

CHAPTER 8: FINAL SECTION 4(f) EVALUATION

8.1 INTRODUCTION

This final Section 4(f) evaluation is an update and refinement of the Draft Section 4(f) Evaluation that was circulated for public comment as part of the Draft EIS/EIR from October 4 to December 20, 2002. Three public hearings and an open house were held on November 12, November 13 (including the open house), and November 26, and public comments were taken at all four meetings. The public comment period on the Draft EIS/EIR ended on December 20, 2002.

A Locally Preferred Alternative has been identified after consideration of the information presented in the Draft EIS/EIR, public and agency input from the circulation of the Draft EIS/EIR, meetings among affected stakeholders, community meetings and workshops, and the public hearings. The Locally Preferred Alternative consists of the following project components: the Transbay Terminal West Ramp Alternative with its associated bus ramps, circulation, and off-site storage; the Caltrain Downtown Extension with the “stacked drift” tunneling option for the segment between Townsend Street and Folsom Street and the Second –to-Main Alternative alignment north of there; and the Transbay Redevelopment Plan Area “full build” development alternative.

This discussion complies with the federal requirements found in 49 USC, Section 303, commonly referred to as Section 4(f). These requirements pertain to all actions or projects undertaken by agencies within the U.S. Department of Transportation, including the Federal Transit Administration (FTA). The essence of Section 4(f) requirements is that special efforts are to be made to protect public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The law states that the Secretary of Transportation shall approve a project which requires the use of land from a significant publicly-owned park, recreation area, wildlife or waterfowl refuge, or historic site of significance only if (1) there is no prudent and feasible alternative to the use of that land and (2) the project includes all possible planning to minimize harm to the resource being affected by that use.

As defined under Section 4(f), use occurs when protected land is permanently acquired for a transportation facility, when a temporary use is considered adverse, or when there is "constructive use" of the resource. Constructive use occurs when indirect impacts are so severe that the activities, features, or attributes that qualify the resource for protection are substantially impaired.

The Locally Preferred Alternative will use Section 4(f) resources through direct acquisition and temporary occupancy, but it does not involve any constructive use. Pursuant to DOT Rules and Regulations, Part 771 Section 771.135 (p) (5) (I), constructive use of an historic property does not occur when “compliance with the requirements of Section 106 of the National Historic Preservation Act and 36 CFR Part 800 for proximity impacts of the proposed action . . . results in an agreement of . . . no adverse effect.” Because the proximity impacts of the project on historic properties (other than those that would be directly used) have been determined to result in “no adverse effect” under

Section 106 regulation, these proximity impacts would not result in a constructive use of the historic resources in question.

Section 4(f) applies to the present project because both Transbay Terminal alternatives would require the use of land from the site of the Transbay Terminal, demolition *and removal* of the Transbay Terminal building, and demolition and removal of the terminal loop ramp *structures* that connect the terminal to the San Francisco-Oakland Bay Bridge. The terminal loop ramp *structures* and the terminal are contributing elements of the Bay Bridge, which is *listed on the National Register of Historic Places (NRHP)*.

In addition, either Caltrain Downtown Extension Alternative using cut-and-cover construction would require demolition and removal of 13 other buildings that are contributors to a historic district that is, by *consensus of the Section 106 consulting parties*, eligible for the NRHP. Either Caltrain Downtown Extension Alternative constructed using the tunneling *option for the segment between Townsend Street and Folsom Street (which option is part of the locally preferred alternative)* would require demolition and removal of three such contributory buildings. Ten of the 13 buildings are contributors to the Rincon Point / South Beach Industrial Warehouse Historic District, which was identified as appearing eligible for the NRHP in 1983. The other three buildings are contributors to the Second and Howard Streets Historic District, which was determined eligible for the NRHP in 1999.

Pursuant to DOT Rules and Regulations Part 771.135 (g) (2), Section 4(f) does not apply to archaeological sites where the FTA, after consultation with the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP), determines that the archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place, and data recovery is undertaken. On the basis of this qualification, Section 4(f) does not apply to any of the archaeological resources identified *in the project area. The Section 106 Historic Preservation Agreement in Appendix G details the actions that will be taken to recover the archaeological data present in the identified resources. Furthermore, the Agreement establishes procedures that will be followed during construction if an unanticipated discovery of archaeological resources occurs.*

8.2 PROJECT PURPOSE AND NEED

The *Transbay Joint Powers Authority*, City and County of San Francisco, Peninsula Corridor Joint Powers Board (JPB), and San Francisco Redevelopment Agency propose to construct a new multi-modal Transbay Terminal on the site of the present Transbay Terminal, extend Caltrain commuter rail service from its present northern terminus at Fourth and Townsend Streets in San Francisco to an underground terminus in the basement of a new Transbay Terminal, and establish a redevelopment area plan and related development projects, including transit-oriented development on publicly-owned land in the vicinity of the new terminal. The primary purposes of the project are to improve public access to bus and rail services, modernize the Transbay Terminal and improve its service, reduce non-transit vehicle usage, and revitalize the Transbay Terminal area. The project will also

address a number of related needs. It will improve Caltrain commute service by providing direct access to downtown San Francisco and enhance connectivity between Caltrain and other major transit systems. It will accommodate future intercity or high-speed rail services. The project is also expected to serve future travel demand in the San Jose - San Francisco corridor and alleviate traffic congestion on US Highway 101 and I-280 between San Jose and San Francisco as well as other routes; improve regional air quality; enhance accessibility to employment, retail and entertainment opportunities; and support local economic and land use development goals. More detailed discussion of the project purpose and need is provided in Chapter 1, Purpose of and Need for the Project.

8.3 PROJECT DESCRIPTION

The proposed project has three major components, as follows:

- A new, multi-modal Transbay Terminal on the site of the present Transbay Terminal;
- Extension of Caltrain commuter rail service from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus underneath the proposed new Transbay Terminal; and
- Establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly owned land in the vicinity of the new multi-modal Transbay Terminal.

Of various alternatives considered, two Transbay Terminal Alternatives, two Caltrain Downtown Extension Alternatives, and two Redevelopment Alternatives were carried forward into conceptual engineering and environmental studies. Both of the Caltrain Downtown Extension Alternatives included design options. A brief description of these alternatives and options is provided in the following paragraphs; Chapter 2, Description of the Project Alternatives, describes these alternatives and options in detail.

8.3.1 TRANSBAY TERMINAL ALTERNATIVES

Two alternatives *were* studied for a new Transbay Terminal. Under either alternative, a new multi-modal terminal would be located at the site of the existing Transbay Terminal. Bus ramps would connect directly from the new terminal to the San Francisco-Oakland Bay Bridge, while a rail facility in the basement of the new terminal would provide space for the terminus of the Caltrain Downtown extension and for potential future East Bay commuter rail and California's high-speed intercity rail. The new terminal would provide facilities for AC Transit, Golden Gate Transit, Greyhound, and Muni buses and trolley coaches, paratransit, and for Greyhound Package Express and private taxi services. It would also include space for retail and cultural uses. It would incorporate sustainable design features to conserve energy and water resources.

