

**Regional Connector Transit Corridor
Draft Environmental Impact Statement/
Draft Environmental Impact Report**

APPENDIX X



CULTURAL RESOURCES -
BUILT ENVIRONMENT (UPDATED)

California State Office of Historic Preservation Coordination

The Cultural Resources – Built Environment Technical Memorandum for the Regional Connector Transit Corridor project contained in this appendix was submitted to the California State Office of Historic Preservation. The State Historic Preservation Officer (SHPO) reviewed the technical memorandum including the determinations of eligibility for all potentially eligible properties within the Area of Potential Effect (APE). On June 1, 2010, the SHPO concurred with the determinations of eligibility and with the findings of effect from project alternatives. That concurrence letter is included in the following pages.

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1 June 2010

Reply To: FTA090409B

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Re: Determinations of Eligibility and Finding of Effect for the Regional Connector Transit Corridor Project, Los Angeles, Los Angeles County, CA

Dear Ms. Saltarelli:

Thank you for your letter of 19 April 2010 continuing consultation on behalf of the Federal Transit Authority (FTA) for the above referenced undertaking in order to comply with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulation at 36 CFR Part 800. You are requesting that I review the determinations of eligibility and assessment of effects for the Regional Connector Transit Corridor Project.

After reviewing the enclosed cultural resources report, I am able to concur with FTA's determinations of eligibility. 289 properties were identified in the APE for the project. Of those 289, 118 were of sufficient age to be considered for inclusion in the National Register of Historic Places (NRHP). Fifteen properties were previously listed in the NRHP and 33 were determined eligible by FTA. FTA has determined the following properties are eligible for inclusion in the NRHP:

1. Barker Brothers, 818 West 7th Street
2. Fine Arts Building, Global Marine House, 811 West 7th Street
3. 811 Wilshire Building, Tishman 615 Building, Wilflower Building, 811 Wilshire Boulevard
4. The California Club, 528 South Flower Street
5. 2nd Street Tunnel, Bridge# 53C 1318
6. Los Angeles Civic Center Historic District
7. Los Angeles Department of Water and Power Building, John Ferraro Office Building, 111 North Hope Street
8. Ahmanson Theater, 135 North Grand Avenue
9. Mark Taper Forum, 135 North Grand Avenue
10. Dorothy Chandler Pavilion, 135 North Grand Avenue
11. Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration, 500 West Temple Street, 222 North Grand Avenue
12. El Paseo de los Pobladores de Los Angeles, 224 North Grand Avenue
13. Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse, 111 North Hill Street
14. County of Los Angeles Central Heating and Refrigeration Plant, 301 North Broadway
15. Los Angeles County Hall of Records, 320 West Temple Street
16. Court of Historic American Flags, 224 North Hill Street, 100 block Hill Street
17. Los Angeles County Law Library, Mildred L. Lillie Building, 301 West 1st Street
18. Hall of Justice, Los Angeles County Jail, 211 West Temple Street

19. Clara Shortridge Foltz Criminal Justice Center, 210 West Temple Street
20. Los Angeles City Hall, 200 North Spring Street
21. City Health Building, City Hall South, 111 East 1st Street
22. Federal Building, North Los Angeles Field Office, 300 North Los Angeles Street
23. The Police Facilities Building, Parker Center, Motor Transportation Division, 150 North Los Angeles Street and 151 North Judge John Aiso Street
24. Mark Kuwata Real Estate, 301 East 1st Street, 104-106 North San Pedro Street, 104-106 Judge John Aiso Street
25. Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple, 342 East 1st Street
26. John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated, 216 South Alameda Street,
27. Los Angeles Times Building, 202 West 1st Street
28. The Mirror Building (Site of Butterfield Stage Station), Los Angeles Times-Mirror Annex, Times Building South, Mirror-News Building, 145 South Spring Street
29. Cathedral of Saint Vibiana, 214 South Main Street
30. Cathedral of Saint Vibiana, Rectory, 114 East 2nd Street
31. J.R. Newberry Company Building, 900 East 1st Street
32. 1st Street Viaduct, 1st Street between Vignes Street and Mission Road
33. Walt Disney Concert Hall, 111 South Grand Avenue

I concur with the NRHP determinations but will not comment on those properties identified solely for CRHR determination. The remaining resources in the APE are not eligible for inclusion in the NRHP.

Only one historic property, the 2nd Street Tunnel will be adversely affected by the project. I concur with the FTA's determination of adverse effect. Once FTA has submitted a draft MOA for the consultation I can comment on the mitigation measures for the undertaking.

Thank you for considering historic properties in your planning process. If you have any questions, please contact Amanda Blosser of my staff at (916) 654-7372 or e-mail at ablosser@parks.ca.gov.

Sincerely,



Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

MWD:ab

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**Regional Connector Transit Corridor
Cultural Resources – Built Environment
Technical Memorandum
Updated**

April 5, 2011

Prepared for

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ACRONYMS

ACHP	Advisory Council on Historic Preservation
AGELRT	American Meteorological Society / EPA Regulatory Model
APE	Area of Potential Effects
California Register	California Register of Historical Resources
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHL	California Historical Landmarks
CHRIS	California Historical Resources Information System
CRA	Community Redevelopment Agency
CRHR	California Register of Historic Resources (California Register)
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FTA	Federal Transit Administration
FULRT	Fully Underground LRT Alternative – Little Tokyo Variations 1 & 2
GBV	Ground Borne Vibration
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power

LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
LTS	Less Than Significant Impact
Metro	Los Angeles County Metropolitan Transportation Authority (LACMTA)
NAHC	California Native American Heritage Commission
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NHPA	National Historic Preservation Act of 1966
NRHP	National Register of Historic Places (National Register)
OHP	Office of Historic Preservation
POC	Pedestrian Overcrossing
PPV	Peak particle velocity
PRC	Public Resources Code
PUC	Pedestrian Undercrossing
SCCIC	South Central Coastal Information Center
SI	Significant Impact that can be mitigated to less than significant
SHPO	State Historic Preservation Officer
SU	Significant and Unavoidable Impact
TBM	Tunnel Boring Machine
TPSS	Traction power substations
TSM	Transportation Management System

UELRT Underground Emphasis LRT Alternative
USDOT US Department of Transportation

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1.0 SUMMARY

1.1 Purpose and Scope

SWCA Environmental Consultants (SWCA) conducted a cultural resources inventory of the built environment that may be affected by the proposed Regional Connector Transit Corridor project (the project). Cardno ENTRIX, Inc. reviewed and revised the Inventory and prepared this Technical Memorandum. Cardno ENTRIX prepared revisions to the Technical Memorandum to address refinements to the Locally Preferred Alternative (LPA).

The Metro Board of Directors has designated the Fully Underground LRT Alternative as the LPA. Based on input received during the Draft EIS/EIR review period, refinements to the LPA were made to reduce impacts. Revisions (excluding minor edits for consistency and correction of minor typographical errors) are indicated by a vertical line in the margin. No changes to the NEPA impact findings or CEQA impact determinations were identified as a result of refinements to the LPA, responses to comments, or other developments since publication of the Draft EIS/EIR.

The project is approximately 1.9 miles in length and is located in the City of Los Angeles, in Los Angeles County, California. The purpose of this project is to improve the region's public transit service and mobility within the corridor by connecting the light rail service of the Metro Gold Line to Claremont and the Eastside with the Metro Blue Line to Long Beach and the Metro Expo Line to Santa Monica. This link would serve communities across the region, allowing greater accessibility while serving expected population and employment growth in downtown Los Angeles.

This Technical Memorandum was prepared to comply with federal and state cultural resource compliance regulations and guidelines. The National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966 regulations require the identification of historic properties and evaluation of project-related effects on those properties. Section 106 of the NHPA defines "historic properties" as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" (National Register) (36 CFR Section 800.16 (l) (1)).

The California Environmental Quality Act (CEQA) and CEQA Guidelines also require lead agencies to evaluate proposed projects for the potential to cause significant impacts on "historical resources." This Technical Memorandum was completed under provisions of CEQA (Section 15064.5) and CEQA Guidelines (Title 14, California Code of Regulations or CCR, Chapter 3, Article 5) for determining "significance of impacts to archeological and historical resources."

1.2 Architectural Field Survey Findings

Cardno ENTRIX concluded that there are a total of 55 architectural historical properties that are listed in or eligible for listing in the National and/or California Registers within a 0.25 mile radius of the area of potential effect (APE). The State Historic Preservation Officer (SHPO) confirmed the definition of the APE in a letter dated February 10, 2010.

SWCA architectural historians conducted reconnaissance-level built environment surveys of the 1.8-mile-long APE in April 2009. In December 2009 a new alternative was added to the proposed project, requiring subsequent field surveys, bringing the total project length to approximately 1.9 miles. Each parcel in the direct and indirect APE containing improvements completed in or before 1968 was digitally photographed and researched, using data from the Los Angeles County Office of the Assessor and other sources. All properties in the APE were field-checked to verify whether or not their construction may have occurred more than 50 years prior to the anticipated project opening date.

In April and May 2009 and again in December 2009, SWCA conducted intensive-level surveys of properties containing improvements completed in or before 1968 within the APE that required evaluation or re-evaluation for historical significance. SWCA reviewed those properties in the field, photographed, and performed subsequent building permit and other research on properties that appeared to retain sufficient integrity to warrant evaluation for National Register and/or California Register eligibility.

The architectural field survey identified a total of 289 properties in the Project APE. ENTRIX concluded that of the 289 historical resources, 118 buildings, structures or objects were found to have been constructed 50 years or more before the assumed project construction date of 2018. California Department of Parks and Recreation (DPR) series 523 forms were prepared for each property containing improvements completed in or before 1968 that were not previously listed in or determined eligible for the National and California Registers. The DPR series 523 forms are used to evaluate eligibility for listing on the National and/or California Registers. Of the 118 resources evaluated within the APE, 49 were found to be eligible for both the National and California Registers; six were found to be only eligible for the California Register; while 63 of the resources were found to be ineligible for either list.

In June 2010 the SHPO reviewed the draft Technical Memorandum and Inventory. SHPO concurred on the initial determinations of eligibility and effects for NRHP eligible properties. SHPO did not comment on California Register eligible properties or effects.

The draft Technical Memorandum was included with the draft Environmental Impact Statement (DEIS) that was released for public comment on September 3, 2010. Two variations of the Fully Underground LRT Alternative (Little Tokyo Variation 1 and Little Tokyo Variation 2) are analyzed in this report. Little Tokyo Variation 2 was subsequently dropped

from consideration, and Little Tokyo Variation 1 became the sole alignment for the Fully Underground LRT Alternative. Both variations are described in this report, and the LPA (as refined) is described separately.

On October 28th, 2010, Metro's Board of Directors approved staff's recommendation to select the Fully Underground Alternative described in the publicly reviewed Draft EIS/EIR for the Regional Connector Transit Corridor as the Locally Preferred Alternative (LPA). The LPA would provide a direct connection from 7th Street/Metro Center Station to the Metro Gold Line at 1st and Alameda Streets. The Metro Gold, Blue and Expo light rail lines would be connected allowing trains to operate between Azusa and Long Beach, and from Culver City and the Eastside. In the action for approval, the Board also directed staff to remove the property located on the southeast corner of 2nd and Spring Streets from the list of potential acquisitions as well as eliminated the station at 5th and Flower Station due to its close proximity to the existing 7th St. Metro Center station and to reduce cost. The approved LPA thus includes three new stations instead of the original four described in the Draft EIS/EIR and northern entrances to the existing 7th St. Metro Center station are to be studied.

On January 4th, 2011, the Federal Transit Administration (FTA) authorized Metro to initiate Preliminary Engineering as part of FTA New Starts funding program. In its authorization, FTA requested that Metro among other items pursue the identification of appropriate mitigations and realize potential cost savings. Consistent with FTA's authorization, refinements to the Locally Preferred Alternative have been identified and are to be analyzed as part of the development of the Final EIS/EIR. The refined Locally Preferred Alternative is described in Section 2.4 Project Description.

This document was updated to describe the effects on historic properties and impacts on historical resources from the project refinements.

1.3 Project Effect/Impact Conclusions

Under NEPA for the No Build Alternative and the Transportation System Management (TSM) Alternative, project construction and operations would not result in any adverse construction or implementation-related effects on historic properties in the Project APE. Under CEQA, construction and operation of the No Build and TSM Alternatives would not result in any direct or indirect significant impacts on historical resources, and would not be expected to result in cumulative effects to historical resources under CEQA. The TSM and No Build alternatives would not result in any Section 4(f) effects.

Under NEPA, for the At-Grade Emphasis Light Rail Transit (LRT) Alternative, project construction and operations would result in an adverse effect to the NRHP/CRHR eligible 2nd Street Tunnel. Under CEQA, the project would result in one direct significant impact and 14 indirect significant impacts to historical resources. Implementation of mitigation measures

would reduce the adverse impacts to a less than significant level. Under Section 4(f), this alternative would require the partial acquisition and use of five NRHP eligible properties.

Under NEPA, for the Underground Emphasis LRT Alternative, the project is not expected to result in any direct or indirect adverse effects to historic properties. Under CEQA, project construction would result in one significant impact and 14 indirect impacts to historical resources. Implementation of mitigation measures would reduce impacts to a less than significant level. Under section 4(f), the Underground Emphasis LRT Alternative would require the acquisition of a subsurface easement situated on one NRHP-eligible property.

Under NEPA, for the Fully Underground LRT Alternative - Little Tokyo Variation 1 and the Fully Underground LRT Alternative – Little Tokyo Variation 2, the project is not expected to result in any direct or indirect adverse effects to historic properties. Under CEQA, there would be one direct significant impact and 14 indirect significant impacts to historical resources. With implementation of mitigation measures, these impacts would be reduced to a less than significant level. Under Section 4(f), the project would require the acquisition of a subsurface easement situated on one NRHP-eligible property, but there would be no adverse effects as a result of the easement.

Under NEPA, for the LPA, the project is not expected to result in any direct or indirect adverse effects to historic properties. Under CEQA, there would be one direct significant impact and 14 indirect significant impacts to historical resources. With implementation of mitigation measures, these impacts would be reduced to a less than significant level. Under Section 4(f), the project would require the acquisition of a subsurface easement situated on one NRHP-eligible property, but there would be no adverse effects as a result of the easement.

1.4 Summary of Findings

There are 55 resources listed in, determined eligible for listing in, or eligible for listing in the National Register and the California Register of Historical Resources (California Register) in the project APE. The Federal Transit Administration (FTA), in coordination with the Los Angeles County Metropolitan Transportation Authority (Metro) with concurrence from the SHPO, established the APE that limits the scope of study to those parcels expected to be affected by the proposed project alternatives. Of the 55 resources, 49 are historic properties that are either listed in, determined eligible for listing in, or recommended as eligible for listing in the National Register, while six are only historical resources listed in, determined eligible for listing in, or recommended as eligible for listing in the California Register (See Table 4-6 and Figure 4-4 in Section 4).

1.5 Potential Impacts

Under the No Build Alternative, there would be no cumulative or potential impacts to historical resources other than impacts resulting from continued escalated automobile traffic

due to the lack of additional mass transit options. Under the TSM Alternative, the project would result in no potential impacts on historical resources. Under the At-Grade Emphasis LRT Alternative, Underground Emphasis LRT Alternative, Fully Underground LRT Alternative Little Tokyo Variations 1 and 2, and the LPA, any potential direct or indirect impacts to historical resources would be reduced to a less than significant level through the implementation of mitigation measures. Project operations are not expected to cause any potential impacts.

1.6 Mitigation Recommendations

For Section 4(f) under the No Build and TSM Alternatives, there would be no mitigation measures to consider as there would be a lack of potential effects to historic properties or impacts to historical resources. Under the At-Grade Emphasis LRT Alternative, Underground Emphasis LRT Alternative, Fully Underground LRT Alternative Little Tokyo Variations 1 and 2, and the LPA, the implementation of mitigation measures MM-BE-1 through MM-BE-5 for CEQA would reduce any potential direct or indirect impacts to historical resources to a less than significant level. For NEPA, the implementation of MM-BE-1 and MM-BE-5 would be required to mitigate potential adverse effects to historic properties. The other alternatives would not require mitigation as there would be no adverse effects to historic properties. For Section 4(f), the implementation of mitigation measures MM-BE-2, MM-BE-3, and, when applicable, MM-BE-4, would greatly reduce the likelihood of a constructive use determination.

1.7 Disposition of Data

This report will be filed with the FTA, Metro, the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton, SWCA, and Entrix. All field notes and records related to the project will remain on file at the South Pasadena office of SWCA.

2.0 INTRODUCTION

NEPA guidelines include compliance with related federal laws that require identification of historic properties and consideration of project-related effects on those properties. This Technical Memorandum was prepared to comply with Section 106 of NHPA, as amended, and with regulations contained in 36 Code of Federal Regulations (CFR) Part 800. These regulations require federal agencies to consider the effects of proposed projects and undertakings on historic properties as part of the environmental assessment process and allow the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on those undertakings. Effects under Section 106 of the NHPA are defined in the “Criteria of Adverse Effect” (36 CFR Section 800.5(1)).

Properties that are identified as historical resources within the identified project APE were evaluated for eligibility for listing in the National Register according to criteria set forth in 36 CFR Part 60.4. The age criterion for inclusion in the National Register is 50 years and older, except in cases of exceptional significance (Criteria Consideration G).

This Technical Memorandum was also prepared to comply with requirements of CEQA and the CEQA Guidelines (CERES 2009) as they apply to cultural resources. Under CEQA, it is necessary for a lead agency to evaluate proposed projects for the potential to cause significant impacts on “historical resources.” A historical resource is defined as “a resource listed in, or determined eligible for listing in, the California Register of Historical Resources” in California Public Resources Code (PRC) Section 21084.1. A proposed project that may affect historical resources is submitted to the California State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the lead agency and before any project-related clearance, demolition, or construction activities are commenced.

If a proposed project could be expected to cause substantial adverse change to a historical resource, environmental clearance for the project would require evaluating alternatives and/or implementing mitigation measures to reduce or avoid potential impacts. If a project is expected to result in an impact on historical resources, CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most the basic objectives of the project and avoid or substantially lessen any significant potential impacts on the historical resource.

Properties were also considered for California Register of Historical Resources (California Register) eligibility; although there is no established age threshold for the California Register, the same 50-year cutoff was used for this project. Under PRC Section 5024.1, the California Register was established to serve as an authoritative guide to the state’s significant historical and archaeological resources.

If a proposed project and its related potential impacts would adversely affect the values of an archaeological or built environment site that is either listed in or determined eligible for inclusion in the National or California Register, such potential effects and/or impacts would be considered adverse.

2.1 Report Format

This report meets the Secretary of the Interior's Standards and Guidelines and follows contemporary professional standards for the preparation of historical resources reports.

2.2 Project Personnel

SWCA conducted the cultural resources inventory of the built environment for this project. The results of the inventory were included in a draft Technical Memorandum that was prepared by SWCA Senior Architectural Historian Francesca Smith, who meets the Secretary of the Interior's Professional Qualifications Standards in history and architectural history. SWCA architectural historians Jim Steely, Shannon Carmack, Kathy Corbett, Samantha Murray, and Sonnier Francisco provided technical input.

Cardno Entrix reviewed and revised the draft Technical Memorandum and prepared the submittal of the final Technical Memorandum. The Entrix project staff included Kimberly Demuth as Project Manager and Reviewer, Kirk Ranzetta as Senior Architectural Historian, David Harvey as Senior Project Historian and Reviewer, Jennifer Flathman as Project Architectural Historian, Don Craig as Project Historian, and Joe Rubin as Project Coordinator and Reviewer.

2.3 Project Description

The proposed project would extend approximately 1.9 miles through downtown Los Angeles (Figure 2-1) and provide enhanced Metro service throughout four distinct travel corridors that span over 50 miles across Los Angeles County. The proposed new dual-tracks would provide a direct link between the Metro Gold, Blue, and Expo Lines by bridging the gap in the regional light rail network between 7th Street/Metro Center Station at 7th and Flower Streets and the Little Tokyo/Arts District area near 1st and Alameda Streets. This would allow trains to travel directly from the Eastside to Santa Monica and from Long Beach to Claremont. The project also includes construction of new stations in downtown that would allow all passengers on the Metro Gold, Blue, and Expo Lines to reach multiple destinations in the central business district without transferring.

