SCH No.95063004
City Project No. 2000.048E

VOLUME I

TRANSBAY TERMINAL / CALTRAIN DOWNTOWN EXTENSION / REDEVELOPMENT PROJECT

in the City and County of San Francisco

FINAL ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT AND SECTION 4(f) EVALUATION

Pursuant to

National Environmental Policy Act of 1969, §102 (42 U.S.C. §4332); Federal Transit Laws (49 U.S.C. §5301(e), §5323(b) and §5324(b)); Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. §303); National Historic Preservation Act of 1966, §106 (16 U.S.C. §470f); 40 CFR Parts 1500-1508; 23 CFR Part 771; Executive Order 12898 (Environmental Justice); and California Environmental Quality Act, PRC 21000 *et seq.*; and the State of California CEQA Guidelines, California Administrative Code, 15000 *et seq.*

by the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION

and the

CITY AND COUNTY OF SAN FRANCISCO,
PENINSULA CORRIDOR JOINT POWERS BOARD, AND
SAN FRANCISCO REDEVELOPMENT AGENCY

March 2004

Acknowledgement

This Final Environmental Impact Statement / Environmental Impact Report (Final EIS/EIR) was prepared in part from a grant of Congestion Mitigation and Air Quality Improvement Program (CMAQ) and Transportation Congestion Relief Program (TCRP) funds received from the California Department of Transportation and the Metropolitan Transportation Commission.

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ABSTRACT

The *Transbay Joint Powers Authority*, the City and County of San Francisco, the Peninsula Corridor Joint Powers Board, and the San Francisco Redevelopment Agency propose to construct a new multi-modal Terminal on the site of the present Transbay Terminal, extend the Peninsula Corridor Service (Caltrain) from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus beneath the new Terminal, and establish a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly-owned land in the vicinity of the new multi-modal Terminal. The project is needed because the present Transbay Terminal, which was built in 1939, does not meet current *building codes, including ADA requirements,* or space utilization standards. The need to modernize the Transbay Terminal provides an opportunity to revitalize the surrounding area with a mix of land uses that includes both market-rate and affordable housing, and to extend Caltrain service from its current terminus outside the downtown area into the San Francisco employment core. Increases in Caltrain and other transit ridership, reductions in non-transit vehicle use and improvements in regional air quality, and revitalization of the Terminal area are expected to result. Impacts include the loss of the Transbay Terminal, *listed on the* National Register of Historic Places, and loss of the terminal loop ramp, a contributing element to the historic Bay Bridge, and up to 13 other historic buildings that are contributors to downtown historic districts; residential and business displacements; localized noise and vibration effects; adverse traffic impacts at seven intersections; loss of parking, and disruption during construction. Proposed mitigation measures include historic recordation, sound walls, high-resilience rail facilities, public information and management practices during construction, temporary bus terminal and bus storage and parking replacement, and pedestrian measures. Relocation assistance will be provided in accordance with the federal and state relocation acts.

Preface

In 1997, a Draft Environmental Impact Statement / Draft Environmental Impact Report (Draft EIS/EIR) was circulated for the Caltrain San Francisco Downtown Extension Project, a public hearing was held, and public comments were received. The present *Final* EIS/EIR describes a different –albeit somewhat similar – project to that evaluated in the 1997 document. Various changes have occurred in project development and project-related conditions since the earlier environmental document was circulated. This Preface summarizes how this document responds to these changes.

The project described and evaluated in this new document is consistent with the Transbay Terminal Study that has been undertaken by the Metropolitan Transportation Commission / Bay Area Toll Authority in concert with the State of California, the City and County of San Francisco, AC Transit and other local transit service providers and other interested parties.

The description of the project alternatives responds to current design criteria to accommodate high-speed steel-wheel-on-rail technologies 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.

Many specific subjects have been updated, not only to address changes in area conditions that have occurred since the 1997 Draft EIS/EIR was issued, but also to reflect the three components of the present project. Background information and analysis for many subjects are entirely new, including: ridership, land use, engineering, capital costs, noise and vibration effects, cultural resources, traffic, transit, parking, and the project financial plan.

Given the extent of differences between the previous project and the present project, the Peninsula Corridor Joint Powers Board, the City and County of San Francisco, and the Federal Transit Administration *have* not *responded* to the public comments received on the 1997 Draft EIS/EIR. Only those comments received on the present document *are* addressed.

The Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) was released for public review on October 4, 2002. Notice of availability of the Draft EIS/EIR was published in the San Francisco Independent newspaper and posted at the Planning Department. Five hundred fifty newsletters were sent to the mailing list announcing the availability of the Draft EIS/EIR, and a letter was sent directly to property owners whose properties could be directly affected by the Project. Fifty 11"X17" posters were posted throughout the Project area, including along Second Street. Notices were sent to all property owners within 300 feet of the project boundary.

The Draft EIS/EIR was available for on-line review on the Transbay Joint Powers Authority (TJPA) web site. Three hundred eight two copies, both printed and compact disc versions, of the Draft EIS/EIR were mailed to agencies and individuals. The document was also available for review at the following locations:

- *Caltrain Headquarters, Second Floor Reception, 1250 San Carlos Ave., San Carlos*
- *San Francisco Central Library, 100 Larkin Street (at Grove)*
- *City of Berkeley Central Library, 2090 Kittredge Street (at Shattuck)*
- *San Francisco Planning Department, 1660 Mission Street, First Floor Public Information Center*
- *AC Transit Headquarters, 1660 Franklin Street, Oakland (Board Secretary)*
- *Main libraries of cities along the Caltrain Corridor*

Three public hearings were held:

- *November 12, 2002 at 5:00 pm – San Francisco Redevelopment Agency Commission in the San Francisco City Hall,*
- *November 13, 2002 at 7:00 pm (with an open house at 6:30 pm) – Caltrain Headquarters, San Carlos, California, and*
- *November 26, 2002 at 12:30 pm – San Francisco Planning Commission in San Francisco City Hall.*

At the request of the public, the comment period was extended by the Planning Commission on November 26 to December 20, 2002.

The final environmental documentation consists of three volumes. Volume I is the Final EIS/EIR (which is the Draft EIS/EIR as amended). Volume II contains responses to public comments on the Draft EIS/EIR, and Volume III contains the written comments and transcripts from the public hearings.

A Locally Preferred Alternative (LPA) was adopted in March 2003 by the Transbay Joint Powers Authority (TJPA) 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 LPA 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; and the Transbay Redevelopment Plan Area "full build" development alternative.

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SUMMARY

S.1 PURPOSE AND NEED FOR TRANSPORTATION IMPROVEMENTS

The primary purposes of the Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project are to:

- Improve public access to bus and rail services;
- Modernize the Transbay Terminal and improve service;
- Reduce non-transit vehicle usage; and
- Alleviate blight and revitalize the Transbay Terminal area.

The project is needed because the present Transbay Terminal, which was built in 1939, does not meet current seismic safety or space utilization standards. The need to modernize the Transbay Terminal provides an opportunity to revitalize the surrounding area and to extend Caltrain service from its current terminus outside the downtown area into the San Francisco employment core. Figure S-1 shows the project's location.

Undertaking the project components would address the following associated needs:

- Provide a multi-modal transit facility that meets future transit needs;
- *Improve the Terminal as a place for passengers and the public to use and enjoy.*
- Alleviate the conditions of blight in the Transbay Terminal area;
- Revitalize the Transbay Terminal area with a more vibrant mix of land uses that includes both market-rate and affordable housing;
- Facilitate transit use by developing housing next to a major transit hub;
- Improve Caltrain service by providing direct access to downtown San Francisco;
- Enhance connectivity between Caltrain and other major transit systems;
- Enable direct access to downtown San Francisco for future intercity and/or high-speed rail service;
- Accommodate projected growth in travel demand in the San Jose – San Francisco corridor;
- Reduce traffic congestion on US Highway 101 and I-280 between San Jose and San Francisco and other routes;
- Reduce vehicle hours of delay on major freeways in the Peninsula corridor;
- Improve regional air quality by reducing auto emissions;
- Support local economic development goals; and
- Enhance accessibility to employment, retail, and entertainment opportunities.

