For Caltrain, which would be electrified at 25kV, 60 Hz AC, EMF field strengths near substations, overhead power systems, and on-board passenger vehicles would likely be less, or at least no greater, than on the BART system. In studies sponsored by the Federal Railroad Administration, measurements of average magnetic fields for overhead electrically-powered rail vehicles ranged from 400 mG at head level to 1500 mG at floor level (Safety of High speed Guided Ground Transportation Systems, EMF Exposure Environments Summary Report, Federal Railroad Administration, 1993). The duration of exposures to EMFs for Caltrain passengers and individuals passing through or by commuter rail facilities would be relatively brief in comparison to their daily exposure from office equipment, household appliances, cell phones, and other electronic equipment.

Furthermore, because the rail extension itself would be almost entirely in tunnel, the potential for non-users and businesses/residences at ground level to experience EMF exposures would be minimal. At present, the evidence is that any increased health risks from EMF exposures attributable to the project would be very small.

The potential for EMI effects from the Terminal/Extension Project can be minimized by ensuring that all electronic equipment is operated with a good electrical ground and that proper shielding is provided for electronic system cords, cables, and peripherals. Installing specialized components, such as filter, capacitors and inductors, can also reduce EMI susceptibility of certain systems. No additional restrictions or protective measures for low-intensity EMF exposures attributable to the project would be warranted.

Because EMF intensities and exposures from Caltrain operations are below thresholds indicating potential health risks, no mitigation measures are proposed.

5.14 HISTORIC AND CULTURAL RESOURCES

The regulatory framework governing treatment of historic and cultural resources is detailed in Section 4.16. This EIS/EIR affords the State Historic Preservation Officer (SHPO) early notice, pursuant to California PRC 5024.5(a), of a project potentially affecting resources listed in, or eligible for, the California Register of Historic Resources. *A summary of effects to historic and cultural resources is* presented herein. *A* Finding of Effects report *was* prepared and submitted to the SHPO for concurrence.

There are no impacts to historic and cultural resources as a result of the No-Project Alternative. The remainder of this section focuses on impacts of the three components of the proposed project.

5.14.1 Archaeological Resources: Impacts

5.14.1.1 Prehistoric Archaeology

Although five prehistoric archaeological sites have been recorded within approximately one mile of the area of potential effects (APE), no known prehistoric archaeological sites are documented within the APE. Unidentified sites may exist, however, and could be affected by the implementation of any project alternative. Appropriate procedures for the treatment of such finds are identified in the mitigation section below.

5.14.1.2 Historic Archaeology

Nineteen known or potential historic-era archaeological sites have been identified within or immediately adjacent to the APE.

The entire APE is covered by buildings or pavement, as well as great depths of artificial fill, and it is not possible to determine the locations of archaeological sites that may be affected by construction without extensive fieldwork. An archaeological Research Design and Treatment Plan, as described in the mitigation section, will be prepared once detailed construction plans for the proposed project are approved. This plan will govern testing, evaluation, and assessment of impacts to any such resources, and describe appropriate treatment strategies.

Areas of high historic archaeological sensitivity include the whole Transbay Terminal Redevelopment Area, the Second-to-Main Alternative alignment, and the Second-to-Mission Alternative alignment – particularly those portions that are not within areas that have long been used as roadways. Portions of the alternative alignments that pass under existing/long-standing roadways – for example Second and Townsend Streets – are generally less sensitive than areas where development has been present for many years.

5.14.2 Archaeological Resources Mitigation

Mitigation measures for archaeological, *historic archaeological* and historic architectural resources *are* set forth in a Memorandum of Agreement (MOA)*, included as Appendix G to Volume I of this Final EIS/EIR. Signatory parties to the MOA will be FTA and SHPO. Invited concurring parties include the Transbay Joint Powers Authority (TJPA), the City and County of San Francisco, the Peninsula Corridor Joint Powers Board (JPB), and Caltrans. For mitigation measures related to historic architectural resources, please see Section 5.14.3.5.*

The MOA include*s* an Archaeological Research Design and Treatment Plan to avoid and mitigate potential impacts to archaeological resources. The plan provide*s* for organizing the various phases of archaeological work – identification, evaluation, and data recovery – into a single pre-approved plan covering the treatment of all on-site archaeological properties, and help

to avoid lengthy interruptions of construction activities. The Plan cover*s* any additional archaeological research investigation standards and procedures, field excavation strategies, monitoring, artifact handling and analysis procedures, treatment of human remains, and ownership and curation of materials. Requirements for final reporting of all field methods, results, and findings *are* also specified. Finally, the Plan ensure*s* that all federal and State laws and regulations regarding the treatment of Native American cultural materials and Native American burials *will* be adhered to, including appropriate notification of the California Native American Heritage Commission and local Native American organizations regarding findings of Native American artifacts.[21]

The Plan *will* be developed with the coordination and concurrence of FTA, SHPO, and the City and County of San Francisco's Environmental Review Officer (ERO) in accordance with ACHP and the Secretary of the Interior's standards and guidelines (36 CFR 800.9 (c) (1)). The various phases of work *will* be performed under the supervision of professional archaeologists who meet or exceed the Secretary of the Interior's qualification standards.

Copies of the final reports on these archaeological investigations *will* be provided to the SHPO, the Historical Resources Information System, the Northwest Information Center of California Archaeological Inventory, the San Francisco Planning Department, and the San Francisco Public Library.

If human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.88.

Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of a qualified archeological consultant having expertise in California prehistoric and urban historical archeology. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. TJPA or its consultants will carry out, in consultation with the Caltrain Joint Powers Board (JPB) and the City and County of San Francisco (CCSF), the following activities regarding mitigation of potential archaeological resource impacts.