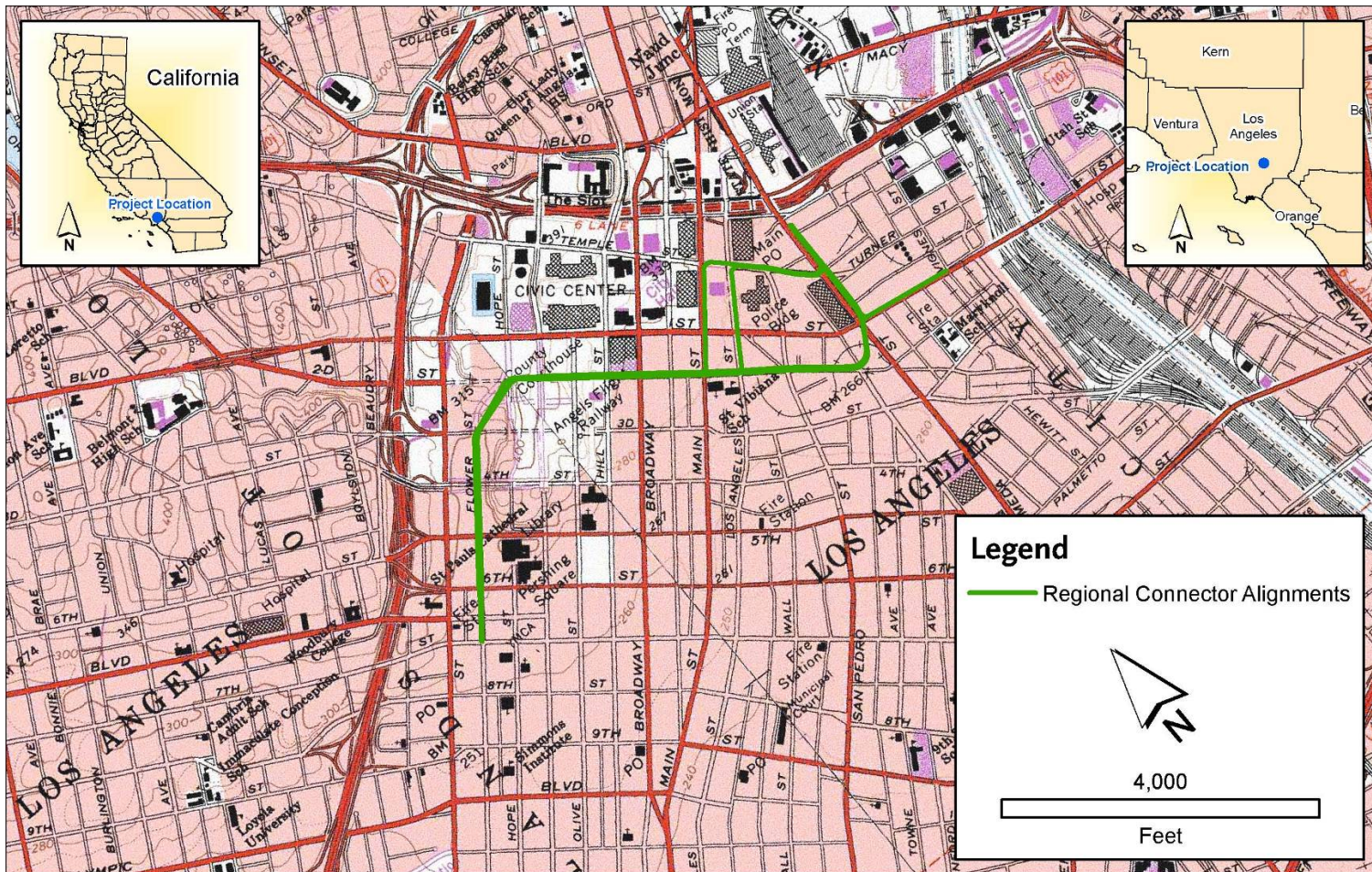


Figure 2-1. Project Location

The following alternatives are evaluated in this Technical Memorandum:

- No Build Alternative
- Transportation System Management (TSM) Alternative
- At-Grade Emphasis Light Rail Transit (LRT) Alternative
- Underground Emphasis LRT Alternative
- Fully Underground LRT Alternative- Little Tokyo Variation 1
- Fully Underground LRT Alternative- Little Tokyo Variation 2
- Locally Preferred Alternative (LPA)

2.3.1 No Build Alternative

Transit service under the No Build Alternative would be focused on preservation of existing services and projects. The No Build Alternative would not include any major service improvements or new transportation infrastructure beyond what is listed in Metro's 2009 Long Range Transportation Plan (LRTP).

By the projection year of 2035, the Metro Expo Line and the Metro Gold Line to the San Gabriel Valley would be open, and a number of bus routes may be reorganized and expanded to provide connections with these new rail lines. All bus and rail lines would operate using a fleet of vehicles similar to those currently in service or identified for purchase in the LRTP. The transit network within the project area should otherwise be largely the same as it is now.

2.3.2 Transportation System Management (TSM) Alternative

The TSM Alternative includes all of the provisions of the No Build Alternative, plus two new express shuttle bus lines linking the 7th Street/Metro Center and Union Stations. These buses would run frequently, perhaps just a few minutes apart, especially during peak hours. Enhanced bus stops would be located every two to three blocks to maximize coverage of the area surrounding the routes. Rail service would remain the same as described for the No Build Alternative.

The two routes are described below and illustrated on Figure 2-2.

- Upper Grand Route – From the 7th Street/Metro Center Station, buses would proceed east on 7th Street, north on Olive Street, west on 5th Street, north on Grand Avenue, east on Temple Street, and then north on Los Angeles Street to Union Station. As a variation, buses could use Alameda Street between Temple Street and Union Station

to allow a stop at Temple and Alameda Streets, near the Little Tokyo/Arts District Station. The alignment is assumed to follow the same route as part of the existing Los Angeles Department of Transportation (LADOT) DASH Route B service, proceeding from the 7th Street/Metro Center Station to Union Station using Grand Avenue, Temple Street, and Los Angeles Street. Shuttle buses would run less than eight minutes apart and provide coverage of the Bunker Hill and Civic Center areas.

- Lower Grand Route – This route would use the existing northbound bus-only lanes on Figueroa Street and mixed flow lanes on 2nd and 3rd Streets, which are lightly used by other bus lines. From the 7th Street/Metro Center Station, buses would proceed north on Figueroa Street, west on 2nd Street, and north on Alameda Street to Union Station. To return to 7th Street/Metro Center Station, buses would travel south on Alameda Street, west on 3rd Street, and south on Flower Street. The alignment passes by both the Little Tokyo/Arts District Station and Union Station, and would provide good coverage of Little Tokyo and the southern edge of the Civic Center.

2.3.2.1 Operating Characteristics

The shuttle routes would be operated by Metro, and could use vehicles ranging from 30-foot shuttle buses to standard 40-foot buses. Buses would run every few minutes during peak periods, and peak hour bus-only lanes would be created where possible by restricting parking on streets that do not already have dedicated all-day bus lanes. Similar to the Metro Rapid Bus lines, a transit priority system that allows longer green lights to oncoming transit vehicles would be used where possible to increase bus speed and efficiency.

2.3.3 At-Grade Emphasis LRT Alternative

2.3.3.1 Overview

The At-Grade Emphasis LRT Alternative would provide a direct connection from the existing underground 7th Street/Metro Center Station to the Metro Gold Line at Temple and Alameda Streets. Three new stations would be added, one would be a split station with single-direction platforms one block apart. This alignment includes a combination of underground and at-grade segments, with 46 percent of the route underground. New stations would serve the Civic Center, Grand Avenue, and the Financial District. Conversion of 2nd Street to a pedestrian-friendly transit mall is assumed.

To implement this alternative, the number of traffic lanes and on-street parking spaces on 2nd Street would be reduced. As a result, traffic is likely to divert to adjacent parallel streets such as 1st and 3rd Streets, but the roadway capacity along these streets would remain unchanged, as with the No Build Alternative. Traffic congestion along these streets would likely increase. Figure 2-3 illustrates the At-Grade Emphasis LRT Alternative.

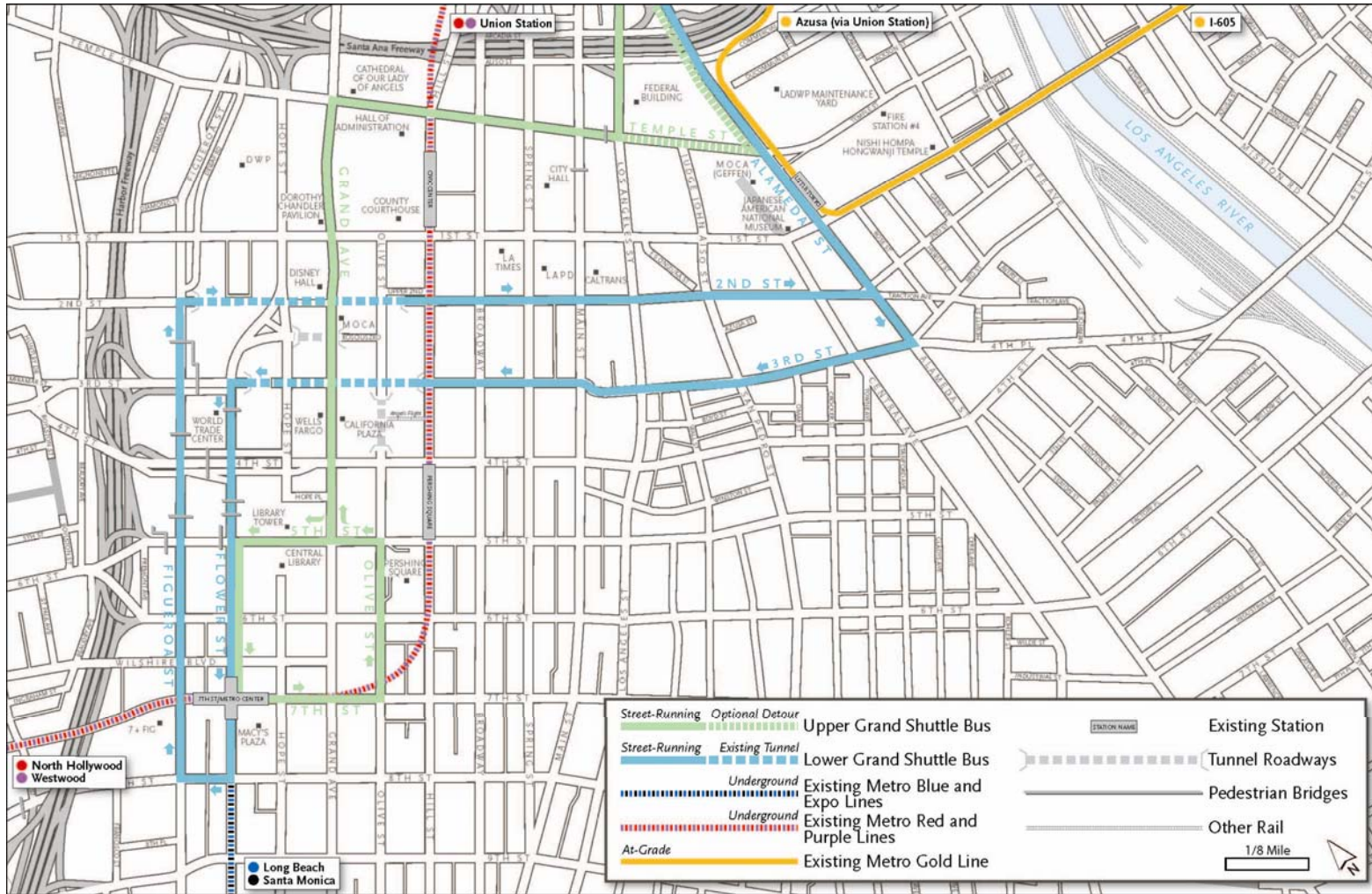


Figure 2-2. Transportation System Management (TSM) Alternative

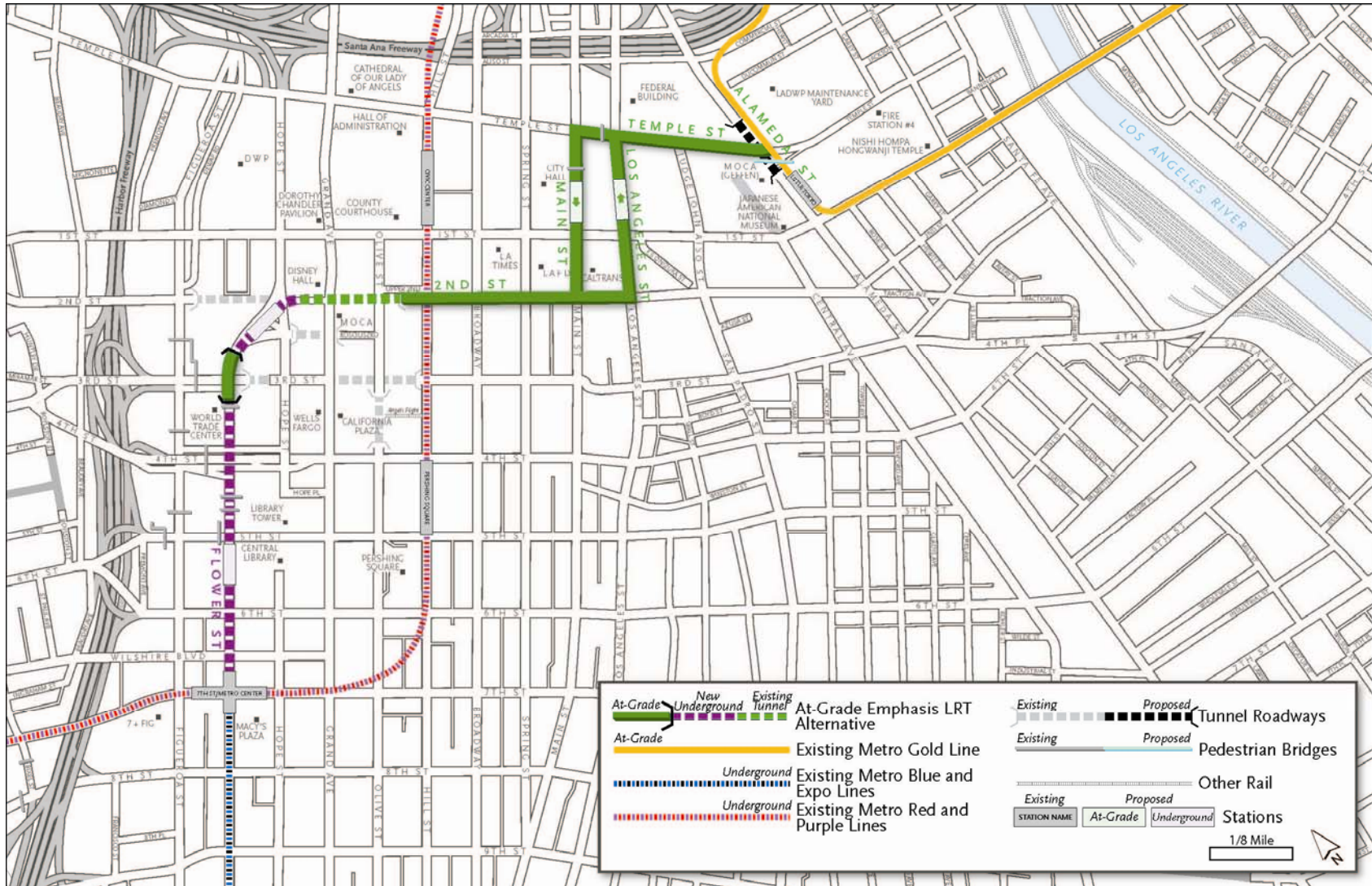


Figure 2-3. At-Grade Emphasis Light Rail Transit (LRT) Alternative

2.3.3.2 Route Configuration

From the existing platform at the 7th Street/Metro Center Station, the tracks would extend north underneath Flower Street to a new underground station just south of 5th Street. The tracks would then continue north, surface just south of 3rd Street, cross 3rd Street at-grade, and veer northeast through a portal in the hillside to an underground station at 2nd and Hope Streets. At this location, a new pedestrian bridge could be constructed to connect the station to Upper Grand Avenue. The tracks would continue northeast, “punch” through the wall of the existing 2nd Street Tunnel, and then travel east in the 2nd Street Tunnel toward Hill Street.

This alignment would reduce the 2nd Street Tunnel from four lanes to one (potentially two lanes, pending further detailed engineering). Trains would proceed east on 2nd Street to Main Street. Second (2nd) Street would be transit-dedicated, with its current two travel lanes and two parking lanes reduced to a single travel lane primarily for access to parking lots and loading zones. This type of configuration would extend from Hill Street to Los Angeles Street.

At Main Street, the alignment would split into two single-track alignments. One track (for northbound trains) would continue east to Los Angeles Street and then north to Temple Street. The other track (for southbound trains) would travel north on Main Street and then west on Temple Street. The at-grade station just north of 1st Street would be a split couplet with one-way stops at Main/1st Street and Los Angeles/1st Street.

At Temple and Los Angeles Streets, the two tracks would rejoin and proceed west on Temple Street to Alameda Street, where the tracks would join the Metro Gold Line to East Los Angeles in a three-way junction. Before reaching Alameda Street, the tracks would shift to the south side of Temple Street to provide an adequate turning radius for trains turning north onto the Metro Gold Line’s existing ramp leading to the bridge over the US 101 freeway to Union Station. The ramp would need to be reconfigured to a steeper slope to facilitate turning movements in the three-way junction area. The intersection of Temple and Alameda Streets would also have a vehicular underpass for through-traffic on Alameda Street and a proposed pedestrian bridge to reduce potential conflicts between pedestrians, trains, and automobiles. The pedestrian bridge could potentially have endpoints located on each of the intersection’s four corners.

At-grade crossovers could be located on 2nd Street between Hill Street and Broadway, and on 2nd Street between Broadway and Spring Street. Crossovers are mechanical track installations along the double-track alignment that allow trains traveling in either direction on either track to move to the other track and continue traveling in the same direction without stopping. Trains may also pass through a crossover without switching tracks. A wider right-of-way may be required in the vicinity of at-grade crossovers, thus potentially increasing the amount of roadway space needed for LRT facilities.

In summary, the At-Grade Emphasis LRT Alternative would connect the Metro Blue and Expo Line tracks at the 7th Street/Metro Center Station to the Metro Gold Line tracks at a new junction north of the Little Tokyo/Arts District Station. This would be accomplished using new light rail right-of-way and new stations, enabling Metro Gold, Blue, and Expo Line services to be consolidated into two routes.

This memorandum also analyzes maximum potential effects for each station. Therefore, the actual effects may be smaller in magnitude than the potential impacts discussed in this analysis. Tunnel construction would be constrained by basements of existing buildings. No encroachments upon existing basements would occur except potentially at underground stations.

2.3.3.3 Operating Characteristics

Two consolidated routes:

- East-West Route – Trains on the Metro Expo Line tracks from Santa Monica would use existing tracks to the 7th Street/Metro Center Station and then continue along the new Regional Connector tracks to the new three-way junction at Temple and Alameda Streets. The service would then continue east along the Metro Gold Line tracks to East Los Angeles.
- North-South Route – Trains on the Metro Blue Line tracks would travel from the 7th Street/Metro Center Station north along the new Regional Connector tracks to the new three-way junction at Temple and Alameda Streets. The service would then continue north along the existing Metro Gold Line tracks to Pasadena and the future Metro Gold Line extension to Azusa.

Vehicle and Pedestrian Circulation

For the at-grade segments of the At-Grade Emphasis LRT Alternative, the two LRT tracks would typically occupy a 26-foot-wide surface right-of-way bordered by mountable curbs. It is expected that this width would increase to 39 feet at center-platform station locations.

Vehicular and pedestrian crossings would be limited to traffic signal-controlled intersections, with the signal phasing modified to provide adequate green time for the LRT vehicles to safely cross. For safety reasons, no uncontrolled mid-block vehicular crossings of the tracks would be permitted.

Access to existing parking structures, parking lots, loading docks, and commercial frontage would be affected by the at-grade LRT facilities. Left-turn parking access and egress is presently allowed at many downtown sites. However, the at-grade LRT facilities would prohibit uncontrolled mid-block left turns, thus modifying existing approach and departure traffic patterns.

The proposed At-Grade Emphasis LRT Alternative alignment would travel at-grade along 2nd Street. It is assumed that this street would be dedicated as a transit-only roadway between the tunnel and Los Angeles Street. This segment of 2nd Street may be closed to through traffic and provide only emergency vehicle access and local access to adjacent properties. As a result of this proposed change in street circulation, through traffic currently using 2nd Street would be diverted to parallel roadways such as 1st and 3rd Streets. East of Los Angeles Street 2nd Street would maintain its current physical features and operating characteristics.

The one-way transit couplet near City Hall along Main and Los Angeles Streets between 2nd and Temple Streets would consist of a single LRT track along each roadway. Both Main and Los Angeles Streets are wide enough to accommodate a single track and maintain acceptable vehicular operations. The curb-to-curb width of Temple Street, between Main and Alameda Streets, is 62 to 71 feet, which would leave one lane of traffic in each direction with potentially mountable curbs for use by emergency vehicles. Traffic operations along this segment of Temple Street would be affected by the lane reduction.

To minimize potential conflicts between rail, vehicular, and pedestrian traffic and minimize delays at the intersection of Temple and Alameda Streets, a vehicular underpass and a proposed pedestrian overpass would be proposed along Alameda Street to route the through traffic beneath the rail tracks and Temple Street traffic. Temple Street and the rail tracks would remain at-grade and the existing at-grade segment of Alameda Street would be lowered to pass under Temple Street.

Through traffic traveling north and south on Alameda Street would operate unimpeded without being stopped or delayed at the intersection. Through traffic traveling east and west on Temple Street would continue to operate at-grade with a signal to control the movements between the vehicular and rail modes of transportation. In addition, a one-lane southbound at-grade frontage road would be provided along Alameda Street to maintain access to businesses and properties on the west side of the street.

2.3.4 Underground Emphasis LRT Alternative

2.3.4.1 Overview

The Underground Emphasis LRT Alternative would provide a direct connection from 7th Street/Metro Center Station to the Gold Line tracks at the Little Tokyo/Arts District Station, and would include three new station locations. The alignment would extend underground from the 7th Street/Metro Center Station under Flower Street to 2nd Street. The tracks would then proceed east underneath the 2nd Street Tunnel and 2nd Street to a new portal on the parcel bounded by 1st Street, Alameda Street, 2nd Street, and Central Avenue.