Figure S-1: Project Location

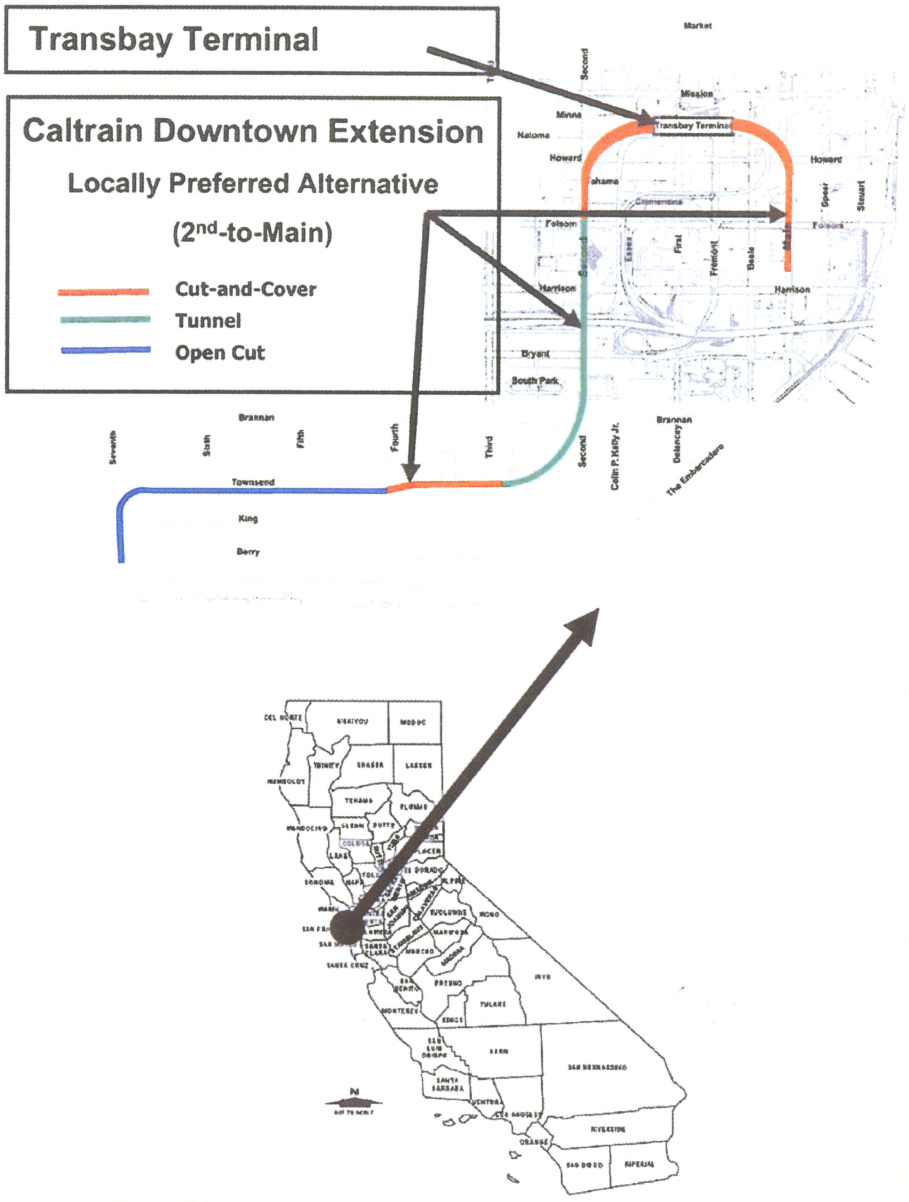


Figure S-1: Project Location and Vicinity Map

The Metropolitan Transportation Commission, State of California, City and County of San Francisco, and area transit providers (AC Transit, Muni, Golden Gate, SamTrans, and JPB) have evaluated options for replacement of the 60-year-old Transbay Terminal facility, due to its age, need for seismic upgrade, and inadequate facility layout. A properly designed, new terminal would improve space utilization, passenger circulation, signage, security, safety, and the overall transit-rider experience.

A multi-modal transportation facility would provide a centralized location for public and private bus and rail services in San Francisco's growing Financial District/South of Market Area and would enhance transit access for passengers arriving in and departing San Francisco. With its location near housing and major retail and commercial opportunities, it would increase transit ridership, thus reducing the number of non-transit vehicles traveling on area streets, highways, and bridges. Reduction in automobile vehicle miles of travel would result in reduced vehicular air emissions and an improvement in air quality.

Extension of the Caltrain Commuter Rail system 1.3 miles to Downtown San Francisco would close the gap than now exists between the train's current terminus station at Fourth and Townsend the employment center of the region, providing a seamless transportation link between the Peninsula and the heart of San Francisco. It would be consistent with Proposition H passed by the voter of San Francisco resolving that Caltrain should be extended to the Transbay Terminal site, and it would enable provision of high-speed rail service for a proposed statewide system.

The Redevelopment Plan would include a new Transbay Terminal, portions of the Caltrain Downtown extension within the Project Area, and redevelopment of other underutilized property in the Transbay Terminal area. Redevelopment activities, including redevelopment of the Terminal, would benefit from utilization of tax increment financing and the ability to assemble properties, install public improvements, and provide office, retail/hotel, and residential development, including affordable housing.

S.2 ALTERNATIVES

A description of the three alternatives evaluated in this Draft EIS/EIR is provided below.

S.2.1 No-Project Alternative

The No-Project Alternative consists of existing Caltrain service with funded improvements, other committed bus, rail, and roadway improvements, a BART extension to the San Francisco International Airport, and proposed development in downtown San Francisco in the 2020 horizon year. This is the No-Project Alternative under CEQA and the baseline alternative for purposes of NEPA.

Among the funded Caltrain service improvements are: service increases in daily trains between San Francisco and San Jose, and between San Jose and Gilroy; rehabilitation improvements, enhancements and additions to the existing Caltrain system; signal system modernization improvements; track improvements at the new Millbrae Intermodal facility that improve intermodal connections with BART; Electrification of the entire Caltrain line from Gilroy to its present San Francisco terminus at Fourth and Townsend Streets.

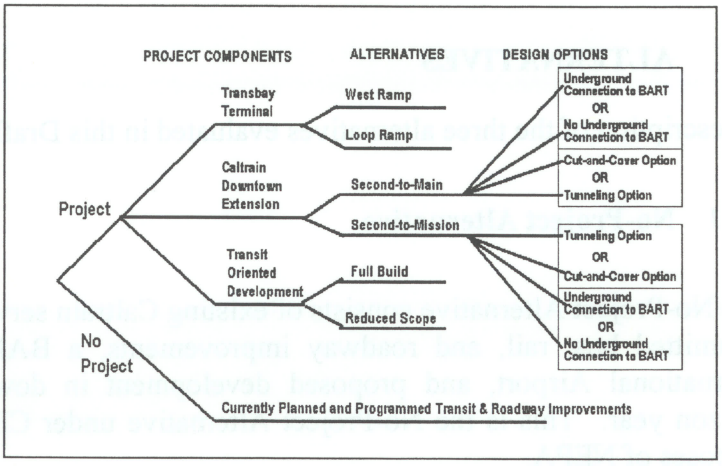
The No-Project Alternative includes all existing Muni service, plus major planned, ongoing, or constructed Muni projects, such as the S-Castro-Embarcadero Shuttle, the Third Street Light Rail project, and the Central Subway. Also included in the No-Project Alternative is existing BART service, *including* the extension to the San Francisco International Airport, *that* also interfaces with Caltrain and Samtrans bus services at the new Millbrae Intermodal Station. The No-Project Alternative further includes the changes to Samtrans bus service that were implemented in August 1999, the completion of Caltrans San Francisco Seismic Retrofit projects, and the completion of roadway and street improvements planned and programmed by the City and County of San Francisco's Department of Parking and Traffic or the Department of Public Works.

S.2.2 Project Components

The proposed project would be located in Downtown San Francisco (See Figure S-1) and has three major components:

- 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.

Two alternatives are under consideration for each of the major project components. Other components of the project include a temporary bus terminal facility to be used during construction, a new, permanent off-site bus storage/ layover facility, reconstructed bus ramps leading to the west end of the new Transbay Terminal, and a redesigned Caltrain storage yard.