8.3.1.1 Transbay Terminal West Ramp Alternative (*Included in Locally Preferred Alternative*)

The Transbay Terminal West Ramp Alternative proposes to construct a terminal one block (165 feet) wide by three blocks (1,300 feet) long on the site of the existing Transbay Terminal, requiring demolition of the existing terminal and its loop ramp. The new Terminal would include six levels, with four levels above ground and two below, comprising an underground train level with a direct connection to the train platforms from the Transbay Terminal; an underground train mezzanine; a street level for bus services; an above-ground pedestrian concourse including 150,000 to 225,000 square feet of retail, entertainment, conference, educational, and cultural uses; and two above-ground bus decks. Elevators and escalators would provide for pedestrian circulation between levels. *This Transbay Terminal alternative has been identified for the terminal component of the Locally Preferred Alternative.*

Under this alternative, new direct bus ramps between the terminal and the Bay Bridge would be constructed on the west side of the terminal building in generally the same location as the existing ramps paralleling Essex Street. The existing loop ramp would be demolished and would not be rebuilt. Midday bus storage would be provided off-site under the west Bay Bridge approaches between Second and Fourth streets. Please see Section 2.2.1.1, Transbay Terminal West Ramp Alternative, for a detailed description of this alternative.

8.3.1.2 Transbay Terminal Loop Ramp Alternative

The Transbay Terminal Loop Ramp Alternative proposes to construct a terminal one block (165 feet) wide and three blocks (1,300 feet) long on the site of the existing Transbay Terminal, requiring demolition of the existing terminal and its loop ramp. It would include five levels: an underground train level; an underground train mezzanine; a street level for bus services; an above-ground pedestrian concourse including entertainment, conference, educational, and cultural uses; and an above-ground bus level. Vertical pedestrian circulation would be provided as in the West Ramp Alternative.

The Loop Ramp Alternative would reconstruct both the west and east bus ramp structures, providing for a full one-way loop of bus circulation through the new Transbay Terminal, with direct connections to the Bay Bridge on both the east and west sides of the terminal building. The Loop Ramp Alternative would allow for some midday bus storage on the ramps, with the remaining storage off-site under the west Bay Bridge approaches. Please see Section 2.2.1.2, Transbay Terminal Loop Ramp Alternative, for a more detailed description of this alternative.

8.3.2 CALTRAIN DOWNTOWN EXTENSION ALTERNATIVES

The Caltrain Downtown Extension component of the project consists of an underground extension of Caltrain from its present San Francisco terminus at Fourth and Townsend Streets to a new

underground terminal at the site of the present Transbay Terminal at First and Mission Streets. The extension would consist of two to four tracks branching to several additional tracks into the basement of the proposed new Transbay Terminal. The extension would include new mainline tracks as they pass the Caltrain Fourth and Townsend storage yard, with a new subsurface station/platform near Fourth Street adjoining Townsend Street.

The extension alignment would enter a portal south of Townsend near Fifth Street, pass the new subsurface Fourth and Townsend platform, and continue eastward below grade under Townsend Street in a cut-and-cover tunnel configuration. It would then curve northward just east of Third Street in a cut-and-cover configuration to Second and Brannan Streets. The alignment would then continue in a cut-and-cover configuration under Second Street for about 2,055 feet.

8.3.2.1 Caltrain Extension Tunneling Option *(Included in Locally Preferred Alternative)*

Use of tunneling rather than cut-and-cover is an option for the portion of the underground Caltrain Extension between Townsend Street and Folsom Street. A highly specialized tunneling technique known as the “stacked drift” approach is suitable to the fractured rock geology of this portion of the alignment. It involves very little risk of collapse and was evaluated specifically as an alternative to preserve many of the buildings under which the tunnel alignment would pass. Please see Sections 2.2.2.3 and 5.20 for more detail on this tunneling option, *which has been identified as the preferred option for tunneling this Caltrain Downtown Extension segment in the Locally Preferred Alternative.*

Two Caltrain Extension alignment alternatives are under consideration from Howard Street northward, both of which would be in a cut-and-cover configuration, as described in the following sections.

8.3.2.2 Second-to-Main Caltrain Extension Alternative *(Included in Locally Preferred Alternative)*

As the Second-to-Main Caltrain Extension Alternative approaches Howard Street along Second Street, it would curve 90 degrees northeasterly, into the basement of the proposed new Transbay Terminal. It would have six tracks and three platforms within the Terminal building and would include approximately 2,000 feet of additional tracks in a cut-and-cover configuration from the east end of the new Terminal, curving 90 degrees south to Main Street, and continuing underneath Main Street to south of Folsom Street. This track could be used for temporary train storage and could be extended for a San Francisco-to-Oakland cross-bay alignment as a separate project. This alternative would include an option for an 800-foot-long pedestrian connection underneath Fremont Street to the BART Embarcadero Station. *The Second-to-Main Alternative has been identified as the Caltrain Extension component of the Locally Preferred Alternative.*

8.3.2.3 Second-to-Mission Caltrain Extension Alternative

The Second-to-Mission Alternative would follow the same alignment as the Second-to-Main Alternative up Second Street to about Howard Street. As the alignment approaches Howard Street, rather than entering the terminal from the west and parallel to the axis of the terminal, it would curve northeasterly at about Tehama Street, cutting diagonally under what is known as the “hump” area in front of the present Transbay Terminal and would exit out Mission Street towards The Embarcadero. Two tracks would continue under Mission Street in a cut-and-cover configuration; these could be used for temporary train storage and could be extended for a San Francisco-to-Oakland cross-bay alignment as a separate project.

Please see Section 2.2.2, Caltrain Downtown Extension Alternative, for a more detailed description of this project component.

8.3.3 REDEVELOPMENT ALTERNATIVES

The third component of the project consists of establishment of a Redevelopment Plan Area and related development projects, including transit-oriented development on publicly owned land in the vicinity of the proposed new multi-modal Transbay Terminal. There are two alternatives to this component: a “full build” development scenario and a “reduced scope” development scenario.

8.3.3.1 Full Build Development Scenario (*Included in Locally Preferred Alternative*)

The Full Build Alternative includes about 7.6 million square feet (sq. ft.) of new residential / office / retail / hotel development, including approximately 5.6 million sq. ft. (74 percent of the total development) of residential development (4,700 residential units including affordable housing); 1.2 million sq. ft. of office development; 475,000 sq. ft. of hotel development; and 355,000 sq. ft. of retail development. *This scenario has been identified for the redevelopment component of the Locally Preferred Alternative.*

8.3.3.2 Reduced Scope Development Scenario

The Reduced Scope Alternative assumes a lesser amount of commercial and retail development and is weighted more toward housing. It assumes approximately 5.4 million sq. ft. of residential / office / retail / hotel development, including 4.7 million sq. ft. (87 percent of the total development) of residential development (3,900 dwelling units); 350,000 sq. ft. of hotel development; and 200,000 sq. ft. each of office and retail development.

8.3.4 THE NO-PROJECT ALTERNATIVE

The No-Project Alternative represents existing and committed (that is, funded) transportation services and facilities in the project corridor. The No-Project Alternative consists of existing

Caltrain service plus funded improvements and other committed bus, rail, and roadway improvements to the 2020 horizon year and a BART extension to the San Francisco International Airport.