TJPA or its consultants will carry out, in consultation with the JPB and City and County of San Francisco, the following activities regarding mitigation of potential archaeological resource impacts.

[21] Reference *will* be made to the Archaeological Research Design/Treatment Plan for the Embarcadero Freeway Replacement/Terminal Separator Structure Project, Holman & Associates, 1996, which covers a similar geographic area and deals with many of the same potential archaeological resources as the proposed project.

A. Research Design/Treatment plan development*. The TJPA will have a comprehensive Research Design/Treatment Plan for archeological resources prepared by a qualified consultant. The Research Design/Treatment Plan will be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the ACHP publication, Treatment of Archaeological Properties: A Handbook (ACHP 1980), and SHPO guidelines.*

B. Research Design/Treatment Plan Specifics. *The Research Design/Treatment Plan will include, at a minimum:*

1. ***An Historical Context for the Area of Potential Effects for Archaeological Resources (APEAR).*** *The Historical Context will present prehistoric and historic-era overviews of the project area. The Historical Context should incorporate data developed in the Archaeological Research Design and Treatment Plan for SF-480 Terminal Separation Rebuild (Praetzellis and Praetzellis, 1993) and the San Francisco-Oakland Bay Bridge, West Approach Replacement: Archaeological Research Design and Treatment Plan (Ziesing, 2000) for the portions of the APEAR within the scope of these documents.*

2. ***A Research Context for the APEAR.*** *The Research Context will identify expected archeological property types and develop research themes, questions, and data needs. To the extent applicable to expected property types, the Research Context will incorporate the research framework developed in the Revised Historical Archaeology Research Design for the Central Freeway Replacement Project (Thad M. Van Bueren, Mary Praetzellis, Adrian Praetzellis, Frank Lortie, Brian Ramos, Meg Scantlebury and Judy D. Tordoff).*

3. ***Testing/Data Recovery Plan*** *that will specify, at minimum:*

   - *The properties or portion of properties where evaluation and/or data recovery are to be carried out;*
   - *The properties, if any, that will be affected by the Undertaking but for which no data recovery will be carried out;*
   - *The manner in which inadvertent discoveries will be treated;*
   - *The methods to be used for data recovery, with an explanation of their relevance to the research questions/themes;*
   - *The methods to be used in cataloguing, analysis, data management, and dissemination of data;*

- *The proposed disposition of recovered materials and records, including discard and deaccession;*
- *The manner in which any human remains and associated/unassociated funerary objects, including those of Native American or Native Hawaiian origin, will be treated;*
- *The security procedures to be undertaken to protect the archeological testing/data recovery site from vandalism, theft, or unintended damage;*
- *The final report summarizing, describing and interpreting the results of testing/data recovery;*
- *The measures to be undertaken to ensure curation of recovered data determined to have appropriate research potential.*
- *Research Design/Treatment Plan Review*

TJPA will submit the Research Design/Treatment Plan to all parties signing the MOA for a thirty (30) calendar day review following receipt of the Plan. If any party fails to submit their comments within thirty (30) days, TJPA may assume that party's concurrence with the Research Design/Treatment Plan. TJPA will take any review comments into account, revise the Research Design/Treatment Plan accordingly, and will notify any party whose comments were not incorporated into the Plan.

C. Notification. *TJPA will promptly notify the SHPO, FTA, and Caltrans, as appropriate, if any properties are found that meet the conditions for eligibility for inclusion in the NRHP.*

D. Report Standards and Dissemination. *TJPA will ensure that all reports from implementation of the Research Design/Treatment Plan meet contemporary professional standards and the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37). Copies of all final reports will be provided to the SHPO, the Northwest Information Center at Sonoma State University, the Federal Transit Administration, Caltrans, and the Environmental Review Officer of the CCSF.*

E. Confidentiality. *Historic properties covered by this Agreement are subject to the provisions of § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archeological site information and, having so acknowledged, will ensure that all actions and documentation are consistent with § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code.*

F. Annual Report. *TJPA will prepare an annual report describing the status of its efforts. The annual report will be prepared following the end of the each fiscal year (July 1 to June 30) until TJPA determines that the applicable mitigation measures regarding archaeology have been completed.*

5.14.3 Historic Architectural Resources: Impacts

Historic architectural resources identified within the project APE consist of individual buildings and structures, some of which are contributors to two districts that are eligible or appear to be eligible for the National Register of Historic Places (NRHP). These are the Rincon Point / South Beach Historic Warehouse-Industrial District and the Second and Howard Streets Historic District. Both NRHP districts have boundaries somewhat overlapping two local historic districts designated by the City of San Francisco, the South End Historic District, and the New Montgomery – Second Street Conservation District. *Properties listed on* or determined eligible for listing on the NRHP, either individually or as contributors to an historic district, are identified in Table 4.16-1. The NRHP and City of San Francisco historic districts are described in Sections 4.16.6.3 through 4.16.6.7.

Impacts to historical architectural resources are reported by major project component; impacts to *individual properties* are presented first, followed by impacts to *contributing elements* of the NRHP and local historic districts.

5.14.3.1 Impacts of Transbay Terminal Alternatives

Either Transbay Terminal alternative would require demolition and removal of the existing Transbay Terminal, a property that is listed on the National Register as a contributing element to the San Francisco-Oakland Bay Bridge. The bridge is a multi-component property that was listed on the NRHP on August 13, 2001. Both Transbay Terminal alternatives would also require demolition and removal of the existing Terminal Loop Ramp structures, which are also contributing elements of the Bay Bridge property. The demolition of these structures would constitute an adverse effect under Section 106 and under the California Environmental Quality Act (CEQA).