It is expected that a portion of this property would need to be acquired to construct the portal and stage construction of the tunnels beneath 2nd Street. The tracks would then connect to the Gold Line tracks across Alameda Street.

The Underground Emphasis LRT Alternative would be located entirely underground except for a single at-grade crossing at the intersection of 1st and Alameda Streets in the same type of three-way junction proposed for the At-Grade Emphasis LRT Alternative. Figure 2-4 illustrates this alternative.

2.3.4.2 Route Configuration

The Underground Emphasis LRT Alternative alignment would extend north from the existing platform at the 7th Street/Metro Center Station. Tracks would run underneath Flower Street to the next proposed station, just north of 5th Street. The tracks would then continue north underneath Flower Street and veer northeast near the intersection of 3rd and Flower Streets.

A new underground station would be located just southwest of the intersection of 2nd and Hope Streets. At this location, a new pedestrian bridge could be constructed to connect the station to Upper Grand Avenue.

The tracks would then head east underneath 2nd Street to the next proposed station. There are two options for a station on 2nd Street. The Broadway station option would place an underground station on 2nd Street between Broadway and Spring Street, and the Los Angeles Street station option would include an underground station between Main and Los Angeles Streets.

The tracks would then continue east underneath 2nd Street to Central Avenue, where they would veer northeast and surface in the lot bounded by 1st, Alameda, and 2nd Streets, and Central Avenue. The tracks would then enter an at-grade three-way junction in the intersection of 1st and Alameda Streets.

A new underpass would carry car and truck traffic along Alameda Street beneath 1st Street and the rail junction, and a proposed overhead pedestrian bridge structure would reduce most potential conflicts between pedestrians and trains. The pedestrian overpass could potentially have endpoints at each of the four corners of the intersection.

Crossovers could be located just north of the proposed station at 5th and Flower Streets and just east of the proposed station on 2nd Street (whether it is between Broadway and Spring Street or between Main and Los Angeles Streets). Crossovers may not be needed at all of these locations and may ultimately be placed in locations that are not adjacent to stations. Underground crossover locations require cut-and-cover construction; tunnel-boring machines cannot be used to construct underground crossovers.

In summary, the Underground Emphasis LRT Alternative would link the Metro Blue and Expo Lines at the 7th Street/Metro Center Station to the Metro Gold Line from a new junction just south of the Little Tokyo/Arts District Station at 1st and Alameda Streets. This would be accomplished using new light-rail right-of-way and new stations, enabling the consolidation of the Metro Gold, Blue, and Expo Line services into two routes.

This Memorandum analyzes maximum potential impacts for each station. Ultimate potential impacts may therefore be less in magnitude than the potential impacts disclosed. Tunnel construction would be constrained by basements of existing buildings. No encroachments upon existing basements would occur except potentially at underground stations.

2.3.4.3 Operating Characteristics

Two consolidated routes:

- East-West Route – Trains on the Metro Expo Line tracks from Santa Monica would run on tracks to the 7th Street/Metro Center Station and then continue north along the new Regional Connector tracks to the new three-way junction at the intersection of 1st and Alameda Streets. Trains would then turn east on 1st Street, bypassing the Little Tokyo/Arts District Station, and continue along the Metro Gold Line tracks to East Los Angeles.
- North-South Route – From the 7th Street/Metro Center Station, trains from Long Beach would continue north along the new Regional Connector tracks to the new three-way junction at 1st and Alameda Streets. The trains would then turn north on 1st Street and stop at the existing Little Tokyo/Arts District Station before continuing along the Metro Gold Line route to Pasadena and Azusa.

Vehicle and Pedestrian Circulation

The Underground Emphasis LRT Alternative alignment would not permanently affect surface traffic or pedestrian circulation except at the intersection of 1st and Alameda Streets, where the LRT alignment would operate in an at-grade configuration. Consequently, vehicular circulation patterns along downtown streets adjacent to most of the alignment would continue to operate under current traffic flow patterns.

The future roadway levels of service for this alternative would be similar to the No Build Alternative except at the intersection of 1st and Alameda Streets, where a vehicular underpass and pedestrian overpass are proposed to separate the heavy traffic volumes along Alameda Street from rail traffic to minimize delays. The proposed underpass would result in uninterrupted flow along Alameda Street in the north and south directions between 2nd and Temple Streets. Through traffic traveling east and west on 1st Street would continue to operate at-grade with a signal to control the movements between the vehicular and rail modes of transportation.

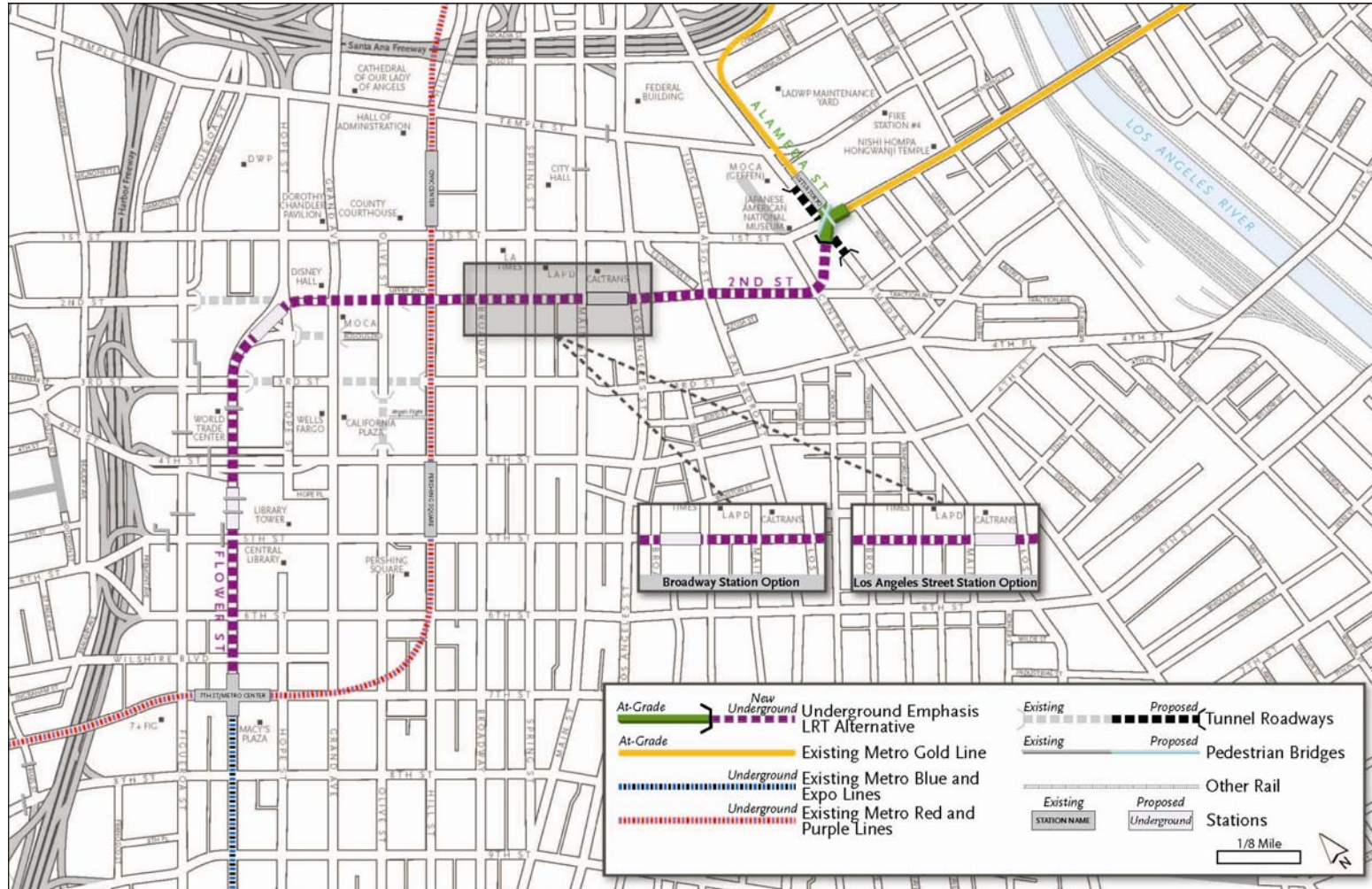


Figure 2-4. Underground Emphasis LRT Alternative

To maintain access to adjacent businesses and properties, at-grade frontage roads would be provided along both sides of Alameda Street south of the intersection and on the southbound side of the street north of the intersection. A full northbound frontage road crossing 1st Street is not feasible because of the location of the tracks and the Little Tokyo/Arts District Station on the east side of Alameda Street.

2.3.5 Fully Underground LRT Alternative – Little Tokyo Variation 1

2.3.5.1 Overview

The Fully Underground LRT Alternative - Little Tokyo Variation 1 would provide four new stations and a direct connection from 7th Street/Metro Center Station to the existing Metro Gold Line tracks to the north and east of 1st and Alameda Streets. The alignment would extend underground from the 7th Street/Metro Center Station under Flower Street to 2nd Street. The tracks would then proceed east underneath the 2nd Street Tunnel and 2nd Street to Central Avenue.

At 2nd and Central, the tracks would continue underground heading northeast under 1st and Alameda Streets. A three-way junction would be constructed underground beneath the 1st and Alameda intersection. To the north and east of the junction, trains would rise to the surface through two new portals to connect to the Metro Gold Line heading north to Azusa and east to the San Gabriel Valley. One portal would be located northeast of the Little Tokyo/Arts District Station and tracks. This portal would rise to the north within the City of Los Angeles Department of Water and Power (LADWP) Maintenance Yard and connect to the existing LRT Bridge over the US-101 freeway, allowing a connection to the Metro Gold Line to Azusa. The portal would be connected to the 1st and Alameda junction by a new tunnel crossing beneath Temple Street and the property proposed for the Nikkei Center (the parcel on the northeast corner of 1st and Alameda Streets), running immediately east of the Little Tokyo/Arts District Station and tracks.

The second portal would be located within 1st Street between Alameda and Vignes Streets. Tracks would rise to the east within this second portal and connect at-grade to the existing Metro Gold Line tracks toward I-605. To accommodate the portal, 1st Street would be widened to the north. Street widening would be initiated at Alameda and continue east, tapering down significantly as it crosses Hewitt Street to join the existing 1st Street LRT tracks about one and half blocks west of the 1st Street Bridge.

Additional property would need to be acquired to stage construction of both portals, connect to the Gold Line LRT bridge, and complete the tunnels beneath 2nd Street and the Nikkei Center property. The Fully Underground Alternative – Little Tokyo Variation 1 would be located entirely underground from the 7th Street/Metro Center Station to east of the intersection of 1st and Alameda Streets. Figure 2-5 illustrates this alternative.

2.3.5.2 Route Configuration

The Fully Underground LRT Alternative- Little Tokyo Variation 1 alignment would extend north from the existing LRT platform at 7th Street/Metro Center Station. Tracks would run underneath Flower Street to the next proposed station, just north of 5th Street. The tracks would then continue north underneath Flower Street and veer northeast near the intersection of 3rd and Flower Streets.

A new underground station would be located just southwest of the intersection of 2nd and Hope Streets. At this location, a new pedestrian bridge could be constructed to connect the station to Upper Grand Avenue. The bridge could begin at street level near the station entrance and cross above the intersection and along Kosciuszko Way to reach Upper Grand Avenue.

The tracks would then head east underneath 2nd Street to the next proposed station at Broadway. The 2nd Street/Broadway station would be located under 2nd Street approximately between Broadway and Spring Street. The tracks would then continue east underneath 2nd Street to Central Avenue, where they would veer northeast to a new underground station, which would potentially be located within the property currently occupied by Office Depot and other small commercial uses.

The tracks would continue from the station under the 1st and Alameda intersection into a new underground three-way junction. One set of tracks would separate from this junction, continuing underground beneath the proposed Nikkei Center parcel (the parcel on the northeast corner of 1st and Alameda Streets), along the eastern side of the existing Little Tokyo/Arts District Station. These tracks would travel under Temple Street before surfacing in the LADWP yard and rising to connect to the existing Metro Gold Line LRT bridge over the US-101 Freeway. This would allow trains to continue along the Metro Gold Line to Pasadena, which would eventually extend to Azusa per Metro's Long Range Transportation Plan. Traffic lanes on Alameda Street would be reconfigured temporarily during construction.

The other set of tracks leaving the three-way junction would rise to the east within 1st Street to accommodate a new portal as well as existing Metro Gold line tracks. To accommodate the portal, the north portion of 1st Street would be widened. Street widening would be initiated at Alameda and continue east, tapering down significantly as the alignment crosses Hewitt Street to join the existing 1st Street LRT tracks, about one and half blocks west of the 1st Street Bridge. This would allow trains to continue along the Metro Gold Line to East Los Angeles, which should eventually extend to I-605 per Metro's Long Range Transportation Plan.

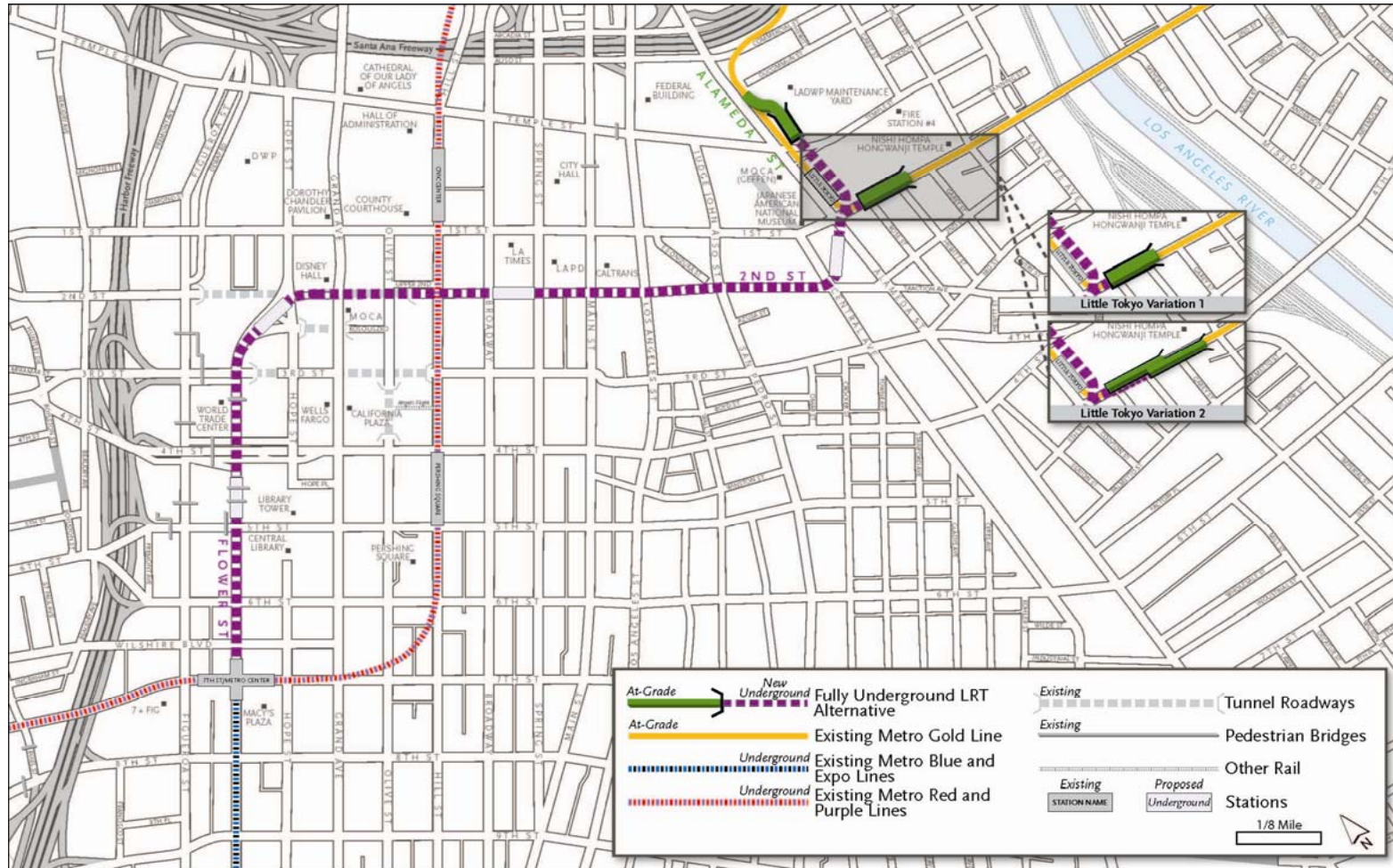


Figure 2-5. Fully Underground Emphasis LRT Alternative Alignment and Configuration, Little Tokyo Variations 1 and 2

The signalized intersection of 1st and Hewitt Streets would be removed. North-south traffic along Hewitt Street would no longer be able to cross 1st Street. All left turns at 1st and Hewitt would be prohibited. Right turns to and from Hewitt Street would continue to be permitted. Automobile access to the proposed Nikkei Center parcel would continue to be available from Temple and 1st Streets. However, access at any driveways into the parcel along 1st Street would be restricted to right turns only.

The existing Metro Gold Line and the Little Tokyo/Arts District Station surface tracks and station would be maintained for continued service during construction, with only intermittent disruptions related to construction activities. Once construction is complete, operation of the current Metro Gold Line between Pasadena and East Los Angeles would terminate. Metro would initiate operations on two routes: between Azusa and Long Beach, and between East Los Angeles and Santa Monica.

Crossovers could be located just north of the proposed station at 5th and Flower Streets and just east of the proposed station at 2nd Street and Broadway. Crossovers may not be needed at both of these locations, and may ultimately be placed in locations that are not adjacent to stations.

Underground crossover locations require cut-and-cover construction; tunnel boring machines cannot be used to construct underground crossovers. More information on these construction methods is provided in the Description of Construction.

In summary, the Fully Underground LRT Alternative – Little Tokyo Variation 1 would link the Metro Blue and Expo Lines at the 7th Street/Metro Center Station to the Metro Gold Line from a new junction under 1st and Alameda Streets. This would be accomplished using new light rail right-of-way and four new stations, enabling Metro Gold, Blue, and Expo Line services to be consolidated.

This technical memorandum analyzes maximum potential impacts for each station. Ultimate potential impacts may therefore be smaller in magnitude than the potential impacts disclosed. Tunnel construction would be constrained by basements of existing buildings. No encroachments upon existing basements would occur except potentially at underground stations.

2.3.5.3 Operating Characteristics

Two consolidated routes:

The Regional Connector would consolidate the Metro Gold Line, Metro Expo Line, and Metro Blue Line into the two following routes:

- East-West Route - Metro Expo Line trains from Santa Monica would continue north from the existing 7th Street/Metro Center Station along new Regional Connector tracks

to a new three-way junction beneath the intersection of 1st and Alameda Streets. Trains would then travel to the new portal on 1st Street, and continue along the Metro Gold Line tracks toward I-605.

- North-South Route - After stopping at 7th Street/Metro Center Station, trains from Long Beach would continue north along the new Regional Connector tracks to the new three-way junction beneath 1st and Alameda Streets. Trains would then travel to the new portal on the LADWP site, and continue along the existing Metro Gold Line alignment to Azusa.

The east-west and north-south routes would each operate with 5 minute headways during peak hours, combining to yield trains every 2 ½ minutes in each direction along the Regional Connector corridor.

Vehicle and Pedestrian Circulation

The Fully Underground LRT Alternative – Little Tokyo Variation 1 alignment would not permanently affect surface traffic or pedestrian circulation on 1st Street between Alameda Street and the 1st Street Bridge, where the LRT alignment would rise within a portal to an at-grade configuration. Street widening and sidewalk modifications would be required in this area.

Vehicular circulation patterns along downtown streets adjacent to most of the alignment would continue to operate under current traffic flow patterns except where a newly installed traffic signal at 1st and Hewitt Streets would be removed. Through traffic movements along Hewitt Street would no longer be permitted at 1st Street, and no left turns to or from Hewitt Street would be possible.

Permanent roadway and lane reconfigurations around the proposed 2nd/Hope Street and Flower/5th/4th Street stations would also be needed. At the proposed 2nd/Hope Street station, a short connector roadway would be removed, but all existing traffic movements would still be possible via the remaining connector roadways. At the proposed Flower/5th/4th Street station, one traffic lane would need to be removed from Flower Street to accommodate station entrances along the sidewalk.

2.3.6 Fully Underground LRT Alternative – Little Tokyo Variation 2

2.3.6.1 Overview

The Fully Underground LRT Alternative - Little Tokyo Variation 2 would provide four new stations and a direct connection from 7th Street/Metro Center Station to the existing Metro Gold Line tracks to the north and east of 1st and Alameda Streets. The alignment would be the same as the Fully Underground LRT Alternative – Little Tokyo Variation 1 from the 7th Street/Metro Center Station to 2nd Street and Central Avenue.

A new two-level underground junction would be constructed beneath the 1st and Alameda Streets intersection. Trains traveling north toward Azusa and east toward I-605 would use the lower level of the junction, and trains travelling south toward Long Beach and west toward Santa Monica would use the upper level. To the north and east of the junction, trains would rise to the surface through new portals to connect to the Metro Gold Line heading north to Azusa and east towards I-605.

