

Greg Feere

David Fierberg

Mike Lengyel

Kristina Lawson

Power Point Presentation

---oOo---

PROCEEDINGS

MR. JEROME: Good evening. I'd like to welcome you all to the Trans Bay Cable Project Draft Enviornmental Impact Report public comment meeting.

My name is Randy Jerome. I'm the former Planning and Building Director for the City of Pittsburg. I'm now under contract with the City since I've been working on this Project for the last two years. And I kept on through the planning process to help assist the City on the technical portion of that.

The purpose of tonight's meeting is to receive comments on the Draft Environmental Impact Report for uses by our consultant, who will then take those comments and respond to them which will then be used for the Final Environment Impact Report.

We've had a number of meetings relative to this project. Because this project runs from Pittsburg to San Francisco with cable in the Bay, we've held a number of meetings over in San Francisco. In fact, last week we held a very similar meeting on comments over at the Potrero Hills section of San Francisco. And this is the duplicate meeting here in Pittsburg to receive those comments.

The comment period will end on June 26th. Tonight's meeting primarily is to hear verbal comments,

but you are also allowed to later then provide written comments on the document itself.

With that introduction -- and by the way, the City of Pittsburg is what's called the lead agency for the Environmental Impact Report process under the California Environmental Quality Act. As such, we are the primary agency that has discretionary permitting approval.

There are a number of other agencies that require permits for this, but since Pittsburg is with the proponent for the land use approvals here in the city of Pittsburg, we are responsible then for the preparation of the environmental document. The document will then have to be certified by the Pittsburg City Council and will be used by the other agency, what's called a responsible agency.

With that, I'd like to introduce Garrett Evans. He is the general manager of the Pittsburg Power Company and he'll explain Pittsburg Power Company's role.

MR. EVANS: Thank you, Randy. As he said, my name is Garrett Evans. I'm the general manager of the Pittsburg Power Company. Welcome to Pittsburg and our city hall.

The Pittsburg Power Company is a municipal utility

that has operations in Pittsburg and Mare Island and Vallejo. We started in 1996 and have grown quite a bit since.

The Power Company's involvement with the Trans Bay Cable Project started two and a half years ago. And approximately two years ago the City of Pittsburg, in a different capacity -- the Power Company's different entity -- was, as Randy said, the lead agency.

The deliberate environmental review process started with a Notice of Preparation. Joan Lamphier will touch on that in a moment.

The Power Company itself, why are we here? Why are we doing this? We really view this Trans Bay Cable Project as an excellent opportunity to address transmission congestion in the Bay Area. It also offers a wonderful opportunity because we are so close to a great point here. I know that's going to be touched on as well.

So thank you again for coming and Randy, you're up.

MR. JEROME: Thank you, Garrett. Next we're going to go into the presentation of the summary of the Environmental Impact Report, the Draft EIR. I'd like to introduce Robert Ray from the URS Corporation.

Mr. Ray is the project manager for the preparation

of this document and he is essentially responsible for the City of Pittsburg for this preparation. So he is the consultant that has prepared this document. Robert.

MR. RAY: Thank you, Randy. Good evening. Again, I'm Robert Ray. I'm with URS Corporation and I'm the project manager for preparation of the Environmental Impact Report for the Trans Bay Cable Project working on behalf of the city of Pittsburg as the lead agency for CEQA compliance.

The Draft EIR was prepared for the City of Pittsburg, as I said, in accordance with the Notice of Preparation, which was issued in August of 2004. And also we've considered the comments that were received on the Notice of Preparation, and we also considered input from various federal state and local agencies that were informally consulted with and coordinated with back when we were scoping the EIR.

The Draft EIR assesses construction and operation of the proposed project and alternatives in Pittsburg and San Francisco, including a converter station site on each end for multiple converter station sites. But it would ultimately, if the project were approved, be one converter station in Pittsburg and one in San Francisco. You can kind of think of a converter

station being similar to an electrical substation.

The other alternatives considered include onshore electrical cable routes and temporary construction laydown areas. The EIR also considers the proposed approximately 56-mile long submarine high voltage direct current cable route between Pittsburg and San Francisco, the vast majority of which would be buried in the bottom of the Bay in connecting waterways.

Project alternatives addressed include alternate converter station sites, onshore AC/DC cable routes, and temporary construction laydown areas.

In summary, the proposed Project as defined by Trans Bay Cable LLC is an approximately 56-mile-long 400 megawatt high voltage direct current submarine cable in San Francisco Bay in connecting waterways between the terminus near the City of Pittsburg and a terminus in San Francisco in the vicinity of Potrero Point.

The proposed Project would transmit electrical power from a converter station in Pittsburg to a converter station in San Francisco providing a dedicated connection between the PG&E Pittsburg substation, which is fed by sufficient generating and transmission capacity, and the PG&E Potrero substation in San Francisco.

I'm now going to talk about Project need and objectives. The electrical power that would be delivered would help meet San Francisco's projected electrical demand for 2012 for at least projected 40 years or more.

The proposed Project is designed to be a cost-effective, energy-efficient solution to address San Francisco's need for additional transmission capacity while improving transmission reliability and load serving capability.

The proposed Trans Bay Cable Project is one of three transmission system reinforcements identified by the California Independent System Operator, also known as CAISO, to meet the long term reliable load serving plan in Northern San Mateo County in San Francisco. The other two Projects are the Jefferson Martin Transmission Line and the San Francisco Electric Reliability Project. The CAISO has determined that all three projects are needed.

The primary goal of the project is to deliver electricity to San Francisco to meet projected demand. The proposed Project would be expected to meet the CAISO Planning and Reliability Standards, decrease transmission grid congestion in the East Bay, reduce transmission losses, and increase the overall security

and reliability of the electrical system and also to provide potential savings to ratepayers.

I'm now going to talk about the key Project components. The proposed Project is made up of the following primary components; installation of an approximately 57-mile long new high voltage direct current cable system, of which about 56 miles is submarine in the Bay and connecting waterways and about approximately 1 mile on shore, depending on what alternative you look at.

It would involve construction of two new converter stations as I said; one in San Francisco and one in Pittsburg. The proposed Project would include installation of approximately 0.3 mile of underground double-circuit 115 kV -- kilovolt, that's kV -- AC transmission cable and/or overhead transmission line in San Francisco; installation of approximately 4.2 miles of new submarine and 1.3 miles of underground/aboveground single-circuit 230 kV high voltage alternating current transmission cable line in Pittsburg.

It would also involve construction of a new access road for the proposed Standard Oil converter station and site in Pittsburg which would connect the proposed converter station site to the Pittsburg-Antioch Highway

to the south and would also involve temporary use of one or more construction laydown areas on previously disturbed sites in San Francisco and Pittsburg.

I'm now going to talk about the contents and give you a summary of the contents and the organization of the Draft EIR.

The Draft EIR is presented in two volumes due to its size and the amount of material that needs to be covered. Volume l includes Sections l through 11 as well as Appendix A, which is the detailed project description. If you want to just get a quick summary and an overview of what the Project is and what the impact findings are and a discussion of the environmentally superior alternative etc. I would recommend if you haven't done so already that you look at Section l which is the executive summary which gives you a good overview. There's a brief summary project description presented in Section 3, and again if you want more detail you should refer to Appendix A.

Fee sections for the impact assessment in Chapter 4 addresses the impact assessment, including baseline conditions; impact findings, including proposed mitigation measures in Chapter 4. The impact assessments for the project alternatives is presented in Section 5, and a comparison of all alternatives, the

proposed Project, the alternatives considered and the No Project Alternative are presented in Chapter 6. And you can see there are various other sections but I think those are the key sections.

Okay. Volume 2 includes Technical Appendices B through K beginning with B as a copy of the Notice of Preparation, the responses that were received to the Notice of Preparation and a summary of the scoping meetings, the comments that were received at the scoping meetings.

Appendix C includes key CAISO documents. Appendix D includes air quality emission calculations. Appendix E is the sediment characterization report for the submarine cable route in the Bay for the specific study that was done for this project to obtain samples to be analyzed as to their constituents.

Appendix F presents supplemental biological information. Appendix G presents a cultural resources technical report. It actually includes two reports. One deals with archeological resources and the other one deals with historic resources.

Appendix H presents the noise studies that were conducted for the converter stations, including alternatives. Appendix I includes a litany of potentially applicable hazardous material regulations

for the project. Appendix J presents a paleontological resources technical report. Appendix K, the final appendix in the Draft EIR, presents information on electrical and magnetic fields.

Okay. The Draft EIR addresses the following environmental resource topics: Air quality, geologic resources and soils, water resources and quality, terrestrial biological resources, marine biological resources, cultural resources, land use and recreation, marine transportation and commercial fishing, traffic and transportation, noise and vibration, public services and utilities, visual resources, hazardous materials and waste management and finally paleontological resources.

I'm now going to summarize the impact findings that are presented in the Draft EIR. Numerous potentially significant environmental impacts are identified in the Draft EIR for construction and/or operation of the proposed Project and alternatives, including converter stations and the submarine cable route.

With implementation of the proposed mitigation measures, all but one of the identified potentially significant impacts for the proposed Project would be reduced to less-than-significant levels.

With implementation of the proposed mitigation measures, almost all of the identified potentially significant impacts for the Project alternatives would also be reduced to less-than-significant levels.

I'm now going to talk about the findings in the EIR regarding unavoidable adverse significant impacts for the proposed Project.

Construction of the proposed HWC converter station in San Francisco would require the demolition of two warehouses that are eligible for listing as historic resources. And they are associated with the once-present Western Sugar Refinery that dates back to the 1920s.

The proposed Project would also potentially require demolition of some portion of the Station A Complex on the adjacent Mirant property to the north of the HWC site for the routing of the cable from the converter station to the PG&E Potrero substation. Demolition of these structures would constitute a significant impact.

Construction of the proposed Pittsburg Standard Oil converter station would not result in any identified unavoidable adverse significant impacts, but it would require dredging at two locations in New York Slough and would involve more biological impacts than

the other alternatives considered in Pittsburg.

Construction and operation of the proposed submarine cable system would not result in any identified unavoidable adverse significant impacts.

Now I'm going to talk about unavoidable adverse significant impact findings for the Project alternatives that are considered in the EIR.

Construction of the alternative San Francisco Mirant converter station would require demolition of the Station A Complex as part of the Project -- that's what I spoke about previously for the cable route from the proposed HWC site. The same Station A Complex would be impacted and would need to be demolished were any of the three layouts on the Mirant San Francisco property selected.

Mirant already has plans to demolish these buildings. They've been told that they need to either seismic retrofit or demolish the buildings, and they're in the process I believe of trying to get approvals. But for the purposes of this EIR, we've assumed that the Trans Bay Cable Project would need to demolish those buildings. That's kind of a worse-case scenario.

Again, the Station A Complex is considered historic by the City and County of San Francisco and demolition of these structures similar to the

warehouses on the HWC property would constitute a significant impact.

Construction and operation of the alternative San Francisco Sheedy converter station would not result in any identified unavoidable adverse significant impacts.

Construction and operation of the alternative Pittsburg West 10th Street Alternative 1 which is oriented east/west and the Pittsburg Mirant converter stations would not result in any identified unavoidable adverse significant impacts.

Construction of the alternative Pittsburg West Tenth Street Alternative 2 -- which is oriented north/south -- converter station would result in an unavoidable adverse noise impact to the residents south of West 10th Street, and that would be due to pile-diving activities which would occur during the construction phase over an estimated approximately three-month period for the Pittsburg sites.

Operation of the alternative Pittsburg West 10th Street Alternative 2 converter station would also result in an unavoidable adverse visual impact due primarily to its proximity to West 10th Street and the residences to the south of West Tenth Street.

Now I'm going to talk about the findings in the EIR regarding the environmentally superior alternative.

The No Project Alternative would result in the fewest environmental impacts but it is incapable of meeting the project objectives including those of the CAISO.

The Trans Bay Cable Project is considered by the City of Pittsburg to be the only feasible alternative for meeting the project and CAISO objectives at this point in time. It is difficult to determine which of the Trans Bay Cable Project converter site alternatives in San Francisco and Pittsburg is the environmentally superior alternative due to their similar environmental impacts.