The San Francisco-Oakland Bay Bridge East Span Seismic Safety Project, currently under construction, will eliminate the East Span, one of the major elements included in the NRHP listing for the entire Bridge. After completion of both the Transbay Terminal/Caltrain Downtown Extension/ Redevelopment Project, and the East Span Seismic Project (a construction project already underway), two major elements of the current bridge – namely the West Span bridge structures and the Yerba Buena Tunnel – would remain. It is anticipated that these remaining structures and buildings would continue to be eligible for the NRHP.[22] This is based upon the definition of "historic district" and "historic structure" presented in National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (1990 and 2002). "A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development," and "the term 'structure' is used to distinguish from buildings those functional construction made

22 Letter from Meta Bunse, JRP Consulting to David Mansen, Parsons, March 12, 2004.

usually for purposes other than creating human shelter." Certainly they are important for their technological and engineering achievements. If reevaluation of the bridge property indicates that it would be more appropriate for the remaining structures to be listed on the National Register as individual properties, it is anticipate that these remaining structures would continue to appear to be eligible and would merit individual listing. The MOA (Appendix G of this Final EIS/EIR) includes a provision (III.E) for the revaluation of the remaining bridge components following completion of the Project.

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)

5.14.3.2 Impacts of Caltrain Downtown Extension Alternatives

Either Caltrain Downtown Extension alternative would result in the acquisition and demolition of buildings that *are individually eligible or that are contributing elements of* a district that is eligible for listing in the NRHP.

The Cut-and-Cover Option for either the Second-to-Main Alternative or the Second-to-Mission Alternative would result in the demolition of 13 historic buildings, 10 of which are contributors to the Rincon Point / South Beach Historic Warehouse-Industrial District, and three of which are contributors to the Second and Howard Streets Historic District. These demolitions would constitute *an adverse effect under Section 106 and under CEQA. The demolition of the three buildings in the Second and Howard Streets Historic District would also result in an adverse effect by isolating three other contributory buildings from the remainder of the district.*

A construction easement through the corner of the *parcel* occupied by a fourteenth *contributing* property of the Rincon Point/South Beach Historic Warehouse-Industrial District would also be required. The construction easement would be necessary to construct the Caltrain subway beneath the southeast corner of the building at 166-78 Townsend Street. The building would be underpinned during construction and maintained in place. There would be no adverse effect to this building from the construction easement.

The Tunneling Option for either the Second-to-Main or Second-to-Mission Alternative would substantially reduce the impacts to historic resources. This Option would result in the demolition of three historic buildings that *are contributing elements of* the Second and Howard Streets Historic District but would *not have an adverse effect on* the buildings within the Rincon Point / South Beach Historic District. The buildings that would be demolished under the Tunneling Option are the same three contributors to the Second and Howard Streets District that would be demolished under the Cut-and-Cover Option. The demolitions would constitute *an adverse effect under Section 106 and under CEQA. The demolition of these three buildings would also result in an adverse effect by isolating three other contributory buildings from the remainder of the district.*

A construction easement through the southeast corner of the *parcel* occupied by the building at 166-78 Townsend Street, which is a *contributing element* to the Rincon Point/South Beach Historic Warehouse-Industrial District, would also be required, *as for the Cut-And-Cover Option*. There would be no adverse effect to this building from the construction easement. The building would be underpinned during construction and maintained in place.

5.14.3.3 Redevelopment Components

Neither of the redevelopment component alternatives (Full Build or Reduced Scope) would result in an adverse effect to historic properties.

5.14.3.4 Affected Properties

Brief descriptions of the historic properties that would be affected by the project are provided in the following paragraphs and accompanying figures. *Individually listed NRHP properties* are described first, followed by the *districts and their contributing elements*. The effects on the NRHP and locally designated districts are then discussed. The NRHP and City of San Francisco historic districts are described in detail in Sections 4.16.6.3 through 4.16.6.7.

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. 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 is a contributing element of the San Francisco-Oakland Bay Bridge property, which was listed on the NRHP on August 13, 2001.* The present owner of the Transbay Terminal is Caltrans. Its current use is for commuter and inter- and intra-regional bus transportation.

Transbay Terminal Loop Ramp. The Transbay Terminal loop ramp structure constitutes two of the six approach spans that remain from the original SFOBB project. *The Terminal Loop ramp structures are contributing elements of the San Francisco-Oakland Bay Bridge property, which was listed on the NRHP on August 13, 2001.* Originally designed to carry trolley trains from the bridge to the terminal, the ramp's tracks were removed as 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.

San Francisco – Oakland Bay Bridge. The San Francisco – Oakland Bay Bridge (SFOBB) 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 suuspension spans on the west (San Francisco) side. The outstanding engineering feature is the center pier between the two suspension spans of the western half of the bridge. The tunnel connection between the east and west spans on Yerba Buena Island was the first double-decked highway tunnel in the United States. Notable individuals connected wth 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 San Francisco-Oakland Bay Bridge is a multi-component property that was listed on the NRHP on August 13, 2001.*

Rincon Point / South Beach Historic Warehouse-Industrial District. The Rincon Point / South Beach Historic Warehouse-Industrial District *appears to be eligible for the NRHP*. 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 *historic architectural* resources within the project vicinity. The district was identifed as appearing eligible for the NRHP in 1983, based on research completed by Caltrans historians for the I-280 Transfer Concept Project. 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 Department of City Planning (DCP) proposed the "South End Historic District," and the City Planning Commission designated this district in February 1990 under Article 10, Historic Preservation. The South End Historic District had nearly identical boundaries and was nearly the same size as the Rincon Point District identified by Caltrans; it is described in detail in Section 4.16.6,7. The National Register status of *these resources*, whether recognized as part of the South End District or Rincon Point / South Beach District is the *same: they appear to be eligible for listing.* For purposes of CEQA, these properties are historic resources.