8.3.5 ALTERNATIVES CONSIDERED AND WITHDRAWN

Other alternatives considered for the Transbay Terminal and Caltrain Extension project elements were withdrawn from further study because they would not accomplish the purpose and need for the project; would severely constrain railroad or bus operations; would constrain pedestrian circulation; would have severe community impacts; had extremely poor constructability; or would have involved extraordinary costs or substantial risk. These alternatives and the reasons why they were withdrawn from further consideration are described in Section 2.3, Alternatives Considered and Withdrawn. *None of these alternatives offered a feasible and prudent alternative for avoiding the use of Section 4(f)-protected resources.*

8.4 DESCRIPTION OF SECTION 4(F) PROPERTIES

Both Transbay Terminal alternatives and both Caltrain Downtown Extension alternatives would require the use of land from the Transbay Terminal property and demolition *and removal* of the Transbay Terminal building, which is eligible for the NRHP and is a contributing element to the San Francisco-Oakland Bay Bridge, *which is listed on the NRHP*. Both Transbay Terminal alternatives would also require demolition and removal of the existing terminal loop ramp structures, which *are* also contributing elements to the Bay Bridge.

Cut-and-cover tunnel construction for either Caltrain Downtown Extension alternative would require the use of land from and demolition of 13 buildings that are *either individually eligible or* eligible for listing in the NRHP as contributory elements to a district that is or appears eligible for listing. *These demolitions would result in the use of individual buildings in the district.*

The Tunnel Option for the Caltrain Downtown Extension alternatives would require the use of land from and demolition of three buildings that are eligible for listing in the NRHP as contributors to a district that is eligible for listing. *Demolition of these three buildings would also result in the use of individual buildings in the district.*

Both alternatives would also require a construction easement through the corner of a fourteenth property that is a contributor to an eligible district. This building would not be demolished, and the construction easement would not result in *its use under Section 4(f)*. *The following sections discuss each of these 4(f) properties. Maps showing their locations are provided in Figures 8.4-1 and 8.4.2* The Redevelopment Area component would not require the use of Section 4(f) property.

8.4.1 THE TRANSBAY TERMINAL

The Transbay Terminal at 425 Mission Street occupies land extending from Mission Street on the north to Natoma Street on the south; the terminal building crosses Fremont Street on the east and First Street on the west (*Figure 8.4-1 #1*). It was designed by Timothy Pfleuger, Arthur Brown, Jr., and John J. Donovan, consulting architects. Built in 1939, the Transbay Terminal was the “functional successor to the Ferry Building. When electric trains began arriving over the Bay Bridge, use of the Ferry Building dropped to almost nothing overnight, and the Transbay Terminal took over as the primary gateway to the city.” (Caltrans, 1983) The Terminal has been determined eligible for listing in the NRHP by consensus of the SHPO and a federal agency (FHWA) and is considered as a contributory element to the historic significance of the Bay Bridge. The present owner of the Transbay Terminal is Caltrans. Its current use is for commuter and inter- and intra-regional bus transportation.

8.4.2 THE TRANSBAY TERMINAL LOOP RAMP

The Transbay Terminal Loop Ramp (*Figure 8.4-1 #2*), which leads from the Bay Bridge approaches to the Transbay Terminal, would be demolished to construct the new Transbay Terminal component of the project.

The Transbay Terminal loop ramp structure constitutes two of the six approach spans that remain from the original Bay Bridge project. *The loop ramp and approach spans are* contributing elements of the Bay Bridge. Originally designed to carry trolley trains from the bridge to the terminal, the ramp’s tracks were removed when electrified trains gave way to buses in the late 1950s. The terminal loop ramp currently serves bus traffic exclusively and is used for midday storage of transit buses.

8.4.3 THE SAN FRANCISCO – OAKLAND BAY BRIDGE

The Bay Bridge (*Figure 8.4-1 #3*) is an eight and one-half mile long series of connecting structures carrying two levels of traffic between San Francisco and Oakland. Opened to service in 1936, in its original design, the bridge upper level carried two-way auto traffic while the lower level carried truck and trolley traffic. Structurally, the bridge is distinctive in its use of a variety of bridge-building technologies, the length of its 1,400-foot cantilever channel span on the east (Oakland) side, and the length of the two 2,320-foot suspension spans on the west (San Francisco) side.