I'm now going to talk about the pros and cons for the San Francisco converter station sites.

The Sheedy site avoids significant impacts to historic architectural resources associated with the proposed HWC and alternative Mirant sites in San Francisco. However, the required electrical connection to the PG&E Potrero substation is problematic due to buried utilities that exist in Illinois street.

The Project proponent only has site control at the HWC site. Locating a converter station on the San Francisco Mirant site would consolidate electrical station facilities at one location which would be considered to be a positive, and that would be

desirable.

The Draft EIR concludes that no one site in San Francisco is clearly environmentally superior to another.

I'm now going to talk about the pros and cons for the Pittsburg converter station sites. Due to the unavoidable significant noise and visual impacts identified for the Pittsburg West Tenth Street Alternative 2 site, this alternative is considered to the be the least preferable from an environmental standpoint.

The Pittsburg West Tenth Street Alternative 1 and Pittsburg Mirant sites are considered to be environmentally superior to the proposed Pittsburg Standard Oil sites since both sites would avoid the need to dredge two locations in New York Slough, and they would also avoid potential impacts to sensitive biological resources and habitat associated with the onshore cable route between New York Slough and the Standard Oil site, as well as the bridge that would need to constructed over Kirker Creek associated with the proposed new access road

The Draft EIR concludes that the Pittsburg West Tenth Street Alternative 1 and Mirant Pittsburg sites are the environmentally superior sites in Pittsburg.

The Final EIR will consider comments received on the Draft EIR, including any pertinent comments on the alternatives considered.

And that concludes my portion of the presentation. I'm going to turn it back over to Randy. Thank you.

MR. JEROME: Thank you Robert. Next before we get into the formal comments from the public, I'd like to introduce Joan Lamphier of Lamphier Associates -- Gregory Associates --

MS. LAMPHIER: It used to be Lamphier and Associates.

MR. JEROME: Right. Now it's Lamphier-Gregory Of Oakland. City of Pittsburg hired Joan to be the project planner and the environmental coordinator for this process, and she will explain a little bit about how this process works before we get into the comment period. Joan.

MS. LAMPHIER: The firm used to be Lamphier and Associates and now we're Lamphier-Gregory. Randy knows us as Lamphier and Associates.

Anyway, the purpose of our meeting this evening is to give the members of the public the opportunity to comment on the Draft Environmental Impact Report. And basically you have two modes of comment. You can either comment verbally (we have a speaker slip for you

to fill out) or you can provide a written comment and give that to the court reporter over here and that will become part of the record.

The intent of the comments is to address the adequacy of the environmental analysis in the document, to address any additional mitigation measures that might further reduce potentially significant environmental impacts or to provide alternatives that also would reduce potential environmental impacts.

Just so that you know, copies of the document are available on the city website. We have CDs available for anybody who doesn't have a copy available this evening, and all notices of the public hearings and of the environmental process are also available on the city's website.

So as is noted on the slide here, the environmental review comment period ends on June 26th. If you choose not to speak this evening you still have the opportunity to provide written comments to Ken Strelo. And then once the environmental comment period ends, all written verbal comments will be incorporated into the Final EIR, and the consultant team will respond to each comment.

The anticipated day for release of the Final EIR is sometime in August, depending on the extent of

comment of course, and then we would anticipate bringing the project and the Final EIR to the Planning Commission first for review and then ultimately to the Pittsburg City Council and Pittsburg Power Company.

So with that I will open up the meeting. Randy. And I would ask that people fill out a speaker slip so that we can track how many people would like to comment. Thank you.

MR. JEROME: Thank you Joan. All right. I have so far three speaker slips. And if anybody else would like to comment on this document I'd like to ask you to fill out one of these speaker slips so we can formally enter it into the record.

As I mentioned, we do have a court reporter so it is a formal part of this meeting. So I would ask you to come up to the podium and speak, or if you want to stay back there we do have a microphone. And if you could keep your comments to three minutes.

The first speaker slip I have is from Greg Feere.

MR. FEERE: Good evening. My name is Greg Feere. I represent the Contra Costa Building and Construction Trades Council right here in Contra Costa. We have 30 construction trade unions and about 30,000 members.

PM2:1-1

we met a number of months ago to review the

project and go over it in detail and looked at the complexity of what was going to transpire here in the City of Pittsburg. I happen to live in Antioch so this was a very important project.

I think the biggest issue that we reviewed in the project was the placement of the cable. And a lot of people are concerned about putting it right in the pathway of the shipping lane. And that has been addressed. **PM2:1-1**

The complexity of the other part is when the cable moves throughout the Bay, we were concerned about having this cable going over the BART tube and how exactly that was going to be addressed and how it was actually going to be set in place. **PM2:1-2**

While we have a lot of discussion -- and we represent divers as well -- and so they were pretty confident about building I guess a kind of an insulated bridge over the BART tube. So we were pretty satisfied in how that was going to be transpired.

Overall we looked at the project in great detail. We coordinated with the San Francisco Building and Construction Trades Council. And partnering together we successfully worked out an agreement that is going to impact not only San Francisco but right here in Contra Costa. **PM2:1-3**

So in reviewing it we think not only that it's going to be a positive return for local jobs and local people, we also think this project is going to bring back a positive social economic return to the City of Pittsburg and San Francisco.

PM2:1-3

One thing that I think with the trades we pride ourselves on building projects on schedule and on budget, and I think we'll be able to successfully build this project with the least amount of impact to the citizens of Pittsburg. Thank you very much.

MR. JEROME: Next I have David Fierberg.

MR. FIERBERG: Good evening. My name is Dave Fierberg. I'm a resident of San Francisco. I live not far from where the conversion site is slated to be built.

I'm also here with San Francisco Community Power. San Francisco Community Power is a community-based organization working in San Francisco on energy efficiency and environmental issues.

PM2:2-1

I'd like to congratulate the City of Pittsburg for having us out here. Unlike in San Francisco where the consultants outnumbered the residents probably five to one, it looks like there is some interest out here by the residents of Pittsburg. So I congratulate you for doing that.

We're here to let you know that we're opposed to this project for a number of reasons. The first is that this project is just fundamentally not needed. CAISO in their analysis calls for this as a means of insuring redundancy not power. It would be much more effective if what you wanted to do was insure the electric grid of San Francisco rather than building one gigantic electric cord as it were from Pittsburg to San Francisco, rather to have a number of different energy generations in the City and County of San Francisco. And so that $300 million that they're talking about spending on this cable we think would be much better spent on more sustainable energy generation types of activities. **PM2:2-1**

We're of course very concerned about the destruction of the two historic sites in the Dog Patch neighborhood. That's a neighborhood that's right next to my neighborhood. And that although -- just as a point of clarification -- although Mirant has requested demolition of these two properties, they have not gone through any of the formal EIR processes or any of the other processes that would require this. And so it's not even close to actually being destroyed. **PM2:2-2**

The $300 estimate as I mentioned that this cable is supposed to cost, it's important to understand that **PM2:2-3**

that's going to have to be paid for by somebody whether or not this cable is used. Our concern is that this is going to be passed on to the ratepayers. It will certainly be passed on to the ratepayers in San Francisco, and I would encourage everybody in Pittsburg to make sure that if Pittsburg Power is the one that's holding this note and if you guys are the ones that is

PM2:2-3

underwriting this if this cable is not used, that the residents of Pittsburg might also then be on the hook to pay off this cable.

We're concerned about this project. As I mentioned, we don't think that this is the right project. We don't think that this is the right time to build this project. We're going to be following this process as we have for the past two years. And we imagine that we'll see you guys in future meetings. And I want to thank you very much for letting me speak.

MR. JEROME: Thank you. Next speaker slip is from Mike Lengyel.

MR. LENGYEL: Thank you for putting that Draft EIR on the City website. I'm Mike Lengyel from

PM2:3-1

Pittsburg and I attempted to look at it. It threw me for a loop. So I had some earlier questions. I don't know if they were answered or not.

The tendency is to pretend that this is something

that's happening in isolation, but this is actually an integral part of the power plant structure in Pittsburg, and this facility offers an ideal mode to establish a health fund to deal with the impacts of air-pollution-related illness of which there have been some studies.

The New York Journal of Medicine reported that in 2000 that the level of fine particulate air pollution was associated with the rates of death in 20 US cities, including San Jose and Oakland. So the more particulates there were in the air the higher the death rate. **PM2:3-1**

ABT Associates in October 2000 did a nationwide study -- which I think was a marvelous study -- found that 259 deaths each year in California are attributable to power plant particulates, and that power plants make the largest contribution to ambient particulate matter and associated health risks.

So I'm asking you as a mitigation to place a surcharge on this Trans Bay Project. It's kind of a son of Enron there.

I see Sam Wayne back there and I think Dave Parkett has a great role in this. So these folks did a number on California. I'm not saying they didn't do a great service to the City of Pittsburg by providing **PM2:3-2**

more than $15 million for the Enron Project that's now known as the Los Medanos Energy Center, but I think there is an obligation to step back and look at this a little bit broader and look at the people who are bearing the brunt of the pollution from the power plants, of which this is part, and to add as a mitigation some sort of charge on that that's collected that goes into a health fund to lesson the problem.

PM2:3-2

So thank you very much. I will leave some written comments that I left for Governor Davis which he ignored for some reason in 2001 when he was here. Thank you very much.

MR. JEROME: Thank you. The next slip I have is from Kristina Lawson.

MS. LAWSON: Good evening. Kristina Lawson with Miller, Starr and Regalia out of Walnut Creek. I'm here tonight on behalf of property owners on West Tenth Street.

I'm appearing in support of the project. And I'm here specifically to comment on the location of the Pittsburg converter station and to urge Pittsburg to actually select the West Tenth Street Alternative 1 as the location for the converter station.

PM2:4-1

This location, as the gentleman presented earlier tonight and as is set forth the EIR in some detail, is

certainly one of the environmentally superior alternatives and will be less environmentally damaging than construction of the converter station, the Standard Oil site and the other locations.

Like I said, the alternative section does an excellent job of explaining why the West Tenth Street alternative 1 is the preferred alternative. It will eliminate the need for the submarine cable installation in the Bay and would reduce -- not in the entire Bay but part of the Bay -- would reduce the length of the high voltage direct current transmission cable installation by approximately 4 miles.

PM2:4-1

Because the cable installation is not going to be needed in the channel between Winter Island and Browns Island, dredging will not be needed to cross that channel.

Because of its close proximity to the PG&E substation, it will avoid potential local impacts to commercial marine transportation and commercial fishing vessel operations in the area.

The West Tenth Street Alternative 1 does not require an access road be constructed and would avoid the disturbance of at least 11 natural communities and numerous species as identified in the EIR.

As also set forth in the alternative section of

the EIR, no impacts to natural communities, wetlands or special-status species would be expected from the West Tenth Street Alternative 1.

It is our understanding that the reason the West Tenth Street Alternative 1 may not have been fully analyzed as the Project in the EIR was because the Project -- that location had not yet been tied up by the Project proponent. We understand now that it's been tied up and that it is an available site. It's not only possible to have the converter site there but it's environmentally preferable.

PM2:4-1

One of the purposes as you know of CEQA is to prevent avoidable environmental damage. This site would allow you to do just that and we would urge you to select it as the alternative. Thank you.

MR. JEROME: That's the last comment slip I have. Would anybody else like to comment? Okay.

If not, than this is the end of the formal comment period for the public meeting tonight. We do have an opportunity to provide written comments until the comment period which ends on June 22nd (sic) and we urge you to do so.

Again, if you haven't looked at the document itself, we do have CDs out there. It's also on the City's website that was mentioned previously. Joan?

MS. LAMPHIER: Can we introduce Ken?

MR. JEROME: Ken Strelo -- stand up there Ken. He's the planner that's coordinating the Project with the City. And comments will come in directly through him through the document you have. He then will distribute it to -- make sure that Robert Ray and his subconsultants get it for comment.