One portal containing the northbound and southbound tracks would be located northeast of the Little Tokyo/Arts District Station and tracks. This portal would rise to the north within the LADWP Maintenance Yard and connect to the existing LRT bridge over the US-101 freeway, allowing a connection to the Metro Gold Line tracks.

This portal would be connected to the 1st and Alameda junction by a new cut-and-cover tunnel crossing beneath Temple Street and the property proposed for the Nikkei Center (the parcel on the northeast corner of 1st and Alameda Streets), and would run immediately east of the existing Little Tokyo/Arts District station and tracks. The new tunnel would feed southbound trains from the portal into the upper level of the junction, and carry northbound trains away from the lower level of the junction toward the portal.

Two portals, each containing one track, would rise to the east within the widened median of 1st Street to allow a connection to the Metro Gold Line towards I-605. The portal containing the westbound track would be located between Alameda and Garey Streets. The portal containing the eastbound track would be located adjacent to the westbound track between Hewitt and Vignes Streets.

The northern portion of 1st Street would be widened to accommodate the westbound portal. The widening would be initiated at Alameda and continue east, tapering down significantly as it crosses Hewitt Street. There, the new tracks would feed into the existing 1st Street LRT tracks, about a block west of the 1st Street Bridge. Also, 1st Street would be widened to the south between Hewitt and Vignes Streets to accommodate the eastbound track portal. The widening would taper down as it approaches Vignes Street. No modification to the 1st Street Bridge would be necessary.

Additional property would need to be acquired to stage construction of both portals, connect to the Gold Line LRT Bridge, and complete the tunnels beneath 2nd Street and the Nikkei Center property.

The Fully Underground Alternative – Little Tokyo Variation 2 would be located entirely underground from the 7th Street/Metro Center Station to east of the intersection of 1st and Alameda Streets. Figure 2-5 illustrates this alternative.

2.3.6.2 Route Configuration

The Fully Underground LRT Alternative – Little Tokyo Variation 2 alignment would extend north from the existing LRT platform at 7th Street/Metro Center Station. Tracks would run underneath Flower Street to the next proposed station, just north of 5th Street. The tracks would then continue north underneath Flower Street and veer northeast near the intersection of 3rd and Flower Streets.

A new underground station would be located just southwest of the intersection of 2nd and Hope Streets. At this location, a new pedestrian bridge could be constructed to connect the station to Upper Grand Avenue. The bridge could begin at street level near the station entrance and cross above the intersection and along Kosciuszko Way to reach Upper Grand Avenue.

From 2nd and Hope Streets, the tracks would head east underneath 2nd Street to the next proposed station at Broadway. The 2nd Street/Broadway station would be located under 2nd Street approximately between Broadway and Spring Street.

The tracks would then continue east underneath 2nd Street to Central Avenue, where they would veer northeast to a new underground station that would potentially be located within the property currently occupied by Office Depot and other small commercial uses.

As the tunnels turn northeast from 2nd Street, the northbound tunnel would descend and the southbound tunnel would rise so that the southbound tunnel would be stacked on top of the northbound tunnel. The new underground station near 2nd Street and Central Avenue would have two underground levels, each with a single-track platform. The northbound track with trains headed north and east would be on the lower level, and the southbound track with trains headed south and west would be on the upper level.

The tracks would continue from the station under the 1st and Alameda intersection into a new two-level underground junction. Separating from the junction, one track from the lower level (northbound) and one track from the upper level (southbound) would continue underground beneath the proposed Nikkei Center parcel (the parcel on the northeast corner of 1st and Alameda Streets), along the eastern side of the existing Little Tokyo/Arts District Station.

These tracks would travel under Temple Street before surfacing in the LADWP yard and rising to connect to the existing Metro Gold Line LRT Bridge over the US-101 Freeway. This would allow trains to continue along the Metro Gold Line to Pasadena, which should extend to Azusa per Metro's Long Range Transportation Plan. Traffic lanes on Alameda Street would be reconfigured temporarily during construction.

A second track (westbound) leaving the upper level of the junction would rise to the east within 1st Street between Alameda and Hewitt Streets and link to the existing Metro Gold Line

track. Another track (eastbound) leaving the lower level of the junction would rise to the east within 1st Street between Hewitt and Vignes Streets, adjacent to the westbound track, and link to the existing Metro Gold Line track.

To accommodate the portal and temporary tracks to maintain Metro Gold Line service during construction, 1st Street would be widened to the north and south. Widening would be initiated at Alameda and continue east, tapering down significantly as the alignment crosses Hewitt Street and again at Vignes Street, where tracks would join the existing 1st Street LRT tracks, just west of the 1st Street Bridge. This would allow trains to continue along the Metro Gold Line to East Los Angeles, which would eventually extend toward I-605 per Metro's Long Range Transportation Plan.

The signalized intersection of 1st and Hewitt Streets would be removed. North-south traffic along Hewitt Street would no longer be able to cross 1st Street. All left turns at 1st and Hewitt would be prohibited. Right turns to and from Hewitt Street would continue to be permitted.

Automobile access to the proposed Nikkei Center parcel would continue to be available from Temple and 1st Streets. However, access at any driveways into the parcel along 1st Street would be restricted to right turns only. The existing Metro Gold Line and Little Tokyo/Arts District Station and surface tracks would be maintained for continued service during construction, with intermittent disruptions related to construction activities.

One lane of 1st Street would need to be temporarily closed during construction between Alameda and Vignes Streets to maintain these surface tracks. The surface tracks would not remain in place beyond construction. Once construction is complete, operation of the current Metro Gold Line between Pasadena and East Los Angeles would terminate. Metro would initiate operations on two routes: between Azusa and Long Beach, and between East Los Angeles and Santa Monica.

Crossovers could be located just north of the proposed station at 5th and Flower Streets and just east of the proposed station at 2nd Street and Broadway. Crossovers may not be needed at both of these locations and may ultimately be placed in locations that are not adjacent to stations. Underground crossover locations require cut-and-cover construction; tunnel boring machines cannot be used to construct underground crossovers. More information on these construction methods is provided in the Description of Construction.

In summary, the Fully Underground LRT Alternative – Little Tokyo Variation 2 would link the Metro Blue and Expo Lines at the 7th Street/Metro Center Station to the Metro Gold Line tracks. The link would be provided by a new two-level junction under 1st and Alameda Streets using new light rail right-of-way and new stations, enabling Metro Gold, Blue, and Expo Line services to be consolidated.

This technical memorandum analyzes maximum potential impacts for each station. Ultimate potential impacts may therefore be smaller in magnitude than the potential impacts disclosed. Tunnel construction would be constrained by basements of existing buildings. No encroachments upon existing basements would occur except potentially at underground stations.

2.3.6.3 Operating Characteristics

Two consolidated routes:

- The Regional Connector would consolidate the Metro Gold Line, Metro Expo Line, and Metro Blue Line into the two following routes: East-West Route - Metro trains from Santa Monica would run on existing tracks from the 7th Street/Metro Center Station north along the new Regional Connector tracks to a new two-level junction beneath the intersection of 1st and Alameda Streets. Trains would then travel to the new portals on 1st Street, and continue along the Metro Gold Line tracks towards I-605.
- North-South Route - After stopping at 7th Street/Metro Center Station, trains from Long Beach would continue north along the new Regional Connector tracks to the new two-level junction beneath 1st and Alameda Streets. The trains would then travel to the new portal on the LADWP site, and continue along the Metro Gold Line tracks to Azusa.

The east-west and north-south routes would each operate with 5-minute headways during peak hours, combining to yield trains every 2 ½ minutes in each direction along the Regional Connector.

Vehicle and Pedestrian Circulation

The Fully Underground LRT Alternative – Little Tokyo Variation 2 alignment would not permanently affect surface traffic or pedestrian circulation on 1st Street between Alameda Street and the 1st Street Bridge, where the LRT alignment would rise within a portal to an at-grade configuration. Street widening and sidewalk modifications would be required in this area.

Vehicular circulation patterns along downtown streets adjacent to most of the alignment would continue to operate under current traffic flow patterns except where a newly installed traffic signal at 1st and Hewitt Streets would be removed. Through traffic movements along Hewitt Street would no longer be permitted at 1st Street, and no left turns to or from Hewitt Street would be possible.

Permanent roadway and lane reconfigurations around the proposed 2nd/Hope Street and Flower/5th/4th Street stations would also be needed. At the proposed 2nd/Hope Street station, a short connector roadway would be removed, but all existing traffic movements would still be

possible via the remaining connector roadways. At the proposed Flower/5th/4th Street station, one traffic lane would need to be removed from Flower Street to accommodate station entrances along the sidewalk.

2.3.7 Locally Preferred Alternative

On October 28th, 2010, the Metro Board of Directors concurred with staff's recommendation to designate the Fully Underground LRT Alternative as the LPA. The LPA is essentially the same configuration as the Fully Underground LRT Alternative – Little Tokyo Variation 1, except that this alternative does not include the Flower/5th/4th Street station. It travels under the Japanese Village Plaza in Little Tokyo instead of continuing underneath 2nd Street to Central Avenue, and it then connects to the Metro Gold Line within 1st Street and north of Temple Street.

The alignment would extend underground from the 7th Street/Metro Center Station under Flower Street to 2nd Street. Tracks would then proceed east underneath the 2nd Street tunnel and 2nd Street to just west of Central Avenue. At 2nd Street and the pedestrian signal to the JVP, the tracks would continue underground heading northeast under the JVP and 1st and Alameda Streets.

An underground junction would be constructed beneath the intersection of 1st Street and Alameda Street. Unlike the Underground Emphasis LRT Alternative, two portals would be needed to facilitate the connection between the underground Regional Connector and the at-grade Metro Gold Line branches to Pasadena/Claremont and the Eastside. The new portals would be located to the north and east of the junction, where trains would rise to the surface to connect to the Metro Gold Line heading north to Claremont and east to the Eastside.

One portal would be located north of Temple Street, northeast of the existing at-grade Little Tokyo/Arts District Station and Metro Gold Line tracks. This portal would rise to the north within the maintenance yard of the City of Los Angeles Department of Water and Power (LADWP) and connect to the existing LRT bridge over US 101, allowing a connection to the Metro Gold Line to Claremont. Tracks would run from the junction under 1st and Alameda Streets through a new tunnel crossing beneath Temple Street and the Mangrove property (the parcel on the northeast corner of 1st and Alameda Streets) to the new portal. This new tunnel would run immediately east of the existing Little Tokyo/Arts District Station and Metro Gold Line tracks.

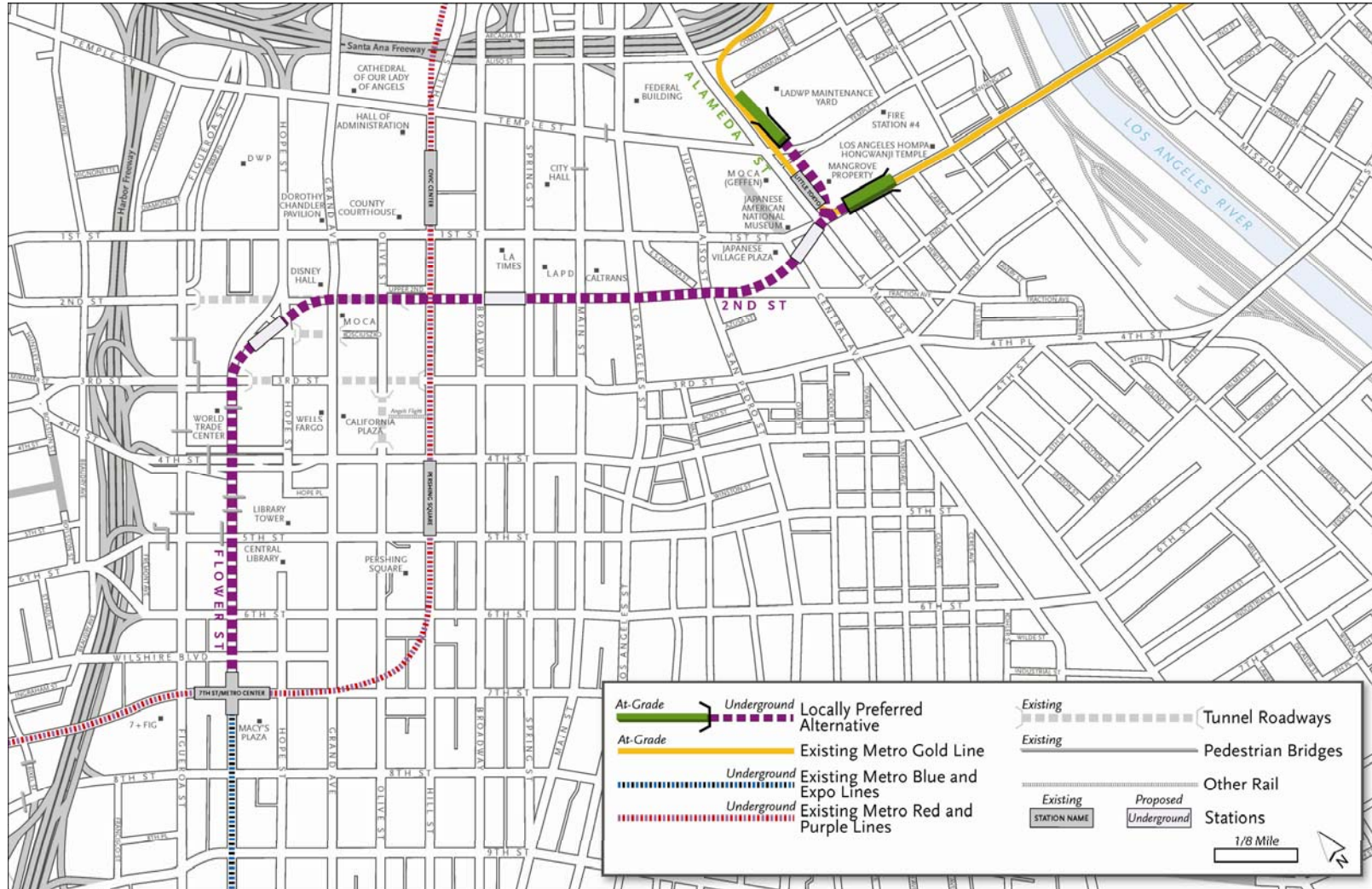


Figure 2-6 –Locally Preferred Alternative

The second portal would be located within 1st Street between Alameda and Garey Streets. Tracks would rise to the east within this second portal and connect at-grade to the existing Metro Gold Line tracks toward I-605. 1st Street would be widened to the north to accommodate this second portal and maintain the existing number of through lanes. The widening would start at Alameda Street and continue east, significantly tapering down as it crosses Hewitt Street, returning to the existing condition prior to the Los Angeles Homba Hongwanji Buddhist Temple, to join the existing 1st Street LRT tracks, just west of the 1st Street Bridge.

Property northeast of 1st and Alameda Streets, the Mangrove property, would need to be acquired for insertion of the TBM, to stage construction of both portals, to connect to the Metro Gold Line LRT bridge, and to construct the tunnels beneath Temple Street and the Mangrove property. During construction, tracks would be installed in this area at-grade to allow service to proceed on the Metro Gold Line while construction activities occur within the project area.

2.3.7.1 Route and Configuration

The LPA alignment would extend north from the existing LRT platform at 7th Street/Metro Center Station and would run underneath Flower Street. An enhanced pedestrian walkway would be provided along Flower Street from the 4th Street and Flower Street area to the existing 7th Street/Metro Center Station entrance at 7th and Flower Streets, which would improve the pedestrian connection between the Financial District and the 7th Street/Metro Center Station. The tracks would then continue north underneath Flower Street and veer northeast near the intersection of 3rd and Flower Streets. A new underground station would be located just southwest of the intersection of 2nd and Hope Streets.

At 2nd and Hope Streets, a pedestrian connection to Upper Grand Avenue would be provided. A pedestrian plaza above General Thaddeus Kosciuszko Way connecting to Upper Grand Avenue is planned as part of the Broad Collection museum. Metro would construct an elevator from the station entrance to the plaza if one is not already provided. If the plaza is not built, Metro would construct a pedestrian bridge from the elevator to Upper Grand Avenue. Tracks would then head east underneath 2nd Street to the next proposed underground station between Broadway and Spring Street (2nd Street/Broadway station).

The tracks would continue east underneath 2nd Street to just west of Central Avenue at approximately the pedestrian signal to the JVP, where the alignment would then veer northeast under privately held property and Central Avenue to a newly proposed Little Tokyo/Arts District underground station (1st/Central Avenue station). The proposed underground station would be partially located within Central Avenue and the northern half of the block bounded by 1st Street, Central Avenue, 2nd Street, and Alameda Street. The Señor Fish, Weiland Brewery, the former Café Cuba (The Spice Table), and associated parking would

need to be acquired for construction of this station. However, the remaining businesses on that block would remain, including the Office Depot and associated parking.

The tracks would leave the station and cross under the intersection of 1st Street and Alameda Street into a new underground rail junction. Separating from the junction, one set of tracks would continue underground beneath the Mangrove property (located on the northeast corner of 1st and Alameda Streets), along the eastern side of the existing Little Tokyo/Arts District Station.

The tracks would then travel under Temple Street before surfacing through a portal in the southwest corner of the LADWP maintenance yard and rise to connect to the existing Metro Gold Line LRT bridge over US 101. This would allow trains to continue along the Metro Gold Line to Pasadena, which would be extended to Claremont. Traffic lanes on Alameda Street would be temporarily reconfigured during construction.

The other set of tracks leaving the underground junction would rise to the east within 1st Street to accommodate a new portal and the existing Metro Gold Line tracks. 1st Street would be widened on its northern side to accommodate the portal. The widening would initiate at Alameda Street and continue east, significantly tapering down as the alignment crosses Hewitt Street, returning to the existing condition prior to the Los Angeles Hampa Hongwanji Buddhist Temple, to join the existing 1st Street LRT tracks, just west of the 1st Street Bridge. This would allow trains to continue along the Metro Gold Line to East Los Angeles, which would be eventually extended to I-605 per Metro's LRTP. The signals would be removed at the intersection of 1st and Hewitt Streets. North-south traffic along Hewitt Street would no longer be able to cross 1st Street. All left turns would be prohibited at the intersection of 1st and Hewitt Streets. Right turns would continue to be permitted to and from Hewitt Street. Automobile access to the Mangrove property would continue to be available from Temple and 1st Streets. However, automobile access to the parcel along 1st Street would be restricted to right turns only.

The existing Metro Gold Line Eastside Extension and the Little Tokyo/Arts District Station surface tracks and station would be maintained for continued service during construction with intermittent disruptions related to construction activities. Once construction is complete, operation of the current Metro Gold Line between Pasadena and the Eastside and the existing, at-grade Little Tokyo/Arts District Station would terminate. In its place, Metro would initiate operations on two routes:

- Between Claremont and Long Beach
- Between the Eastside and Santa Monica

Crossovers could be located just east of the proposed station at 2nd and Broadway Streets, underground beneath 1st Street just east of the intersection of 1st and Alameda Streets, and

underground beneath the Mangrove property, north of the rail junction. In addition, a pocket track, which could also serve as a crossover, would be located beneath Flower Street between 5th and 6th Streets. The crossovers and pocket track may not be needed at these locations and may ultimately be placed in other locations. Tunnel boring machines cannot be used for construction of crossovers since underground crossover locations require cut and cover construction. More information on these construction methods is provided in the Description of Construction, Appendix K.

In summary, the LPA would link the Metro Blue Line and Metro Expo Line at the 7th Street/Metro Center Station to the Metro Gold Line at a new junction under 1st and Alameda Streets using new light rail rights-of-way and new stations. This would enable the Metro Gold Line, Metro Blue Line, and Metro Expo Line services to be consolidated. Key features of the LPA are described below.

Proposed LRT alignments that would be constructed as part of the LPA are:

Underground double track beneath Flower Street from the existing platform at the 7th Street/Metro Center Station to 3rd Street

- Underground double track curving northeast from the intersection of 3rd and Flower Streets toward 2nd and Hope Streets
- Underground double track beneath the 2nd Street tunnel and 2nd Street from Hope Street to just west of Central Avenue, at approximately the pedestrian signal to the JVP, then northeast to 1st and Alameda Streets
- Underground rail junction beneath the intersection of 1st and Alameda Streets
- Underground double track from the rail junction to the portal located within a widened 1st Street between Alameda and Garey Streets, prior to the Los Angeles Homba Hongwanji Buddhist Temple; then at-grade double track connecting to the existing Metro Gold Line Eastside Extension tracks toward I-605
- Underground double track from the rail junction running north beneath the Mangrove property and Temple Street, just east of the existing Little Tokyo/Arts District Station, to the new portal in the LADWP maintenance yard site; then at-grade double track rising from the portal on a new ramp structure to connect to the existing Metro Gold Line bridge over the US 101

Proposed stations that would be constructed as part of the LPA are:

- Underground station just southwest of the intersection of 2nd and Hope Streets (2nd/Hope Street station)
- Underground station on 2nd Street between Broadway and Spring Streets (2nd/Broadway station)
- Underground station just southeast of the intersection at 1st Street and Central Avenue (1st/Central Avenue station). This station may include a small building at ground level on the southwest corner of 1st and Alameda Streets to house ventilation fans. This shallow station may potentially be built without a roof or mezzanine, leaving the below-grade platform level exposed

The proposed crossovers and pocket track could be located at the following preliminary locations:

- Pocket track, which could also serve as a crossover, underground along Flower Street between 5th and 6th Streets, which would allow for a possible future station at this location constructed as a separate project
- Crossover underground just east of 2nd/Broadway station
- Crossover underground beneath 1st Street just east of the intersection of 1st and Alameda Streets
- Crossover underground beneath the Mangrove property, north of the rail junction

Proposed TPSS facilities would be placed at the following locations:

- Along Flower Street between 5th and 4th Streets
- Underground in the 2nd/Broadway station

2.4.7.2 Operating Characteristics

The LPA consolidates the Metro Gold Line, Metro Expo Line, and Metro Blue Line into the two following routes:

East-West Route (Santa Monica to the Eastside via the Metro Expo Line, Regional Connector, and Metro Gold Line Eastside Extension tracks): Metro Expo Line trains from Santa Monica would travel on existing Flower Street tracks north of the junction at Washington and Flower Streets. After stopping at the existing 7th Street/Metro Center Station, the trains would continue north along the new Regional Connector tracks to a new junction beneath the intersection of 1st and Alameda Streets. Trains would then travel to a new portal on 1st Street, and continue along the Metro Gold Line Eastside Extension tracks to the Eastside in

the vicinity of I-605. North-South Route (Claremont to Long Beach via the Metro Gold Line, Regional Connector, and Metro Blue Line tracks): After stopping at 7th Street/Metro Center Station, Metro Blue Line trains from Long Beach would continue north along the new Regional Connector tracks to a new junction beneath 1st and Alameda Streets. Trains would then travel to a new portal on the LADWP maintenance yard site, and continue along the Pasadena Metro Gold Line and the Foothill Extension to Claremont.