S.2.2.1 Refinements to the Project and EIS/EIR

Refinements have been made to the Project and EIS/EIR since the Draft EIS/EIR was published. These refinement include

- ***Adoption of a Locally Preferred Alternative.*** *Following the U.S. Department of Transportation, Federal Transit Administration guidance and regulations, the Transbay Joint Powers Authority (TJPA) adopted in March 2003 the West Ramp Transbay Terminal, Second-to-Main, Tunneling, Full Build Options as the components to be included in the Locally Preferred Alternative (LPA) for inclusion in this Final EIS/EIR.*

- ***Movement of the Transbay Terminal Footprint to the West.*** *In response to public comment on the Draft EIS/EIR, the footprint of the new Transbay Terminal is proposed to be moved to the west (approximately 150 feet) of the location shown in the Draft EIS/EIR.*

- ***Elimination of the Temporary Bus Ramps to the Temporary Terminal.*** *In response to public comments on the Draft EIS/EIR, AC Transit bus access to the temporary terminal will no longer make use of a temporary bus ramp between the Bay Bridge and the temporary terminal during operation of the temporary facility.*

- ***Supplemental Air Emissions Assessment and Supplemental Noise Assessment of the Permanent Off-Site Bus Storage Facility*** *In response to public comments on the Draft EIS/EIR, a supplemental air emissions assessment and supplemental noise assessment was made of the proposed permanent off-site bus storage facility under the West Approach to the Bay Bridge between Second and Fourth Streets..*

- ***Refinements to the 2nd-to-Main and 2nd-to-Mission Caltrain Extension Alternatives.*** *Alignments and Station Layout. In response to public comments on both alternatives for the Caltrain Extension contained in the Draft EIS/EIR, engineering refinements were made to the Second-to-Mission and Second-to-Main options for the Caltrain Downtown Extension. Refinements included changes to the track, platform, and tail track layouts.*

- ***Revised Caltrain Operating Plan Assumptions*** *The number of daily Caltrain trains assumed to be operated in the Year 2020 has been revised downward from 170 to 132 reflecting more recent planning of the Peninsula Corridor Joint Powers Board.*

- ***Revised Project Construction/Implementation Schedule.*** *In response to public comments on the Draft EIS/EIR, the proposed project construction and implementation schedule has been refined.*

- ***Revised Project Capital Costs.*** *In response to public comments on the Draft EIS/EIR, capital cost estimates for both the Transbay Terminal and the Caltrain Downtown Extension have been refined for the LPA, resulting in an overall cost reduction of $143.7 million in 2003 dollars. The refined costs have been assigned to an anticipated year of expenditure under the refined implementation schedule, and inflation rates have been applied, providing a year-of-expenditure cost estimate for the LPA.*

- ***Revised Project Financial Plan.*** *The Project's financial plan has been refined to reflect the revised capital costs, the anticipated year of expenditure for various costs, and recent events regarding various funding sources.*

- ***Release of Draft Transbay Redevelopment Project Area Design for Development Vision and Redevelopment Boundary Revision.*** *In response to public comments on the Draft EIS/EIR and to advance the planning work for the proposed Transbay Redevelopment Area, the San Francisco Redevelopment Agency has released for public review the Draft Transbay Redevelopment Project Area Design for Development Vision (August 2003). The Draft Vision provides additional detail regarding the possible elements of the final Redevelopment Area Plan. A revision was also made to the proposed redevelopment area boundary in response to public comments.*

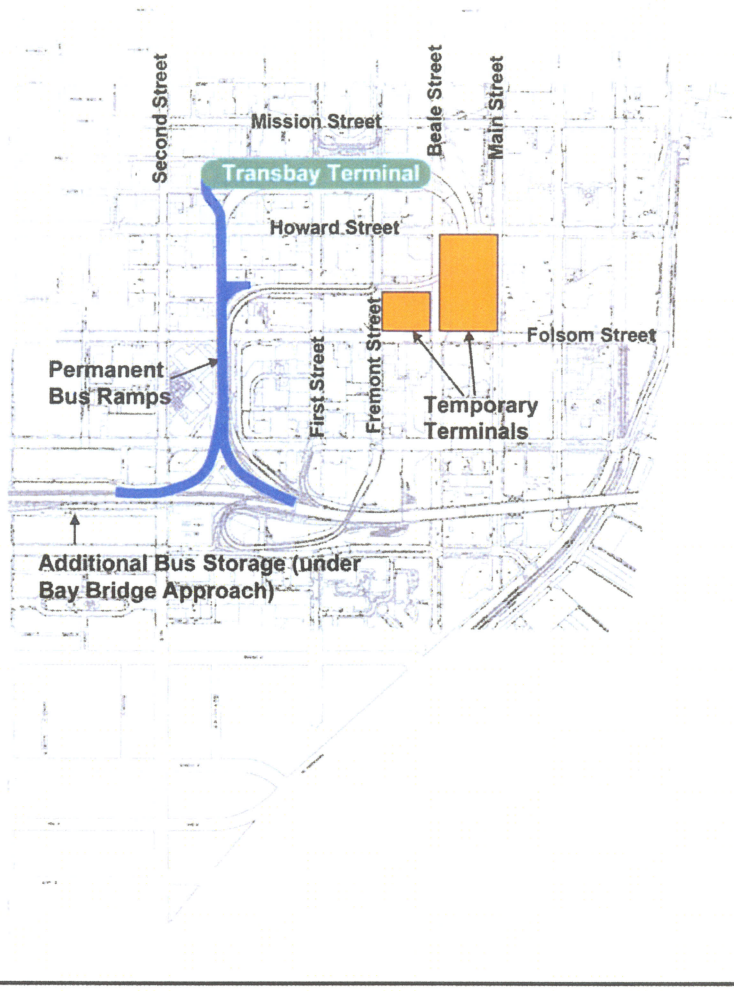
- ***Revisions to the Final EIS/EIR in Response to Public Comments on the Draft EIS/EIR.*** *Other revisions/refinements have been made in this Final EIS/EIR in response to public comments received on the Draft EIS/EIR. Volume II of this Final EIS/EIR contains the comments given on the Draft EIS/EIR and the responses to these comments. As indicated in Volume II, responses at times led to revision to the Final EIS/EIR. All refinements and revisions to the Draft EIS/EIR are outlined in this Final EIS/EIR in italics.*

S.2.2.*2* Transbay Terminal Alternatives

Two alternatives are being studied for a new Transbay Terminal. Under either alternative, a new multi-modal terminal would be located at the same site as the existing terminal at Mission and First Streets.

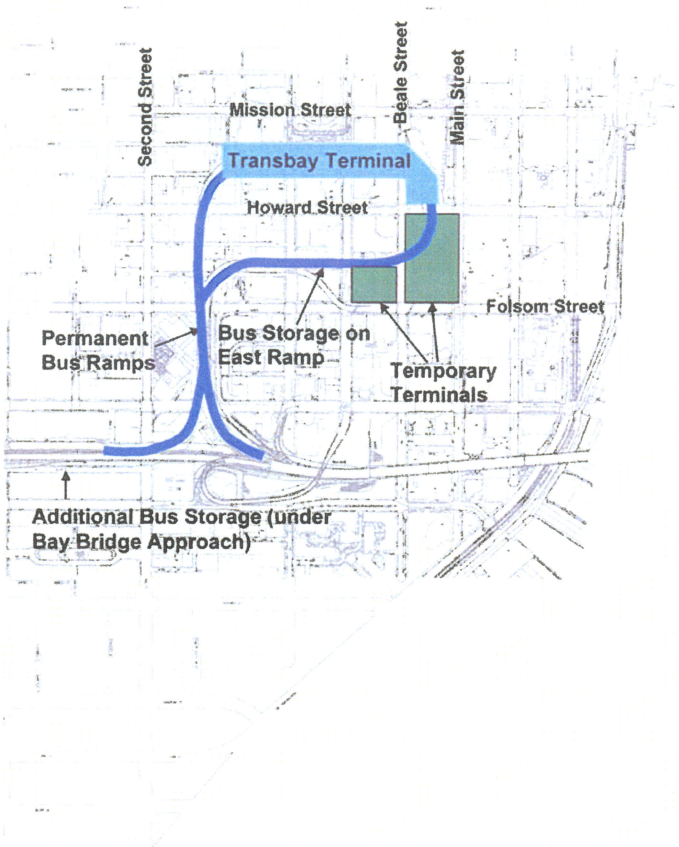
Bus ramps would connect directly from the terminal to the Bay Bridge, while an underground rail facility would allow the extension of Caltrain to downtown and provide space for potential future East Bay commuter rail and California's high-speed intercity rail.