So again, how the process works now, this is the Draft EIR that we've been talking about. Comments then will be received. The consultant URS will respond to those comments. Those will be bundled together to become part of the Final Environmental Impact Report which will then be used by the City of Pittsburg City Council for certification as required under the California Environmental Quality Act.

Okay. Well, with that, I thank you all for coming. Again, you still have 'til June 26th to provide us with written comments which will go into Ken Strelo.

We have displays out in the back and we have a lot of the subconsultants here as well as the proponent himself and you can ask questions of him.

Thank you again.

(Whereupon, the meeting ended at 7:20 p.m.)

---oOo---

REPORTER'S CERTIFICATE

I, JUDITH L. LARRABEE, a Hearing Shorthand Reporter in the State of California, duly authorized to administer oaths, hereby certify:

That I am a disinterested person herein; that the foregoing meeting was reported by me in shorthand, and thereafter transcribed by means of computer-aided transcription.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in the outcome of said examination.

IN WITNESS WHEREOF, I have thereunto set my hand on this 23rd day of June, 2006.

_____

Judith L. Larrabee, Hearing Reporter

RESPONSE TO COMMENTS

Comment Number	Response
PM2:1-1	Comment noted.
PM2:1-2	Comment noted.
PM2:1-3	Comments noted.
PM2:2-1	Comments noted. Please refer to Responses 3-1 through 3-6, 10-1, and 10-2.
PM2:2-2	Comments noted. Please refer to Response 3-7.
PM2:2-3	Comment noted. Please refer to Response PM1:1-1.
PM2:3-1	Comments noted. Please refer to Response 2-1A.
PM2:3-2	Comments noted. The TBC Project is being evaluated on its own merits. The only air quality issues involve the emergency generator and firewater pump that are required by regulations and used only on an emergency basis. TBC is in the process of obtaining air permits for both the Pittsburg and San Francisco converter station sites.
PM2:4-1	The City of Pittsburg as CEQA Lead Agency appreciates Miller, Starr and Regalia's review of the Draft EIR for the proposed Trans Bay Cable Project. The City of Pittsburg concurs with the commentor's comments regarding the environmental superiority of the Pittsburg West Tenth Street Alternative 1 converter station site as discussed in the Draft and Final EIRs. Please refer to Sections 1.0 and 3.0 of the Final EIR for a description of the currently-proposed Project, which includes Pittsburg West Tenth Street Alternative 1 (East-West) as the now-preferred Pittsburg site.

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0 1 2 3 4 5 Miles
0 1 2 3 4 5 Kilometers
1 inch equals 3 miles 1:190,080
NAD 1983 UTM Zone 10N

PROPOSED 400 MW DC CABLE ROUTE

Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
Sheet 9
Sheet 10

DC 0
DC 10
DC 20
DC 30
DC 40
DC 50
DC 52.7

MIRANT ALTERNATIVE
PG&E POTRERO SUBSTATION
PG&E PITTSBURG SUBSTATION
PROPOSED WEST TENTH STREET ALTERNATIVE
SHEEDY ALTERNATIVE
EXPANDED STUDY CORRIDOR TO ALLOW FLEXIBILITY FOR BART CROSSING
PROPOSED SF CONVERTER STATION, HWC (MITIGATED)

SAN PABLO BAY
SAN FRANCISCO BAY
SUISUN BAY

PETALUMA POINT* NOVATO* MARE ISLAND* BENICIA* VINE HILL* HONKER BAY* ANTIOCH NORTH*
Sonoma County Solano County Marin County Contra Costa County Alameda County San Francisco County San Mateo County
Vallejo Novato Rodeo Crockett Hercules Pinole Martinez Vine Hill West Pittsburg Pittsburg Antioch Oakley Brentwood
Benicia SRA Carquinez Strait Shoreline Point Pinole Regional Shoreline China Camp SP Lucas Valley-Marinwood Santa Venetia Fairfax San Anselmo Ross Kentfield Larkspur Corte Madera Mill Valley Strawberry Tamalpais-Homestead Valley Mount Tamalpais SP Tiburon Belvedere Angel Island SP Golden Gate NRA
Concord Naval Weapons Station JOICE ISLAND ST GAME REFUGE BROWNS ISLAND WINTER I
SAN RAFAEL* SAN QUENTIN* RICHMOND* BRIONES VALLEY* WALNUT CREEK* CLAYTON* ANTIOCH SOUTH*
Richmond San Rafael Tara Hills Pinole El Sobrante San Pablo East Richmond Heights Wildcat Canyon Regional Park Miller/Knox Regional Park El Cerrito Kensington Albany Berkeley Emeryville East Shore State Park (SS) Bayview-Montalvin Pacheco Concord Pleasant Hill Clayton Briones Regional Park John Muir NHS BLACK DIAMOND MINES REG PRESER
POINT BONITA* SAUSALITO SAN FRANCISCO NORTH* OAKLAND WEST* OAKLAND EAST* LAS TRAMPAS RIDGE* DIABLO
Tilden Regional Park Orinda Lafayette Walnut Creek Lafayette Reservoir Rec Area Mount Diablo SP Alamo Moraga Town LAS TRAMPAS REGIONAL WILDERNESS Redwood Regional Park ANTHONY CHABOT REGIONAL PARK Blackhawk Danville San Ramon
TREASURE ISLAND NAVAL STA OAKLAND ARMY BASE OAKLAND NAVAL SUPPLY CTR ALAMEDA NAVAL AIR STA
Oakland SAN FRANCISCO SOUTH* HUNTERS POINT* SAN LEANDRO* HAYWARD* DUBLIN
Daly City Brisbane San Leandro Castro Valley Ashland

Legend
7.5 Minute USGS Quad Index
Strip Map Index
-Proposed 400 MW High Voltage Direct Current Cable Route
-10 Milepost/Endpoint
-Yellow Study Corridor (Width 500 m - 250 m Each Side of DC Routes within Water Body)
Alternate 400 MW High Voltage Direct Current Cable Route
Proposed Alternating Current Cable Route (San Francisco 115 kV/Pittsburg 230 kV)
County Boundary
City Limits/ Census Designated Place
Existing Substations
Existing Transmission Line
115 kV
230 kV
500 kV
Interstate
US Route
State Route
Other Roads
Railroad
BART (Bay Area Rapid Transit)
Department of Defense
Local or State Park
National Park

SOURCE: U.S. Geological Survey National Elevation Dataset (NED) 1 arc second, Platts PowerMap 1st Quarter 2003 release, California Resources Agency Legacy Project 2005, Census TIGER® 2000 Data, ESRI Data & Maps 2003 CD-ROM.

Sonoma County Napa Solano County Marin County Contra Costa County Alameda County San Francisco County San Mateo County Sacramento County
Novato Vallejo Benicia West Pittsburg Pittsburg Pinole Martinez Antioch Concord San Rafael San Pablo Larkspur Mill Valley Richmond Walnut Creek Albany Berkeley Piedmont Oakland San Francisco Alameda San Ramon San Leandro San Lorenzo Daly City

TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION STRIP MAP INDEX	Final EIR	2006

T:\Trans_Bay_Cable_Project_EIR\deliverables\FinalEIR\Map A_2-1 DETAILED PROJECT LOCATION STRIP MAP INDEX.mxd

DC 5

DC 4

DC 3

DC 2

DC 1

DC 0.7

DC 0

AC 0.28

AC 0

EXPANDED STUDY CORRIDOR TO ALLOW FLEXIBILITY FOR BART CROSSING

ALTERNATIVE SF CONVERTER STATION, MIRANT

PG&E POTRERO SUBSTATION

PROPOSED SF CONVERTER STATION, HWC (MITIGATED)

ALTERNATIVE SF CONVERTER STATION, SHEEDY

PROPOSED CONSTRUCTION LAYDOWN AREA (PIER 94/96)

Treasure Island

NAVAL RESERVATION

Yerba Buena Island

COAST GUARD RESERVATION

North Point

Rincon Point

Rincon Hill

China Basin

Central Basin

Potrero Point

Lash Lighter Basin

SAN FRANCISCO

BAR CHANNEL

ISLAIS CREEK CHANNEL

Bayview District

Chinatown

Jackson Park

Footbridge

Beacons

Beacon

Mission Rock Terminal

TRANSIT TUBE

TRANS-BAY TUBE

(DOUBLE DECK) BAY BRIDGE

(TOLL BRIDGE) SAN FRANCISCO-OAKLAND BAY BRIDGE

OAKLAND (TOLL BRIDGE)

CABLE AND

OUTER HARBOR EN

MARINE SUPPLY CORPS ANNEX

Legend

Proposed/Alternative Cable Route Mileposts

- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes

- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
- AC 0 — Proposed 230 kV Alternating Current Cable Route (Pittsburg)
- DC 0 — Alternate 400 MW High Voltage Direct Current Cable Route
- AC 0 — Alternate 230 kV Alternating Current Cable Route (Pittsburg)
- Proposed Converter Stations
- Alternate Converter Stations
- Existing PG&E Substation
- Proposed Construction Laydown Area
- Yellow Study Corridor: Width 500 m - 250 m Each Side of DC Routes within Water Body
- # — See Table A.2-1 (Red and green lines accompanied by this symbol represent land easements granted to vendors by the State of California).
- DS-# — USACE Dredge Disposal Areas

Note: Water depth will be confirmed as part of the TBC Marine Survey.

Source: U.S. Geological Survey 1:24,000-scale topographic maps (National Geographic Seamless USGS Topographic Maps on CD-ROM, Powered by TOPO!).

0 0.1 0.2 0.3 0.4 0.5 Miles

0 100 200 300 400 500 600 Meters

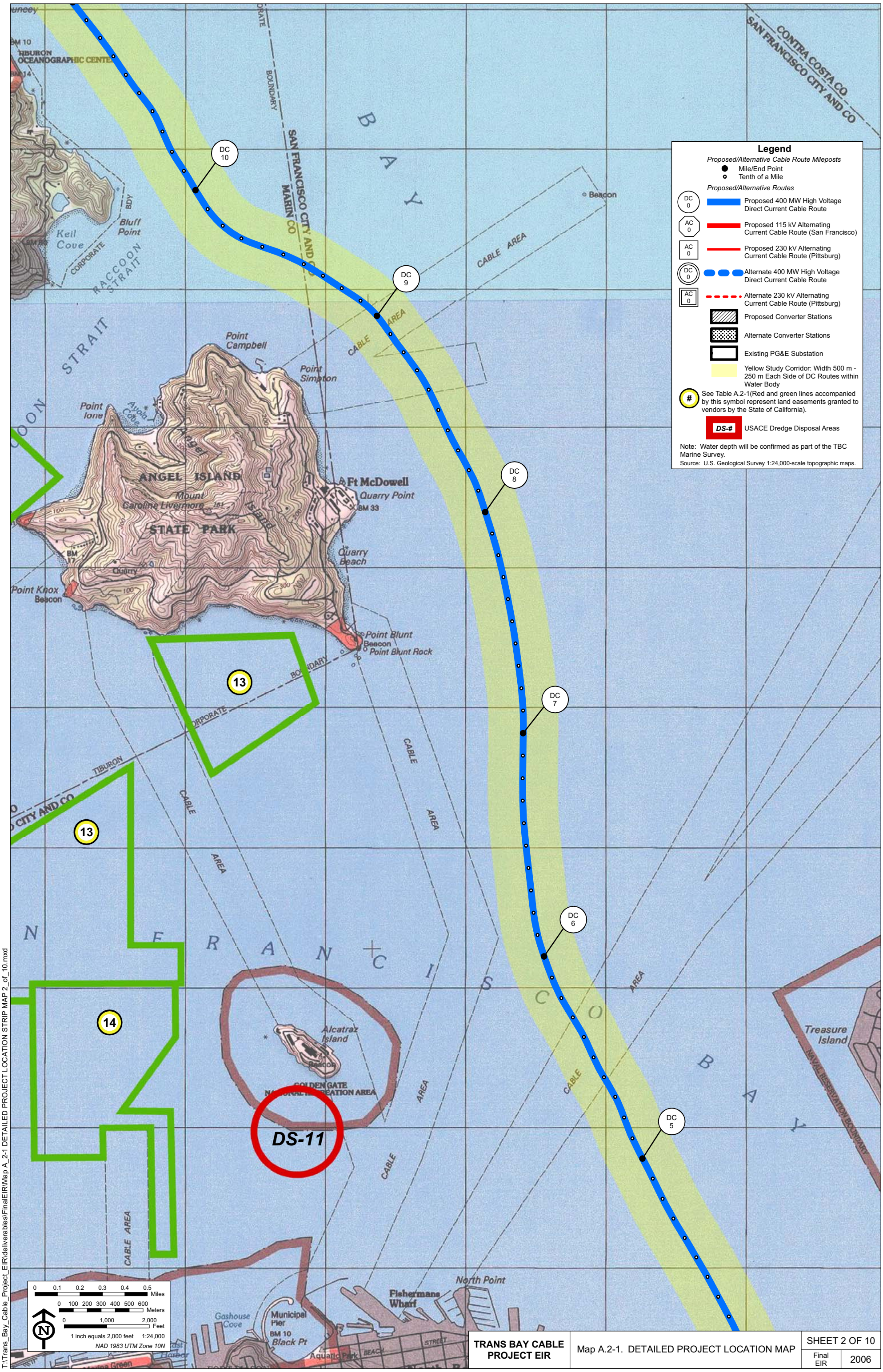
0 1,000 2,000 Feet

1 inch equals 2,000 feet 1:24,000

NAD 1983 UTM Zone 10N

TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 1 OF 10
		Final EIR 2006

T:\Trans_Bay_Cable_Project_EIR\deliverables\FinalEIR\Map A_2-1 DETAILED PROJECT LOCATION STRIP MAP 1_of_10.mxd