The east-west and north-south routes would each operate with five minute headways during peak hours, combining to yield trains every 2 ½ minutes in each direction along the Regional Connector.

Vehicle and Pedestrian Circulation

The Regional Connector alignment would not affect surface traffic or pedestrian circulation on 1st Street between Alameda Street and the 1st Street bridge, where the LRT alignment would rise within a portal to an at-grade configuration. Street widening and sidewalk modifications would be required in this area. Through traffic movements along Hewitt Street would no longer be permitted at 1st Street, and no left turns to or from Hewitt Street would be possible. Vehicular circulation patterns along downtown streets adjacent to most of the alignment would continue to operate under current traffic flow patterns with the exception of the removal of a newly installed traffic signal at 1st and Hewitt Streets and potentially reduce lane of traffic and parking lane between Wilshire and 5th Streets.

Compared to other alternatives, the LPA alignment would require relatively small changes to surface traffic and pedestrian circulation patterns. There would be some changes on 1st Street between Alameda Street and the 1st Street Bridge where the LRT alignment would rise within a portal to an at-grade configuration. Street widening and sidewalk modifications would be required in this area. Vehicular circulation patterns along downtown streets adjacent to most of the alignment would continue to operate under current traffic flow patterns with the exception of the removal of a newly installed traffic signal at 1st and Hewitt Streets. Through traffic movements would no longer be permitted along Hewitt Street at 1st Street, and left turns would no longer be possible to or from Hewitt Street.

An enhanced pedestrian walkway would be created along Flower Street from the 4th Street and Flower Street area to the existing 7th Street/Metro Center Station entrance at 7th and Flower Streets, which would improve the pedestrian connection between the Financial District and the 7th Street/Metro Center Station. Pedestrian enhancements would include an enhanced pedestrian walkway with landscaping, wayfinding signage, art features, and amenities aimed at improving pedestrian experience and safety.

Permanent roadway and lane reconfigurations would also be needed around the proposed 2nd/Hope Street station and the proposed pedestrian walkway enhancement along Flower

Street. At the 2nd/Hope Street station, a short connector roadway would be removed, but all existing traffic movements would still be possible via the remaining connector roadways. One traffic lane would need to be removed from Flower Street between 4th and 6th Streets to accommodate the enhanced pedestrian walkway from the 4th Street and Flower Street area to the existing 7th Street/Metro Center Station entrance at 7th and Flower Streets.

3.0 METHODOLOGY FOR IMPACT EVALUATION

3.1 Regulatory Framework and Standards of Significance

This section discusses the applicable federal, state, and local regulations that 1) define historic properties and historical resources and 2) provide thresholds for determining effects to historic properties under NHPA and impacts to historical resources under CEQA.

3.1.1 Federal

A number of federal laws address the protection of historic properties. Analysis of expected effects to built environment resources are primarily addressed through NEPA, the National Historic Preservation Act (NHPA), and Section 4(f) of The Department of Transportation Act of 1966.

3.1.1.1 National Environmental Policy Act (NEPA)

The intent of NEPA is to protect the natural and built environment, including historic properties, from adverse effects resulting from federal actions. Before a federal agency may proceed with a proposed action, an environmental evaluation must be made to determine whether the action may have a significant effect on the environment. Effects on historic properties are usually assessed in coordination with the process established under Section 106 of the NHPA.

NEPA requires that agencies evaluate the degree to which an action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for the National Register of Historic Places. Properties that are listed in or eligible for listing in the National Register are defined as “historic properties” (See 36 CFR 800.16(l)). NEPA requires federal agencies to evaluate the significance of potential project-related effects, including both direct and indirect effects upon historic properties.

3.1.1.2 National Historic Preservation Act (NHPA)

Any project, activity, or program that is permitted, licensed, approved, or funded in whole or in part by a federal agency must comply with Section 106 of the NHPA. Federal agencies are required to take into account the effect of their actions on historic properties listed in or eligible for the National Register. Under 36 CFR Part 800.8, federal agencies are specifically encouraged to coordinate compliance with Section 106 and the NEPA process.

The NRHP, created under the NHPA, is the federal list of historic, archaeological, and cultural resources worthy of preservation. Resources listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, prehistory, architecture, archaeology, engineering, and culture. The NRHP is maintained and expanded by the National Park Service on behalf of the Secretary of the Interior. The California Office of Historic Preservation (in Sacramento) administers the statewide NRHP program under the

direction of the SHPO. To guide the selection of properties included in the NRHP, the National Park Service has developed the NRHP Criteria for Evaluation. The criteria are standards by which every property that is nominated to the NRHP is judged. Significance in American history, architecture, archaeology, and culture is possible in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling and association, and meet one of the following Criteria (36 CFR 60.4):

- Criterion A: A property is associated with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: A property is associated with the lives of a person or persons significant in our past; or
- Criterion C: A property embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: A property has yielded, or may be likely to yield, information important in prehistory or history.

Buildings less than 50 years old do not meet the NRHP criteria unless they are of exceptional importance under Criteria Consideration G, as described in the NPS's Bulletin No. 22, "How to Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Last 50 Years." Other NRHP criteria considerations are used for religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, and commemorative properties.

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 CFR Part 800.5(a) (1). These standards of significance are used in the evaluation of potential project effects and are described further in Section 3.2.

Section 110(f) of the NHPA of 1966, as codified in 36 CFR 800.10, requires federal agencies to undertake planning and actions to minimize harm to designated National Historic Landmark (NHL) properties. If a proposed project is found to have the potential for an adverse effect on a NHL, the Secretary of the Interior (typically represented by a representative of the National Park Service) is invited to participate under Section 110(f) of the NHPA. For this project, the Little Tokyo Historic District NHL is situated within the APE and would not be adversely affected. Consultation with the National Park Service will be conducted.

3.1.1.3 U.S. Department of Transportation Act (USDOT), Section 4(f)

Section 4(f) (23 CFR Part 774) of the U.S Department of Transportation (USDOT) Act of 1966, as amended (49 USC 1653[f]), defines impacts of DOT agency projects to be the “use” of certain types of resources, including “historic sites.”

DOT agencies, including FTA, cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites that are listed in or eligible for listing in the National Register unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land; and
- The action includes all possible planning to minimize harm to the property resulting from use (FHWA 2009).

Under Section 4(f), a historic site is significant if it is a historic property (i.e. a property listed in or eligible for the NRHP). Historic properties are considered 4(f) resources that are subject to the provisions of 23 CFR Part 774.

3.1.2 State

The protection of historical resources in California is addressed through the regulatory compliance of the CEQA. The identification and designation of resources in California follow guidelines set in the California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest.

3.1.2.1 California Environmental Quality Act (CEQA)

CEQA includes regulatory compliance in relation to historical resources. The CEQA guidelines define a significant historical resource as “a resource listed in or eligible for listing in the California Register of Historical Resources” (CRHR) (Public Resources Code Section 5024.1; 14 CCR 4852). The term historical resource is defined as any site that:

- Is listed in, or determined to be eligible by the State Historical Resources Commission for listing in the CRHR, or is determined to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California; and
- Meets any of the following criteria, denominated 1 through 4:
 1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 2. Is associated with the lives of persons important in California’s past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, a resource included in a local register of historical resources, as defined by Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC is presumed to be historically or culturally significant.

3.1.2.2 California Register of Historical Resources (California Register)

Under California PRC Section 5024.1, the CRHR was established to serve as an authoritative guide to the State's significant historic and archaeological resources. A resource is considered historically significant if it meets the criteria for listing in the CRHR (PRC Section 5024.1, Title 14 CCR Section 4852). For a property to be considered eligible for listing in the CRHR, it must be found significant under at least one of four criteria by the State Historical Resources Commission. The four criteria include a finding that the resource:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to possessing one of the above-listed characteristics, to be eligible for listing in the CRHR, resources must retain "substantial" integrity to their period of significance. The seven aspects or qualities of integrity are the same as those applied to NRHP-eligible properties: location, design, setting, materials, workmanship, feeling, and association.

The CRHR also includes properties which:

- Have been determined eligible for listing in, or are listed in the National Register;
- Are registered State Historical Landmark Number 770 and all consecutively numbered landmarks above Number 770 (see Section 3.1.2.3);

- Are points of historical interest that have been reviewed and recommended to the State Historical Resources Commission for listing (see Section 3.1.2.4);
- Are city- and county-designated landmarks or districts (see Section 3.1.3., historic districts) are a concentration of historic buildings, structures, objects, or sites within precise boundaries that share a common historical, cultural or architectural background. Individual resources within a historic district may lack individual significance but be considered a contributor to the significance of the historic district (PRC Section 5024.1 (d) (1-3)).
- Are identified as significant in a historic resource survey if it meets the following criteria:
 1. The survey has been or will be included in the State Historical Resources Inventory;
 2. The survey and the survey documentation were prepared in accordance with Office of Historic Preservation (OHP) procedures and requirements;
 3. The resource is evaluated and determined by the office to have a significance rating of category “1–5” on California Department of Parks and Recreation (DPR) series 523 form; and
 4. If the survey is five or more years old, at the time of its nomination for inclusion in the California Register the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource (PRC Section 5024.1 (g)).

3.1.2.3 California Historical Landmarks

California Historical Landmarks (CHLs) are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value.

Designated CHLs are numbered sequentially as they are listed by the State Historical Resources Commission. CHLs numbered 770 and higher are automatically listed in the CRHR. According to PRC Section 5031 (a), to be eligible for California Historical Landmark designation, a property must be of “statewide historical importance” and must demonstrate its statewide significance by meeting one of the following three requirements:

- The property is the first, last, only, or most significant historical property of its type in the region. The regions are Southern California, Central California, and Northern California.
- The property is associated with an individual or group having a profound influence on the history of California. The primary emphasis should be the place or places of achievement of an individual. Birthplace, death place, or place of interment shall not be a consideration unless something of historical importance is connected with his or her birth or death.
- The property is a prototype of, or an outstanding example of, a period, style, architectural movement, or construction, or it is one of the more notable works, or the best surviving work in a region of a pioneer architect, designer, or master builder.

3.1.2.4 California Points of Historical Interest

California Points of Historical Interest include “sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value.” Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. To be designated, a property must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (City or County).
- Associated with an individual or group having a profound influence on the history of the local area.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer or master builder.

3.1.3 Local

The City of Los Angeles designates local landmarks (Historic-Cultural Monuments) and historic districts, through Ordinance Number 175891, Section 12.20.3, of the Los Angeles Municipal Code.

NEPA and CEQA guide lead agencies to incorporate local designations in the review and evaluation of project effects. Therefore, designated Historic-Cultural Monuments and Historic Preservation Overlay Zones are also considered in the affected environment and included in identified properties. Since Los Angeles is a Certified Local Government, locally designated properties have “presumptive significance” under CEQA. If project alternatives

are expected to affect locally designated historic properties, mitigation measures are recommended, as for CEQA, to avoid, minimize, and mitigate those effects. No Historic Preservation Overlay Zones are located in the APE for this project.

3.1.3.1 City of Los Angeles Designation

Local landmarks in Los Angeles are designated as “Historic-Cultural Monuments.” To be eligible for separate designation, properties must meet the criteria described in City of Los Angeles Administrative Code Section 22.130. Historic Cultural Monuments would include any site (including significant trees or other plant life located thereon), building, or structure which:

- Is of particular historic or cultural significance to the City of Los Angeles, such as historic structures or sites in which the broad cultural, economic or social history of the nation, State or community is reflected or exemplified; or
- Is identified with historic personages or important events in the main currents of national, State or local history; or
- Embodies the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period style or method of construction; or
- A notable work of a master builder, designer, or architect whose individual genius influenced his age.

Properties are usually submitted to City of Los Angeles Office of Historic Resources staff for review, and if considered are presented to the Cultural Heritage Commission. If approved, the Cultural Heritage Commission makes a recommendation to a preliminary committee for its review and later to the City Council for designation.

3.2 Standards of Significance

3.2.1 Federal (NHPA) Criteria of Adverse Effect – Section 106

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 CFR Part 800.5(a) (1):

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include

reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

If a project's effects do not diminish the integrity of a historic property, then a "no adverse effect" finding is appropriate (36 CFR 800.5(b)). An "adverse effect" finding is appropriate when any of the following project effects occur:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;
- Removal of the property from its historic location;
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR Part 800.5(a) (2)).

If an adverse effect is expected to occur as a result of a proposed project, the lead agency shall consult further to resolve the adverse effect, pursuant to 36 CFR Part 800.5(2) and develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties (36 CFR Part 800.6).

3.2.2 CEQA Standards of Significance for Potential Impacts

As noted in Section 3.1.2.1, under CEQA, proposed public projects must be evaluated for their probability to cause significant effects on "historical resources." Historical resources are defined as "a resource listed in, or determined eligible for listing in, the California Register of Historical Resources" in PRC Section 21084.1. CEQA equates a "substantial adverse change" in the significance of a historic property with a significant effect on the environment (PRC Section 21084. 1). Thresholds of substantial adverse change are established in PRC Section

5020.1, and include demolition, destruction, relocation, or “alteration activities that would impair the significance of the historic resource.”

Material impairment occurs when a project results in demolition, or materially alters in an adverse manner, the physical characteristics that convey a property’s historic significance, or that are the reason for that property’s inclusion in an official register of historic resources (PRC Section 15064. 5[b] (2)).

If a proposed project or alternative under consideration is expected to cause substantial adverse change to a historical resource, an evaluation of alternatives for the project or implementation of mitigation measures to reduce or avoid impacts is required. If the project is expected to result in an effect on historical resources, CEQA guidelines require an analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project and avoid, or substantially lessen, any significant effects on the historical resource.

3.2.3 Noise and Vibration

Noise generated by construction equipment can cause adverse effects to historic properties and significant impacts to historical resources when exposure exceeds the “severe level” as established by FTA (Hanson 2006). Noise that reaches a severe level which cannot be reduced through mitigation or other measures may cause a reduction in use or access to historic properties or historical resources, and thus cause an adverse effect to historic properties or a significant impact to historical resources. For properties or resources where the sense of quiet represents a characteristic of its historical significance, increases in noise may also cause adverse effects and/or significant impacts.

Ground borne vibration (GBV) generated by construction equipment can also cause adverse effects to historic properties and significant impacts to historical resources that are in close proximity construction activities. Construction-related vibration can cause damage ranging from minor cosmetic damage to interior plaster or woodwork damage to major structural damage. Thus, GBV can harm the characteristics that make historic properties eligible for the NRHP and historical resources eligible for the CRHR.

GBV is established by measuring the vibratory potential of construction equipment, the distance between the equipment and a sensitive receptor (i.e. historical resource or historic property), and the structural category of the historic property and/or historical resource. When assessing the potential for building damage, GBV is usually expressed in terms of the peak particle velocity (PPV) in units of inches per second. FTA vibration damage criteria for various structural categories are listed in Table 3-1.

Depending on the types of construction equipment and the category of buildings, potential “minimum safe distances” for GBV for this project have been calculated in Table 3-2. The

approximations in Table 3-2 are based on “typical” equipment and construction activities as well as the general classification of structures.

Building Category and Description	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: U.S. Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual, May 2006. FTA-VA-90-1003-06. Table 12-3.

Equipment		Building Categories and (FTA Guideline Damage Thresholds)			
		Cat I (0.5 PPV) Inch/sec	Cat II (0.3 PPV) Inch/sec	Cat III (0.2 PPV) Inch/sec	Cat IV (0.12 PPV) Inch/sec
Pile Driver (Impact)	Upper Range	53	74	97	136
	Typical	30	42	55	77
Pile Driver (Sonic)	Upper Range	33	46	60	84
	Typical	13	18	23	32
Large Vibratory Roller		15	20	26	37
Hoe Ram		8	12	15	21
Large Bulldozer		8	12	15	21
Caisson drilling		8	12	15	21

3.3 Area of Potential Effects

The project-specific Area of Potential Effects (APE) (See Figures 3-1 through 3-9) was established through consultation between the lead federal agency, FTA, the lead CEQA agency, Metro, SHPO, and other consulting parties, in accordance with 36 CFR 800. Consistent with 36 CFR 800.16(d), the APE is defined as:

The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

The project APE was delineated to ensure identification of historic properties and historical resources that may be directly or indirectly affected by the project and that are listed in or eligible for inclusion in the NRHP and/or CRHR. The APE was established using methodology consistent with those of previous Metro projects. The 1.9-mile-long APE consists of 246 Los Angeles County Office of the Assessor parcels, some of which are subdivided into multi-property entities.

The SHPO concurred with the project APE on September 9, 2009. Subsequent to the September 2009 APE concurrence, two new alternatives were developed by MTA. As a result, the APE was revised and resubmitted to SHPO for review of the new areas on December 24, 2009. The SHPO concurred with the revised APE on February 10, 2010. Although the Fully Underground Alternative has been altered slightly due to project refinements the APE has not changed.

Correspondence between FTA and SHPO for this project is included in Appendix E.

3.4 Evaluation Methodology

3.4.1 Records Search

A California Historical Resources Information System (CHRIS) records search was conducted at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton for the area within the APE. The SCCIC houses cultural resources records for Los Angeles County and the primary purpose of the CHRIS records search was to identify any previously recorded cultural resources known to exist within or adjacent to the project corridor. The records review included a review of listings for the National Register of Historic Places California Register of Historical Resources, State Historical Landmarks, and California Points of Historical Interest. In addition, complete listings for designated local landmarks were also reviewed.

3.4.2 Built Environment Survey Methods

SWCA architectural historians conducted reconnaissance-level built environment surveys of the 1.8-mile-long APE in April 2009. In December 2009 two new alternatives were added to the proposed project, requiring subsequent field surveys, bringing the total project length to approximately 1.9 miles. Each parcel in the direct and indirect APE containing improvements completed in or before 1968 was digitally photographed and researched, using data from the Los Angeles County Office of the Assessor and other sources. Since construction year records are not entirely reliable, all properties in the APE were field-checked to verify whether or not their construction may have occurred more than 50 years from the anticipated project construction date of 2018.

SWCA assumed that the historic status of properties listed in or determined eligible for the National and/or California Registers was unchanged, unless improvements were no longer extant or major alterations had recently been made as noted. One building that was determined eligible for listing in the National Register was field-checked and the determination, which is believed to have been made in error, was corrected in this document as a finding. DPR series 523 forms were prepared for properties that have been demolished since they were listed or eligibility determinations were made for National and/or California Registers.

In April and May 2009 and again in December 2009, SWCA conducted intensive-level surveys of properties containing improvements completed in or before 1968 in the APE that required evaluation or re-evaluation for historical significance. SWCA reviewed those properties in the field, photographed, and performed subsequent building permit and other research on properties that retained sufficient integrity to warrant evaluation for National Register and/or California Register eligibility. Those properties were studied to identify the architects, builders, owners, and tenants, as well as events that may have taken place, in order to make recommendations regarding their historic significance.

3.4.3 Consultation/Coordination

In addition to consultation with the SHPO (see Appendix E), Metro has coordinated with other interested parties regarding cultural resources as described in Section 3.4.3.1, Section 3.4.3.2, and the Cultural Resources – Archaeology Technical Memorandum. This early coordination is intended to assist in the identification of potential cultural resources and historic properties in support of the effects evaluation.