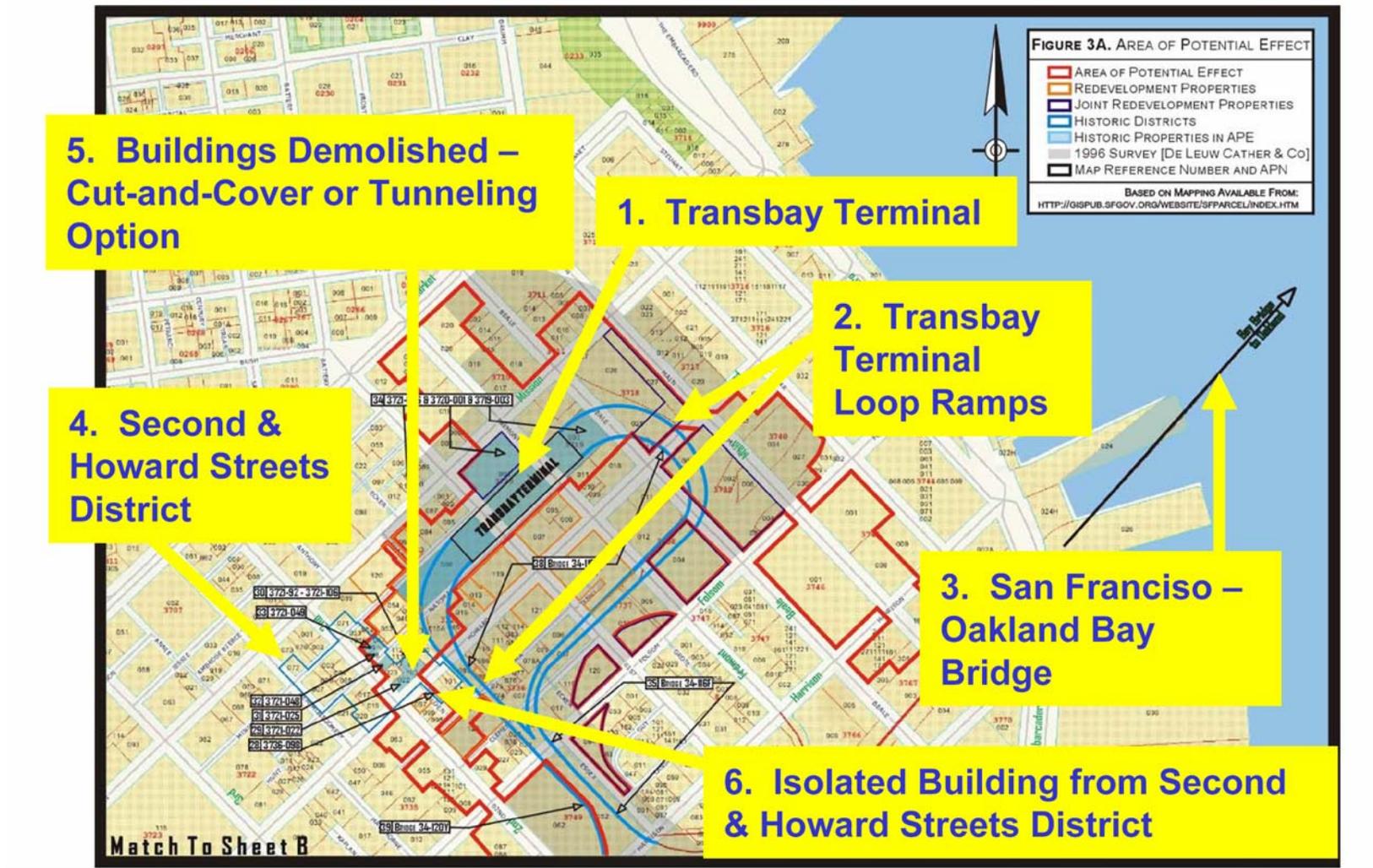


Figure 8.4-1: Section 4(f) Properties – Northern Portion

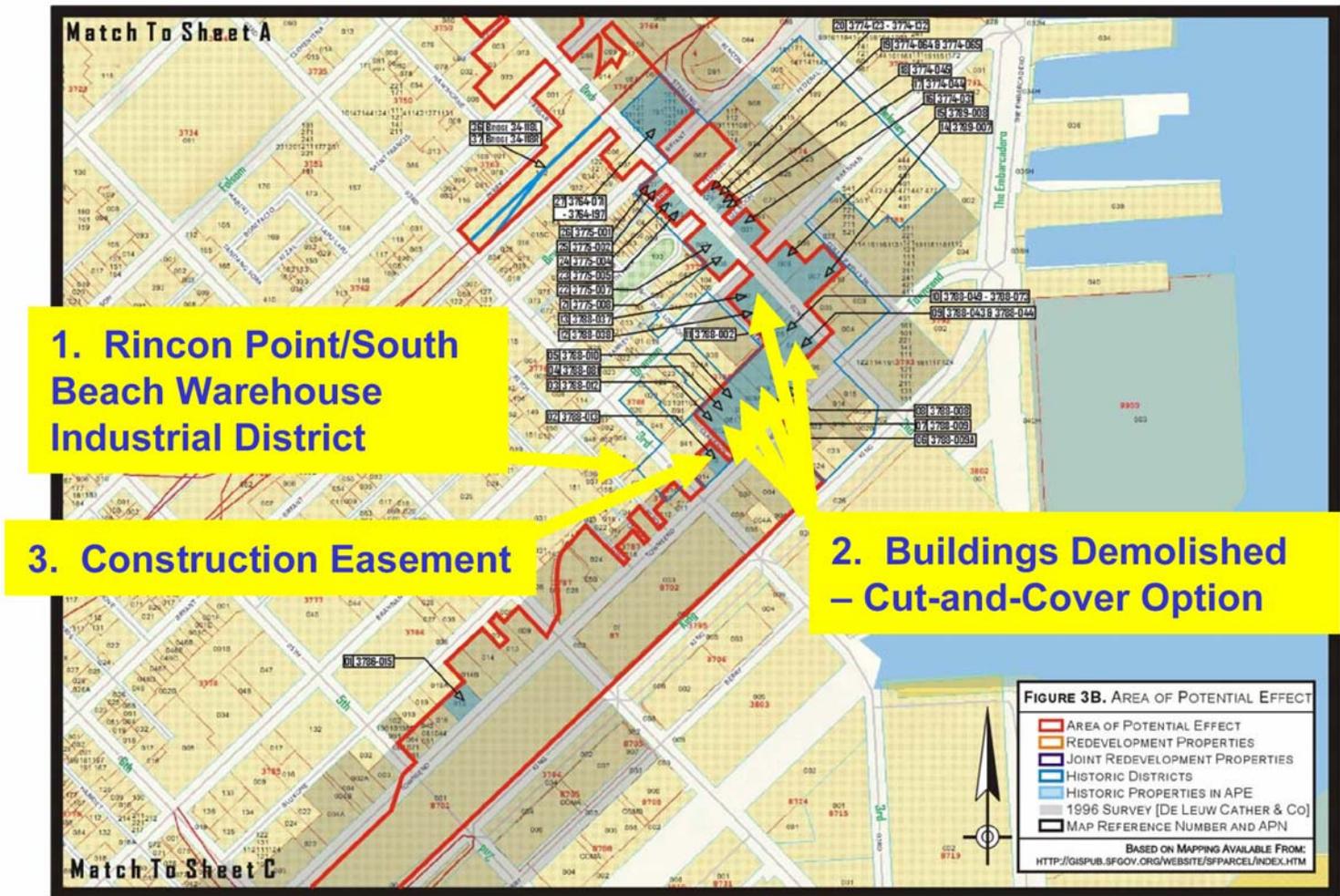


Figure 8.4-2: Section 4(f) Properties – Southern Portion

The outstanding engineering feature is the center pier between the two suspension spans of the western half of the bridge. The tunnel connections between the east and west spans on Yerba Buena Island was the first double-decked highway tunnel in the United States. Notable individuals connected with the project were Charles H. Purcell, Chief Engineer; Charles E. Andrew, Bridge Engineer; Glenn B. Woodruff, Design Engineer; and T. L. Pfleuger, Arthur Brown, Jr., and John J. Donovan, consulting architects. The Bay Bridge was evaluated by Caltrans in 1983 as meeting National Register eligibility criteria A, B, and C at the national level; it was determined eligible for listing in 1985. *It was listed on the NRHP as a multi-component property on August 31, 2001.*

8.4.4 RINCON POINT / SOUTH BEACH HISTORIC WAREHOUSE-INDUSTRIAL DISTRICT

The Rincon Point / South Beach Historic Warehouse-Industrial District (*Figure 8.4-2 #1*) was identified and designated in the 1983 survey by Caltrans. It was developed beginning in the 1850s and 1860s, when landfill efforts and warehouse construction changed the physical appearance of the “point” and “beach” forever. This district contains the greatest concentration of architectural resources within the project vicinity. The district was identified as appearing eligible for the NRHP in 1983, based on research completed by Caltrans historians for the I-280 Transfer Concept Project, but it was never determined eligible by the SHPO. That research found that the district appeared eligible under all four National Register criteria. About 60 buildings within the district have been identified as contributing to the district’s significance. Approximately eight of these buildings date from before the 1906 San Francisco earthquake, with several from the mid-1800s.

The Rincon Point / South Beach Historic Warehouse Industrial District has also been designated locally significant and is eligible for listing in the California Register of Historic Places.

In 1985, the San Francisco Planning Department proposed the “South End Historic District,” and the San Francisco Planning Commission designated this district under its landmarks program in February 1990. The South End Historic District has nearly identical boundaries and is nearly the same size as the Rincon Point District identified by Caltrans. The National Register status of the properties within the district, whether recognized as part of the South End district or Rincon Point / South Beach district, is the same. Please see Section 4.16.6, Historic Architectural Resources, for more detailed descriptions of both the NRHP and City of San Francisco districts.

8.4.5 SECOND AND HOWARD STREETS DISTRICT

The Second and Howard Streets District (*Figure 8.4-1 #4*) was determined eligible for the NRHP in 1999. This small district consists of 19 contributing properties and three non-contributors (two heavily-altered buildings and a vacant lot) with addresses on Second, Howard, Natoma and Montgomery streets. The contributing buildings date from 1906 to 1912; the primary original uses of these buildings were wholesaling, light manufacturing, and printing. The area was built for services to the construction industry. The permit for the first building to be erected in the District was

approved on July 5, 1906, just two and a half months following the 1906 earthquake and fire. The Second and Howard Streets District is partially surrounded by a locally recognized district known as the “New Montgomery – Second Street Conservation District.” The San Francisco Planning Commission uses the conservation district designation to recognize parts of the city that have substantial concentrations of “special architectural and aesthetic importance.” Please see Section 4.16.6, Historical Architectural Resources, for more detailed descriptions of both the NRHP and City of San Francisco districts.