Legend
Proposed/Alternative Cable Route Mileposts
Mile/End Point
Tenth of a Mile
Proposed/Alternative Routes
DC 0
Proposed 400 MW High Voltage Direct Current Cable Route
AC 0
Proposed 115 kV Alternating Current Cable Route (San Francisco)
AC 0
Proposed 230 kV Alternating Current Cable Route (Pittsburg)
DC 0
Alternate 400 MW High Voltage Direct Current Cable Route
AC 0
Alternate 230 kV Alternating Current Cable Route (Pittsburg)
Proposed Converter Stations
Alternate Converter Stations
Existing PG&E Substation
Yellow Study Corridor: Width 500 m - 250 m Each Side of DC Routes within Water Body
#
See Table A.2-1(Red and green lines accompanied by this symbol represent land easements granted to vendors by the State of California).
DS-#
USACE Dredge Disposal Areas
Note: Water depth will be confirmed as part of the TBC Marine Survey.
Source: U.S. Geological Survey 1:24,000-scale topographic maps.
DC 10
DC 9
DC 8
DC 7
DC 6
DC 5
DS-11
13
13
14
ANGEL ISLAND
STATE PARK
Mount Caroline Livermore
Point Campbell
Point Simpton
Point Ione
Point Knox Beacon
Point Blunt
Point Blunt Rock
Ft McDowell
Quarry Point
Quarry Beach
Alcatraz Island
Keil Cove
Bluff Point
Beacon
Treasure Island
North Point
Fishermans Wharf
Municipal Pier
Gashouse Cove
BM 10
Black Pt
Aquatic Park
CABLE AREA
BOUNDARY
CORPORATE
SAN FRANCISCO CITY AND CO
MARIN CO
CONTRA COSTA CO
SAN FRANCISCO CITY AND CO
TIBURON
RACCOON STRAIT
STRAIT
BAY
0 0.1 0.2 0.3 0.4 0.5 Miles
0 100 200 300 400 500 600 Meters
0 1,000 2,000 Feet
1 inch equals 2,000 feet 1:24,000
NAD 1983 UTM Zone 10N
N
TRANS BAY CABLE PROJECT EIR
Map A.2-1. DETAILED PROJECT LOCATION MAP
SHEET 2 OF 10
Final EIR
2006
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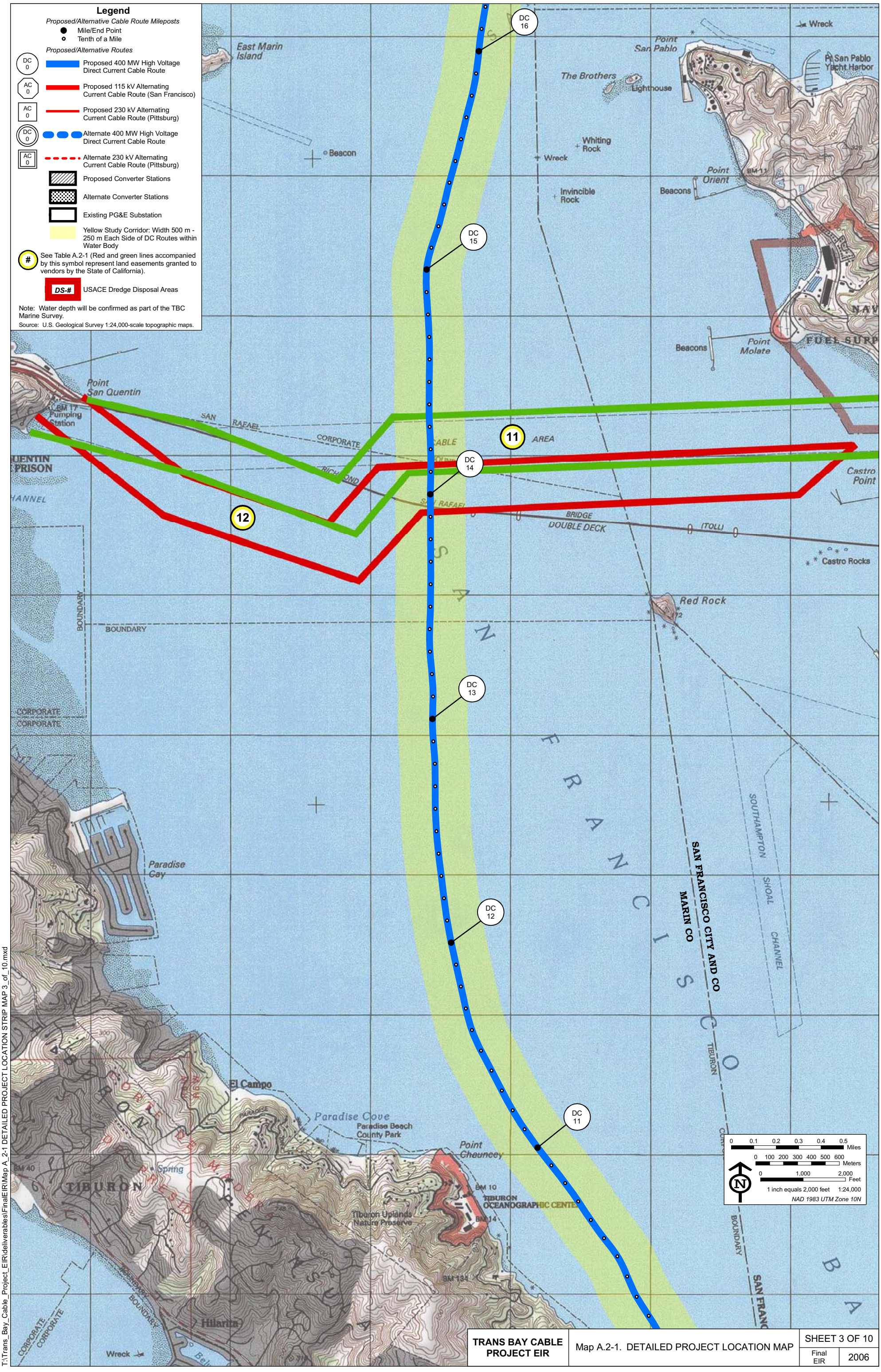

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TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 3 OF 10	
		Final EIR	2006

Legend

Proposed/Alternative Cable Route Mileposts

- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes

- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
- AC 0 — Proposed 230 kV Alternating Current Cable Route (Pittsburg)
- DC 0 — Alternate 400 MW High Voltage Direct Current Cable Route
- AC 0 — Alternate 230 kV Alternating Current Cable Route (Pittsburg)
- Proposed Converter Stations
- Alternate Converter Stations
- Existing PG&E Substation
- Yellow Study Corridor: Width 500 m - 250 m Each Side of DC Routes within Water Body
- # — See Table A.2-1 (Red and green lines accompanied by this symbol represent land easements granted to vendors by the State of California).
- DS-# — USACE Dredge Disposal Areas

Note: Water depth will be confirmed as part of the TBC Marine Survey.

Source: U.S. Geological Survey 1:24,000-scale topographic maps.

0 0.1 0.2 0.3 0.4 0.5 Miles
0 100 200 300 400 500 600 Meters
0 1,000 2,000 Feet
1 inch equals 2,000 feet 1:24,000
NAD 1983 UTM Zone 10N

DS-10

DC 20
DC 19
DC 18
DC 17
DC 16

China Camp
Peacock Gap Golf and Country Club
McNears Beach County Park
The Sisters
Point San Pedro
Quarry
Mud
West Marin Island
East Marin Island
Point San Pablo
Wreck
Pt San Pablo Yacht Harbor
Pinole Point
Rocky I.
BM 118
BM 8
BM 3
Fill
ROAD
MARIN CO
CONTRA COSTA CO
CITY
BOUNDARY
RICHMOND
CORPORATE
INDEFINITE
SAN PABLO BAY
SAN PABLO STRAIT
SAN RAFAEL BAY
SAN PABLO

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TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 4 OF 10
		Final EIR 2006

Legend

Proposed/Alternative Cable Route Mileposts

- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes

- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
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Source: U.S. Geological Survey 1:24,000-scale topographic maps.

0 0.1 0.2 0.3 0.4 0.5 Miles

0 100 200 300 400 500 600 Meters

0 1,000 2,000 Feet

1 inch equals 2,000.000000ft at 24000

NAD 1983 UTM Zone 10N

DC 20 · DC 21 · DC 22 · DC 23 · DC 24 · DC 25 · DC 26

POTENTIAL SPLICE LOCATION

POTENTIAL SPLICE LOCATION

ANTICIPATED POST-CABLE LAY AREA WITH BARGE/HYDROPLOW

MARIN CO
CONTRA COSTA CO
CITY BDY
APPROXIMATE BOUNDARY
RICHMOND
CITY BOUNDARY
HERCULES
PINOLE
CITY
CITY
PINOLE
CITY
BOUNDARY
BOUNDARY
BOUNDARY
Pinole
Lights
Pinole Point
Nitro
POINT PINOLE REGIONAL SHORELINE
SAN PABLO
Sobrante
BM 11
BM 19
Piling
MUD
Wilson Point
PACIFIC
ATCHISON
Gateley
Nob Hill
P I N O L E S H O A L S

TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 5 OF 10	
		Final EIR	2006

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0 0.1 0.2 0.3 0.4 0.5 Miles
0 100 200 300 400 500 600 Meters
0 1,000 2,000 Feet
1 inch equals 2,000 feet 1:24,000
NAD 1983 UTM Zone 10N

DS-9

POTENTIAL SPLICE LOCATION

DC 26 · DC 27 · DC 28 · DC 29 · DC 30 · DC 31

10

B A Y

S H O A L

SOLANO CO
CONTRA COSTA CO

CARQUINEZ STRAIT

VALLEJO CITY BOUNDARY

Mare Island · Mare Island Strait · Carquinez Heights · Swanzy Reg · Cable Area · Carquinez Strait Light Station · California Maritime Academy · Morrow Cove · Glencove · Glen Cove · Elliott Cem · Sample Point · Airway Beacon · CARQUINEZ BRIDGE · Selby · Davis Pt · Tormey · Valona · Crockett · Oleum · OIL REFINERY · OIL TANKS · Radar Target · Sewage Disposal · Lone Tree Point · Bayo Vista · Rodeo · Hillcrest School · Garretson Hts School · St Patricks School · Stake · Piling · Dolphins · Lights · Beacon · End · BREAKWATER · LEVEE · MUD · GOLF COURSE · EASTSHORE FREEWAY · SOUTHERN PACIFIC · HERCULES · Canada del Cañada

Legend

Proposed/Alternative Cable Route Mileposts
- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes
- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
- AC 0 — Proposed 230 kV Alternating Current Cable Route (Pittsburg)
- DC 0 — Alternate 400 MW High Voltage Direct Current Cable Route
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- Alternate Converter Stations
- Existing PG&E Substation
- Yellow Study Corridor: Width 500 m - 250 m Each Side of DC Routes within Water Body
- # — See Table A.2-1 (Red and green lines accompanied by this symbol represent land easements granted to vendors by the State of California).
- DS-# — USACE Dredge Disposal Areas

Note: Water depth will be confirmed as part of the TBC Marine Survey.
Source: U.S. Geological Survey 1:24,000-scale topographic maps.

TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 6 OF 10	
		Final EIR	2006

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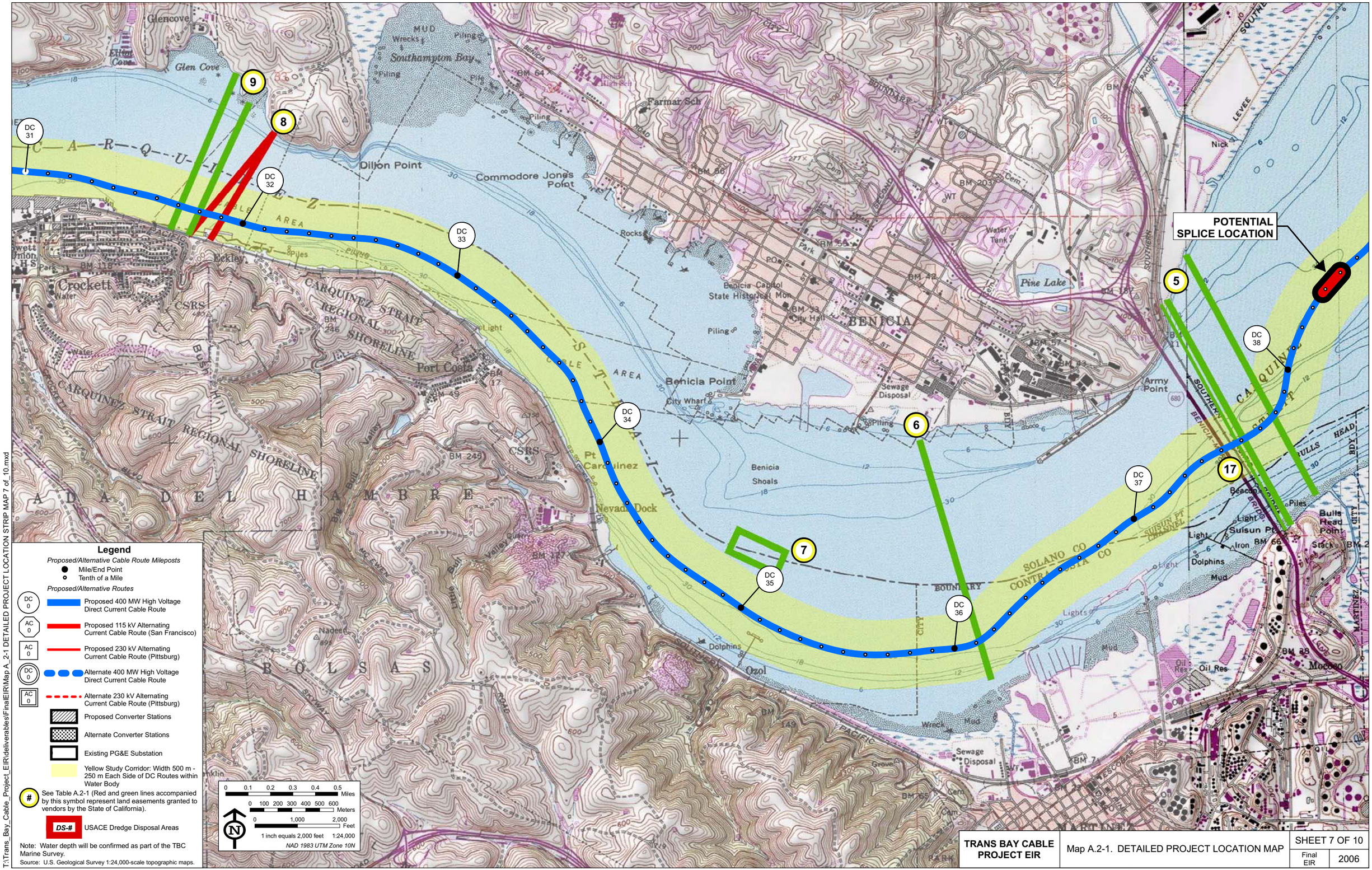

Legend

Proposed/Alternative Cable Route Mileposts

- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes

- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
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- DS-# — USACE Dredge Disposal Areas

Note: Water depth will be confirmed as part of the TBC Marine Survey.

Source: U.S. Geological Survey 1:24,000-scale topographic maps.

0 0.1 0.2 0.3 0.4 0.5 Miles
0 100 200 300 400 500 600 Meters
0 1,000 2,000 Feet
1 inch equals 2,000 feet 1:24,000
NAD 1983 UTM Zone 10N

TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 7 OF 10
		Final EIR 2006

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Legend

Proposed/Alternative Cable Route Mileposts

- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes

- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
- AC 0 — Proposed 230 kV Alternating Current Cable Route (Pittsburg)
- DC 0 — Alternate 400 MW High Voltage Direct Current Cable Route
- AC 0 — Alternate 230 kV Alternating Current Cable Route (Pittsburg)
- Proposed Converter Stations
- Alternate Converter Stations
- Existing PG&E Substation
- Yellow Study Corridor: Width 500 m - 250 m Each Side of DC Routes within Water Body
- # — See Table A.2-1 (Red and green lines accompanied by this symbol represent land easements granted to vendors by the State of California).
- DS-# — USACE Dredge Disposal Areas

Note: Water depth will be confirmed as part of the TBC Marine Survey.

Source: U.S. Geological Survey 1:24,000-scale topographic maps.

0 0.1 0.2 0.3 0.4 0.5 Miles

0 100 200 300 400 500 600 Meters

0 1,000 2,000 Feet

1 inch equals 2,000 feet 1:24,000

NAD 1983 UTM Zone 10N

DC 40 · DC 41 · DC 42 · DC 43 · DC 44

DC 39 · DC 38

POTENTIAL SPLICE LOCATION

5 · 17

SUISUN · NAVAL WEAPONS STATION Roe Island · CONCORD · Preston Pt · Tripod · Beacon · Light · MUD · PRESTON PT REACH · ROE ISLAND CHANNEL · PT EDITH CROSSING RANGE · SOLANO CO CONTRA COSTA CO · EAST BULLS HEAD CHANNEL · Seal Islands · Pt Edith · Echo · Lands End · Dolphin · Nick · Piles · Pile · LEVEE · SOUTHERN PACIFIC · Parking Area · Trailer Park · Suisun Slough · Tract 38 · Tract 39 · Gillespie Pt · BM 20 · BM 15 · BM 9 · BM 8 · BM 7 Hastings · BM 4

TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 8 OF 10
		Final EIR 2006

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Legend

Proposed/Alternative Cable Route Mileposts

- Mile/End Point
- Tenth of a Mile

Proposed/Alternative Routes

- DC 0 — Proposed 400 MW High Voltage Direct Current Cable Route
- AC 0 — Proposed 115 kV Alternating Current Cable Route (San Francisco)
- AC 0 — Proposed 230 kV Alternating Current Cable Route (Pittsburg)
- DC 0 — Alternate 400 MW High Voltage Direct Current Cable Route
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- Proposed Converter Stations
- Alternate Converter Stations
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- Yellow Study Corridor: Width 500 m - 250 m Each Side of DC Routes within Water Body
- # — See Table A.2-1 (Red and green lines accompanied by this symbol represent land easements granted to vendors by the State of California).
- DS-# — USACE Dredge Disposal Areas

Note: Water depth will be confirmed as part of the TBC Marine Survey.

Source: U.S. Geological Survey 1:24,000-scale topographic maps.

0 0.1 0.2 0.3 0.4 0.5 Miles
0 100 200 300 400 500 600 Meters
0 1,000 2,000 Feet
1 inch equals 2,000 feet 1:24,000
NAD 1983 UTM Zone 10N

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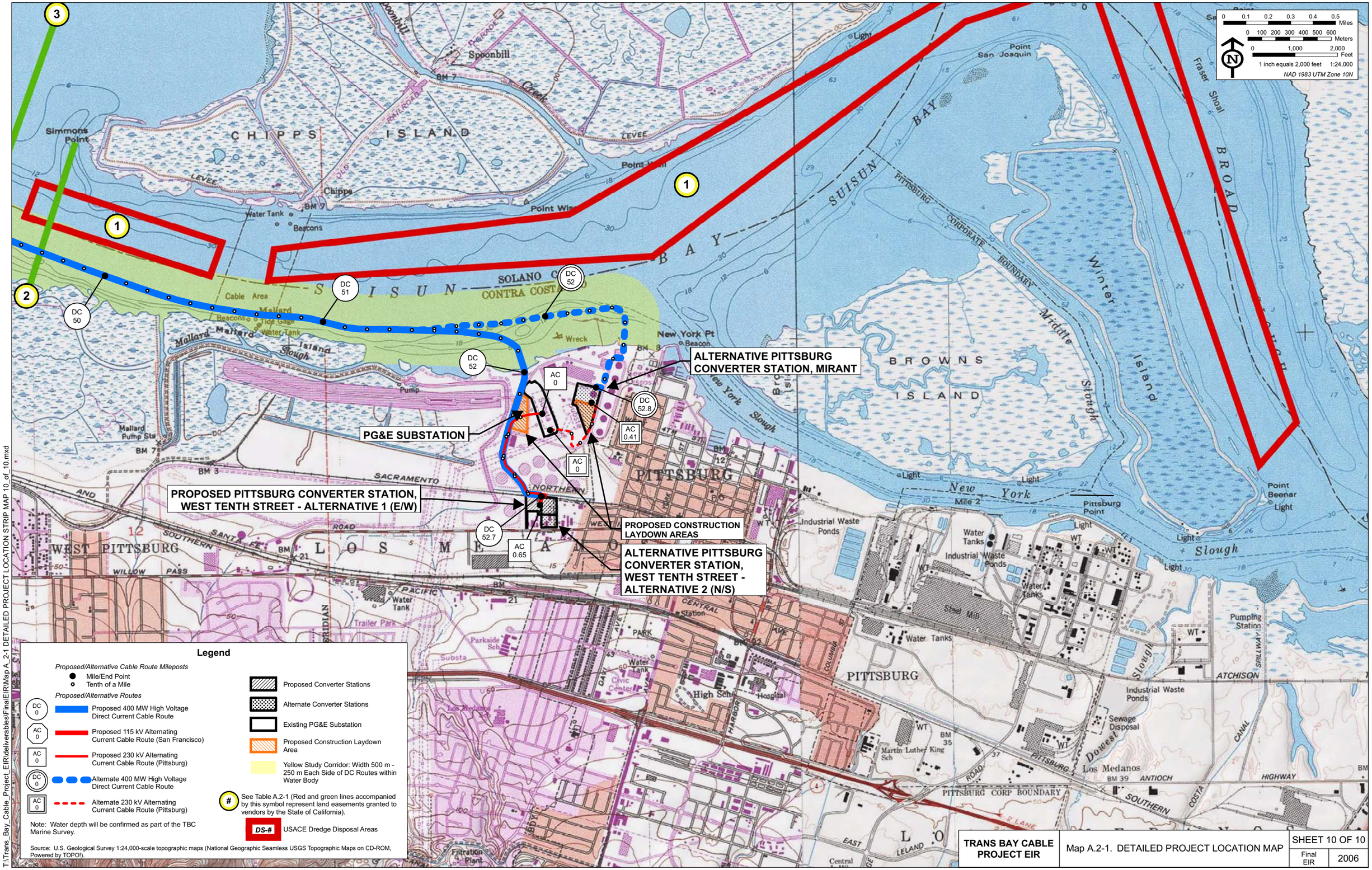
TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 9 OF 10
		Final EIR 2006



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TRANS BAY CABLE PROJECT EIR	Map A.2-1. DETAILED PROJECT LOCATION MAP	SHEET 10 OF 10	
		Final EIR	2006

The following are minor text changes, additions, or modifications made to the Draft EIR for the proposed Trans Bay Cable Project. The text revisions presented herein have been made in response to applicable comments received on the Draft EIR as well as to address mitigating refinements to the proposed Project. Refer to Section 12.0 of this Final EIR for the comments received, including the responses to comments. The specific comments that warranted a text revision to the Draft EIR are indicated in the margins next to the revised text which follows. Text revisions are indicated in underline/strikethrough.