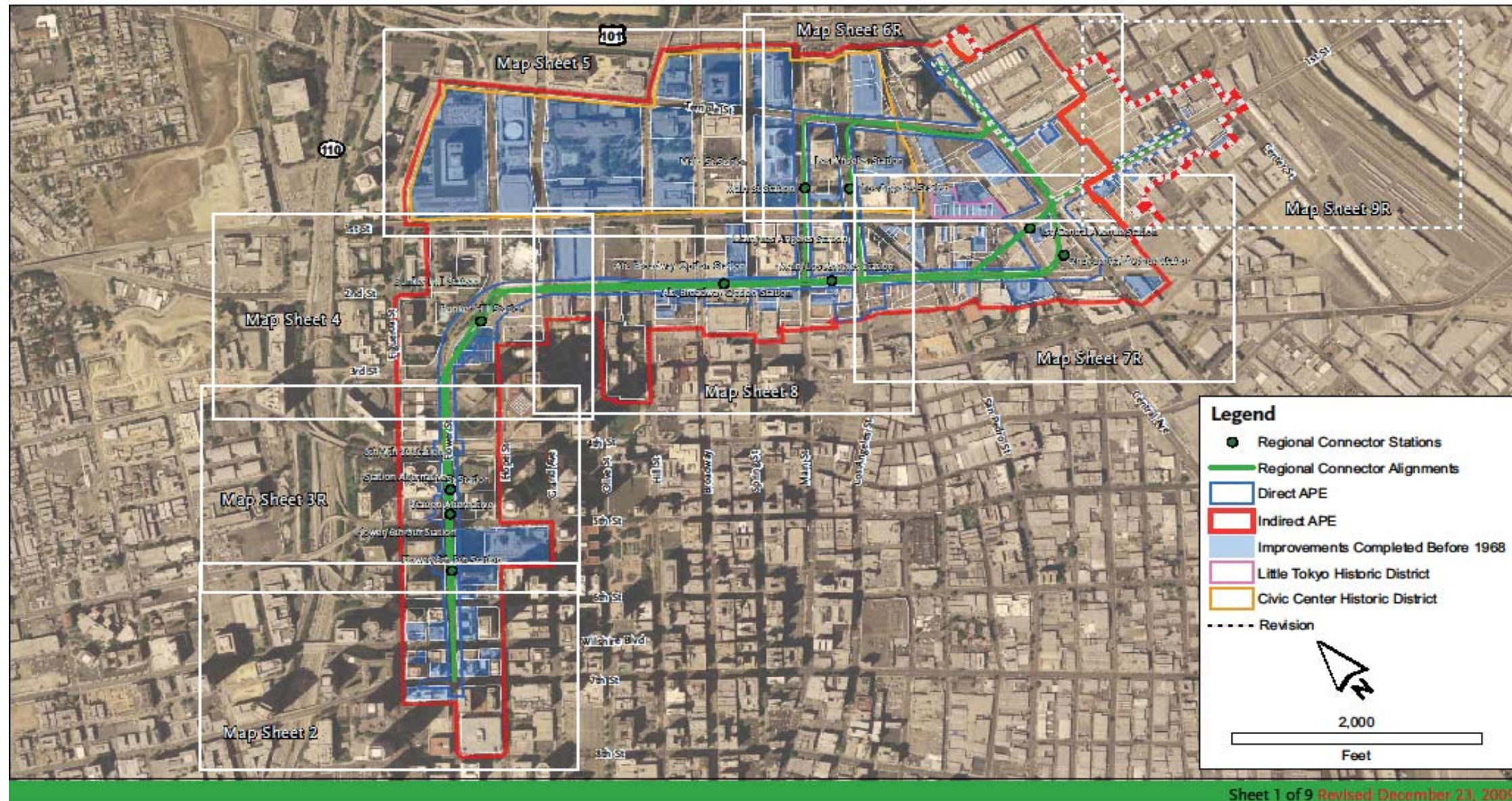
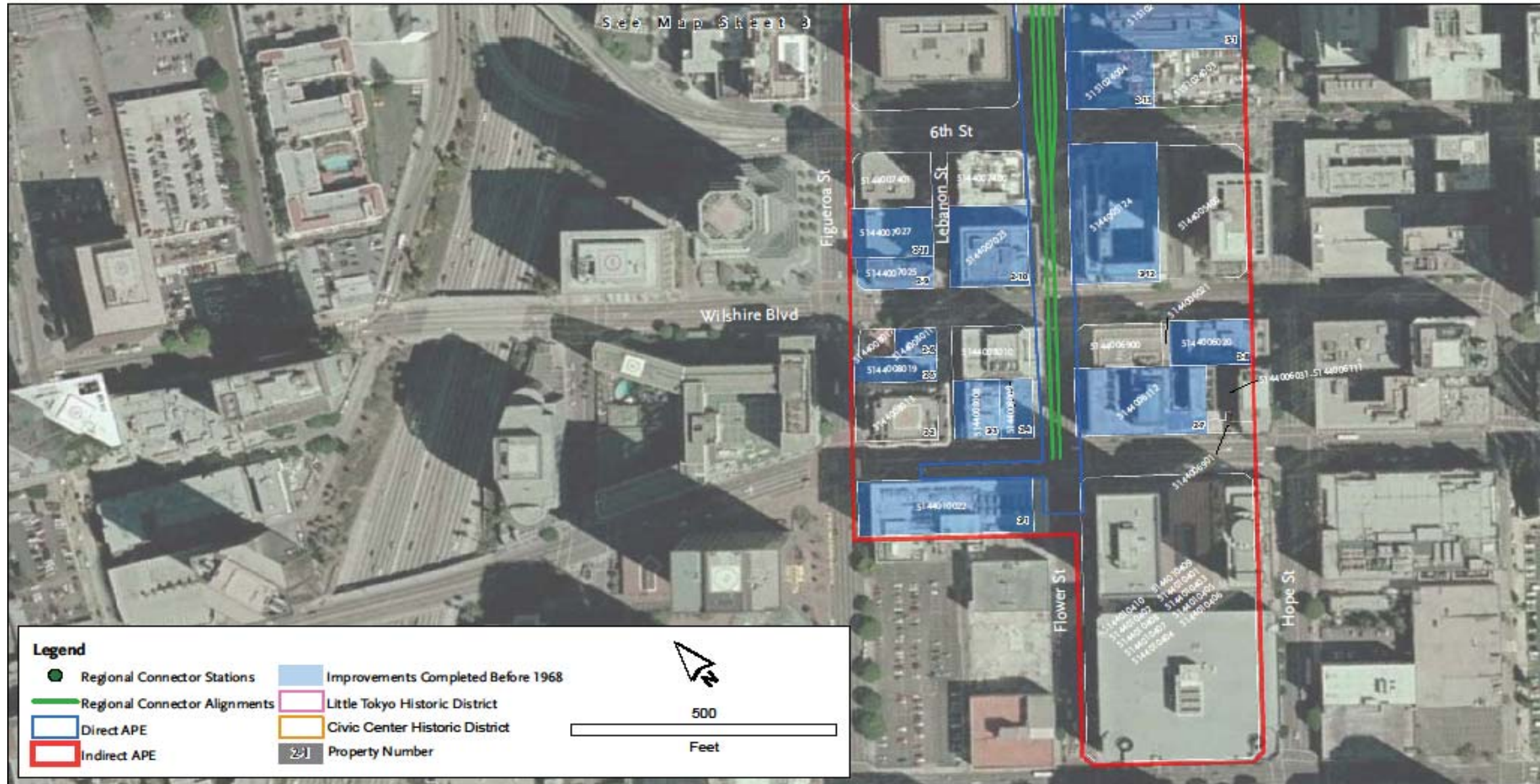
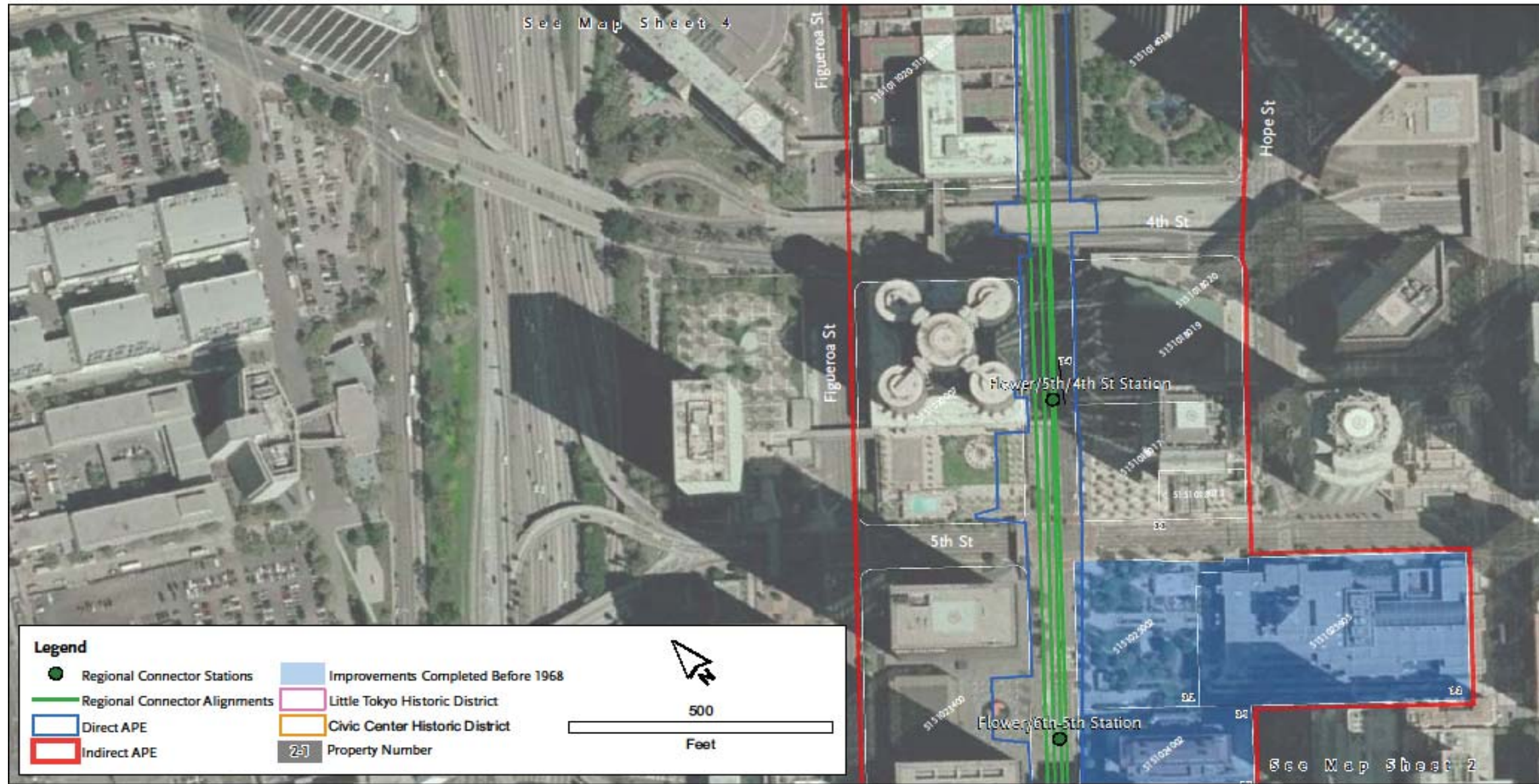


Figure 3-1. Area of Potential Effects Map, Sheet 1



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Figure 3-2. Area of Potential Effects Map, Sheet 2



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Figure 3-3. Area of Potential Effects Map, Sheet 3R

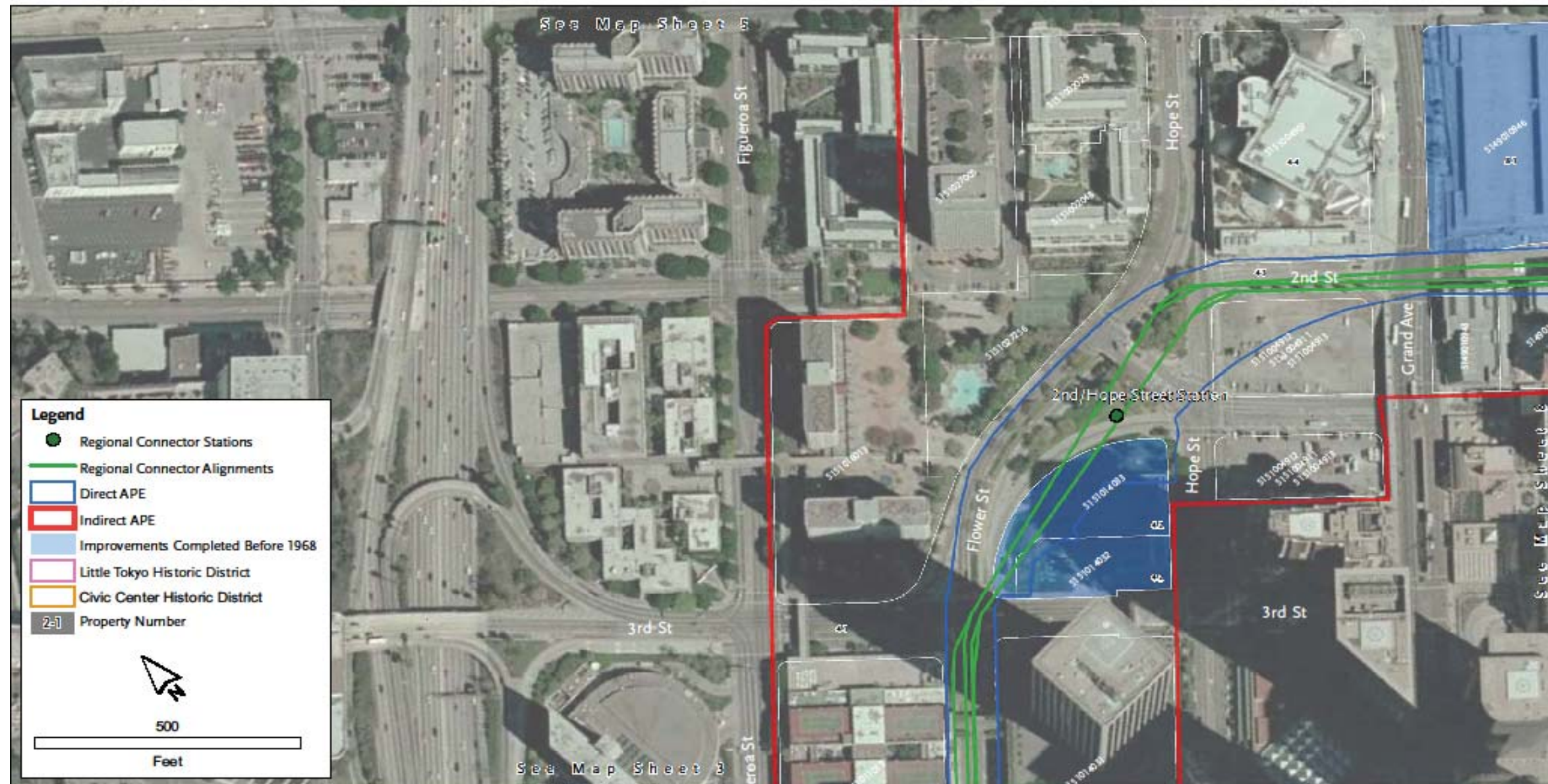


Figure 3-4. Area of Potential Effects Map, Sheet 4

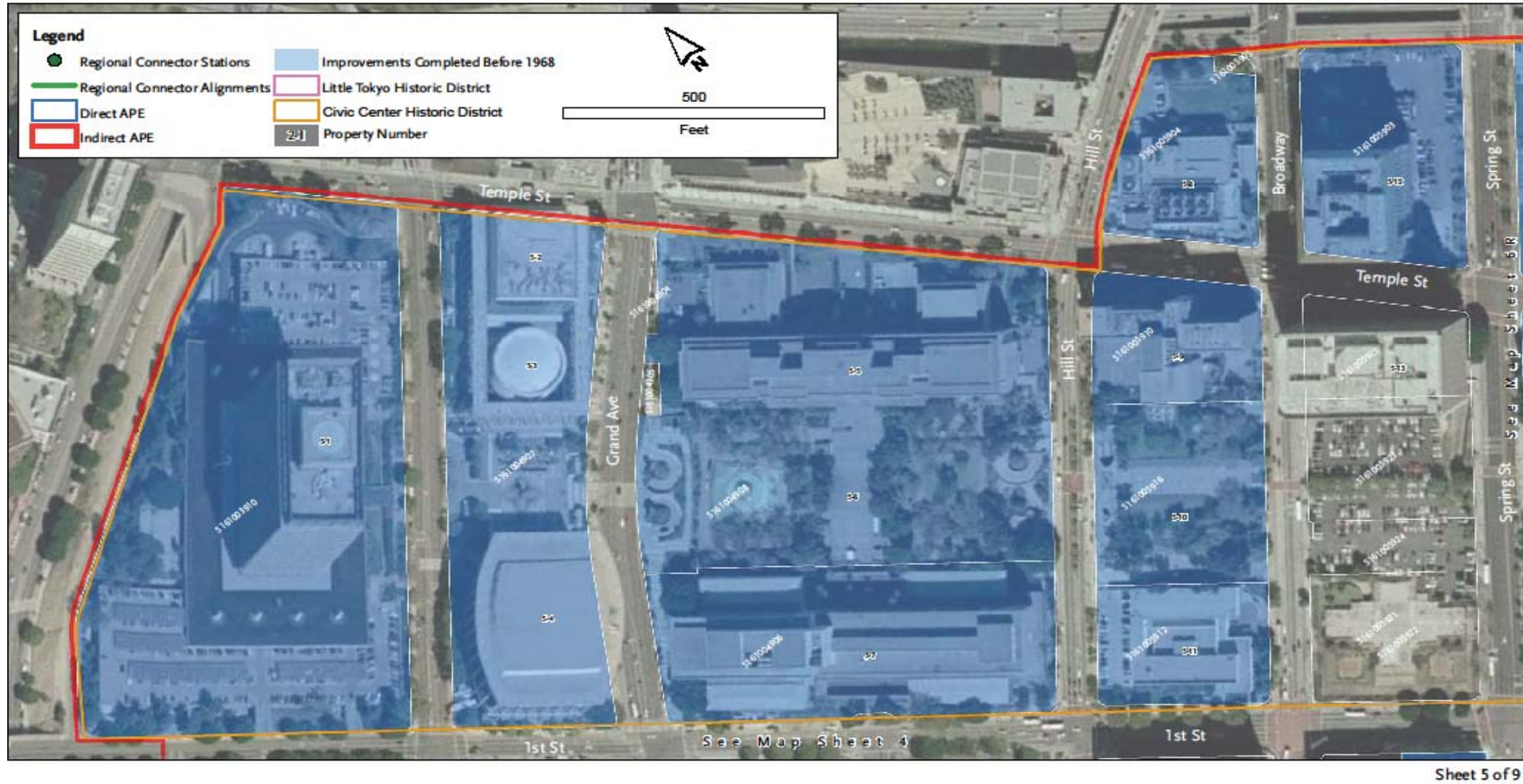


Figure 3-5. Area of Potential Effects Map, Sheet 5

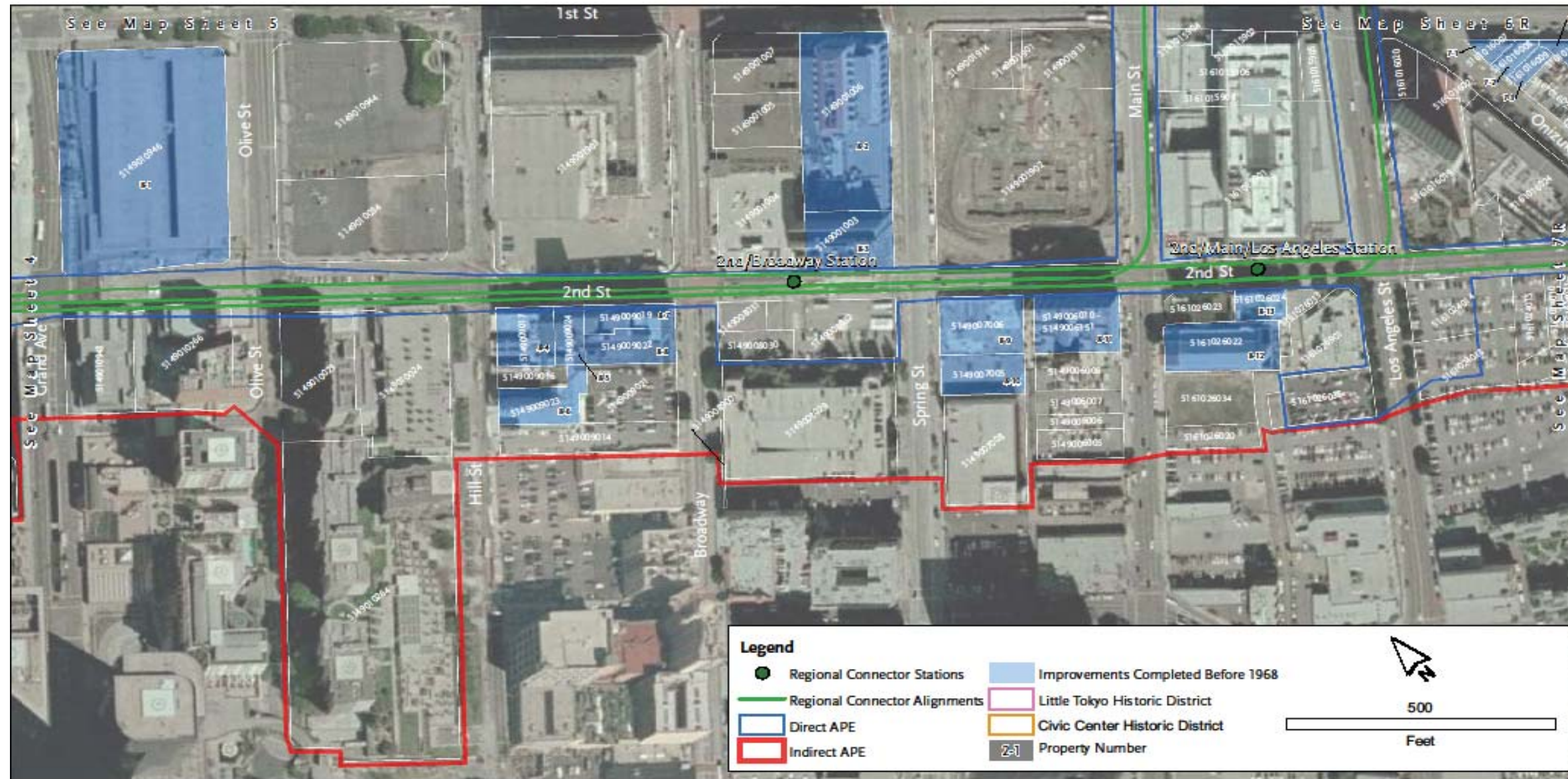


Figure 3-6. Area of Potential Effects Map, Sheet 6R



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Figure 3-7. Area of Potential Effects Map, Sheet 7R



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Figure 3-8. Area of Potential Effects Map, Sheet 8



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Figure 3-9. Area of Potential Effects Map, Sheet 9

3.4.3.1 Native American Coordination

In compliance with Section 106 of the NHPA, FTA initiated the consultation process with Native American tribes with interests in the project area as consulting parties, pursuant 36 CFR Part 800.