Second and Howard Streets Historic District. Ann Bloomfield prepared a National Register of Historic Places nomination for the Second and Howard Streets District in 1998. This small district consists of 19 contributing *elements* and three non-contributors (two heavily-altered buildings and a vacant lot) with addresses on Second, Howard, Natoma and New 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 Historic District is partially surrounded by a locally recognized district known as the "New Montgomery – Second Street Conservation District." This district is described in detail in Section 4.16.6.5. 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." For purposes of CEQA, these properties are historic resources.

The following are individually eligible properties, or are contributing elements of an historic district that would be adversely affected under one or both of the project options.

130 Townsend Street

A one-story warehouse of brick masonry construction, this property lies within the boundaries of the Rincon Point / South Beach Historic Warehouse - Industrial District and is a contributor to the district. The Caltrans 1983 survey dated this building ca. 1910, but information obtained for the 1996 survey from the San Francisco Architectural Heritage (SFAH) indicated that the building appears to have been built in 1895 or 1896 and was first occupied by Stevens, Arnold and Co., agents for Inglenook Vineyard of Napa County. By 1906, the property was owned by Gustave Niebaum of the Alaska Commercial Company. Under the name B. Arnhold Company, the original tenants remained until the 1920s.

136 Townsend Street

This two-story and clerestory industrial building was dated 1902 by the Caltrans 1983 survey, but information obtained from SFAH for the 1996 survey suggested that it was designed in 1913 by engineer R.V. Woods for L.A. Norris of the Clinton Fireproofing Company and was originally used for wire and iron storage. The building was twice its current width, but in 1922, the southern half was replaced with the more substantial structure at 144 Townsend Street for the same company. It lies within the Rincon Point / South Beach Historic Warehouse Industrial District, to which it is a contributing element.

144-46 Townsend Street

This three-story reinforced concrete warehouse with decorated façade was designed and built in 1922 by architect H.C. Bauman for the Clinton Construction Company (L.A. Norris, owner); it was originally used for storage of wholesale wire. This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district.

148-154 Townsend Street

This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. A three-story, reinforced concrete warehouse in the Mediterranean style, it was designed by H.C. Bauman and Edward Jose in 1922 for the Winchester-Simmons Company, wholesale dealers in hardware, guns, and ammunition. By 1950, the building was occupied by Western Asbestos Company.

162-164 Townsend Street

This building was designed by H.C. Bauman for the L.A. Norris Company and was built by the Clinton Construction Company in 1919. By 1929, it was occupied by the Central Warehouse and Drayage Company. Work being done on the building during the 1996 survey included removal of the sign for West Coast Ship Chandlers at the front. This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district.

166-168 Townsend Street

This distinctive building was dated 1910 by Caltrans in 1983, but information obtained from SFAH for the 1996 survey suggests that it was designed by Percy and Hamilton in 1888 for the California Electric Light Company, which may have been the first public electric power company in the state; it first generated electricity for the public in 1879.

On August 1, 1888, the company was awarded the contract for lighting outlying districts of San Francisco, and this building may have been built to address the need for extra capacity. By 1894, ownership was held by the Edison Light & Power Company and by 1901, it had passed to the San Francisco Gas and Electric Company, which made it their Arc Light Plant Station B. By December of 1905, this building was no longer in operation for electricity service, probably because a new plant was built across Townsend Street.

From 1908 to 1927, the building was used for hay and grain storage and as a feed mill (W.W. Robinson Co., 1908-1910 and Producers Hay Co., 1913-1927). The high stack at the rear of the building was removed in 1995, following damage in the 1989 Loma Prieta earthquake. This alteration would affect its potential for individual eligibility, but the rest of the large building remains, and it remains a contributor to the Rincon Point/South Beach Historic Warehouse District.

640 Second Street

Another Bauman design for L.A. Norris, this building lies within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. It was built in 1925-26 and was first occupied by the United States Radiator Corporation.

650 Second Street

This building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. A six-story reinforced concrete office and warehouse with a Spanish tiled parapet, this building was designed in 1922 by Baumann (sic) and Jose, architects for J. Sheldon Potter, capitalist. It was occupied by B.F. Goodrich Rubber Company until 1934, when it was altered inside for use as a bottling plant.

670-680 Second Street

This building was designed in 1913 by Leland S. Rosner, engineer, for Moore and Scott Iron Works as a castings, forging, machine shop, and boiler works. The company was an important ship builder during World War I under the name, Moore Shipbuilding & Dock Company. The building is within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district.

301-321 Brannan Street

This building was determined individually eligible for the NRHP by Caltrans in 1982. It also lies within the Rincon Point / South Beach Historic Warehouse Industrial District and is a contributing element to the district. It was designed by architect Lewis P. Hobart and built in 1909 as the west coast headquarters of an eastern pipe and plumbing supply company, the Crane Company.

165-173 Second Street

This six-story, brick clad Electric Building was designed in 1906 by John Cotter Pelton. In 1910, it was being used by the Westinghouse Electric Company. It lies within the Second and Howard Historic District and is a contributing element to the district.

191-197 Second Street

This four-story, brick clad building was designed in 1907 by Ross & Burgen. In 1910, it was being used for wholesaling by the American Chicle Company, Badische Company (chemicals) and Jesse Moore Hunt Company (liquor wholesaling). It lies within the Second and Howard Historic District and is a contributing element to the district.

580-586 Howard Street

The first building to go up in the Second and Howard Historic District, this four-story, brick clad building was designed in 1906 by A. W. Smith and constructed by the R.W. Kinney Company for its own business, plumbing supplies. The building permit was approved July 5, 1906, only two and a half months after the 1906 earthquake and fire. This use may have sparked the whole District's specialization in construction services. In 1910 the building was still being used for plumbing supplies wholesaling as well as printing. It lies within the Second and Howard Historic District and is a contributing element to the district.