As many as *eighteen* historic buildings, including ten contributors to the Rincon Point / South Beach Industrial Warehouse District and *seven* contributors to the Second and Howard Streets District would be affected by the project. *The Locally Preferred Alternative including the Tunnel Option for the segment of the Caltrain Extension Alternative between Townsend Street and Folsom Street would affect seven contributors to the Second and Howard Streets District. The Locally Preferred Alternative would also require a construction easement through the corner of another property (the eighteenth property previously mentioned) that is a contributor to the Rincon Point / South Beach Industrial Warehouse District. This building would not be demolished, and the construction easement would not result in use of the building under Section 4(f).* The Transbay Terminal and ramps, which are contributors to the San Francisco-Oakland Bay Bridge, would be *demolished and removed*. Descriptions of each affected property are provided in Section 5.14, Historic and Cultural Resources.

Table 8.4-1 summarizes the impacts to the *Section 4(f)* properties that would be affected by the project, grouped in terms of the primary resources or districts to which they contribute.

8.5 USE OF SECTION 4(f) RESOURCES

Both *the Transbay Terminal West Ramp Alternative (the Locally Preferred Alternative) and the Transbay Terminal Loop Ramp Alternative* would require the *demolition and removal* of the Transbay Terminal (*Figure 8.4-1 #1*), an NRHP-eligible resource and contributory element to the *San Francisco-Oakland Bay Bridge, a multi-component NRHP-listed property, and of its existing ramp and bridge approaches, which are also contributing elements to the Bay Bridge.*¹

¹ In accordance with California Public Resources Code Section 5027, the Transbay Terminal and terminal loop ramp, as NRHP-eligible structures that would be transferred from state (Caltrans) ownership to another public agency (the Transbay Joint Powers Authority) may not be demolished without the prior approval of the California Legislature. The California Legislature has considered the importance of proceeding with the Transbay Transit Terminal project and has granted a specific exemption to State Law prohibiting the demolition of historic structures with the following language: "the Legislature hereby approves demolition of the Transbay Terminal building at First and Mission Streets in the City and County of San Francisco, including its associated ramps, for construction of a new terminal at the same location, designed to serve Caltrain in addition to local, regional, and intercity bus lines, and designed to accommodate high-speed passenger rail service." (AB 812, 2003)

Table 8.4-1: Section 4(f) Properties That Would be Used by the Transbay Terminal and Caltrain Downtown Extension Component Alternatives			
Property Descriptor	NRHP Status	Use	
		<i>Cut-and-Cover Trench</i>	<i>Stacked Drift Tunneling [1]</i>
<i>San Francisco-Oakland Bay Bridge, a multi-component property listed on the NRHP</i>			
Transbay Terminal, 425 Mission Street	Individually eligible & contributor	Demolition	Demolition
Bay Bridge Approaches	Contributor	Demolition	Demolition
Bus Ramps	Contributor	Demolition	Demolition
<i>Second and Howard Streets District²</i>			
165-173 Second Street	Contributor	Demolition	Demolition
191 Second Street	Contributor	Demolition	Demolition
580-586 Howard Street	Contributor	Demolition	Demolition
<i>163 Second Street</i>	<i>Contributor</i>	<i>Adverse effect due to loss of nearby contributing building</i>	<i>Adverse effect due to loss of nearby contributing building</i>
<i>577-79 Howard Street</i>	<i>Contributor</i>	<i>Isolated from District</i>	<i>Isolated from District</i>
<i>583-87 Howard Street</i>	<i>Contributor</i>	<i>Isolated from District</i>	<i>Isolated from District</i>
<i>589-591 Howard Street</i>	<i>Contributor</i>	<i>Isolated from District</i>	<i>Isolated from District</i>
<i>Entire District Second and Howard Street District</i>	<i>Eligible</i>	<i>Use of District</i>	<i>Use of District</i>
<i>Rincon Point/South Beach Industrial Warehouse District</i>			
35 Stanford Street	Contributor	Demolition	No use
640 Second Street	Contributor	Demolition	No use
650 Second Street	Contributor	Demolition	No use
670-680 Second Street	Contributor	Demolition	No use
301-327 Brannan Street	Contributor	Demolition	No use
130 Townsend Street	Contributor	Demolition	No use
136 Townsend Street	Contributor	Demolition	No use
144-46 Townsend Street	Contributor	Demolition	No use
148-54 Townsend Street	Contributor	Demolition	No use
162-164 Townsend Street	Contributor	Demolition	No use
166-78 Townsend Street	Contributor	Construction Easement/ Temporary Occupancy/ No use	Construction Easement/ Temporary Occupancy/ No use
<i>Entire Rincon Point/South Beach Industrial Warehouse District</i>	<i>Eligible</i>	<i>Use of District</i>	<i>No Use of District</i>
[1] The tunneling option has been identified as the Caltrain Extension component of the Locally Preferred Alternative (LPA).			

² The buildings at 577-79 Howard Street and 583-87 Howard Street are outside the APE but are contributing elements to the National Register District.

The Tunneling Option (*identified for the Caltrain Extension component of the Locally Preferred Alternative*) would require the removal of three historic buildings (*Figure 8.4-1 #5*) and result in the isolation from the remainder of the district of three other buildings (*Figure 8.4.1 #6*), all of which are contributors to the Second and Howard Historic District. These impacts would result in a use of these individual buildings and the District under Section 4(f). Under this tunneling option, the 10 buildings that are contributors to the Rincon Point / South Beach District would be retained and would be underpinned to protect them from harm during construction. There would thus be no use of these properties or the District with this construction option. The stacked drift tunneling method has an extremely low likelihood of collapse or tunnel failure. Reducing impacts to historic properties was a primary factor in the identification of the tunneling option for the Townsend Street to Folsom Street segment of the Caltrain Extension component of the Locally Preferred Alternative.

A construction easement through an *eighteenth* property (affecting the southeast corner of the 166-178 Townsend property, *Figure 8.4-2 #3*) would also be required to construct the subway for the Caltrain Downtown Extension under either construction option. The California Electric Light Company building would not be removed and would be underpinned to protect it from harm during construction. The easement would not constitute use under Section 4(f) pursuant to 23 CFR 771.135 (7). The occupancy of land from the affected *Section 4(f)* property would be temporary, and less than the time needed for construction of the project. The encroachment would be for a construction easement only; there would be no change in ownership of the land. The scope of the work would be minor and there would be no changes to the nature or magnitude of the *Section 4(f)* resource; the building would be unchanged. Not only would there be no adverse physical impact, but there would be no interference with the purposes of the *Section 4(f)* resource, which would remain in place during construction. The resource would remain a contributor to its historic district. Following construction of the tunnel, the property would be returned to its original condition.

The demolitions of the Transbay Terminal and ramp structures, demolition of three historic buildings that are contributors to a historic district, and isolation of three other buildings from the remainder of the district that would occur under the Locally Preferred Alternative would constitute a use of these historic buildings and the Second and Howard District under Section 4(f). The construction easement required for the building at 166-178 Townsend will not result in a use under Section 4(f).

8.6 AVOIDANCE ALTERNATIVES

Two alternatives were evaluated for each project component to achieve the project purpose and need. Also, the Caltrain Extension component has two construction Options. There are differences in effects on *Section 4(f)*-protected resources among these Alternatives and Options, as discussed in the following section, which is organized by project component. The No-Project Alternative is also briefly discussed.