13.1 EXECUTIVE SUMMARY (SECTION 1.0)

Section 1.0, Executive Summary, of the Draft EIR has been revised and represented in this Final EIR to reflect modifications made to the Project by the Project proponent as well as to consider comments received on the Draft EIR. Please refer to Section 1.0, Executive Summary, of this Final EIR for the revised section.

13.2 INTRODUCTION (SECTION 2.0)

No revisions were required for Section 2.0 of the Draft EIR.

13.3 PROJECT DESCRIPTION (SECTION 3.0)

Section 3.0, Project Description, of the Draft EIR has been revised and represented in this Final EIR to reflect modifications made to the Project by the Project Proponent as well as to consider comments received on the Draft EIR. Please refer to Section 3.0, Project Description, of this Final EIR for the revised section.

13.4 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION – PROPOSED PROJECT (SECTION 4.0)

The following revision to the text of the Draft EIR, **Mitigation Measure AIR-1** (Fugitive Dust Controls), page 4.2-15, paragraph 3, has been made in response to Comment 10-3:

Mitigation Measure AIR-1: Fugitive Dust Controls. Best achievable control measures (BACM) shall be utilized during construction phases of the Project. Fugitive dust control measures are stipulated by BAAQMD Regulation 6 (BAAQMD, 1999) and shall include all of the following as applicable to the Project site: **10-3**

- Water all active construction areas at least twice daily

- Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more)
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways

- No vehicle shall exceed 10 miles per hour speed limit within the construction site **10-3**
- The construction site entrance shall be posted with visible speed limit signs
- All construction vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering public roadways
- Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station
- All unpaved exits from the construction site shall be graveled to prevent track out to public roadways
- All construction vehicles shall enter the construction site through the graveled roadways, unless an alternative route has been submitted to and approved for use by the City

At least the first 500 feet of any public roadway exiting from the construction site shall be swept at least twice daily (or less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff from the construction site is visible on the public roadways

The following revision to the text of the Draft EIR, **Mitigation Measure AIR-2** (Exhaust Controls), page 4.2-17, paragraph 2, has been made in response to Comment 10-4:

Mitigation Measure AIR-2: Exhaust Controls. The following controls pertaining to equipment emissions (BAAQMD, 1999) shall be implemented during construction to reduce emissions from construction equipment exhaust:

- Use alternative fueled construction equipment, as practical.
- Minimize idling time.
- Maintain properly tuned equipment.
- Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use.
- All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.
- All diesel-fueled engines used in the construction of the facility shall have clearly visible tags showing that the engine meets the conditions set forth herein. **10-4**
- All construction diesel engines, which have a rating of 100 horsepower (hp) or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1). In the event a Tier 2 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" if, among other reasons:
  - There is no available soot filter that has been certified by either the California Air Resources Board or U.S. Environmental Protection Agency for the engine in question
  - The construction equipment is intended to be on-site for ten (10) days or less
  - The City may grant relief from this requirement if the construction contractor can demonstrate that they have made a good faith effort to comply with this requirement and that compliance is not possible

- The use of a soot filter may be terminated immediately if one of the following conditions exists, provided that the City is informed within ten (10) working days of the termination:
  - The use of the soot filter is excessively reducing normal availability of the construction equipment due to increased time for maintenance, and/or reduced power output due to an excessive increase in backpressure
  - The soot filter is causing or is reasonably expected to cause significant engine damage
  - The soot filter is causing or is reasonably expected to cause a significant risk to workers or the public
  - Any other seriously detrimental cause which has the approval of the City prior to the termination being implemented
- All heavy earthmoving equipment and heavy duty construction related trucks with engines meeting the requirements of (c) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
- All diesel heavy construction equipment shall not remain running idle for more than five minutes, to the extent practical.

10-4

The following revision to the text of the Draft EIR, **Mitigation Measure AIR-3** (Marine Vessel Emission Controls), page 4.2-27, paragraph 1, has been made in response to Comment 10-5:

Mitigation Measure AIR-3: Marine Vessel Emission Controls. The following shall be implemented to control emissions from vessels owned by Prysmian:

- Use California diesel, Purinox, biodiesel, or other fuel (whichever is feasible and would result in lowest emissions)
- Minimize diesel engine fuel usage as much as possible
- Use shore-side power when docked instead of running engines, where feasible

10-5

Resulting Level of Significance. Implementation of Mitigation Measure AIR-3 would reduce or limit Impact AIR-3 to a less-than-significant level.

Implementation Responsibility: Project proponent/construction contractor

Requirements and Timing: Implement approved marine vessel emission controls during all marine vessel operations in San Francisco Bay **10-5**

Monitoring Requirements: City of Pittsburg to monitor and ensure compliance

Record Keeping: The Project proponent shall maintain copies of all diesel, or alternative fuel purchase and shall provide such records to the City of Pittsburg on a monthly basis.

The following revision to the text of the Draft EIR, **Mitigation Measure GEO-2** (Controls for Excavation of Serpentine), page 4.3-15, paragraph 4, has been made in response to Comments 8-11 and 8-12:

Mitigation Measure GEO-2: Controls for Excavation of Serpentine. Prior to Project construction, previously-prepared geotechnical reports and boring and trenching logs from the site would be reviewed to identify areas of serpentinite bedrock that would be disturbed during excavation and Project construction. An Asbestos Dust Mitigation Plan would be submitted to the Bay Area Air Quality Management District (BAAQMD) for approval in accordance with the *Final Regulation Order Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations*. The Asbestos Dust Mitigation Plan would address the following:

- Identification by a California Licensed Geologist of asbestos-form materials and particulate size that are expected to be present, and asbestos-form materials and particulate size actually encountered **8-11, 8-12**
- Prevention of dust emissions offsite
- Control of dust for disturbed areas and storage piles
- Traffic control for on-site unpaved areas; Control for earthmoving activities
- Track-out prevention
- Control for off-site transport
- Post-construction stabilization of disturbed areas
- Air monitoring for asbestos (if required by the district Air Pollution Control Officer [APCO])

The following addition to the text of the Draft EIR, Section **4.3.3.4.2** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Geological Resources and Soils, Environmental Impacts, Offshore DC Cable Route, Operations-related Impacts), page 4.3-21, paragraph 9, has been made in response to Comment 10-6:

Landslide Hazard within the Carquinez Strait. There is a small potential for landslide hazard to the submarine cable. This area is narrow and bounded by cliffs. However, as the submarine cable would be placed at least 500 feet from shore in this area and buried at a typical target depth of at least 3 feet, it is unlikely that the cable would be damaged by a landslide. In the event that a landslide did damage the cable, the cable would be quickly repaired and put back in service. This impact is considered less than significant. No feasible mitigation exists that would mitigate this possible hazard. **10-6**

In Response to **Comment 10-9**, Figure 4.4-1A (RWQCB Identified Toxic Hot Spots in the Bay) has been added to the Draft EIR, Section **4.4.1.3.1** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Water Resources and Quality, Environmental Setting, Regional Geology, San Francisco Bay Sediment Quality, Sediment Quality Along the Proposed Cable Route).

The following revision to the text of the Draft EIR, Section **4.4.2.1.1** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Water Resources and Quality, Regulatory Setting, Federal, Clean Water Act), page 4.4-14, paragraph 1, has been made in response to Comment 25-2:

***Section 401*.** Dredging permit applicants intending to dispose material in water must obtain water quality certification from the State of California through the RWQCB with jurisdiction over the Project area. The RWQCB, after reviewing the Project, may recommend ~~to the State Water Resources Control Board (SWRCB)~~ that certification be granted or denied. **25-2**

The following revision to the text of the Draft EIR, Section **4.4.3.4.1** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Water Resources and Quality, Environmental Impacts, Offshore DC Cable Route, Construction-related Impacts), page 4.4-32, paragraph 4, has been made in response to Comment 19-17:

Sediment testing and removal would be conducted in accordance with a consolidated Dredging — Dredge Material Reuse/Disposal permit that would need to be applied for ~~and issued by~~ through the San Francisco DMMO. **19-17**

The following revision to the text of the Draft EIR, Section **4.6.1.2.5** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Marine Biological Resources, Environmental Setting, Aquatic Plants), page 4.6-9, paragraph 6, has been made in response to Comment 10-32:

Eelgrass (Zostera marina). Eelgrass is a native marine vascular plant indigenous to the soft-bottom bays and estuaries of the Northern Hemisphere. The species is found from middle Baja California and the Sea of Cortez to northern Alaska along the west coast of North America and is common in healthy shallow bays and estuaries. Eelgrass serves as a food source for a number of invertebrates, fish, and some migratory birds. It also provides habitat for many commercially and recreationally important finfish and shellfish species. Pacific herring regularly spawn on eelgrass leaves, and juvenile salmonid and smelt often spend extensive amounts of time within eelgrass habitats prior to heading for the open ocean (Wyllie-Echeverria and Rutten, 1989).

10-32

Distribution of eelgrass in the Bay is limited by sediment in the water (turbidity) and the depth to which light can penetrate at levels high enough to sustain eelgrass growth. In San Francisco Bay, eelgrass is limited to depths of about 10 feet or less along the shoreline. Locations of eelgrass beds are shown on Figure 4.6-2. There are no eelgrass beds located east of Point Pinole, thus Figure 4.6-2 in the Draft EIR is limited to the applicable portion of the cable route where eelgrass beds are actually present.

Eelgrass is protected under the Clean Water Act of 1972 (as amended), Section 404(b) (1) "Guidelines for Specification of Disposal Sites for Dredged or Fill Material," Subpart E, "Potential Impacts on Special Aquatic Sites."

The following addition to the text of the Draft EIR, Section **4.6.1.3.4** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Marine Biological Resources, Environmental Setting, Special-status Species, Green Sturgeon), page 4.6-12, paragraph 1, has been made in response to Comments 16-10 and 16-11:

4.6.1.3.4 Green Sturgeon. NOAA Fisheries issued a Final Rule to list the Southern distinct population segment (DPS) of green sturgeon (*Acipenser medirostris*) as a threatened species on April 7, 2006. This final rule became effective on June 6, 2006. The Southern DPS consists of coastal and Central Valley populations south of the Eel River, with the only known spawning population in this DPS occurring in the Sacramento River. NMFS defines a

16-10, 16-11

distinct population segment (DPS) of any species as that population of vertebrate fish or wildlife which interbreeds when mature. Critical habitat designation for the Southern DPS has not yet been determined. Federal Regulation; (71 FR 17757)

The green sturgeon is the most widely distributed member of the sturgeon family Acipenseridae. It is an anadromous species, spending most of its life in marine waters, returning to freshwater to spawn. Green sturgeon spawning locations along the west coast of North America are in the Klamath, Sacramento, and Rogue rivers. However, green sturgeon are known to range in nearshore marine waters from Mexico to the Bering Sea and are commonly observed in bays and estuaries along the coast (Moyle et al., 1992).