Project effects on these individually eligible properties and the districts to which they are contributing elements are summarized in Table 5.14-1 and described in the following paragraphs.

New Montgomery-Second Street Conservation District (City of San Francisco) and Second and Howard Streets District (National Register of Historic Places). Many of the buildings in this area are located within two overlapping districts of historic buildings, one designated by the City of San Francisco, the New Montgomery-Second Street Conservation District, hereafter "Conservation District," and the other certified by the Keeper of the National Register, the Second and Howard Streets District, hereafter "National Register District." Both proposed Caltrain Downtown Extension alternatives (Second-to-Main and Second-to-Mission) would involve demolition of three buildings located near the intersection of Second and Howard Streets in San Francisco. These impacts would occur under either the Cut-and-Cover Option or the Tunneling Option. *The Tunneling Option has been identified for this component of the Locally Preferred Alternative.*

The three buildings within the Historic Architectural APE for this project that would be demolished under the Caltrain Downtown Extension alternatives are listed below and shown in the following photographs:

580-*586* Howard Street,
APN: *3721-092 through 3721-106*

***165-173* Second Street,**
APN: 3721-025

191 Second Street,
APN: 3721-022

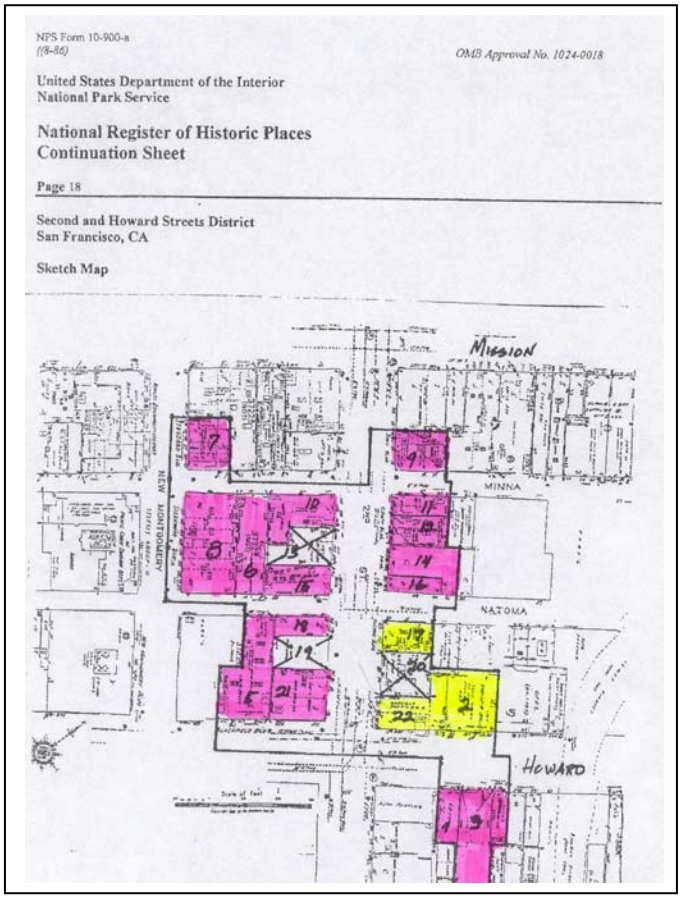
View of buildings at corner of Second and Howard

The two Second Street buildings are located within the Conservation District. All three buildings are contributing elements of the National Register District. The demolition of these buildings would be an adverse effect to each individual building and to the National Register District to which they contribute. Because the term "adverse effect" applies only to *properties* that are eligible for and/or that are listed on the National Register, there is technically no "adverse effect" to the Conservation District. As both buildings in the Conservation District would be historic resources according to CEQA Guidelines Section 15064; however, the demolition of these buildings would be a substantial adverse change under CEQA.

View of 171 Second Street
165-173 Second Street is brick building on the left.
191 Second Street is building on the right).

The Conservation District covers a much larger area than the National Register District, so the quantitative effect of demolishing these buildings is less for the Conservation District than for the National Register District. The Conservation District would lose two of approximately 53 parcels located within its boundaries, while the National Register District would lose three of its total of 19 contributing buildings. Affected buildings make up less than four percent of the Conservation District, while the demolished buildings make up over 15 percent of the National Register District. *Nonetheless*, loss of the two buildings would constitute a substantial adverse effect to the Conservation District under CEQA, given that the loss could have an effect on the overall integrity of the district.

Another expected adverse effect to the National Register District would be the possible alteration of the district boundaries. The loss of the three buildings of the National Register District would create a wide gap that would separate the south-easternmost contributors (577-79, 583-87, and 589-*591* Howard Street) from the rest of the district. None of these Howard Street properties is being proposed for demolition, but all would be adversely affected by the demolition of the *contributing elements* listed above because they would become isolated from the larger, more cohesive group. *The building at 163 Second Street would also experience an adverse effect due to the loss of a nearby contributing building. It does not appear that this loss would cause 163 Second Street to experience a change in status and it would continue to be eligible as a contributing element of the district.*[23]



In summary, each of the individual buildings proposed for demolition in this part of the project would be adversely affected by either Caltrain Downtown Extension alternative. Although both districts would lose buildings that exist within their boundaries, only those that contribute to the National Register District would be "adversely affected." Furthermore, the National Register District itself would be adversely affected through the loss of three contributing

577-79, 583-87, and 589 Howard Street

23 *Letter from Meta Bunse, JRP Consulting to David Mansen, Parsons, March 12, 2004.*

buildings, and by the fact that *three* additional buildings (not scheduled for demolition) would become more isolated from the rest of the contributors. The cumulative effects are not expected to result in a de-listing of the National Register District, nor would it necessarily result in rescission of the Conservation District.