West Loop Alternative. The existing western and eastern bus ramps between the Transbay Terminal and the Bay Bridge would be demolished, and new ramps would be constructed on the west side of the new Transbay Terminal, opening up additional space for development on the east side. The new bus ramps would be in approximately the same position as the existing ramps on the west side of the terminal and paralleling Essex Street. Bus turnaround loops would be provided on each bus level at the east end of the terminal. As the ramps approach the Bay Bridge, they would be stacked in a double-deck configuration. This alternative includes a terminal one block (165 feet) wide by *two* blocks (1,300 feet) long. It would include six levels, with four levels above ground and two below. Beginning at the lowest level, these include 1) a Train Level for Caltrain platforms, 2) Train Mezzanine Level for train passenger ticketing services, 3) Street Level for Muni vehicles and Golden Gate Transit buses, 4) Concourse Level for pedestrian circulation and substantial areas for joint development, 5) AC Transit Level, and 6) Upper Bus Level for other bus service (Muni service to Treasure Island, paratransit, Greyhound, and private operators). *This West Ramp Alternative was selected by the Transbay Joint Powers Authority as the Transbay Terminal component of the Locally Preferred Alternative. The footprint of the terminal has been moved approximately 150 feet to the west from its proposed location in the Draft EIS/EIR and would no longer span Beale Street. This shift reduces Project capital costs but does not affect the Project's environmental impacts or the operating efficiency of the terminal.*



Transbay Terminal West Ramp Alternative
Location of Terminal Components

Loop Ramp Alternative. This alternative would involve the demolition and reconstruction of both the existing western and eastern bus ramps between the Transbay Terminal and the Bay Bridge. The new Transbay Terminal would be one block wide and three and three-fourths blocks in length. It would include five levels, with two levels above ground and two below. The lower four levels (Train, Train Mezzanine, Street, and Concourse) would be very similar to the West Loop Alternative, although there would be less area available for joint development. The fifth level would be the Bus Level, which would accommodate AC Transit and all other bus operators.



Transbay Terminal Loop Ramp Alternative
Location of Terminal Components

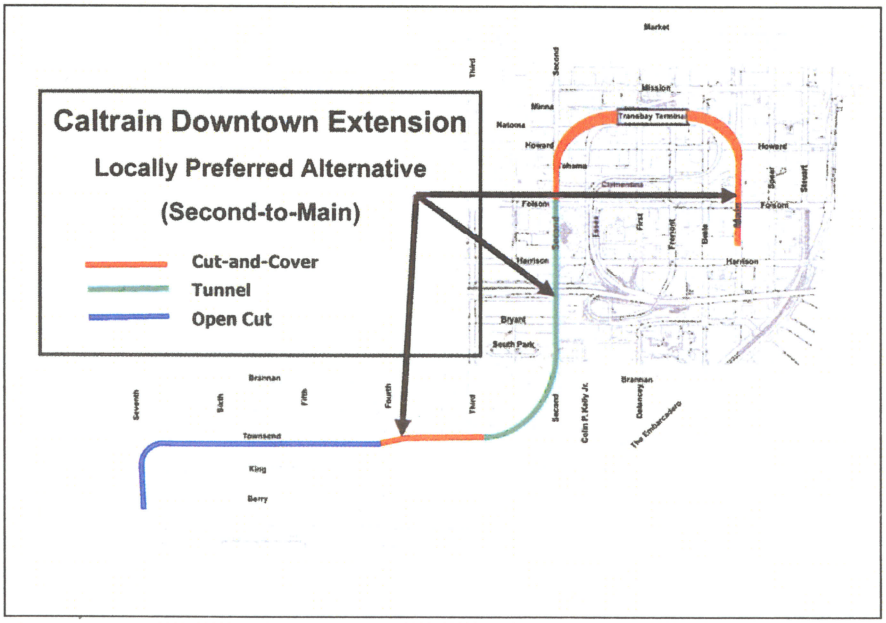
S.2.2.3 Caltrain Downtown Extension Alternatives

The Caltrain Downtown Extension Component consists of an extension of Caltrain from the present San Francisco terminus at Fourth and Townsend Streets to an underground terminal on the site of the present San Francisco Transbay Terminal at First and Mission Streets, a distance of some 1.3 miles. The extension would include reconstruction of the current storage yard at Fourth and Townsend, with provision of three surface platforms and six tracks on the southern portion of the existing facility near Fourth and King Streets and the addition of a new underground Caltrain station on the northern portion near Townsend and Fourth Streets.

Caltrain Downtown Extension tracks would begin its descent at about Berry Street and would curve east to a new underground station with a center platform near Fourth and Townsend Streets. From there, the tracks would continue under Townsend Street near Fourth Street, and continue east under Townsend Street in a cut-and-cover tunnel configuration. It would then curve north at about Clarence Place just east of Third Street in a cut-and-cover configuration. Nine buildings would need to be acquired and demolished to accommodate cut-and-cover construction of the curve from Townsend to Second and Brannan Streets. *A tunneling option has been defined for the Caltrain Downtown Extension. Under this option, the extension would be constructed from near Townsend Street, under Second Street, north to Folsom Street using a stacked drift tunneling technique. The tunneling option was selected by the Transbay Joint Powers Authority as the Caltrain Downtown Extension component of the Locally Preferred Alternative.* The alignment would continue under Second Street to Howard Street.

Two alternatives are under consideration from Howard Street north: (1) Second-to-Main, and (2) Second-to-Mission. *Engineering for these alternatives has been refined since distribution of the Draft EIS/EIR. Platform lengths and the length of straight (tangent) platforms were increased for both options, and additional through tracks were added to both. The lengths and number of tail tracks were also increased under both options.*

Second-to-Main Caltrain Extension Alternative. As the alignment approaches Howard Street along Second Street, it would curve northeasterly, into the basement of the new Transbay Terminal. Eleven buildings would need to be acquired and demolished for this curve into the Terminal. The terminal station would have six tracks and three platforms and would include approximately 2,000 feet of additional tracks (called tail tracks) in a cut-and-cover section leading from the east end of the new Terminal. These tracks would curve south to Main Street and continue underneath Main Street to south of Folsom Street. The tail tacks could also be extended as a separate, independent project at some time in the future, to a San Francisco-to-Oakland cross-bay alignment for commuter rail and/or high-speed trains. *This Second-to-Main*



Alternative was selected by the Transbay Joint Powers Authority as the Caltrain Downtown Extension component of the Locally Preferred Alternative.

This alternative would include a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station.

Second-to-Mission Caltrain Extension Alternative. Up to Second and Howard Streets, this Alternative would follow the same alignment as the Second-to-Main Alternative, although it would have a deeper profile. At that point, it would provide a different configuration for the underground station in the Transbay Terminal and for the tail tracks leading out of the terminal.

As this alignment approaches Howard Street, rather than running parallel to the Terminal's long axis, this alignment would curve northeasterly at about Tehama Street, cutting diagonally under the new terminal and exiting out under Mission Street headed towards The Embarcadero. The southernmost track would branch into four tracks leading to and serving two center platforms directly under the Transbay Terminal.

The two northernmost tracks would continue on an angle to Mission Boulevard and would serve two 600-foot side platforms to the north of the Transbay Terminal. These two tracks would continue to two 1,400-foot tail tracks under Mission Street ending just east of The Embarcadero. Two additional buildings on Mission Street would need to be acquired north of the Terminal for this alternative. The tail tracks for this alignment would be used in a manner similar to the uses described above for the Second-to-Main Alternative.

This alternative also includes a design option for a pedestrian connection underneath Fremont Street to the BART Embarcadero Station.

S.2.2.4 Proposed Transbay Redevelopment Plan Area

The Redevelopment Component includes two alternatives: the Full Build Alternative and the Reduced Scope Alternative. Either of these alternatives would include redevelopment on the parcels shown in Figure S-2. *In response to comments on the Draft EIS/EIR, the redevelopment area boundary shown on Figure S-2 has been revised from that shown in the Draft EIS/EIR.*

Full Build Alternative. This alternative assumes about 7.6 million square feet (sq. ft.) of residential/office/retail/hotel development, including approximately 5.6 million sq. ft. 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. *The Full Build Alternative was selected by the Transbay Joint Powers Authority as the redevelopment components of the Locally Preferred Alternative.*

A review of the proposals contained in the recently released Draft Transbay Redevelopment Project Area Design for Development Vision (San Francisco Redevelopment Agency, August 2003) shows that this vision would not introduce new adverse impacts beyond those identified in the Draft EIS/EIR for the Full Build Alternative for the redevelopment component of the Project.