8.6.1 TRANSBAY TERMINAL COMPONENT

There are no Transbay Terminal alternatives that are either reasonable, or feasible and prudent, and that avoid *Section 4(f)*-protected resources, as shown in the following paragraphs.

8.6.1.1 Transbay Terminal Alternatives Considered in the Present Document

The purpose and need for the Project includes the extension of Caltrain to the site of the existing Transbay Terminal in the Financial/South of Market downtown area (as required by Proposition H), as well as the ability to accommodate a California high-speed system (as also required by Proposition H). This Project's purpose and need could not be achieved by rehabilitation of the present Transbay Terminal.

Bringing the Caltrain/high speed rail tracks into the upper levels of the present terminal would displace portion of the current AC Transit operations, would require retrofitting the terminal, (substantially reducing its ability to function effectively), and would disrupt current transit operations. It would also require new elevated train tracks leading to the terminal, thus reducing the ability of redevelopment planning efforts to revitalize the area around the terminal.

Additionally, such retrofit would require bringing the remainder of the present facility up to building codes and ADA requirements, adding additional cost and disruption to the present terminal operation; and terminal retrofit would require continued use of the eastern bus ramp (which would not occur under the selected Locally Preferred Alternative West Ramp Alternative), thus reducing the ability of the proposed redevelopment planning to revitalize the area surrounding the terminal. Bringing the Caltrain extension and high speed rail tracks into the basement of the present terminal is not practicable.

Finally, it should be noted that the Metropolitan Transportation Commission's Transbay Terminal Study generated a regional consensus among the participating agencies (Caltrans, AC Transit, Golden Gate Transit District, Muni, the City and County of San Francisco, the Peninsula Corridor Joint Power Board, and SamTrans) for a new terminal on the site of the current Transbay Terminal.

*To meet the purpose and need of the Project, it would be necessary to demolish the existing Transbay Terminal and the terminal loop ramp, both of which are *Section 4(f)*-protected resources.*

8.6.1.2 Transbay Terminal at Main/Beale

The New Bus Terminal at the Main/Beale Site that was considered in the 1997 Draft EIS/EIR for the Caltrain Downtown Extension would not have constructed a new terminal at the site of the present Transbay Terminal but it would not have avoided removal of the existing Transbay Terminal and terminal loop ramp. Although this option would have placed bus operations at the Main/Beale site, the Caltrain Downtown Extension was still proposed to terminate underground at the site of the present Transbay Terminal, which required demolition and removal of the terminal and terminal loop ramp. Note that this bus terminal alternative had been endorsed by the San Francisco Board of

Supervisors but was ultimately found not to be feasible because the Main/Beale site could not provide for the needed level of AC Transit service. Withdrawal of the Main/Beale site was also consistent with the provisions of Proposition H (passed by the voters of San Francisco in November, 1998), which called for a multi-modal facility on the site of the current Transbay Terminal.

8.6.2 CALTRAIN DOWNTOWN EXTENSION COMPONENT

Two Alternatives with different horizontal and vertical alignment geometrics and two construction approaches (cut-and-cover *trenching* and tunneling) were evaluated to meet the project purpose and need for the Caltrain Downtown Extension. There would be no difference in effects to *Section 4(f)*-protected resources between the Second-to-Mission Street and Second-to-Main Street Alternatives if constructed using the cut-and-cover trenching technique, however, construction of these alternatives using the Tunneling Option would affect fewer *Section 4(f)* protected properties, *as discussed in the following paragraphs. There was no feasible and prudent Caltrain Downtown Extension Alternative that would avoid all historic properties.*

8.6.2.1 Cut-and-Cover Tunneling Option

The Cut-and-Cover Option would require the removal of all 13 historic buildings described in Section 8.4, Potentially Affected *Section 4(f)* Properties. Ten of these buildings are contributors to the Rincon Point / South Beach Industrial Warehouse District and three are contributors to the Second and Howard Historic District. *Removal of ten buildings from the Rincon Point / South Beach Industrial Warehouse District would result in a use of that district under Section 4(f). Removal of the three contributors to the Second and Howard Historic District would result in a use of the Second and Howard District through isolation of three other buildings from the remainder of the district.* The Cut-and-Cover Option would also require a construction easement through the southeast corner of the 166-178 Townsend property, which is a contributor to the Rincon Point historic district; *this easement would be temporary and would not require alteration or demolition of the building, and therefore would not constitute a use of the property.*

8.6.2.2 Stacked Drift Tunneling Option

The Tunneling Option would avoid removal of 10 historic buildings that are contributors to the Rincon Point / South Beach Industrial Warehouse District, but would require removal of three buildings that are contributors to the Second and Howard Historic District, *resulting in a use of those buildings under Section 4(f). Removal of these three buildings would also result in the isolation of three other buildings from the remainder of the district, resulting in a use of that District.* *The Tunneling Option constitutes an avoidance alternative for the 10 historic buildings that are contributors to the Rincon Point District. Reducing impacts to historic buildings and districts consistent with the requirements of Section 4(f) was a primary factor in the identification of the Tunneling Option for the Caltrain Downtown Extension component of the Locally Preferred Alternative.*

The inability to successfully tunnel under the three historic structures in the Second and Howard District is due to ground conditions and the necessary Project facilities for this immediate area. A large number of closely spaced tracks are required for the segment leading from Folsom Street into the new Terminal. This is the areas where the tracks leading north on Second Street would need to brand into six tracks leading into the basement of the terminal. Soils near Second and Howard Streets are exceptionally soft and weak, and the excavations required for the multiple, closely spaced tracks would be wide. While it may be technically feasible to construct a single tunnel or perhaps twin bores under a given building, it is not considered practicable in the soft soils to open so many tunnels so close to each to accommodate the multiple tracks.

The Tunneling Option would also require *the same* construction easement through the southeast corner of the 166-178 Townsend property, which is a contributor to the Rincon Point historic district, *but this easement would be temporary and would not require alteration or demolition of the building, and therefore would not constitute a use of the property.*

8.6.2.3 Caltrain Downtown Extension – Essex Street Stub-End Alignment Alternative

In response to the curve radii problems associated with the 1997 Caltrain Downtown Extension alignment, an alternate subway alignment was reviewed that did not curve into the basement of the proposed new Transbay Terminal, but included a train terminal oriented perpendicular to and west of the existing Terminal. Therefore, it did not require demolition of the existing Transbay Terminal. Also, it would have been possible to construct this alignment using the stacked drift technique. This would have avoided demolition of all of the historic buildings in and around the Rincon Point / South Beach Industrial Warehouse District, while the alignment would not have encroached into the Second and Howard Historic District.

This alternative was included in the Notice of Preparation and Notice of Intent to Prepare this EIS/EIR, but was found not to be feasible. During the scoping process, the public noted several shortcomings of this alignment, and these public comments and shortcomings contributed to the withdrawal of this alternative alignment from further consideration. Because the train platforms would not have been directly under the new multi-modal transit facility, internal passenger circulation and transfers between modes would have been substantially compromised. Also, the stub-end orientation meant that trains would not be able to enter one end of the station and exit at the other. In the stub-end configuration, trains would pull into the station and would need to reverse direction to exit. This would substantially impair operating efficiency and would not meet the project purpose to improve Caltrain service to downtown San Francisco.