It is anticipated that the adverse effect of demolishing these three buildings would not require a change in the NRHP status of the district. According to the NRHP, "a district derives its importance from being a unified entity, even though it is often composed of a wide variety of resources," and explains further that the interrelationship of the contributing elements of the district "can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties."[24] The district currently contains 19 contributing buildings, so the demolitions associated with the Project would leave 16 elements. Of the 16, three buildings (discussed below) would be isolated from the remaining district leaving 13 contributing buildings after implementation of the Project. These 13 buildings are expected to retain the strong visual linkage that helps to define the buildings as a district. It is anticipated that the portion of the district formed by the 13 contributing elements that would remain after completion of the Undertaking would retain this important linkage and together would continue to be eligible as a historic district.[25] The MOA (Appendix G of this Final EIS/EIR) includes a provision (IV.D) for the revaluation of the District following completion of the Project.

Three contributing elements of the Second and Howard Streets District would be adversely affected by demolition of nearby contributing buildings thus impairing their linkage with the remaining contributing elements of the district. These buildings are: 589-591 Howard Street, San Francisco (HPSR Map Reference #28); 579 Howard Street, San Francisco (outside of APE); and 583-587 Howard Street, San Francisco (outside of APE). It appears that the demolition of nearby contributing elements discussed above would impair the linkage between these three buildings on Howard Street and the remainder of the district. The reevaluation of these properties after completion of the Project would determine whether or not they should be removed from the district listing and whether or not they are individually eligible for the National Register.

Both districts would retain numerous contributing buildings and each would still display the elements that define the character and nature of each district. It is important to note, however, that the piecemeal demolition of additional contributing *elements* would have a cumulative adverse effect on the National Register District. Additional demolitions could lead to de-listing of the district, especially if the district had already suffered previous losses of contributing buildings. Demolition of the two buildings within the boundaries of the Conservation District, on the other hand, must be approved via the processes set forth in Article 11 of the City of San Francisco Planning Code.

24 NPS, NRHP, *National Register Bulletin 15*, 5.
25 *Letter from Meta Bunse, JRP Consulting, to David Mansen, Parsons, March 12, 2004.*

The South End Historic District (City of San Francisco) and the Rincon Point/South Beach Historic Warehouse-Industrial District (Eligible for National Register of Historic Places). Both Caltrain Downtown Extension alternatives (Second-to-Main and Second-to-Mission) would involve demolition of ten buildings located near the intersection of Second and Townsend Streets, if the Cut-and-Cover Option is selected. Under the Tunneling Option, *which has been identified for the Caltrain Downtown Extension component of the Locally Preferred Alternative,* these impacts would not occur. Many buildings in this area are located within two overlapping districts of historic buildings, one designated by the City of San Francisco, the South End Historic District, hereafter "Historic District," and the other a National Register eligible district called the Rincon Point/South Beach Historic Warehouse-Industrial District, hereafter "National Register District."[26]

The ten buildings within the Historic Architectural APE for this project that would be demolished under the cut-and-cover alternative are listed below and shown in the photographs that follow:

Address		APN
162-164	Townsend Street	*3788-081*
148-154	Townsend Street	3788-010
144-146	Townsend Street	3788-009A
136	Townsend Street	3788-009
130	Townsend Street	3788-008
670-680	Second Street	3788-043 & 044
650	Second Street	3788-049 *through 3788-073*
640	Second Street	3788-002
634	Second Street	3788-038
301	Brannan Street	3788-037

The demolition of these buildings *would* cause adverse effects to each individual building. The *contributing elements* listed above *are located* within the boundaries for both the National Register District and the *locally-designated* Historic District. The demolition of these buildings would be an adverse effect to the National Register District to which they contribute. Because the term "adverse effect" applies only to *properties* that are eligible for and/or that are listed on the National Register, there is technically no "adverse effect" to the local Historic District designated by the City of San Francisco. As these buildings are *contributing* to and in the Historic District, they are historic resources according to CEQA Guidelines 15064.5 nonetheless, and demolition of these buildings would be a substantial adverse change under CEQA.

[26] This district has been fully documented and appears to be eligible for the National Register. Although it is not yet listed on the National Register, it has been submitted to the Office of Historic Preservation and is considered eligible for the National Register for the purposes of Section 106 review.

The quantitative effect of demolishing these buildings is roughly equivalent for the two districts because the Historic District would lose ten of the approximately 60 buildings within its boundaries, while the National Register District would lose ten of its total of 60 contributing buildings. (While these counts are similar, the boundaries of the two districts are not identical.) Affected buildings represent about one sixth of the buildings within each district.

View looking east on Townsend toward intersection with Second Street.

Another expected adverse effect to the National Register District would be the possible alteration of the district boundaries. The loss of the ten buildings of the National Register District would be a substantial adverse effect to two streetscapes within the district: one on the northwest side of the 100 block of Townsend and the other on the southwest side of the 600 block of Second Street. The loss of these ten buildings would create a gap that would break up the continuity of the center of the district in a city block that includes a high percentage of contributing buildings. The National Register District currently contains three blocks of streetscapes with contributing buildings lining both sides of the street. If these buildings were removed, only the 500 block of Second Street would retain buildings along both sides.

View looking north on Second Street from intersection of Townsend and Second.

Building at left is 698 Second Street. It would not be demolished, although the buildings to the north up to Brannan Street would be demolished under the cut-and-cover option.