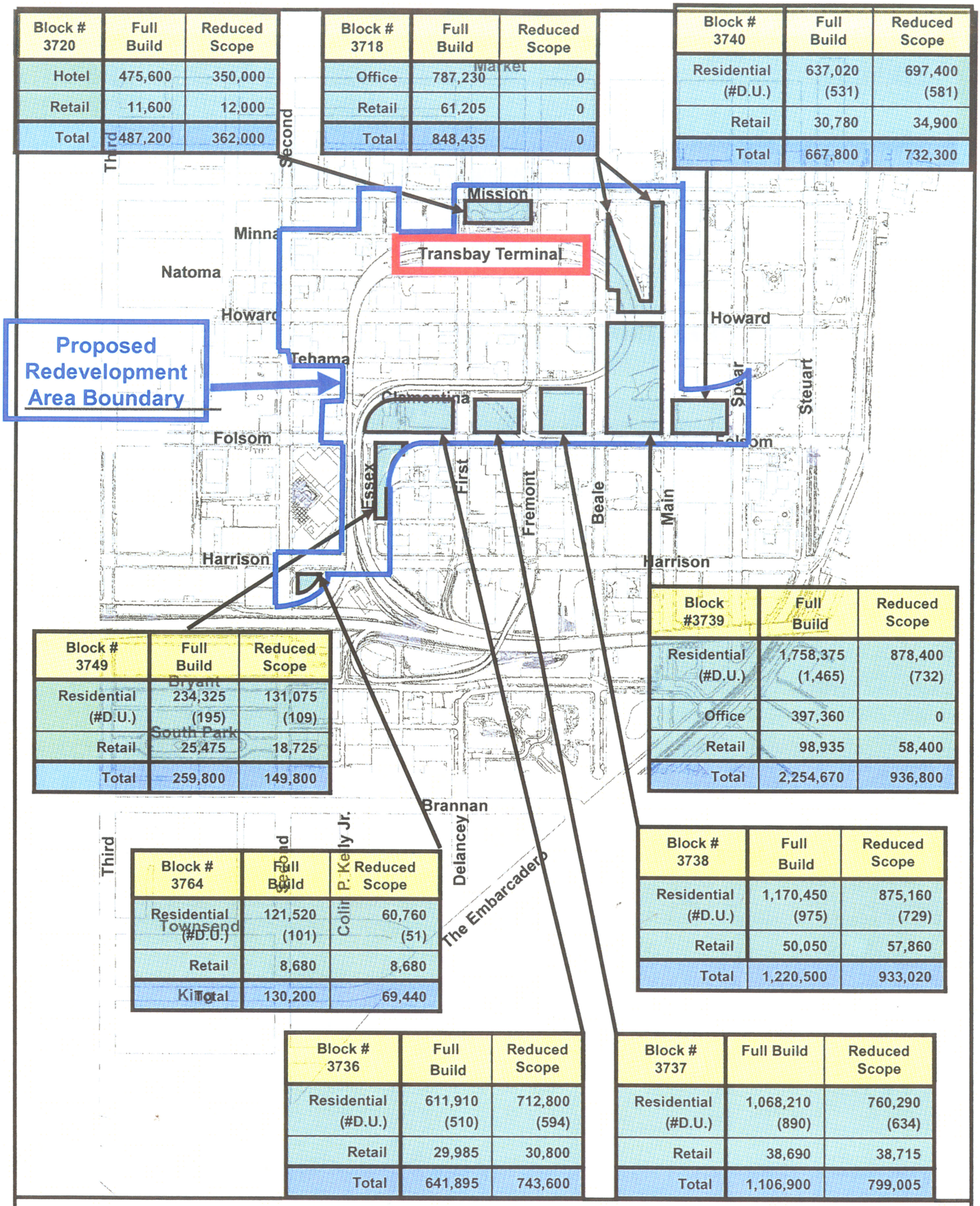


Figure S-2: Development Levels Assumed for Full Build & Reduced Scope Redevelopment Alternatives & Proposed Redevelopment Area Boundary

Reduced Scope Alternative. This alternative assumes a lesser amount of commercial and retail development and is weighted more toward housing. It assumes approximately 4.7 million sq. ft. of residential/office/retail/hotel development, including 4.1 million sq. ft. of residential (about 3,400 dwelling units), 350,000 sq. ft. of hotel development, and 260,000 sq. ft. of retail development. No office development is assumed for this Alternative.

S.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Long-term environmental impacts and proposed mitigation measures are summarized in Table S-1. Short-term construction-related impacts and proposed mitigation are summarized in Table S-2. Because the Redevelopment Component of the project would involve separate future projects, each of which requiring separate environmental review, construction impacts for the Redevelopment Component are not included in Table S-2. For a full description of impacts and mitigation, see Chapter 5.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Land Use	Opportunities for revitalization in Transbay area would be lesser than under either of Redevelopment Alternatives.	For both alternatives: Parking lot on Harrison Street between 2nd and 4th streets displaced by bus storage. Mitigation: construct a parking deck under the freeway between 3rd and 4th Streets.	For both alternatives (2nd Street Cut-and Cover Option): loss of historic buildings would result in some change in character. *More* buildings would remain under tunneling option	Full Build includes 7.6 million sq. ft. of development (5.6 million residential, 1.2 million office, 475,600 hotel, 355,400 retail). Reduced Scope includes 5.4 million sq. ft. of development (4.7 million residential, 350,000 hotel, 200,000 each office and retail).
Wind	No impact	No impact	No impact	Full Build: 9 exceedences of San Francisco Planning Code pedestrian comfort criterion and 1 hazard criterion exceedence. Reduced Scope: 8 pedestrian comfort criterion exceedences; 1 hazard criterion exceedence. Case-by-case mitigation for future redevelopment projects.
Shadow	No impact	No impact	No impact	For both alternatives: some publicly accessible, open spaces would be expected to see a diminution in sunlight during certain periods of the day and the year. No mitigation is indicated.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Displacements and Relocation	No impact	Both alternatives would take 4 buildings/displace 2 non-residential units, other currently vacant. Mitigation would be relocation in accordance with the federal and state relocation acts.	2nd-to-Main Alternative Cut-and-cover Option would displace 60 residential units (120 residents) & 48 businesses (1,084 employees). 2nd-to-Mission Alternative Cut-and-cover Option would displace 60 residential units (120 residents) & 58 businesses (1,422 employees). Second-to-Main Tunneling Option would displace would displace 23 residential units (46 residents) & 40 businesses (425 employees). Second-to-Mission Tunneling Option would displace would displace 23 residential units (46 residents) & 50 businesses (763 employees). Mitigation: see Transbay Terminal discussion.	No impact.
Socio-economics	No impact	No adverse impact. Both alternatives would increase pedestrian activity and may contribute to the intensification of land uses and the redevelopment of underutilized parcels; thereby improving the economic vitality of the area.	No adverse impact. Both alternatives would provide improved access and therefore would enhance economic activity in this area.	No adverse impact. Both alternatives are expected to provide socioeconomic benefits by intensifying the urban character of the area and resulting in a more cohesive neighborhood with a balanced mix of residential and commercial uses.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Community Facilities & Services	No impact	Estimated 2 San Francisco Police Dept. officers would patrol new Terminal. *Additional officers and compensation would be required.* Life safety plan would address fire safety issues. Short- and long-term solid waste management measures are included.	For both alternatives, a life safety plan would be developed to address fire safety issues.	Estimated up to 115 San Francisco Police Dept. officers required/ no new police facilities. Develop security plan for future projects. Additional fire suppression personnel may be required/no new facilities likely. New emergency medical staff may be required. Likely supported by user fees.
Parklands, Schools and Churches	No impact.	No adverse impacts. Current concept for the new Transbay Terminal includes an open plaza for public use.	No adverse impacts. Private schools would likely benefit from the improved transit operations.	No adverse impacts. *New parks proposed as part of redevelopment plan.* Private schools would likely benefit from new transit-oriented development.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Fiscal and Economic Impacts	No impact.	Both Alternatives: Net real estate acquisition, demolition, and relocation costs between *$34.6 and $47.0* million *(LPA – West Ramp).*	Second-to-Main Alternative Tunneling Option net real estate acquisition, demolition, and relocation costs between *$44.1 and $50.6* million *(LPA).* Second-to-Mission Alternative Cut-and-Cover Option net real estate acquisition, demolition, and relocation costs between $130.4 and $137.6 million. Second-to-Mission Alternative Tunneling Option net real estate acquisition, demolition, and relocation costs between $65.7 and $69.0 million. Short-term loss of property tax revenue may be recouped or exceeded by new development. Short-term loss of payroll tax revenue avoided if businesses relocate in San Francisco.	Transfer of publicly-owned property from State to San Francisco Redevelopment Agency and Transbay Joint Power Authority to defray portion new Transbay Terminal costs.
Air Quality	No impact.	*No violation of CAAQS for permanent bus storage facility. Current terminal design includes glass partition between bus passenger waiting and loading areas*	Both Alternatives expected to produce decrease in vehicle miles traveled (VMT) with reduction of emissions from automobiles (reactive organic gases, carbon monoxide (CO), oxides of nitrogen, particulate matter, and oxides of sulphur).	No adverse impact. Incremental increases in CO concentrations at study intersections would not exceed state or federal standards. Locating development at a transit hub expected to divert to public transit many trips that would otherwise be made by private automobile.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Noise and Vibration	No impact.	Noise impacts from proposed bus storage lot *west* of Second St. would occur *at residential uses near facility.* Mitigation: construct sound walls along south side of the bus storage lots *and along bus ramps leading from AC Transit lot. Install absorptive materials on inside of noise walls. Sound insulate residential unit on Perry Street.*	Vibration impacts would occur at 4 buildings. Mitigation: use high-resilience track fasteners or a resiliently supported tie system.	No impact.
Geology and Seismicity	No impact	Included in discussion of Caltrain Downtown Extension impacts.	**Both Alternatives – Cut-and-cover & Tunneling Options** Address potential for settlement by applying engineering principles and conventional construction techniques. Address potential liquefaction and ground deformation through: Regular track maintenance. Design & construction of foundations & shoring systems. Reinforce/stabilize soils, or rapid repair contingency plans. Design for maximum credible earthquake; use seismically resistant building structures. Pile supports for cut-and-cover portions, 4th & Townsend station.	Apply standard design and construction techniques for area. See Caltrain Extension discussion.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Geology Seismicity			**Both Alternatives – Tunneling Option** Due to fractured rock formations, use "Stacked Drift" and "Spiling" to prevent tunnel collapse.	
Water Resources	No Impact	No Impact	No Impact	No Impact
Floodplain	No Impact	No Impact	No Impact	No Impact
Utilities	No impact	Included in discussion of Caltrain Downtown Extension alternatives.	Relocation of existing underground utilities due to cut-and-cover excavation. Mitigation: coordinate with utility providers; avoid, relocate, and/or support in place utilities as necessary. Substantially reduced impacts from tunneling Option.	New development to connect to existing utility systems.
Electric and Magnetic Fields (EMF)	No impact	Included in discussion of Caltrain Downtown Extension alternatives.	EMF intensities and exposures are low. No health risks indicated.	No impact