Under the guidance of FTA, SWCA contacted the California Native American Heritage Commission (NAHC) by a letter dated February 10, 2009, requesting review of the Sacred Lands File and a list of appropriate Native American contacts for the project. The NAHC search of the Sacred Lands File indicated the presence of Native American cultural resources in the project area. The NAHC also provided a list of five Native American contacts.

SWCA sent letters via U.S. mail to the five Native American contacts on April 16, 2009, requesting information regarding potential cultural resources that may be located within the project APE. These letters included location maps and a description of the proposed project and its related APE. A follow-up contact with each group was made via telephone on May 11, 2009, and subsequent follow-ups via telephone and/or email were made as necessary. Not all of the contacts responded.

Details of SWCA's contacts with the tribes are provided in the Regional Connector Transit Corridor Cultural Resources – Archaeology Technical Memorandum.

3.4.3.2 Local Historical Group/Local Government Coordination

Metro's representative, SWCA, sent letters via U.S. mail to nine local government, local historic preservation advocacy, and history advocacy groups to request information regarding historic resources that may be located within the project APE. The letters were mailed on April 16, 2009, and described the proposed project and its related APE, and included location maps (Appendix C). SWCA followed up with each group via telephone and/or email between April 23 and May 14, 2009, and made subsequent follow-up efforts, as necessary. The Fully Underground LRT Alternative (Little Tokyo Variation 1 and 2) were added to the project in December 2009. These alternatives are in or immediately adjacent to the original study area; therefore, additional consultation was not undertaken.

Five groups did not provide responses. One asserted that it was too early in the project to discuss. One agency and one local historic preservation advocacy group reserved the right to consult regarding effects in the future. Subsequently, meetings were held with each of these groups and one meeting was jointly held with both groups. One group commented on general environmental issues, and another group provided additional research on the history of Little Tokyo and the Atomic Café. Results of the coordination are described in detail in Table 3-3. Coordination regarding identification, effects, and mitigation are ongoing as part of this project's Section 106 compliance efforts.

On March 16, 2011 METRO, FTA, Cardno ENTRIX and other project staff met with the Los Angeles Conservancy and the City of Los Angeles to discuss project refinements and proposed mitigation for the project.

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
<p>City of Los Angeles Office of Historic Resources, Department of City Planning 200 N. Spring Street, Room 620 Los Angeles, CA 90012</p> <p>Contact: Ken Bernstein, Director</p>	4/16/09, via U.S. Priority Mail	4/27/09, telephone call from Mr. Bernstein	<ul style="list-style-type: none"> 4/23/09, telephone message by Francesca Smith (FS), SWCA 4/27/09, Mr. Bernstein returned the call to FS3/7/11 An invitation was sent by email to invite the City to participate in a meeting to discuss project refinements 	<p>Mr. Bernstein stated on 4/27/09: “No comments, really.” He asserted that when Survey LA is “up and running” they will be able to provide more information. He recommended that SWCA contact the Los Angeles Conservancy, which recently teamed with the Downtown Los Angeles Council to create a street map that identified historic resources. Map was obtained for reference. He also said that once effects were identified, their agency would likely want to consult on the project.</p> <p>In a brief telephone call and subsequent e-mail message sent on 8/4/09, Mr. Bernstein said that his office was “starting to hear concerns from the downtown community about potential historic resources impacts, including impacts on historic Little Tokyo. He requested “a briefing/consultation meeting for Office of Historic Resources staff. We would be happy to include other interested parties in the historic preservation community, including the Los Angeles Conservancy,” suggesting potential meeting dates.</p> <p>A joint meeting was held with Los Angeles Conservancy staff on 9/2/09. The project was presented, identification efforts were described, and very general ideas about effects and mitigation were discussed. Consultation is expected to be ongoing.</p> <p>A joint meeting was held with Los Angeles Conservancy</p>

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
				<p>staff on 03/16/2011. The project was presented, identification efforts were described, and very general ideas about effects and mitigation were discussed. Consultation is expected to be ongoing.</p>
Conference of California	4/16/09, via U.S. Priority		<ul style="list-style-type: none"> 4/23/09, sent e-mail message sent to 	No response.

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
Historical Societies University of the Pacific Stockton, CA 95211 Contact: Richard S. Kimball, President	Mail		Margarita Noyola, Administration and Membership Services <ul style="list-style-type: none"> 5/8/09, sent additional e-mail message to Ms. Noyola 	No further action necessary.
Historical Society of Southern California P.O. Box 93487 Pasadena, CA 91109 Contact: Patricia Adler-Ingram, Ph.D., Executive Director	4/16/09, via U.S. Priority Mail		<ul style="list-style-type: none"> 5/8/09, telephone messages by FS 5/11/09, second telephone message by FS 	No response. No further action necessary.
Los Angeles City Historical Society P.O. Box 41046 Los Angeles, CA	4/16/09, via U.S. Priority Mail		<ul style="list-style-type: none"> 5/8/09, telephone call by FS, Number on website was disconnected 5/12/09, 	No response. No further action necessary.

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
90041 Contact: Ann Shea, President			sent e-mail message on 5/12/09. <ul style="list-style-type: none"> • 5/12/09, sent additional e-mail message 	
Little Tokyo Community Council, Inc. 369 East 1 st Street Los Angeles, CA 90012 Contact: June Aochi Berk	4/16/09, via U.S. Priority Mail	5/11/09, June Burk called FS	<ul style="list-style-type: none"> • 5/8/09, telephone message by FS • 5/11/09 call was returned and FS returned Ms. Berk's call 	Ms. Burk said that LTCC sent comments to Dolores Roybal Saltarelli at MTA. She asked that we re-send the letter and attachments by email. It was re-sent on 5/11/09. No further action necessary.

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
<p>Los Angeles Conservancy 523 West 6th Street, Suite 826 Los Angeles, CA 90014</p> <p>Contact: Mike Buhler, Director of Advocacy</p>	<p>4/16/09, via U.S. Priority Mail</p>	<p>4/20/09, Mr. Buhler called K. Harper (KH), SWCA</p>	<ul style="list-style-type: none"> 4/30/09, Mr. Buhler called KH to discuss late in work day. KH asked if we could discuss on the following day, he agreed. FS called Mr. Buhler back and left voicemail messages on 5/1/09 and 5/9/09. Mr. Buhler spoke with FS via telephone on 5/28/09. 02/23/11 Ms. Flathman (Cardno ENTRIX) spoke with Flora Chou to invite LA Conservancy staff to attend the meeting to discuss project refinements 	<p>On 5/28/09, Mr. Buhler spoke with FS. Mr. Buhler followed up after the phone call via email and stated “As we discussed, the Los Angeles Conservancy would like to request a meeting with SWCA and MTA to discuss the Regional Connector Project and its potential impacts on historic resources located on or near the proposed alternatives under consideration.”</p> <p>A meeting was held on 7/22/09, the project was presented and very general ideas about effects and mitigation were discussed. Mr. Buhler provided a copy of the poster prepared by the Conservancy with the Downtown Los Angeles Council for use.</p> <p>Consultation is expected to continue.</p> <p>A joint meeting was held with the City of Los Angeles Office of Historic Resources staff on 9/2/09. In that meeting, the project was presented again and much of the discussion was focused on expected effects and proposed mitigation. Consultation is expected to be ongoing.</p> <p>A joint meeting was held with the City of Los Angeles Office of Historic Resources staff on 03/16/2011 In that meeting, the project was presented again and much of the discussion was focused on expected effects and proposed mitigation. Consultation is expected to be ongoing.</p>

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
<p>Japanese American Cultural & Community Center 244 South San Pedro Street Los Angeles, CA 90012</p> <p>Contact: Sandra Sakamoto, Esq., Chair</p>	<p>4/16/09, via U.S. Priority Mail</p>	<p>5/11/09, Sandra Sakamoto left telephone message</p> <p>5/13/09, received letter from Chris Aihara</p>	<ul style="list-style-type: none"> • 5/809, telephone message by FS with Mika, receptionist • 5/11/09, Sent re-formatted letter to Christine Aihara at Ms. Sakamoto's request • 5/13/09, received letter from Chris Aihara 	<p>Ms. Sakamoto called on 5/11/2009 and left a telephone message that she did not see the letter (because she is a volunteer board member) but suggested that we contact Chris Aihara, President of the Little Tokyo Community Council. Sent re-formatted letter to Ms. Aihara on 5/11/09.</p> <p>Ms. Aihara responded via e-mail on 5/13/09 and in her letter discussed effects of construction on small businesses. She noted that "traffic congestion and elimination of parking will inhibit visitors and patrons to shop, attend community events, and attend cultural classes. Noise due to construction will hinder the visitor experience. The short-term impact could be so great that the important aspects of the community will not survive."</p> <p>No further action necessary.</p>

Table 3-3. Coordination with Local Groups: Government, Historical Society, Historic Preservation, and History Advocacy

Local Group	Letter Sent	Reply Date	Follow-up	Results
Little Tokyo Service Center 231 East 3 rd Street, Suite G-106 Los Angeles, CA 90013 Contact: Bill Watanabe Executive Director	4/16/09, via U.S. Priority Mail	4/20/09, via telephone	<ul style="list-style-type: none"> 4/21/09, via telephone and via email. 5/11/09, telephone message by FS 5/14/09, telephone message by FS 	On 4/20/09, Mr. Takao Suzuki called to request a copy of the APE map. KH forwarded the map via email. No response to telephone messages. No further action necessary.
Little Tokyo Historical Society 231 East 3 rd Street, Suite G-106 Los Angeles, CA 90013 Contact: Deanna Matsumoto	4/16/09, via U.S. Priority Mail	5/18/09, telephone call from Ms. Matsumoto	<ul style="list-style-type: none"> 5/18/09, Resent letter via e-mail to Craig Ishii at LTSC 	Ms. Matsumoto informally provided additional information on the Aoyama Tree, Little Tokyo history and Atomic Café history.

4.0 AFFECTED ENVIRONMENT

4.1 Historic Overview

The project is located within the City of Los Angeles in Los Angeles County, California. Generally, the APE extends in a northeasterly direction from south of the intersection of Flower and 7th streets to the Gold Line at Alameda Street between 2nd and Temple streets in downtown Los Angeles. The project crosses several community areas in downtown Los Angeles, including the Civic Center and Little Tokyo communities. This area is highly urbanized with development ranging from commercial, public, and institutional uses to high density residential. The following historic context statement was prepared to present an overview of development of the overall community and project area and provides the framework used to evaluate historic significance of properties within the project APE.

4.1.1 Spanish Period (1769–1822)

Los Angeles was established in 1781 as a Spanish pueblo near the Los Angeles River. The Spanish governor of California, Felipe de Neve, led a procession of soldiers, laypeople, and priests from nearby Mission San Gabriel Arcángel and founded the pueblo near the Porciúncula, now Los Angeles River. The objective of the settlement was to supplement the agricultural goods produced at the Mission San Gabriel. The mission and Los Angeles were designed according to the Laws of the Indies, the town planning guidelines codified by the Spanish in the mid-sixteenth century for colonial towns (Fogelson 1993). Due to seasonal river flooding, the settlement was relocated three times before its final location was established. All three iterations of the pueblo had similar plans: houses and buildings faced a central square, oriented to the cardinal points. The pueblo lands were divided and distributed among the 44 original settlers, or pobladores, each of whom received two suertes, or fields, of irrigable land, two fields of dry land, and a house lot, facing the central square (Ríos-Bustamante and Castillo 1986). The third site chosen by the Spanish for the new pueblo was located in what is now known as the Plaza, to the north of the project APE. Selected in 1825, the final pueblo site was originally named El Pueblo de la Reina de Los Angeles (Ríos-Bustamante and Castillo 1986).

4.1.2 Mexican Period (1822–1848)

Mexico gained independence from Spain in 1821; the subsequent secularization of the mission system and distribution of its holdings dramatically shifted the character of land ownership in Los Angeles and much of California. Mission secularization in 1833 marked the beginning of highly profitable private trade in cattle hide and tallow exports, which eventually resulted in larger, commercially driven farms. During Mexican rule of California, between 1821 and 1848, land owned by the Spanish crown and clergy was distributed in more than 800 land grants, passing mostly to Mexican settlers born in California, or Californios. This shift marked the beginning of the rancho system that would “dominate California life for nearly half

a century...” (Poole 2002) but the rural character of the pueblo of Los Angeles and its surroundings remained (Fogleson 1993).

Many ranchers maintained second homes near the pueblo area, which was managed by the ayuntamiento or common council. The ayuntamiento was responsible for an informal system of zanjas or irrigation ditches that conveyed water for both agricultural and domestic use. By the 1830s, the population of the settlement had grown from the original 44 to approximately 1,000 persons, making Los Angeles the most populous of the original three pueblos, as well as the center of economic and political life, in Alta (or upper) California (Fogleson 1993).

4.1.3 American Period (1848–Present)

With the signing of the Treaty of Guadalupe Hidalgo in 1848, the U.S.-Mexican War formally ended. California was annexed to the United States and subsequently gained statehood in 1850. That same year, the City of Los Angeles was incorporated. During the city’s transition from a Mexican pueblo to an American town, public authority rather than private enterprise became the influence behind development.

In 1849, the first survey of Los Angeles was made when Lieutenant Edward O. C. Ord produced the city’s first map. Ord made his plat according to the same grid plan (albeit using the pueblo’s original orientation to the cardinal points) that had become the standard for American cities by this time (O’Flaherty 1978). The survey had a northeast-southwest street alignment, which was influenced by natural landforms, colonial irrigation patterns, and the concept that no side of the street be entirely in shade or shadow during the most important business hours. The city’s oldest areas, just east of Main Street, still exhibit the characteristics of the imperfect platting that dates from before 1848. The 33-degree “skewed” grid orientation of downtown Los Angeles characterizes the north-south streets east of Hoover Avenue and west of Indiana Street.

With the 1849 Gold Rush, and growing influx of European-Americans to Southern California, the population of Los Angeles expanded substantially. During the American period, from 1850 to 1860, the population grew nearly 300 percent from approximately 1,600 to 4,300 persons (Hill 1929). Many of the new residents were farmers who came to Southern California to take advantage the abundance of inexpensive land and water. As settlement continued to expand outward of the central city, the core of Los Angeles, its Plaza area, continued to serve as the center of social and religious life in the town. Harris Newmark came from West Prussia (now Germany) to settle in Los Angeles in 1853. He learned Spanish before mastering English and subsequently published his recollections of early Los Angeles. Newmark described the Plaza area as the “nucleus” of town, around which were “clustered the homes of many of those who were uppermost in the social scale” (Newmark and Newmark 1970).

The three major railroads, Southern Pacific Railroad, Atchison Topeka & Santa Fe Railway, and Union Pacific Railroad, came to Los Angeles in 1876, 1872 and 1905, respectively. Their presence, coupled with an agricultural boom, helped to fuel the community's then-unparalleled growth. As one of the first cities to significantly benefit from the presence of railroads, the citrus industry expanded enormously after the advent of the refrigerated freight car. Artificially cooled freight cars allowed produce to be shipped to other markets that previously only had access to such goods during colder months.

Once the railroads came to Los Angeles, development of the city was tremendously influenced by transit and transportation patterns, which expanded as the community matured. Growth of the community and enhancements in transportation modes each influenced the other more compellingly than in more established cities, where principal transit corridors had already been identified before rail transit became a factor.

Its strategic location on the Pacific Ocean made Los Angeles a regional business center during the early American Period, but was still viewed as a small town with rough edges. In *Inventing the Dream*, the pronounced effect of railroads on the region was summarized:

[t]he railroads settled Southern California: first the Southern Pacific, blasting its way through the San Fernando Mountains in 1876 to link Los Angeles with San Francisco and the east, and then, in 1885, the Atchison Topeka and Santa Fe Railway arriving overland through the deserts and gorges of the southwest (Starr 1985).

The consequences of rail traffic were further illustrated in the community's sudden progress:

[i]n the...1870s... [Los Angeles] became an American city. Adobe gave way to brick and wood, candles and kerosene to gas. The streets were paved and tracks laid for horse-drawn streetcars. Police and fire departments were organized on a permanent basis and a lending library was established. A city hall was built, together with a train station a county hospital, an opera house, and a [large] theater... (Starr 1985).

4.1.4 City of Los Angeles

Between 1880 and 1900, Los Angeles grew from a town of 11,000 to a bustling city of 100,000 residents, prompting the development and expansion of city roads, buildings, and services. A dramatic real estate rush in Los Angeles between roughly 1886 and 1888, coupled with price wars between the three transcontinental railways serving the region, led to further increases; the population peaked in 1888 at 80,000. In the downtown area, development was particularly dense as government and commercial buildings were constructed throughout the area that now comprises the Civic Center (Roseman et al. 2004).

The plaza and community matured as daily newspapers, public and private schools and universities, and a racetrack were established. Expansion of railroads, as well as the growth of

port facilities, contributed substantially to the celebrated economic boom that occurred in the region in the 1880s (Caughy and Caughy 1977; Dumke 1944). Although the real estate boom exponentially affected surrounding areas, Los Angeles, as the commercial center, also reaped substantial benefits from the unprecedented growth. That growth was spurred by efforts of community boosters, who assisted in propelling the small town into a major city. Los Angeles was the subject of “the longest, loudest, [and] most persistent promotional campaign” to promote an American city between the 1870s and the Depression (Zimmerman 2008). Due to their obvious role in moving goods and transporting the populace, local, regional, and national railroad companies helped shape the development and growth of present-day Los Angeles as well as the surrounding region.

The first Sanborn Fire Insurance Company maps prepared for Los Angeles portrayed north-south streets in 1888. The west-to-east sequence was: Pearl Street (currently Figueroa Street), Flower Street, Hope Street, Bunker Hill Avenue (not applicable to current street name), Grand Avenue, Olive Avenue, Hill Street, Fort Street (now Broadway), Spring Street, Main Street, Los Angeles Street, San Pedro Street (currently Judge John Aiso Street north of 1st Street), and Vine Street (currently Central Avenue). Figure 4-1 shows an excerpted image of 1888 Sanborn Fire Insurance map with proposed project alternatives overlaid to show how the essential arrangement of streets has not substantially changed since that time. By 1888, the rise in real estate values had finally deflated; causing the population to slide down to 50,900. The subsequent economic depression lasted through the mid-1890s (O’Flaherty 1978).

4.1.4.1 The Metropolis Develops

By the turn of the twentieth century, downtown Los Angeles was growing quickly in size and stature. Although affected by the real estate downturn of the late 1880s, industrial and commercial activity remained high throughout downtown, as well as in the rest of the city. The 1890 discovery of oil prompted the development of new technologies and sparked a wave of manufacturing activities, including furniture, sportswear, and homes. By 1900, the city’s first central business district emerged, centered around 2nd and Spring Streets, consisting of some 20 city blocks (Longstreth 1998; Fogelson 1993).

As the city grew, the need for interurban transportation significantly increased. A number of small, short rail lines were established throughout the city to provide residents with local transportation. Many of these rail lines operated for brief periods of time, lasting only a few years before being bought out by larger firms or forced out of business by competing lines. One of the unique smaller lines that managed to succeed was Angel’s Flight, established in 1901 by Colonel J. W. Eddy to serve the residents of Bunker Hill in the northwest area of present-day downtown. The steep climb up 3rd Street between Hill and Olive Streets proved difficult for the affluent residents. The short funicular rail line only traveled a block or two, but the route was up a steep grade and it proved invaluable to residents. Angel’s Flight closed in 1969 and was dismantled. It was briefly reopened one-half block south of its original location

at 3rd and Hill streets and is currently situated mid-block between 3rd and 4th streets, just south of the project APE.

Henry Huntington was a nephew of Collis P. Huntington, one the notorious “big four” who built the Central Pacific Railroad, the western portion of the first transcontinental railroad in the United States. The younger Huntington completed his first streetcar line, the Pacific Electric Railway Company (PE), in 1902. The line connected Los Angeles to Long Beach. In part because of the PE interurban rail lines, Broadway evolved as a main retail thoroughfare. Many of the PE’s routes terminated at 4th Street and Broadway. Public use of the PE peaked in 1924, and it made that intersection and corridor valuable commercial property. Broadway was developed with commercial uses, specifically retail and theater buildings. Beginning in the early 1910s and extending to the 1940s it was the center of retail commerce in the growing city of Los Angeles.