The demolition of the two rows of buildings would also have an adverse effect on 698 Second Street, an important contributor to the National Register District. This building was built in 1910 as San Francisco Fire Department Pumping Station Number One and it was separately listed on the National Register of Historic Places in 1982. While this building is outside the APE for this project, and not proposed for demolition, it would be adversely affected by the demolition of buildings on either side of its corner location. An additional portion of the National Register

District would be largely separated from the rest of the district by the proposed demolitions. The contributing buildings along Third Street and those buildings on Townsend and Brannan Streets that are near Third Street would be isolated from the larger, more cohesive group. The loss of the ten buildings at the center of the district would substantially impair its visual continuity and the district's ability to impart a sense of time and place. The City's Historic District boundary may also need to be changed to reflect the loss of the same ten buildings on Townsend and Second Streets.

In summary, each of the ten individual buildings proposed for demolition in this part of the project would be adversely affected by the Cut-and-Cover Option under either Caltrain Downtown Extension alternative. Although both districts would lose buildings that exist within their boundaries, only those that contribute to the National Register District would be "adversely affected." The National Register District would not only be adversely affected through the loss of contributing buildings, it would also have the result that entire rows of adjacent contributors that form two sides of important streetscapes within the district would be demolished. Additionally, a contributor to the district that is already listed on the National Register (698 Second Street) would be adversely affected through its isolation from its existing historic streetscape. These cumulative effects may result in a de-listing of the National Register District. It would also have serious implications in terms of the integrity of the Historic District for the same reason. *Because the Tunneling Option has been identified for the Caltrain Downtown Extension component of the Locally Preferred Alternative (LPA), these effects of the Cut-and-Cover Alternative would not occur under the LPA.*.

Table 5.14.1 lists the affected properties with the assessor's parcel number, NRHP status, and type of impact for each. The table also groups the properties according to their respective district.

Table 5.14-1: Summary of Project Effects on Listed or Eligible Properties in APE

Address/ Assessors Parcel Number	NRHP Status	Contributing *Element of*	City Status	Const. Date	Type of Impact
Properties Affected by Either Transbay Terminal Alternative					
425 Mission Street (Transbay Terminal) / 3719-003,3720-001,3721-006	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Bay Bridge Approach / *#34-116F*	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Bay Bridge Approach / *#34-118L*	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Bay Bridge Approach / #34-118R	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Terminal Loop Ramps / #34-119Y	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition
Harrison Street Overcrossing / #34-120Y	*1*	S.F-Oakland Bay Bridge		*1936*	Demolition

Table 5.14-1: Summary of Project Effects on Listed or Eligible Properties in APE

Address/ Assessors Parcel Number	NRHP Status	Contributing *Element of*	City Status	Const. Date	Type of Impact
Properties Affected by Either Caltrain Downtown Extension Alternative Either Construction Option (Cut-and-Cover and Tunneling Options)[27]					
Address/ Assessors Parcel Number	**NRHP Status**	**Contributing *Element of***	**City Status**	**Const. Date**	**Type of Impact**
589-591 Howard Street / 3736-098	*1D*	Second & Howard District & New Montgomery/ Second Street	Article 11 Category V	*1906*	*Adverse effect to linkage with district*
163 Second Street / 3721-048	*1D*			*1907*	*Adverse effect due to loss of nearby contributing building*
165-173 Second Street / 3721-025	1D			1906	Demolition
191 Second Street / 3721-022	1D			1907	Demolition
580-586 Howard Street / *3721-092 through 3721-106*	1D	Second and Howard District		1906	Demolition
166-78 Townsend Street / 3788-012	*3D*	*Rincon Point/South Beach District & South End District.*		*1910 [1] 1888[2]*	*Construction easement; no demolition; no adverse effect*
Properties Affected by Either Caltrain Downtown Extension Alternative Cut-and-Cover Option Only					
640 Second Street / 3788-002	*2S2*	Rincon Point/South Beach District & South End District.	Article 10 Contributing	*1926*	Demolition
650 Second Street / 3788-049 *through 3788-073*	*2S2*			1922	Demolition
670-680 Second Street / 3788-043, 3788-044	*2S2 (670), 3D (680)*			1913	Demolition
301-321 Brannan Street / 3788-037	3D			1909	Demolition
130 Townsend Street / 3788-008	3D		Article 10 Contributing Altered	1910 [1] 1895-6 [2]	Demolition
136 Townsend Street / 3788-009	3D		Article 10 Contributing	1902 [1] 1913 [2]	Demolition
144-46 Townsend Street / 3788-009A	3D			1922	Demolition
148-54 Townsend Street / 3788-010	3D			1922	Demolition
162-164 Townsend Street / 3788-*081*	3D			1919	Demolition

Notes: National Register Status Codes are as follows:
1 Listed on the NRHP
2S1 Determined eligible for listing by the Keeper of the Register
2S2 Determined eligible for listing by consensus of the SHPO and a federal agency.
1D Listed on National Register as a contributor to a district or multi-resource property
2D2 Determined eligible as a contributor by consensus determination
3D Appears eligible as a contributor to a fully documented district
[1] Caltrans, 1983, [2] Corbett and Bradley, 1996 **Source:** JRP Historical Consulting, Parsons Transportation Group, 2001.

[27] *The buildings at 577-79 Howard Street (built in 1907, parcel 3736-100) and 583-87 Howard Street (built in 1912, parcel 3736-099), which are outside the APE but are contributing elements to the National Register District, would also experience a substantial adverse change to their linkage with the remainder of the district.*

5.14.3.5 Potential Mitigation Measures for Historic Architectural Resources

Mitigation measures *are* set forth in a Memorandum of Agreement (MOA – Appendix G of Volume I in this Final EIS/EIR). *Signatory parties to the MOA will be FTA and SHPO. Invited concurring parties include the Transbay Joint Powers Authority (TJPA), the City and County of San Francisco, the Peninsula Corridor Joint Powers Board (JPB), the San Francisco Redevelopment Agency, and Caltrans.* They include measures as discussed below.