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Historic and Cultural Resources	No Impact	Archaeological resource impacts included in Caltrain Downtown Extension discussion. Demolition and removal of the Transbay Terminal (*on the* National Register of Historic Places), as well as the existing loop ramp (contributing element to the Bay Bridge). Mitigation described under Caltrain Downtown Extension.	Previously unidentified archaeological sites may exist, and could be affected by any Alternative. Mitigation: Archaeological Research Design and Treatment Plan. Cut-and-cover Option (Both Alternatives) would require demolition of 13 buildings that contribute to historic districts. Mitigation measures to be set forth in a Memorandum of Agreement per Section 106 of National Historic Preservation Act. Tunneling option (Both Alternatives) would require demolition of 3 buildings that are *either individually eligible for NRHP and* contribute to historic districts. *Demolition would isolate 3 buildings in historic district.* Mitigation measures set forth in a Memorandum of Agreement (MOA) per Section 106 of National Historic Preservation Act.	No Impact
Hazardous Materials	No Impact	No Impact	Construct and operate fueling facility to comply with local, state and Federal regulations; handle and store fuels and solvents per California OSHA and local standards for fire protection and prevention.	No Impact

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Visual/ Aesthetics	Continued presence of existing features with low visual value, including surface parking lots, and in some cases, deteriorated buildings.	No adverse impact. Bus ramps to the Bay Bridge would occupy less area than existing ramps, and would be split, breaking up the mass of the ramps, enhancing views. New ramp decks would be less visually intrusive than existing. For West Ramp Alternative, the south and east portions of the existing ramp network would be demolished, opening up views outside of the Transbay Area.	Trench with concrete retaining walls approximately 30 feet deep south of Townsend St. and west of 5th St. Cut-and-cover construction between 5th Street and the Transbay Terminal includes demolition of all existing buildings above the alternative alignments. It is anticipated that new buildings would be constructed, with height and bulk similar to those demolished.	*Under either alternative,* Folsom St. building heights would be taller than existing. Provisions for development would help protect views, preserve open space, *and* enhance the pedestrian environment. *Under the Full Build Alternative, b*uildings may be broader and shorter, with setbacks preserved. *Under the Reduced Scope Alternative, buildings would be* taller and more slender preserving more of the existing views.
Safety and Security	No Impact	Security at Terminal responsibility of Transbay Terminal Joint Powers Authority.	Security at the Caltrain stations provided by the JPB via its contract with Amtrak. Security would increase over present levels commensurate with the increases in station activity.	Safety and security provided by San Francisco Police and Fire Departments.
Energy	No Impact	Included in Caltrain Downtown Extension discussion.	No adverse impact. Overall, Terminal and Train Extension would reduce the consumption of energy by diverting auto travel to rail and bus.	Redevelopment would require provision of energy from then current providers.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Transit Operations	10,000 passenger Transbay terminal capacity 32 bus bays. On-site bus storage	**For West Ramp Alternative**: Increase terminal capacity to 35,000 passengers. *48* bus bays provided. Off-site bus storage. **For Full Loop Ramp Alternative:** Increase terminal capacity to *35,000* passengers. Provide 51 bus bays. Maintain *some* on-site bus storage *and use Off-site-bus storage*.	**Either Alternative would** Increase linked transit trips in the corridor in 2020 by 10,000/day. Result in daily travel time savings of 7,200 person hours. Reduce VMT in Caltrain corridor by 260,000. Reduce BART San Mateo County entries/exits, but increase BART-Caltrain transfers in San Francisco. Reduce Muni and Samtrans service ($4 million annual savings) Increase transfers between Caltrain and other transit service.	Either Alternative would provide high-density development (business and residential) near major multi-modal transit facility to encourage increased transit usage and defray portion of Transbay Terminal costs. Less transit-oriented development under Reduced Scope Alternative.
Traffic Impacts	No Impact	All project components included in the Redevelopment impact discussion.	All project components included in the Redevelopment impact discussion.	7 intersections with adverse traffic impacts (significant under City and County of San Francisco guidelines) Mitigation: The City may request developers to contribute to the new Integrated Transportation Management System (ITMS) program.

Table S-1: Summary of Long-term Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT		
		TRANSBAY TERMINAL COMPONENT ALTERNATIVES	CALTRAIN DOWNTOWN EXTENSION COMPONENT ALTERNATIVES	REDEVELOPMENT COMPONENT ALTERNATIVES
Parking	No Impact	All project components included in the Redevelopment discussion.	All project components included in the Redevelopment discussion.	Approximately 1,950 (14 percent of study area parking) off-street parking spaces would be eliminated, including 260 spaces within the current Transbay Terminal building. Development (business and residential) near major multi-modal transit facility expected to encourage increased transit usage with reduced parking demand.
Non-motorized Traffic	11 corners and 2 crosswalks would operate at pedestrian Level of Service F.	All project components included in the Caltrain Downtown Extension impact discussion.	11 corners and 2 crosswalks would operate at pedestrian Level of Service F. Although not required, pedestrian mitigation measures are suggested. A total of *232* bicycle storage spaces would be needed at the new Transbay Terminal.	All project components included in the Caltrain Downtown Extension impact discussion.

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Transit Operations	No Impact	**For the Downtown Extension 2nd Street Cut-and-Cover Option**: - Muni's Line 10 would be re-routed. - Potential re-striping of 3rd Street could affect the performance of Muni Lines 15, 30, 45 and 81X.
Vehicular Traffic	No Impact	**Transbay Terminal** construction would affect access to 4 loading docks on Minna Street. **Both Caltrain Alternatives - Cut-and-Cover Option** would require: A total of *31* trucks per hour. Block-by-block closures of 2nd St. 3rd Street would be restriped as detour with 3 northbound and 2 southbound lanes. On-street parking will be prohibited, and the bus lane will be a mixed flow lane. A left-turn lane will be added on Howard at the 3rd/Howard intersection. Temporary closure or alternative access for 21 driveways (2nd to Main Alternative), or 11 driveways (2nd to Mission Alternative). The 2nd Street Tunneling Option would reduce the number of driveways affected. **Tunneling Option for Caltrain Extension Alternatives** would require detour plans and parking removal only for the block of Second Street between Howard and Folsom Streets (Both Caltrain Extension Alternatives) and for Main Street between Howard and Harrison (Second-to-Main Alternative) or for Mission Street between Beale and The Embarcadero (for Second-to-Mission Alternative). **Contra-flow lanes to the temporary terminal** would: Eliminate 2 southbound traffic lanes & 12 curbside parking spaces on Beale Street between Howard and Folsom Streets. Reduce Folsom Street from 4 to 2 lanes between *Essex* and Main streets. 9 parking spaces would be removed. Main St. would be reduced from 3 to 2 lanes between Howard and Folsom. 48 motorcycle parking spaces & 9 automobile spaces would be removed. On-street parking spaces on Howard St. would be removed between Beale and Main. *Convert Essex northbound lanes to southbound lanes. Add a contraflow lane.*