San Francisco Bay and its associated river systems contain the southern-most spawning population of green sturgeon. Green sturgeon juveniles are found throughout the Delta and San Francisco Bay. Green sturgeon adults and juveniles occur throughout the upper Sacramento River. Spawning occurs predominately in the upper Sacramento River, in late spring and early summer, above Hamilton City. Green sturgeon are thought to spawn every 3 to 5 years. Their spawning period is March to July, with a peak in mid-April to mid-June (Moyle et al., 1992). Juveniles appear to spend 1 to 3 years in freshwater before they enter the ocean. Green sturgeon concentrate in estuaries only during the summer and disperse widely in the ocean after their out-migration from freshwater (Moyle et al., 1992). **16-10, 16-11**

Green sturgeon are a long-lived, slow-growing species. They grow approximately 7 centimeters (3 inches) per year until they reach maturity at 130-140 centimeters (51-55 inches) at an age of 15-20 years. The largest green sturgeon are usually female and over 200 centimeters (79 inches) in length, and can reaches ages over 40 years. Adult sturgeon in the Sacramento-San Joaquin delta feed on benthic invertebrates including shrimp, mollusks, amphipods, and even small fish (Moyle et al., 1992). Juveniles in the Sacramento-San Joaquin Delta feed on opossum shrimp and amphipods (Radtke, 1966).

The following addition to the text of the Draft EIR, Section **4.6.2.2** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Marine Biological Resources, Regulatory Setting, State), page 4.6-14, has been made in response to Comment 19-7:

4.6.2.2.2 San Francisco Bay Plan. The Bay Conservation and Development Commission (BCDC) has jurisdiction over open water, marshes and mudflats of **19-7**

the greater San Francisco Bay, including Suisun and San Pablo Bays and the Carquinez Strait. BCDC also has jurisdiction over the first 100 feet inland from the shoreline around San Francisco Bay. BCDC's responsibilities include: 1) regulating all filling and dredging in San Francisco Bay; 2) protecting the Suisun Marsh by administering the Suisun Marsh Preservation Act; and 3) regulating new development within the first 100 feet inland from the Bay to ensure that maximum feasible public access to the Bay is provided (BCDC, 2001). **19-7**

The goals and policies of BCDC are described in the San Francisco Bay Plan, which was adopted in 1968 and incorporated by the California Legislature into the McAteer-Petris Act in 1969 (BCDC, 2003). The Bay Plan contains findings about the value of the Bay, policies to guide future uses of the Bay, and maps that apply these policies to the Bay and its shoreline. The Fish and Wildlife Policy within the Bay Plan is as follows:

- The benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay, the remaining water volume and surface area of the Bay, and adequate fresh water inflow into the Bay should be maintained.
- Specific habitats that are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes. Such areas on the shoreline are designated as Wildlife Areas on Bay Plan maps.

The following addition to the text of the Draft EIR, Section **4.6.4** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Marine Biological Resources, References), page 4.6-21, has been made in response to Comments 16-10 and 16-11:

Federal Regulations (71 FR 17757). 2006. Threatened Status for Southern Distinct Population Segment of North American Green Sturgeon. Federal Register / Vol. 71, No. 67 / Friday, April 7, 2006 page 17757

~~FR684433. 2003. 12-Month Finding on a Petition to List North American Green Sturgeon as a Threatened or Endangered Species. Federal Register / Vol. 68, No. 19 / Wednesday, January 29, 2003 page 4433~~ **16-10, 16-11**

Moyle, P.B., P.J. Foley and R.M. Yoshiyama. 1992. Status of green sturgeon, Acipencer medirostris, in California. Final Report submitted to National Marine Fisheries Service, Terminal Island, CA.

Radtke, L. D. 1966. Distribution of smelt, juvenile sturgeon, and starry flounder in the Sacramento-San Joaquin Delta with observations on food of sturgeons. *In* Turner, J. L. and D. W. Kelley (ed.) Ecological studies of the Sacramento-San Joaquin Estuary, Part II; California Department of Fish Game Fish Bulletin 136, pp 115-119.

U.S. Fish and Wildlife Service. 1995. Sacramento-San Joaquin Delta Native Fishes Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon.

16-10, 16-11

The following revision to the text of the Draft EIR, Section **4.7.2.1** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Cultural Resources, Regulatory Setting, Federal Regulations), page 4.7-8, paragraph 1, has been made in response to Comment 10-47:

- Antiquities Act of 1906
- Historic Sites Act of 1935
- Submerged Lands Act of 1953
- Reservoir Salvage Act of 1960
- National Historic Preservation Act of 1966
- National Environmental Policy Act of 1969
- Executive Order 11593 (Projection and Enhancement of the Cultural Environment, 5/13/1971)

10-47

- ~~36 CFR 800 and CFR 60 (Advisory Council on Historic Preservation: Protection of Historic and Cultural Properties, Amendments to Existing Regulations, 1/30/1979, National Register of Historic Places, Nominations by States and Federal Agencies, Rules and Regulations, 1/9/1976)~~
- Revisions to 36 CFR 800 (Protection of Historic Properties, ~~1/10/1986~~8/05/04)
- Archaeological and Historical Preservation Act of 1974
- American Indian Religious Freedom Joint Resolution of 1978
- Archaeological Resources Protection Act of 1979

- Abandoned Shipwreck Act of 1987 **10-47**

~~•Native American Graves and Reparation Act of 1990~~

The only potential federal nexus identified at this time would be with the U.S. Army Corps of Engineers 404 permitting process. This process would potentially require coordination between the project Applicant, the U.S. Army Corps of Engineers and the State Historic Preservation Office for the laws and regulations cited above.

The following addition to the text of the Draft EIR, Section **4.8.2.3** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Land Use and Recreation, Regulatory Setting, Local), page 4.8-23, paragraph 1, has been made in response to Comment 22-85D:

4.8.2.3.9 San Francisco Energy-Related Local Ordinances and Regulations. San Francisco has established several policies both city-wide and for particular neighborhoods which address the City's future in regards to development and sustainability, including: 1) the San Francisco Electricity Resource Plan; and 2) Community Choice Aggregation. The Electricity Resource Plan was developed in response to the Maxwell Ordinance, which directed the San Francisco Public Utilities Commission and the Department of the Environment to prepare an Energy Resource Plan that considers all practical transmission, conservation, efficiency and renewable alternatives to fossil fuel electricity generation in the CCSF. The Plan's goals include: maximizing energy efficiency, developing renewable power, assuring reliable power, supporting affordable electric bills, improving air quality and preventing other environmental impacts associated with power generation, and supporting environmental justice. The Community Choice Aggregation (CCA) is a program enabled under a 2002 State law in response to California's energy crisis. Under CCA, the City and County of San Francisco would become an electricity purchaser for residents and businesses currently served by PG&E. **22-85D**

The following addition to the text of the Draft EIR, Section **4.8.3.3.2** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Land Use and Recreation, Environmental Impacts, San Francisco HWC Converter Station, Operations-related Impacts), page 4.8-26, has been made in response to Comment 22-85D:

Consistency with CCSF's energy-related local ordinances and regulations was also evaluated, including whether the proposed Project is consistent with the goals of the Electricity Resource Plan and Community Choice Aggregation. On September 8, 2005 the CAISO Board of Governors approved the proposed **22-85D**

Project as the preferred long-term transmission alternative to ensure reliable operation of the transmission system within the San Francisco Peninsula Area for the period of 2009 and beyond. Existing generation within San Francisco is expected to reduce significantly in late 2008, which will place increased pressure on the peninsula's transmission systems that supply power to San Francisco. With its 2009 in-service date, the proposed Project is expected to significantly reduce load and capacity issues related to existing transmission systems on the Peninsula.

The CAISO Board of Directors chose the Trans Bay Cable proposal as the preferred long-term alternative because it provides long-term reliable load serving capability to the San Francisco Peninsula area and increases the diversity and security of the power supply for the region. The CAISO chose the proposed Project in part because it is expected to reduce pressure on the current AC transmission system, which will reduce power losses within the transmission system and will facilitate more efficient generation within the greater Bay Area.

In addition, the CAISO anticipates that there will be long-term economic savings for consumers resulting from improved energy distribution (congestion cost reduction) on the grid when the Project is operational. San Francisco has made it a priority to close down the remaining older power plants inside the City, which are thought to contribute to air pollution and associated high levels of asthma and other respiratory illnesses. In order to provide energy without generating it inside San Francisco, it must be transmitted into the City. The electricity conveyed for the Project would be taken from the PG&E Pittsburg Substation and transmitted under the Bay to San Francisco. The Pittsburg Substation receives power directly from several local power plants, as well as through transmission lines from many other power plants in California and the Western U.S. Because of the diversity of that substation's energy sources, the source of power to the Project cannot be specified; however, renewable energy sources such as hydropower, geothermal and wind are included in the resources supplied to the Pittsburg Substation from the transmission system. The Project does not involve any new energy generation. **22-85D**

The proposed Project is considered a part of a larger strategy to meet the energy demand and decrease pollution in San Francisco while still bringing additional reliable energy to the City's residents and businesses. The proposed Project would not interfere with the CCSF's proposal to sell its own power or to develop renewable energy resources. It is considered consistent with the goals of the Electricity Resource Plan and Community Choice Aggregation.

The following addition to the text of the Draft EIR, Section **4.9.3.2.1** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Marine Transportation and Commercial Fishing, Environmental Impacts, Construction-related Impacts, Commercial Vessel Traffic), page 4.9-13, following Mitigation Measure MTRANS-1c, has been made in response to Comments 18-1 and 25-52:

Mitigation Measure MTRANS-1d: Publication of Cable Location. The planned location of the cable has been reviewed with the USACE, at local bottom depths as indicated by soundings on current navigation charts. The Project proponent/construction contractor shall document the specific as-built location of the submarine cable for its entire length and shall provide GPS coordinates for critical waypoints of the cable alignment as required by the USACE and NOAA for inclusion on San Francisco Bay navigational charts and in the applicable volume(s) of the U.S. Coast Pilot. All cable-laying vessels shall also operate in accordance with the applicable navigation rules including the Cable Act of 1992. **18-1, 22-52**

Implementation Responsibility: Project proponent/construction contractor

Requirements and Timing: Coordinate construction activities prior to and during submarine cable installation activities

Monitoring Requirements: City of Pittsburg to monitor and ensure compliance

The following addition to the text of the Draft EIR, Section **4.10.1.4.3** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Traffic and Transportation, Environmental Setting, Rail Facilities), page 4.10-7 has been made in response to Comment 5-6:

4.10.1.4.3 Bay Area Rapid Transit (BART). BART provides regional rail service to a four county area including San Francisco, Alameda, Contra Costa, and San Mateo counties and manages the Capitol Corridor service between San Jose and Sacramento-Roseville. BART service extends to Pittsburg, terminating at the Pittsburg Bay Point Station, which is located in the median of SR 4 near, but outside, the Project study area. In San Francisco, BART travels through Downtown, the Mission District, Glen Park, Balboa Park, and the Outer Mission before entering San Mateo County. BART connects its East Bay and West Bay **5-6**

service areas via a two-track Transbay tunnel that is emplaced in Bay Mud at the bottom of San Francisco Bay. The project study area crosses the alignment of the BART tube east of downtown San Francisco (refer to Map A.2-1, Sheet 1 of 10). **5-6**

The following revision to the text of the Draft EIR, Section **4.10.3.2.1** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Traffic and Transportation, Environmental Impacts, San Francisco HWC Converter Station Site, Transit Service Impacts), page 4.10-18 paragraph 2, has been made in response to Comment 22-57:

Mitigation Measure TRAFFIC-4: Reducing Impact on the Movement of MUNI Light Rail Vehicles into and out of the Metro East Maintenance Facility. The Project laydown area located at Pier 94/96 is the preferred laydown area. ~~Construction contractor will coordinate with MUNI to define times for scheduling of truck deliveries to the proposed laydown area (Western Pacific site) if the truck deliveries were to occur during the peak period. Alternatively, particularly if the peaker project is implemented at the Western Pacific site at the same time as the Trans Bay Cable Project is under construction, the Project laydown area could be located at Pier 94/96.~~ As indicated in Section 4.10.3.2.1, Construction-related Impacts, truck deliveries to the Pier 94/96 laydown area would not produce significant impacts along Cargo Way and would avoid a potential conflict with the movement of MUNI light rail vehicles along 25th Street. If the Western Pacific site were used as an alternative laydown area, the construction contractor will coordinate with MUNI, Port of San Francisco, and the Department of Parking and Traffic to minimize delays to MUNI Metro operation and to define times for scheduling of truck deliveries if the truck deliveries were to occur during the peak period. **22-57**