- ***Documentation.*** Because it is unlikely that relocation of historic *properties* will be feasible, recordation *will occur* to ensure a permanent record of the properties' present appearance and context. Under this mitigation, *prior to the start of any work that would have an adverse effect on historic properties, TJPA will consult with the California SHPO, to ensure that the Transbay Transit Terminal has been adequately recorded by past efforts. Collectively, these past studies, which include California Department of Transportation's (Department's) past recordation of a series of remodeling and seismic retrofit projects that have occurred since 1993, may adequately document the building, making Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation unnecessary. In addition, TJPA, assisted by Department, will seek to obtain the original drawings of the Transbay Transit Terminal by the architect Timothy Pflueger. If the drawings cannot be copied and included in the documentation, then TJPA will consult with SHPO regarding recordation level and specifications for completing additional documentation. When the SHPO finds the documentation to be adequate, then TJPA will compile this documentation into a comprehensive record. All documentation will be submitted to SHPO and Department Headquarters Library with a xerographic copy to the Department District 4 Office. TJPA will contact the following repositories to inquire if they would like to receive a xerographic copy of the documentation: History Center at the San Francisco Public Library, San Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the Oakland Museum of California, and the Western Railway Museum. TJPA will ensure that these records are accepted by SHPO prior to demolition of the Transbay Transit Terminal.*

  ***Permanent* Interpretive Display.** *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. The interpretive exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a mural or other depiction of the historic terminal, and Key System, or other interpretive material.*

  TJPA will consult with Department regarding the availability of historical documentary materials and the potential use of salvaged items from the existing Transbay Transit Terminal for the creation of the permanent interpretive display of the history of the

original Transbay Transit Terminal building and its association with the San Francisco-Oakland Bay Bridge and the potential salvaged items from the existing Terminal.

Department will assist TJPA in planning the scope and content of the proposed interpretive exhibit. In addition, TJPA will also invite the Oakland Heritage Alliance, the San Francisco Architectural Heritage, the California State Railroad Museum, and the Western Railway Museum to participate. TJPA, while retaining responsibility for the development of the exhibit, will consider, jointly with Department, the participating invitees' recommendations when finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.

TJPA will also consult with the City of Oakland about its interest in having a similar interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design of the Terminal, TJPA will provide and deliver exhibit materials to a venue provided by the City of Oakland.

Museum 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. TJPA will propose contributions to such an exhibit that may include an interpretive video including the history of the Transbay Transit Terminal and the Key System. Components to such an exhibit may include photographs, drawings, videotape, models, oral histories, and salvaged components from the terminal. In addition, TJPA will assist the Museum by contributing to the cost of preparing and presenting the exhibit, interpretive video, as well as the costs of an exhibit catalog or related museum publication in conjunction with the exhibit, in a manner and to the extent agreed upon by TJPA, Department, and the Oakland Museum of California if consultation results in agreement between TJPA and Oakland Museum prior to demolition of the existing Transbay Transit Terminal. TJPA has established a maximum budget of $50,000.00 for the Oakland Museum of California exhibit and the interpretive video.*

Opportunities for Salvage. *TJPA, in consultation with 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. Within two years of signing of this agreement, TJPA will offer these items to San Francisco Architectural Heritage, the California State Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any other interested parties. Acceptance of items by interested parties must be completed at least 90 days prior to demolition of the Transbay Transit Terminal. TJPA will remove the items selected in a manner that minimizes damage and will deliver them with legal title to the recipient. Items not accepted for salvage or interpretive use will receive no further consideration under this agreement.*

The above measures are set forth in the MOA, *Appendix G of this Final EIS/EIR.*

5.14.4 Consultation and Coordination

The Finding of Effect was transmitted to SHPO on August 29, 2003. SHPO concurred in the findings of effect presented herein on November 25, 2003; copies of their letters are provided in Appendix D. This environmental document presents measures designed to address impacts on archaeological and historic resources, as set forth in this section and in the MOA, Appendix G, Volume I of this Final EIS/EIR.

5.15 HAZARDOUS MATERIALS

This section focuses on the risk of exposure to or releases of hazardous materials from *the* project. Impacts of hazardous materials sites related to construction of the Transbay Terminal, the Caltrain Extension, and the *R*edevelopment *P*lan *A*lternatives are discussed in Section 5.21.14.

Production and/or handling of new hazardous materials are not anticipated under the Transbay Terminal or Redevelopment Plan Alternatives. Hazardous materials handling for Caltrain operations is discussed below.

Impacts from Hazardous Materials Used in Train Operations. The proposed storage yard options would contain a fueling facility to provide diesel to non-electric locomotives served by the Fourth and Townsend Yard (e.g., trains that may come across the Dumbarton Bridge or from Monterey). Additionally, cleaning solvents associated with the routine maintenance operations would also be present on the site. This facility would involve services similar to those at the current Caltrain yard and, therefore, potential impacts would be similar to those under the No-Project Alternative.

The fueling facility would be constructed and operated to comply with local, state and Federal regulations regarding handling and storage of hazardous materials. Diesel fuel pumps would be equipped with emergency shut-off valves and, in compliance with U.S. EPA requirements, fuel USTs would be equipped with leak detection and monitoring systems. Any aboveground storage tanks would employ the use of secondary containment systems. These safeguards would limit the amount of diesel fuel that could potentially be released from a storage system, provide early detection in the event the storage tank should leak, and provide secondary containment to prevent the material from contaminating soil and/or groundwater. Cleaning solvents would be stored in 55-gallon drums, or other appropriate containers, within a bermed area to provide secondary containment. Paved surfaces within the fueling facility and the solvent storage area would be sloped to a sump where any spilled liquids could be recovered for proper disposal.