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Parking Impacts	No Impact	**For both Downtown Extension alternatives (Cut-and-Cover Option)**, on-street parking would be temporarily removed along Townsend, 2nd, and 3rd streets. 2nd Street parking would be closed and re-opened on a block-by-block basis. Parking on 3rd Street would be removed to accommodate detour for 2nd Street traffic. Contractor would post dates and times of parking closures and openings. **Tunneling Option for both Downtown Extension Alternatives.** Parking removal and detours would be required only for 2nd and 3rd Streets only between Folsom and Howard. Contractor would post dates and times of parking closures and openings. Tunneling Option would not require temporary removal of parking on 3rd Street. One block of parking on Second Street would be required between Folsom and Howard Streets.
Pedestrians and Bicycle Traffic	No Impact	**Temporary bus terminals would have the following impacts:** Casual carpool queues on the east side of Beale Street would be temporarily relocated to the west side of Beale Street. Walk and bicycle distances to the temporary terminal would be increased by 4 blocks for most pedestrians and bicyclists.
Neighborhoods & Businesses	No Impact	Most substantial impacts would occur on **streets affected by cut-and-cover construction**. Residential uses would be subject to reduced vehicle access, increased traffic congestion, increased noise, and construction-related dust. Businesses would experience the same type of disruptions, with the greatest impact to retail establishments, which rely on visibility and walk-in traffic. **For Cut-and-Cover Options – Both Alternatives,** this includes Townsend, 2nd Street between Brannan and Streets. **For Second-to-Main Alternative**, this includes Main Street. **For Second-to-Mission Alternative**, this includes Mission Streets. For Both Alternatives Tunneling Option, this includes Second Street between Folsom and Howard. **Mitigation:** conduct outreach to affected residents and businesses; develop traffic management plan; maintain a field office and information telephone line; post informational signs; maintain sidewalks during construction where feasible; install construction decking flush with adjacent surfaces; install construction fencing.
Community Facilities & Services	No Impact	Safety & security services would be provided by San Francisco Police and other security personnel. Any impacts to emergency access due to change in traffic conditions would likely be minor and not affect emergency response times. The San Francisco Fire Department would review project plans to ensure provision of adequate life safety measures and emergency access during construction. The amount of construction debris could be adequately accommodated by existing landfills. Mitigation: construction specifications will require the use of recycled construction materials where feasible, and include specification regarding the recycling of construction and demolition debris.

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Parks, Schools, Religions Institutions	No Impact	For all alternatives/construction options: construction-related traffic delays may inconvenience persons gaining access to these facilities.
Air Quality	No Impact	**For all Alternatives and Options**: Temporary emissions of nitrogen oxides, carbon monoxide, and sulfur oxides, and dust (PM_{10}). **Mitigation** would include: Water active construction areas at least twice daily. Cover trucks hauling loose materials or require trucks to maintain 2 feet of freeboard. Pave, apply water 3 times/day, or apply soil stabilizers on unpaved roads, parking and staging areas. Sweep daily paved access roads, parking and staging areas. Sweep streets daily if visible soil material is carried onto adjacent public streets. Install sandbags or other erosion control measures. Replant vegetation as quickly as possible.
Noise & Vibration	No Impact	**For all Alternatives and Options**, noise and vibration from construction activities could intrude on nearby residents and workers. **Mitigation** would include: Construct a sound wall as necessary for construction site. Comply with San Francisco Noise Ordinance. Conduct noise and vibration monitoring. Conduct inspection and noise testing of equipment. Implement community liaison program. Include noise control requirements in construction specifications. Limit use & hours of construction high vibration-generating techniques.
Water Resources	No Impact	**For all Alternatives and Options**: Grading, tunneling, and utility excavations would increase the sediment load to storm sewers, and wind-transported soils could affect nearby surface waters. Construction dewatering would locally result in temporary lowering of the water table and could promote downward migration of contaminants. **Mitigation** would include: Manage construction spoils to minimize wind dispersion. Dewater in stages and discharge dewatered effluent to sanitary sewer. Test groundwater samples to obtain a batch discharge permit from San Francisco Public Works Department; treat effluent prior to discharge if necessary.

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures

IMPACT CATEGORY	NO-PROJECT ALTERNATIVE	PROPOSED PROJECT
Utilities	No Impact	Impacts for overall project were addressed in prior table. If necessary, disruptions to service during construction would be short-term and carefully scheduled with advance notice given to affected customers.
Electromagnetic Fields	No Impact	No Impact
Historical and Cultural Resources	No Impact	Caltrain Extension Alternatives and Options require construction easement at the southeast corner of 166-178 Townsend Street, a contributor to the significance of the Rincon Point / South Beach Historic Warehouse – Industrial District. Proposed **mitigation:** underpin the building prior to construction. For archeology: If buried cultural materials are unearthed during construction, work in the vicinity would be halted until a qualified archaeologist can assess significance. If human remains are encountered during construction, no further disturbance shall occur until the County Coroner has made the necessary findings. Long-term impacts to archaeological and historical resources are addressed in Section 5.14.
Hazardous Materials	No Impact	Potential for direct impacts from pre-existing hazardous waste at 7 sites, indirect impacts from 27 sites. Exposure to asbestos or lead could result from demolition of the Transbay Terminal, which may have asbestos containing materials (ACM) and/or lead-based paint. **Mitigation** measures would include: Conduct further site investigation and develop mitigation plan for disposal of contaminated soil and discharge of contaminated effluent. Workers who may have contact with contaminated soil or groundwater would be required to have appropriate health and safety training. A worker health and safety plan would be developed, implemented and monitored. Any ACM and/or lead-based paint in the Terminal would be identified. If necessary asbestos will be abated and lead-based paint removed prior to demolition.
Aesthetics/ Visual Impacts	No Impact	Construction equipment and supplies would be visible, and evidence of construction activity would be noticeable to area residents, employees, and visitors. **Mitigation** is not required, but the project contractor will minimize "spill over" light or glare effects on adjacent areas at night. The TJPA and JPB, through on-site field office, will make all efforts possible to minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.
Geologic Impacts	No Impact	**For both Downtown Extension Alternatives - Cut-and-Cover Option**, poor quality bedrock under Second Street from Brannan Street to Folsom Street would be addressed by special shoring techniques. **For the both Downtown Extension Alternatives Tunneling Option**, specialized tunneling techniques are recommended including "spiling" and "stacked drift."

Table S-2: Summary of Construction Impacts and Proposed Mitigation Measures		
IMPACT CATEGORY	**NO-PROJECT ALTERNATIVE**	**PROPOSED PROJECT**
Safety and Security	No Impact	To ensure safety during construction, best construction management practices would be required to be in place: Construction and staging areas would be fenced and lighted. Recognized safety practice requirements would be followed for the use of heavy equipment and the movement of construction materials. The Construction Manager would be responsible for job site safety and security. Emergency response personnel within San Francisco would be available for immediate response on an as-needed basis.

S.4 ESTIMATED CAPITAL COSTS

The Locally Preferred Alternative for the rebuilt Transbay Terminal and the underground Caltrain Extension *is* estimated to cost *$2.083 billion escalated to year of expenditure. Selection of another alternative other than the LPA would result in higher capital costs.* The Transbay Terminal component, *West Ramp Alternative,* of the Project is estimated to cost *$1,101.68 million escalated to year of expenditure. The Second-to-Main, tunneling Alternative for* the Caltrain Extension Alternative *is estimated to* cost *$971.84 million escalated to year of expenditure.*

Tables S-3 and S-4 summarize capital costs *for the Locally Preferred Alternative components of the* new Transbay Terminal and Caltrain Downtown Extension improvements, respectively. Cost estimates include net land acquisition costs and all agency costs for project oversight as well as general project contingency and reserve.