The following revision to the text of the Draft EIR, Section **4.10.3.2.1** (Traffic and Transportation, Construction-related Impacts, Parking), page 4.10-18 paragraph 7, has been made in response to Comment 22-59:

Parking. In the San Francisco study area, most streets have curb parking on both sides of the street. However, parking is often pre-empted by construction projects that temporarily restrict parking on the surrounding streets. By 9 a.m. on weekdays, most available curb parking in the area is taken. ~~However, given the frequent transit service offered throughout the City of San Francisco and the City's Transit First policy,~~ the City of San Francisco does not consider limited parking availability to be a significant impact, although the Project proponent would, if necessary, provide employee parking at the Pier 94/96 laydown area and shuttle the workers to and from the construction site to avoid contributing to **22-59**

secondary effects resulting from a substantial shortfall of on-street parking spaces. **22-59**

The following addition to the text of the Draft EIR, Section **4.10.1.6** (Environmental Setting, Impacts, and Mitigation, Proposed Project, Traffic and Transportation, Planned San Francisco Roadway and Public Transportation Improvements), page 4-8, following paragraph 7, has been made in response to Comment 22-58:

4.10.1.6 Planned San Francisco Roadway and Public Transportation Improvements

The San Francisco County Transportation Authority New Expenditure Plan is fiscally constrained to the total funding expected to be available for each category of transportation improvements. The financial constraint is further detailed within each category through the specification of funding priority levels (Priorities 1, 2, and 3). Adoption of an ordinance to continue the existing half-cent sales tax is necessary in order to fund the projects and programs. If the ordinance is adopted, the tax shall be continued for the period of implementation of the New Expenditure Plan and its updates. The improvements, identified in the bulleted Project list below, will improve traffic circulation, pedestrian and bicycle circulation, and transit service throughout the City of San Francisco. Third Street Light Rail, which will become operational by the end of 2006, and the Port's Illinois Street Bridge project are the specific Expenditure Plan projects located in the study area. **22-58**

In addition, the Draft Central Waterfront Neighborhood Plan (San Francisco Planning Department, December 2002) identifies the extension of 23rd Street and 25th Street east of Illinois Street to the Bay to improve access to the waterfront.

The following revision to Table 4.14-8 (Involvement of Government Agencies and Other Organizations By Type of Incident) of the Draft EIR, in Section **4.14.3.2.2**, page 4.14-33, has been made in response to Comment 25-3:

San Francisco Bay Regional Water Quality Control Board (510) ~~226~~622-2300 **25-3**

TABLE 4.14-8
INVOLVEMENT OF GOVERNMENT AGENCIES AND OTHER ORGANIZATIONS BY TYPE OF INCIDENT

Organization	Emergency Phone #	Fire	Spill	Security	Medical	Technical Assistance	Other
Contra Costa County Fire Protection District	911	X	X	X	X	X	X
City and County of San Francisco Fire Department	911	X	X	X	X	X	X
Emergency Medical Services	911	X	X		X		
Police Department	911			X			
California Highway Patrol	911		X[1]				
Mt. Diablo Medical Center (Concord)	911				X	X	
St. Francis Memorial Hospital (San Francisco)	911				X	X	
Bay Area Air Quality Management District (BAAQMD)	(415) 771-6000		X			X	
San Francisco Bay Regional Water Quality Control Board	(510) ~~226~~622-2300		X			X	X
Contra Costa County Hazardous Materials Incident Response Team	(925) 646-1112		X			X	
San Francisco Hazardous Materials Team	(415) 335-3700		X			X	
CalEPA; Department of Toxic Substances Control	(510) 540-2122		X			X	
California Office of Emergency Services	(800) 852-7550	X	X			X	X
California Department of Fish & Game	(707) 944-5500		X[2]				
EPA National Response Center	(800) 424-8802		X[2]			X	
U.S. Department of Transportation	(510) 286-6444		X[2]			X	
U.S. Coast Guard	(415) 556-2103		X[2]			X	
Poison Control Center	(800) 876-4766		X		X	X	
PG&E	(800) 743-5000						X

25-3

[1] If spill is on highway.

[2] If spill is into waterways or sewer.

13.5 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION – PROJECT ALTERNATIVES (SECTION 5.0)

The following additions to the text of the Draft EIR, Section **5.2.7.2.2** (Environmental Setting, Impacts, and Mitigation, Project Alternatives, San Francisco Mirant Alternative, Cultural Resources, Environmental Impacts, Historic Architectural Resources), page 5.2-8, have been made in response to Comment 3-7:

Mitigation Measure CUL-2d: Coordination with Central Waterfront Historic Preservation. The Project proponent and other interested parties would identify a historic preservation project taking place within the Central Waterfront historic district adjacent to, or historically related to the Station A complex and would coordinate the contribution of one or more of the other mitigation measures listed above to the goals of the identified preservation project. One or more of the products of the first three mitigation measures—HABS/HAER recordation (CUL-2a) the development of interpretive or display material (CUL-2b), and/or architectural salvage (CUL-2c)—would be selected in cooperation with the interested parties. The resulting documentation, interpretive material, and/or salvaged architectural items would be provided to the interested parties and/or proponents of the identified preservation project. **3-7**

Implementation Responsibility: Project proponent

Requirements and Timing: Upon completion of Mitigation Measures CUL-2a, CUL-2b, and CUL-2c

Monitoring Requirements: City of Pittsburg, in consultation with the City and County of San Francisco, to monitor and ensure compliance

13.6 COMPARISON OF ALTERNATIVES (SECTION 6.0)

Section 6.0, Comparison of Alternatives, of the Draft EIR has been revised and represented in this Final EIR to reflect modifications made to the Project by the Project proponent as well as to consider comments received on the Draft EIR. Please refer to Section 6.0, Comparison of Alternatives, of this Final EIR for the revised section.

13.7 CUMULATIVE IMPACTS (SECTION 7.0)

No changes, deletions, or modifications of text were required for Section 7.0 of the Draft EIR.

13.8 GROWTH-INDUCING IMPACTS (SECTION 8.0)

No changes, deletions, or modifications of text were required for Section 8.0 of the Draft EIR.

13.9 UNAVOIDABLE ADVERSE SIGNIFICANT IMPACTS (SECTION 9.0)

Section 9.0, Unavoidable Adverse Significant Impacts of the Draft EIR, has been revised and represented in this Final EIR to reflect modifications made to the Project. Please refer to Section 9.0 of this Final EIR for the revised section.

13.10 EIR PREPARERS AND AGENCY CONSULTATION (SECTION 10.0)

No changes, deletions, or modifications of text were required for Section 10.0 of the Draft EIR.

13.11 APPENDICES

13.11.1 Appendix A (Detailed Project Description)

The following revision to **Table A.2-1** (Known Utility Crossings) of the Draft EIR, in Appendix A, page A-4, has been made in response to Comment 26-2:

TABLE A.2-1
KNOWN UTILITY CROSSINGS[1,2,3]

Cable Route Milepost	Map ID	Utility Description	Owner
13.9–14.4	11, 12	Cable Crossing-Point San Quentin to Castro Point	Pacific Telephone and Telegraph
30.5	10	Fiber Optics Conduit (12-inch)	Level 3 Communications, LLC
31.7	9	Communication Line	Pacific Telephone and Telegraph
31.9	8	Two Submarine Communications Cables	Pacific Telephone and Telegraph
36.1	6	Communications Facilities	American Telephone and Telegraph Communications of California Inc.
37.55	17	Petroleum Product Pipelines	Kinder Morgan
37.6–37.8	5	Two Petroleum Pipelines and One Discharge Pipeline	Exxon Corporation-Assigned to Valero Refining Co.
45.2	4	To Be Determined	Shell Oil Co. Multiple reassignments to Chevron USA Inc, Venoco Inc.
49.4	3	Refined Petroleum Product Line (8-inch)	Chevron USA Inc.
49.7	2	CPN Natural Gas Pipeline	Shell Oil co-reassignments – Shell Cal Prod. Inc, Shell Western E&P Inc, Cal Resources LLC. AERA Energy LLC

26-2

1 Refer to Map A.2-1 in Section 3.0 of this Final EIR for approximate crossing locations.

2 Source: State Lands Commission lease documentation review conducted in 2005, as amended.

3 Note: numerous bay crossings have been identified. The information in this table will be revised and updated, as required, when the need for a crossing consent has been confirmed.

TABLE A.2-2
OTHER KNOWN CROSSINGS[1]

Milepost	Utility Description	Owner
3.1	Oakland Bay Bridge	Caltrans
3.4	Trans Bay (BART) Tube	Bay Area Rapid Transit
13.9	Richmond Bridge	Caltrans
30.8	Carquinez Bridge	Caltrans
37.5	Benicia Bridge	Caltrans

1 Refer to Map A.2-1 in Section 3.0 of this Final EIR for approximate crossing locations.

13.11.2 Appendix C (CAISO Documents)

The following document has been added to **Appendix C** of the Final EIR: California Energy Commission 2005 Strategic Transmission Investment Plan. The title of Appendix C has been changed to: "CAISO and CEC Documents."

13.11.3 Appendix F (Supplemental Biological Information)

The text in the tables in Appendix F of the Draft EIR has been revised as follows in responses to Comment 10-27.

13.11.4 Other Appendices

No revisions to the other appendices presented in the Draft EIR are necessary.

LIST OF POTENTIALLY AFFECTED SPECIES (APPENDIX F)

Species	Listing Status Federal/ State/ CNPS Listing	General Habitat	Potential for Impact	Period of Identification/ Blooming Period
Hall's bush mallow (*Malacothamnus hallii*)	--/--/1B	Chaparral, coastal scrub.	None, the project area provides no suitable habitat for this species the species was not observed in current surveys.	May-September
Bearded popcorn flower (*Plagiobothrys hystriculus*)	--/--/~~1A~~1B	Presumed extinct, last collected in 1892. Known from one collection in the Montezuma Hills. Wet sites in grasslands.	Unlikely, the project area contains limited habitat for this species, the species was not observed and is not expected to occur.	April-May
Eel-grass pondweed (*Potamogeton zosteriformis*)	--/--/2	Freshwater marshes and swamps.	Unlikely, potential habitat occurs in the project area, species is not known from the area and not observed during current surveys.	June-July
Caper-fruited tropidocarpum (*Tropidocarpum capparideum*)	FSC/CSC/List 1A	Alkaline soils in valley and foothill grasslands. Last seen in 1957, this species is presumed extinct.	Unlikely, though marginal potential habitat is available in the project area, project impacts will occur in existing roadways and railroad right of ways.	March-April
Sensitive Natural Communities				
Bulrush marsh	--/--/--	These freshwater and brackish marsh habitats dominated by bulrush occur in coastal and Delta locations. These areas have become increasingly rare and fragmented in the current California landscape due to urbanization and conversion of open lands.	High, this community occurs adjacent to and within portions of the Pittsburg Converter Station route. Project impacts have the potential to impact this wetland community.	Year-round
Northern claypan vernal pool	--/--/--	These seasonal pools are subtended by claypan soils. They can support vernal pool crustaceans such as fairy shrimp and are sometimes surrounded by unique plant assemblages. These habitats have become increasingly rare in the modern California landscape.	High, one vernal pool occurs adjacent to the Pittsburg Converter Station route, and one seasonal wetland that may be classified within this community occurs within the BNSF ROW. Project activities have the potential to impact both pools.	Late Winter to Early Summer
Pickleweed saltmarsh	--/--/--	These saltwater marsh habitats occur in coastal and Delta locations, and are dominated by pickleweed and often bordered by saltgrass. These areas have become increasingly rare and fragmented in the current California landscape due to urbanization and conversion of open lands.	High, this community occurs adjacent to and within portions of the Pittsburg Converter Station route. Project activities have the potential to impact this wetland community.	Year-round

10-27