While it would have been possible to construct the Essex Street Stub-End Alignment of the Caltrain Downtown Extension without demolishing and erecting a new Transbay Terminal, this action would not have been a reasonable undertaking. Leaving the existing Transbay Terminal in place would have done nothing to improve space utilization, passenger circulation, signage, safety or operating efficiency within the existing Transbay Terminal. There would have been very limited potential for revenue-generating joint development within the terminal or its environs. The existing terminal footprint includes numerous structures crossing city streets, a condition that has contributed to the

continued deterioration and underutilization of land in the surrounding area. None of these conditions would have been improved without demolition of the terminal under this alternative.

In summary, therefore, this alternative alignment was found not to be feasible or reasonable and it was withdrawn from further consideration. It therefore does not constitute an avoidance alternative under Section 4(f).

8.6.3 NO-PROJECT ALTERNATIVE

The No-Project Alternative would not use the Transbay Terminal or the existing loop ramp *approach structures*, but this alternative would not address the Project's purpose and need. Note, however, that Caltrans is currently completing seismic retrofit of the loop ramp, and Caltrans' plans include demolition and removal of the east ramps and reconstruction of the west ramps. Further, the existing Transbay Terminal building also requires substantial and costly retrofit and reconstruction to meet current seismic and other building codes. Interim retrofit measures have been taken, but the full reconstruction (to be undertaken by others) may be so extensive as to result in the use of the resource under Section 4(f). Given the high costs of retrofitting the existing terminal, the City of San Francisco requested Caltrans cooperation in considering replacement alternatives that would meet the project purposes identified for the present study.

8.6.4 OTHER ALTERNATIVES

Other alternatives and alignment variations considered for the 1997 Draft EIS/EIR for the Caltrain Downtown Extension were not feasible or prudent for the present study. Geometrics for these alignment alternatives did not meet curve radius minimums required to accommodate high-speed steel-wheel-on-rail equipment currently in use in Europe and under consideration by the California High-Speed Rail Authority for implementation in California, including a station in downtown San Francisco. Constructing a new Caltrain alignment that precluded future use by high-speed rail equipment was not prudent, and these alternatives were withdrawn from further consideration.

Figures 2.2-1, 2.2-5 through 2.2-7, and 2.2-9 through 21 show the project alternatives. Figure 2.3-1 shows all of the alternatives for the terminal and extension components that were considered in the present study and the 1997 Draft EIS/EIR but found not to be viable.

8.7 MEASURES TO MINIMIZE HARM

There are no remaining *feasible and prudent* alternatives that avoid Section 4(f)-protected properties. The *Locally Preferred Alternative comprising the Transbay Terminal West Ramp, Caltrain Downtown Extension with Tunneling Option for the Townsend Street to Folsom Street segment* /

Second-to-Main Alignment Alternative and Full Build Development Scenario would include all possible planning to minimize harm to the properties.

Measures to minimize harm are included in a Memorandum of Agreement (MOA). Signatory parties to the MOA include FTA and SHPO. The City and County of San Francisco, the Transbay Terminal Joint Powers Authority (TJPA), the Peninsula Corridor Joint Powers Board (JPB), and Caltrans are invited concurring parties to the MOA. The MOA is included in Appendix G of this Final EIS/EIR. The Measures are summarized below.

- 1. Professional Standards:** *All activities regarding history, historic preservation, historical archaeology and prehistoric archaeology that are carried out will be carried out by or under the direct supervision of persons meeting, at a minimum, the Secretary of the Interior's professional qualifications standards (48 FR 44738-9) in these disciplines.*

- 2. Mitigation of Effects on Components of the San Francisco-Oakland Bay Bridge (Bay Bridge)**
 - A. Permanent Interpretive Exhibit at the Terminal:** *TJPA will direct the design and engineering team for the Undertaking to integrate into the design of the new terminal a dedicated space for a permanent interpretive exhibit. TJPA will also consult with the City of Oakland about its interest in having a similar interpretive exhibit in the East Bay.*

 - B. Salvage:** *TJPA, in consultation with the State Department of Transportation (Department), will identify elements of the existing Transbay Transit Terminal that are suitable for salvage and interpretive use in the exhibit in the new Terminal or in museums.*

 - C. Oakland Museum of California Exhibit:** *TJPA will consult with Department and the Oakland Museum about contributing to Department's exhibit at the Oakland Museum relating to the history and engineering of the major historic state bridges of the San Francisco Bay Area.*

 - D. Documentation:** *TJPA will consult with the California SHPO to ensure that the Transbay Transit Terminal has been adequately recorded by past efforts. TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal.*

 - E. Reevaluation of the Bay Bridge** *by the TJPA will occur within 180 days after FTA determines that the Undertaking has been completed.*

- 3. *Mitigation of Effects on Second and Howard Streets Historic District and Protective Measures for Rincon Point/South Beach Historic Warehouse Industrial District***
- A. *Protective Measures:*** TJPA, in consultation with the owners of historic properties immediately adjoining the construction sites, will develop and implement measures to protect the contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District from damage by any aspect of the Undertaking.
- B. *HABS/HAER Documentation:*** TJPA will assure that the three historic properties in the Second and Howard District to be demolished will be recorded in accordance with HABS/HAER standards, as appropriate.
- C. *Repair of Inadvertent Damage:*** TJPA will ensure that any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking will be repaired in accordance with the Secretary of the Interior's Standards for Rehabilitation.
- D. *Reevaluation of the Second and Howard Streets Historic District by the TJPA*** will occur within 180 days after FTA determines that the Undertaking has been completed,
- 4. *As described in Chapter 5 of this Final EIS/EIR, directly relevant mitigation measures include:***
- *Provision of signage during construction.*
 - *Installation of a level deck for cut-and-cover construction*
 - *Provision of efficient sidewalk design and maintenance.*
 - *Underpinning of existing buildings, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction. Other alternatives, in lieu of underpinning, involve strengthening of the rock between the building and the crown of the tunnel. Grouting in combination with inclined pin piles can be used not only to strengthen the rock but to make the rock mass over the tunnel act as a rigid beam, which would allow construction of the tunnels with no adverse effects on the buildings that are supported on shallow foundations over the tunnel.*
 - *Proper design and construction of pile supported foundations for structures to control potential settlement of the surface.*
 - *Upon completion of the construction phase, power wash and/or paint buildings with visible signs of dirt and debris from the construction site (given that permission is obtained from the property owner to gain access to and wash the property with no fee charged by the owner).*
 - *Limit or prohibit use of construction techniques that create high vibration levels.*

- *Restrict procedures that contractors can use in vibration sensitive areas.*
- *Require vibration monitoring during vibration intensive activities.*
- *Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime hours.*
- *Investigate alternative construction methods and practices to reduce the impacts in coordination with the construction contractor if resident annoyance from vibration becomes a problem.*
- *Include specific limits, practices and monitoring and reporting procedures for the use of controlled detonation.*
- *Use high-resilience track fasteners or a resiliently supported tie system for the Caltrain downtown extension for areas projected to exceed vibration criteria.*
- *Require the project contractors to ensure that construction crews working at night direct any artificial lighting onto the work site in order to minimize "spill over" light or glare effects on adjacent areas.*
- *Ensure that any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking will be repaired in accordance with the Secretary of the Interior's Standards for Rehabilitation.*

8.8 COORDINATION WITH DEPARTMENT OF INTERIOR

The United States Department of Interior (DOI) provided the following comments regarding Section 4(f) matters related to the proposed Project in a letter from Willie R. Taylor, Director, Office of Environmental Policy and Compliance, Office of the Secretary, DOI, to Leslie Rogers, Region IX Administrator, FTA. (The DOI letter dated March 9, 2004 is contained in Appendix D.) The DOI comments and responses to those comments are provided in Table 8.8-1.