Table S-3: Transbay Terminal Capital Cost Estimate
West Ramp Alternative (LPA)
(Millions of Dollars – Year of Expenditure)

Activity	*Cost Estimate*
Operations Analysis, Preliminary Engineering, Geotechnical Engineering), Program Review/Value Engineering, Final Design & Permitting, Owner Costs	*$107.87*
Acquire Property, Design, Construct Temporary Terminals (Transit and Greyhound)	*$28.29*
Acquire Property & Demolish Buildings to Build Terminal	*$36.54*
Demolish Existing Terminal & Ramps, Construct New Terminal & Ramps	*$909.22*
Construct Permanent Off Site Bus Storage Facility	*$24.45*
TOTAL COST ESTIMATE	***$1,106.37***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for West Ramp Alternative*
- *Other qualifications and assumptions apply, including coordination with Caltrans during the retrofit of the Western Approach and bus ramp retrofit projects.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*

Source: *MTC, SMWM, Oppenheim/Lewis, Sedway Group, Parsons, 2003*

Table S-4: Capital Cost Estimate for Caltrain Downtown Extension Second-to-Main Street Tunneling Option – Locally Preferred Alternative
(Millions of Dollars – Year of Expenditure)

Activity	*Cost Estimate*
Operations Analysis, Preliminary Engineering, Geotechnical Engineering, Program Review/ Value Engineering, Final Design & Permitting, Owner Costs	*$76.83*
Acquire Property & Demolish Buildings along Extension	
Acquisition/Relocation for Train Subway	*$82.85*
Demolition	*$1.24*
Resale Proceeds	*($31.12)*
Subtotal	*$52.97*
Design and Relocate Utility Lines along Extension	*$52.90*
Construct Surface Rail & Improvements at Train Yard	*$13.37*
Construct Cut-and-Cover and Retained-Cut – Caltrain Extension	*$427.13*
Reconstruct Streets	*$7.09*
Construct Train Tunnel	*$287.70*
Construct Track & Systems Facilities	*$58.54*
TOTAL COST ESTIMATE – Caltrain Downtown Extension	***$976.53***

Notes:

- *Costs escalated to year of anticipated expenditure between 2004 and 2011.*
- *Costs are for Second-to-Main Tunneling Alternative, the Locally Preferred Alternative.*
- *Total assumes high end of 2001 real estate estimate escalated to year of expenditure.*
- *Construction costs include a 25% construction contingency, 8% for construction management, and 10% project reserve. Owner costs are factored into each category.*
- *The optional underground pedestrian connection from the train mezzanine to The Embarcadero Muni Metro/BART Station is estimated to cost $45.3 million.*
- *An additional $235 million could need to be added to the Project costs for purchase of dual mode locomotives if the Caltrain corridor is not electrified.*

Source: *Parsons, 2003*

S.5 PROJECT'S INCLUSION IN REGIONAL TRANSPORTATION PLAN

The Transbay Terminal / Caltrain Downtown Extension / Redevelopment Project is included as one of the top funding priorities in the financially constrained portion (called "Track 1") of the Regional Transit Expansion Policy (RTEP).1 The RTEP is the transit expansion element of the 2001 Regional Transportation Plan (RTP).

The 2001 RTP, including the RTEP, was adopted by the Metropolitan Transportation Commission in March 2002. The Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project is therefore included in the financially constrained 2001 RTP.

1 The Project is identified as the "Caltrain Downtown Extension/Rebuilt Transbay Terminal" in the RTEP and RTP.

The 2003 Transportation Improvement Plan (TIP) was federally approved in February 2003. The proposed Project is included in the 2003 TIP for Preliminary Engineering and design.

S.6 PROPOSED FUNDING BY SOURCE

Table S-1 presents *a funding plan for the LPA that was adopted by the TJPA Board and* described in Chapter 2 *of this Final EIS/EIR.* These funding options are based on the funding plan developed jointly by the City and County of San Francisco, the San Francisco County Transportation Authority, the JPB, and MTC as part of MTC Resolution 3434. The financial plan in this *Final EIS/EIR* is based on financial projections and governmental actions that are not finalized.

Table S-1 identifies revenue sources to fund the expected financing cost of the project. The other funding options have also been developed using Resolution 3434 funding plan as the point of departure, with adjustments as necessary within the framework of project eligibility and assumed overall availability of the different funding sources.

All improvements to the Transbay Terminal/Extension project could be classified as Transportation Improvements under Title 23 and are therefore eligible for a subordinated loan from the federal government as a part of USDOT's TIFIA program, which was authorized in TEA-21. This program may provide various forms of credit support for large transportation projects for up to one-third of a project's total cost. Revenues that could be pledged to such a loan include:

- Tolls from the San Francisco Bay Bridge,
- Lease income on retail space within the terminal,
- Sale or lease of properties transferred to the Transbay Joint Powers Authority, and
- Tax Increment Revenues on project areas created by the San Francisco Redevelopment Agency.
- *Passenger facility fees.*

While additional consideration could be given to the relative contribution of various funding sources to the project, to avoid speculation regarding the funding sources to be used and the viability of the financially constrained plan, the variations on the funding plan shown in Table S-1 are based on existing funding sources. There are, however, prospects for additional funding from new sources.

Table S-5: Project Estimated Capital Costs and Funding Sources
(Millions of YOE Dollars)

Transbay Terminal	**West Ramp**
Caltrain Extension Alternative	**Second-to-Main Tunnel Option**
Capital Costs and TIFIA Debt Service	
Total Capital	$2,082.9
Debt Service	$1,857.2
Total Cost	$3,940.1
Funding Source	
Local/State	
Regional Measure 1	$53.0
RTIP [1]	$23.0
San Mateo Sales Tax [2]	$27.0
San Francisco Sales Tax Reauthorization [3]	$295.0
AB1171 [*4*]	$150.0
Land Sales [*5*]	$287.9
Tax Increment [*6*]	$534.2
Net Operating Revenues [*7*]	$140.2
Bridge Toll Increase (SB 916) [*8*]	$150.0
High Speed Rail Bonds [*9*]	$475.0
Other [*10*]	$*182.5*
PFC [*11*]	$873.0
Leveraged Lease Transaction [*12*]	$50.2
Federal	
TIFIA Loan	$689.7
Section 1601 [*13*]	$9.4
Total Funds	**$3,940.1**

Notes:

[1] Per MTC's RTP, which assumes $23 million in RTIP (Regional Transportation Improvement Program), STP (Surface Transportation Program), and CMAQ (Congestion Mitigation and Air Quality Improvement Program) funds.

[2] San Mateo County contribution (per MTC's RTP).

[3] San Francisco County contribution per Expenditure Plan for the Reauthorization of the Local Sales Tax for Transportation, approved June 17, 2003, escalated to YOE $s. Approved by voters November 2003.

[*4*] Per MTC's RTP. New Source of discretionary funds to MTC, pursuant to State law passed in October 2001 to complete the seismic retrofit of Bay Area bridges and related projects, consistent with Regional Measure 1.

[*5*] Per *valuation by CB Richard Ellis for San Francisco Redevelopment Agency, August 2003, escalated to year of expenditure.*

[*6*] Tax Increment amounts from Seifel Consulting, *August 8, 2003 for San Francisco Redevelopment Agency.*

[*7*] Per Jones, Lang LaSalle and Nancy Whelan Consulting, *September 2003*. Includes $3 million in annual BATA bridge toll operating support per MTC Resolution 3434 *and SB 916 (proposed).*

[8] Regional Measure 2, which includes $150 million for the Project, was passed by the voters in Bay Area counties on March 2, 2004.

[9] Per SB 1856, funding for the Caltrain Downtown Extension may be provided as a part of the High Speed Rail bond initiative. The bond may be approved by the voters in November 2004.

[*10*] Other includes potential funding from the following sources: Proposition 42, *federal earmarks* and *additional local sales tax.*

[*11*] A Passenger Facility Charge (PFC) is assumed for Caltrain, AC Transit *and High Speed Rail* passengers. The PCF would be *$0.75 for Caltrain passengers, $0.25 for AC Transit passengers and $3 for High Speed Rail passengers.*

[*12*] The Terminal Facility's value is assumed to be $1.003 or $1.163 billion and the net benefit rate to be 5%. Leveraged lease transactions are encouraged by the FTA as innovative financing mechanism.

[*13*] Per MTC's RTP, which assumes $9.37 million in Section 1601 design grant.

Sources: San Francisco County Transportation Authority, Seifel Consulting, Jones, Lang LaSalle, Openheim/Lewis, Peninsula Corridor Joint Powers Board, Sedway Group, Nancy Whelan Consulting, Parsons Transportation Group, 2001, 2002, *2003, and 2004.*

S.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The West Ramp Transbay Terminal, Second-to-Main, Tunneling Option, Full Build is the environmentally superior alternative in that it:

- Fully meets the purpose and need for the project,
- Provides the most efficient transit service within the new terminal,
- Provides better views and opportunities for coordinated development in downtown San Francisco with fewer adverse land use impacts,
- Requires the least amount of property acquisition, including the fewest historic structures, therefore involving the fewest business and residential relocations,
- Provides dense transit oriented development near a multi-modal transit facility to help defray the costs (via tax-increment financing) for a multi-modal transit facility, thus encouraging increased transit use,
- Has the lowest level of construction impacts on properties along Second and Third Streets.

This alternative was selected by the Transbay Joint Powers Authority as the Locally Preferred Alternative.

S.8 ISSUES TO BE RESOLVED

Resolution is required regarding the ultimate disposition of California high-speed rail voter initiative that is pending on a future election ballot, as well as the future implementation of the Caltrain electrification program.