Table 8.8-1: Responses to the Department of Interior (National Park Service) Comments

Department of Interior Comment	Response to Comment
<i>Based on the information provided in the EIS/Report, it is apparent that no public parkland, refuge, or similar site would be affected by either of the action alternatives. Therefore, there are no Section 4(f) considerations with regard to recreational sites.</i>	<i>Section 4.4 of this Final EIS/EIR, Volume I shows that there would be no impacts to public parklands, refuges, or similar sites.</i>
<i>The National Park Service’s Pacific West Regional Office has reviewed this administrative draft document identifying and analyzing a “no action” alternative as well as “action” alternatives for individual components of the proposed project. A locally preferred Stacked Drift Tunneling West Ramp alternative is also deemed to be the environmentally superior alternative.</i>	<i>The DOI reviewed the administrative draft Final EIS/EIR that identified the Locally Preferred Alternative (LPA) as the Stacked Drift Tunneling West Ramp alternative. This LPA is described in Section 2.2 of this Final EIS/EIR, Volume I.</i>
<i>In regard to cultural resources, each of the “action” alternatives entails demolition of historic buildings. The locally preferred alternative would have significantly less impact on other listed historic structures in comparison with the Cut and Cover Trench/West Ramp alternative.</i>	<i>As described in Sections 5.14 and 8.6.2 of this Final EIS/EIR, Volume I, the LPA would have significantly less impact on listed historic structures.</i>
<i>Several options were withdrawn from full analysis because they would fall short of meeting the expressed purpose and need for action. None of the withdrawn options offered a feasible and prudent alternative for avoiding the identified effects on cultural resources.</i>	<i>Alternative considered and withdrawn from consideration and reasons for their withdrawal are described in Sections 2.3 and Section 8.6 of this Final EIS/EIR, Volume I.</i>
<i>The locally preferred Stacked Drift alternative slates six historic structures for demolition. Three of the resources slated for demolition – Transbay Terminal (425 Mission Street), Bay Bridge Approaches, and Bus Ramps – have been designated contributing resources to the San Francisco-Oakland Bay Bridge, a multi-</i>	<i>These impacts associated with the LPA are described in Sections 5.14, 8.5 and 8.6 of this Final EIS/EIR, Volume I. The MOA for this Project is contained in Appendix G of this Final EIS/EIR, Volume I.</i>

Table 8.8-1: Responses to the Department of Interior (National Park Service) Comments

Department of Interior Comment	Response to Comment
<p><i>component property listed on the National Register of Historic Places (NRHP). According to the draft Memorandum of Agreement (MOA) included in the EIS/Report, the California Legislature has granted a specific exemption to State law prohibiting the demolition of historic structures as follows:</i></p> <p><i>“The Legislature thereby approves demolition of the Transbay Terminal building at First & Mission Streets in the City and County of San Francisco, including the associated ramps, for construction of a new terminal at the same location...” (AB 812, 2003).</i></p>	
<p><i>Our concerns are twofold. First, three of the structures slated for demolition (and not addressed by AB 812) – 165-173 Second Street, 191 Second Street, 580-586 Howard Street – have been designated as contributing resources in the Second & Howard Streets District. Demolition of these three structures in the Second & Howard Streets District also result in isolation of four additional contributing resources in the District, adding to the adverse impact of the undertaking on the integrity of the District. While it is clear that the proposed undertaking will adversely affect all six properties, not enough information has been provided in the EIS/Report materials to determine the overall effect of the proposed demolition on the integrity of the Second & Howard Streets District or the Bay Bridge District (as listed on the NRHP).</i></p> <p><i>Second, the MOA Section III (F) stipulates that a reevaluation of the Bay Bridge District shall occur within 180 days of completion of the undertaking to determine whether the nomination should be amended or whether the bridge no longer qualifies for listing and should</i></p>	<p><i>In response to DOI’s request, the MOA (Appendix G) now includes a reevaluation clause not only for the Bay Bridge (MOA, Section III.E) but also for the Second and Howard Street District (MOA, Section IV.D.). Additional information has been added to Section 5.14 of the administrative draft Final EIS/EIR (shown as underlined and italics on pages 5-90, 5-91, 5-103, and 5-104 of this Final EIS/EIR) stating that it is not anticipated that the Undertaking would result in a delisting from the NRHP of the remaining elements for either of these resources. Underlying reasons are provided.</i></p> <p><i>The number of isolated buildings shown in the administrative draft Final EIS/EIR (as reviewed by the DOI) has been changed from four to three for this Final EIS/EIR. Specifically, 163 Second Street would not be isolated but rather would be adversely affected due to loss of a nearby contributing building.</i></p>

Table 8.8-1: Responses to the Department of Interior (National Park Service) Comments

Department of Interior Comment	Response to Comment
<p><i>be removed from the NRHP. The MOA states that the Transbay Joint Powers Administration will conduct the evaluation in consultation with the SHPO. A similar clause is not included for the Second & Howard Street Historic District in the Mitigation Section IV of the MOA. From the information provided, it is unclear whether an evaluation was completed to assess the potential impact of the proposed undertaking on the Second & Howard Street Historic District, or if not, what was the basis for this result. If an evaluation has not been done, our recommendation would be to complete this process for the Second & Howard Street District.</i></p>	
<p><i>The Department of the Interior has no objection to Section 4(f) approval of this project, provided the measures to minimize harm mentioned above are included in the project plans and implementation.</i></p> <p><i>Because this Department has a continuing interest in this project, we are willing to cooperate and coordinate with you on a technical assistance basis in further project evaluation and assessment.</i></p>	<p><i>As shown above, the requested measures to minimize harm in the DOI letter are included in the Project plans and implementation. Given DOI's letter stating no objection with these measures in place, FTA has determined that there is no feasible and prudent alternative to the use of land from the national register properties required for the LPA and that implementation of the proposed LPA includes all possible planning to minimize harm resulting from such use (see Section 8.9 below).</i></p>

8.9 SECTION 4(f) FINDING

It is determined that there is no feasible and prudent alternative to the use of land from the national register properties required for the Locally Preferred Alternative (LPA) and that implementation of the proposed LPA includes all possible planning to minimize harm resulting from such use.

Underlying reasons for these findings include:

- *The regional designation of the Transbay Terminal site as the appropriate site for a new regional multi-modal terminal,*
- *The requirement for and advantages of providing new bus ramps to the new terminal (i.e., elimination of the east loop, stacking of the west ramps),*
- *The need to provide commuter and high-speed train service into the basement of this new facility to enhance regional transit connectivity,*
- *The major advantages (i.e., reduced community impacts and project costs) of using public rights-of-way (Townsend and Second Streets) for the underground train extension, and the minimum curve radii required for high speed trains,*
- *The soft ground conditions and multiple, closely-spaced tunnel requirements in the Second and Howard Streets area,*
- *The selection of a Locally Preferred alternative minimizing the number of 4(f) resources used, and*
- *The agreement to document and preserve elements of the 4(f) resources via recordation, displays in the new terminal and at local museums, financial participation in the production in educational videos, and the salvage of appropriate elements in the terminal.*