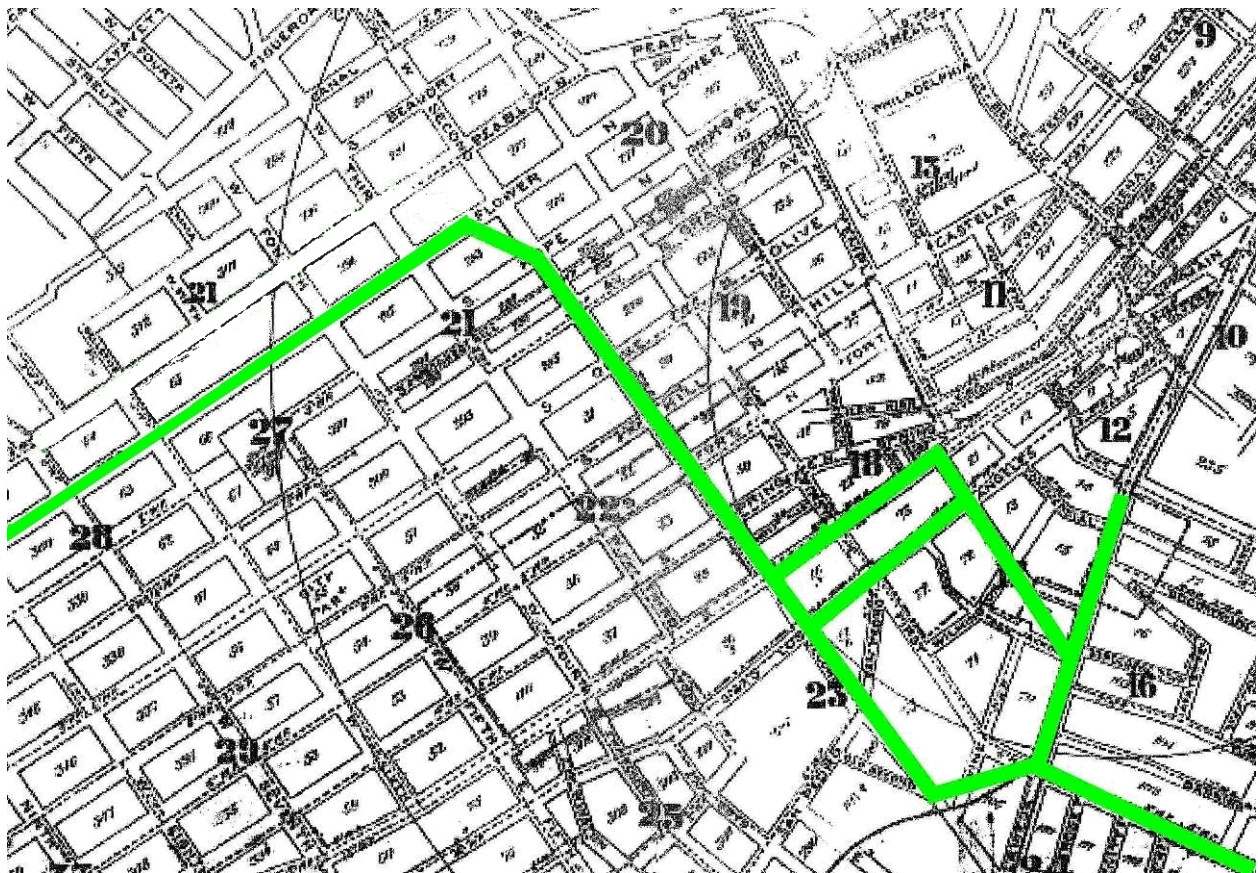


Figure 4-1. Excerpted Sanborn Fire Insurance Company maps of Los Angeles, California dated 1888.

Notes: Index sheets combined and annotated, graphically depicting all proposed project alternatives in green. Note that the arrangement of streets is essentially the same in 2010 as they were in 1888.

Along with early city growth the first demand for organized urban planning was made. Until planning and zoning rules were implemented, single-family homes (some belonging to city fathers) were dwarfed by tall, commercial buildings. City officials and residents became vigilant regarding fast-paced changes occurring in downtown, which were largely fueled by private commercial development. When the 12-story Braly (now Continental) Building (400 South Spring Street; John D. Parkinson) was completed in 1902, the city adopted its first of two height limit ordinances, establishing what became the uniform height of 150 feet or less for all buildings.

By the 1910s, city planners were calling for more parks, fewer saloons, and improved streets. To implement these goals, planners turned to the “City Beautiful” trend for direction. The City Beautiful movement was a progressive concept that had great influence on American civic design and planning from the late 1800s to the early twentieth century (Bluestone 1988). Espousing precepts that monumental formal design, beautification, and grandeur would improve cities, it was expected that those noble efforts would counteract the increasing moral and physical decay of poverty. Originally associated with the cities of Chicago, Detroit, and Washington, D.C., this influential planning style did not promote beauty for the sake of aesthetics, but was intended to be a subtle social control device for creating moral and civic virtue in urban populations. Advocates of the movement believed that such beautification could thus provide a harmonious social order that would improve the lives of the inner-city poor. The City Beautiful movement resulted, in part, in gracious long vistas in civic plazas; usually light-colored, formal buildings and other structures; the inclusion of diagonal streets rather than simple grids; and gracious public gardens and parks.

In an unintended move that foretold the city’s future as a major metropolis, the City of Los Angeles Municipal Arts Commission engaged “city architect” Charles Mulford Robinson to bring the City Beautiful concept to the community. The City Beautiful principal was adopted in 1908, the same year that Los Angeles adopted a zoning code. Its realization in Los Angeles was complicated and ultimately compromised by the demise of the PE and the concurrent rise in use of the private automobile. It did, however, provide the first dialogue for development of a civic center, a plan that would not finally be realized until after World War II (Starr 1990).

The Los Angeles River Bridges are an ensemble of 12 City Beautiful-inspired bridges, built near downtown between 1911 and 1933. It is the largest and most architecturally significant grouping of concrete bridges in the state according to some experts (Mikesell 1986). Each of the 12 is a reinforced concrete structure, built in concrete strengthened by interior reinforcing steel bars. The steel was notably included in the concrete curing process.

Reinforced concrete technology began in Europe in the 1840s and continues to evolve and improve. California engineers are credited with introducing reinforced concrete use to the rest of the nation, in part because of the ready availability of raw concrete ingredients such as

sand. The state became a proving ground for reinforced concrete, and the Los Angeles River Bridges are considered by many to be the finest examples of its use.

The 1st Street Viaduct (property 9R-7) was completed in 1929 as the eighth of the 12 bridges. The first was North Buena Vista Viaduct/North Broadway Bridge in 1911, and the final bridge in the series was 6th Street Viaduct/Whittier Boulevard Viaduct in 1933. The resulting remarkable series of concrete bridges and viaducts cross the river with surprising grace. Each of the bridges (nine of the 12 are technically viaducts) adapted the unique qualities of reinforced concrete and used state of the art engineering and design concepts.

By the 1920s, the economic core of downtown had expanded to 50 square blocks. The Central Business District, the center of which was once the Plaza, had “migrated southwesterly since the boom the 1880s, so that Broadway and 7th [were] its main shopping arteries” during most of the twentieth century (Lantis et al. 1973). This economic expansion prompted a period of unprecedented growth in Los Angeles, both in population and in physical development. Strides in manufacturing, oil development, tourism, land development, and the film industry prompted a period of rapid construction and invigorated downtown, which became home to about three-quarters of the city’s commercial and professional activity (Fogleson 1993). As described in *Material Dreams: Southern California Through the 1920s*, “the financing of Los Angeles’s exfoliating real-estate, construction, oil, port, manufacturing, entertainment and aviation industries remained largely in local hands, and so Los Angeles emerged as a banking center as well” (Starr 1990). So many of these financial institutions were located along Spring Street, the street was known as the “Wall Street of the West.”

Retail expansion was focused along Broadway and Hill Street, crowded with department stores that sold everything from shoes to pianos. Barker Brothers Furniture Store (Property 2-1, 818 West 7th Street, Curlett & Beelman), completed in 1925 in the Classical Revival style, was a striking example of a multi-story retail complex constructed during the period. At the time, it was one of the largest furniture stores in the United States; its facilities were separated into interior spaces that reflected the organization and spaces found in the average household (Hatheway 1978).

In addition to commercial expansion that occurred in the 1920s, many of the civic improvements drafted earlier in the century finally came to fruition, including the early beginnings of a civic center district. At the center of this achievement was Los Angeles City Hall (Property 6-2, 200 North Spring Street, Austin, Parkinson & Parkinson and Martin), which was completed in 1926 on the former site of the Temple Block. When it was built, City Hall was the tallest building downtown; at 454 feet, it was substantially taller than the allowable 150-foot building height limitation in place at the time. The Los Angeles Central Library (Property 3-2, 630 West 5th Street, Bertram Goodhue with Carlton Winslow), completed in 1926 was another ambitious 1920s civic building project that announced Los Angeles as a

major city. The “light of learning” theme was a remarkable architectural collaboration at the time and remains one of the largest library systems in the nation.

By 1924, downtown was thriving; a reported 1.2 million people (a figure greater than the city’s total population) traveled each day to the area, which by that time had expanded to encompass Temple Avenue, Los Angeles Street, Pico Boulevard, and Figueroa Street. Although downtown retained an intricate network of rail lines and trolley cars that connected the big city to outlying communities, the automobile had begun to guide development throughout Los Angeles. Inter-urban streetcar use began to wane as the automobile gained relevance. Adding to the difficulty were the thousands of at-grade streetcar-automobile intersections, which greatly impeded streetcar service. By 1921, some of the urban railways offered bus service. The Roosevelt Building (Property 2-7, 727 West 7th Street, Curlett & Beelman), completed in 1925, was one of the many downtown buildings that incorporated automobile parking into its design, offering subterranean space for 350 vehicles, when comparable competitors offered only 120 spaces (Longstreth 1998).

Improvements to roads were also necessary to accommodate the influx of automobiles. The 2nd Street Tunnel (APE Map # 4-3), completed in 1924, was the fourth in a sequence of significant tunnels to be built by the City of Los Angeles to ease traffic congestion in the early twentieth century (Los Angeles Times 1924). The first was Broadway Tunnel (opened 1901, demolished 1969), followed by the 3rd Street Tunnel (1907, significantly altered 1967), and the Hill Street Tunnel (1909, demolished 1948). The sleek, tile-lined 2nd Street Tunnel is noteworthy for its construction methods and as a masonry arch structure, supported by eight rings of brick in the upper section of the arch.

Figueroa Street was one of a handful of great boulevards of Los Angeles that were expanded in the 1920s. An early alignment of Figueroa Street was part of the famed US Route 66, and is currently a component of the Pasadena Freeway (Interstate 110). The notable Figueroa Street Tunnels, near present-day Chinatown, were once a part of Figueroa Street as well. Figueroa Street is credited with being one of the longest avenues in the United States, with a length of more than 30 miles, stretching between Eagle Rock to the Los Angeles Harbor.

Downtown continued to thrive throughout the 1920s. The commercial and civic core of the city continued to shift farther south, toward a new center at 7th and Hill Streets (Fogleson, 1993). Throughout the twentieth century, businesses and retail services crept south, with major businesses eventually abandoning the Broadway and Spring Street areas for 7th Street, and later Figueroa and Flower Streets (Starr 1997).

Along the eastern end of downtown, the Japanese-American community of Little Tokyo was also thriving. The first Japanese American resident had arrived in Los Angeles in 1886 and started a restaurant on East 1st Street. By the end of the nineteenth century, Japantown (as it was then known) was home to more than 2,000 Japanese Americans, and a prosperous

community had been established. Many of those residents had moved to the area to lay track for the Pacific Electric interurban streetcar system. By 1935, Los Angeles was home to 13,000 people of Japanese ancestry, most of whom resided close to or within Little Tokyo (Starr 2002; Hayden 1996).



Figure 4-2. Figueroa Street Tunnels, view north, circa 1940s.

Source: Longshaw Post Card Company. Private collection, used with permission.

Downtown's building frenzy continued until 1929, when the stock market crash brought both large and small investment to a halt. As real estate and automobile values plummeted, shops and apartments stood vacant. In downtown Los Angeles, few buildings were added to the downtown skyline during the 1930s. As described in *City Center to Regional Mall, Architecture, the Automobile and Retailing in Los Angeles, 1920-1950*.

Between the early 1930s and early 1950s little new construction of consequence occurred in the [business] district. The depression did not, of course destroy downtown Los Angeles; it only accelerated tendencies set in motion during the previous decade when the city center seemed indomitable. Many property owners 'held on' and many put new capital into their buildings (Longstreth 1998).

The decade of the 1930s eventually included additional growth in Los Angeles, although much of it was outside of downtown. The San Fernando Valley expanded as an agricultural,

commercial, and residential center. The Los Angeles Memorial Coliseum (John and Donald Parkinson), actually completed in 1924, was built for the 10th Olympiad in 1932. Griffith Park Planetarium (John C. Austin and Frederick Ashley) was completed in 1934. The Union Passenger Terminal (John and Donald Parkinson) was built on the north end of downtown in 1939. Along with residential development, retail areas expanded from downtown to include Wilshire, Sunset, and Santa Monica Boulevards, each of which drew away more and more of what had been downtown's loyal patronage. Notable downtown projects ranged from the Los Angeles Times Building (Property 8-2, 101 South Spring Street, Gordon B. Kaufmann), built in 1935, to the United States District Courthouse Building (Property 6-1, 312 North Spring Street), completed in 1940, and the concept and design for a new, unified Civic Center began to take shape.

4.1.4.2 World War II and Post-war Los Angeles

In the immediate aftermath of the attack on Pearl Harbor, downtown Los Angeles became involved in the war effort, as did the rest of the nation. Within Little Tokyo, the bombing sparked the beginning of significant change for business owners and residents. During World War II, Executive Order 9066 gave the Army authority to relocate more than 110,000 Japanese Americans on the west coast to internment camps in isolated and barren areas. As suggested in *Embattled Dreams: California in War and Peace*, “the Japanese-Americans of California suffered the trauma and indignity of an incarceration that represented the most massive violation of the constitutional rights of any single ethnic group in this nation after the ending of slavery” (Starr 2002). The spirit of what was the largest Nihonmachi (Japantown) in the United States was suddenly extinguished, as its Japanese-American residents were forced into internment camps. This action eradicated Japanese settlements and culture until after the end of the war and caused interned families to start their lives over - personally, emotionally, and financially - after release from incarceration.

During the war, African Americans, who had come to Los Angeles in large numbers to work in the defense industry, moved into Little Tokyo. Like other Japanese communities in California, after blacks moved in, the area became a thriving “Bronzeville” until the 1950s (Waugh et al. 1988). Part of the explanation for the widespread and local African-American population changeover was that Little Tokyo was not subject to deed restrictions.

Downtown failed to return to its 1920s economic peak in the aftermath of the Second World War. Nearly 13 million veterans returned to the United States, ready to buy homes and settle into suburban life. While many returned to or decided to settle in or near Los Angeles, patterns changed, and these residents moved away from the city center, residing in the growing, outlying residential suburbs. Home ownership in the nation was propelled to unprecedented numbers, in part due to low-interest loans and long-term mortgages provided by the G.I. Bill (Servicemen's Readjustment Act of 1944, Public Law 78-346, 58 Statute 284m). Through the late 1950s, the effect of the automobile was reflected in the built environment, as

the economic potential from commercial establishments along heavily traveled highways and thoroughfares prompted roadside development.

During the post-WWII period, many downtown areas suffered economic downturns, including that of Los Angeles. Suburbs became increasingly desirable as residential and commercial hubs, and as a result downtown Los Angeles lost some of its caché as a business center and retail destination. The 1940 opening of Arroyo Seco Parkway (now Interstate-110), constructed to ease downtown commuting, instead sent the populace away, leaving the downtown area empty compared to its pre-war level of activity. The growth of the suburbs pushed population away from the city center, and many downtown buildings deteriorated as a result. Once grand movie places were no longer crowded, department store flagship stores were no longer fashionable destinations, and ornate office buildings were not the sought-after real estate they had once been.



Figure 4-3. Postcard depicting view of freeway and Civic Center, c. 1953.

Source: Private collection, used with permission.

Notes: View southwest toward Civic Center, looking across Hollywood Freeway (U.S. 134). Back of postcard reads "The Hollywood Freeway is one of a vast network of major highways engineered and designed to provide unobstructed driving to and from the metropolitan area of Los Angeles."

In an effort to combat the urban slump, the California Community Redevelopment Law was passed in 1945, followed by Title 1 of the Federal Housing Acts of 1946 and 1949. These laws

were designed to legally and financially assist cities to address problems of decay and neglect within their communities. In response to this new legislation, the Community Redevelopment Agency of the City of Los Angeles (CRA) was established in 1948, in part to cure economic "blight" by funding and overseeing redevelopment. As its first major project, the CRA sought to improve the Bunker Hill area, which had been one of the more exclusive residential neighborhoods at the turn of the twentieth century but had deteriorated and fallen out of fashion. Despite many proposals, plans to redevelop Bunker Hill were rejected, and ultimately not begun until the 1960s, when large hotels and Victorian-era homes were bulldozed and the landforms were rearranged. Slowly, over the past 50 years, a community of high-rises has been constructed in their place (Kawaratani 2008).

When the Harbor Freeway (Interstate-110) was completed in 1952, it was hopefully called "downtown's new Main Street" by noted local architect A. C. Martin, Jr. (Los Angeles Times 1967). Construction of the freeway and the repeal of the building height ordinance in 1954 created a significant new concentration of high- and midrise buildings, eventually concentrated on Figueroa and 7th Streets.

The downtown civic center began to take shape in the post-war era. As discussed in *California: A Land of Contrast*:

Business blocks of the late nineteenth century have been replaced by the Civic Center, whose buildings, most of contemporary design, are flanked by multi-acre parking lots. The Civic Center has encroached westward upon Bunker Hill, once occupied by the city's wealthier residents and now experiencing impressive [redevelopment] (Lantis, et al. 1973).

The resulting Civic Center plan, adopted in 1947, has an east-west axis and is roughly bounded on the north by Aliso Street, on the south by 2nd Street, Grand Avenue to the west, and Alameda Street on the east side.

A new police facilities building was constructed on two city blocks formerly occupied by shops and residences in Little Tokyo. The new police building (Property 6-6, 150 North Los Angeles Street, constructed in 1955) was expected to "revolutionize the design of law enforcement buildings" and was designed by Welton Becket and Associates and J. E. Stanton. The new building consolidated activities that were previously scattered throughout the city and provided a modern anchor for the eastern terminus of the expanded civic center (Los Angeles Police Department, no date).

Additional contributions to the Civic Center included the Courthouse in 1958 (Property 5-7); the County Hall of Records in 1962 (Property 5-9, 320 West Temple Street, Richard Neutra and Robert Alexander); the City Department of Water and Power building in 1965 (Property 5-1, 111 North Hope Street, Albert C. Martin & Associates); the Federal Office Building in 1966

(Property 6-5, 300 North Spring Street, Welton Becket); and the Music Center (Properties 5-2, 3, 4) 135 North Grand Avenue, Welton Becket), containing the Dorothy Chandler Pavilion (Property 5-4, completed in 1964), the Mark Taper Forum, and the Ahmanson Theatre (Properties 5-3 and 5-2, both constructed in 1967).

Within Little Tokyo, redevelopment efforts began as early as the 1960s when local Japanese-American businessmen initiated a \$50 million rejuvenation plan that sought to control urban renewal and protect the unique community atmosphere. A number of office and retail buildings as well as banks and hotels were developed under this effort (Hebert 1965). Redevelopment efforts within Little Tokyo continued into the 1970s and 1980s under the management of the CRA, which implemented an aggressive improvement plan that unwittingly destroyed most of the old vestiges of the community. Little Tokyo was dramatically shifting from a quaint enclave of low- and midrise buildings into a mixed-use area of large-scale commercial high-rises, hotels, and shopping centers, including Weller Court (123 Weller Court, constructed in 1982) and Japanese Village Plaza (350 East 1st Street, constructed in 1978).

Efforts to combat redevelopment in 1986 succeeded with listing the Little Tokyo Historic District in the National Register of Historic Places (Properties 7-7 through 7-19). In 1995, the District received the higher distinction of being designated a National Historic Landmark (NHL) district. In 1990, artist Sheila de Bretteville was commissioned by the City of Los Angeles' CRA to design a public art exhibit to showcase the history of the Little Tokyo Historic District. Working in collaboration with Japanese-American artists and assistants, the Little Tokyo 1st Street public art initiative took four years to create and the final design was approved by community members and local agencies. Completed by 1996 the decorative terrazzo with concrete sidewalk designs depict images of Japanese-American culture, personal testimonials (transcribed in English and Japanese), and historic names and tenants for each building in the district. The resulting Omoide no Shotokyo (Remembering Old Little Tokyo) installation includes an oversized replica of the camera used by photographer Toyo Miyatake to capture images documenting the Manzanar Internment Camp (Hayden 1996).

One of the most recent hallmarks of the Civic Center, the Walt Disney Concert Hall (Property 4-4), was completed in 2003. It was built in stages, funded through a public-private partnership, to serve as the new home for the Los Angeles Philharmonic Orchestra. It was completed at a reported cost of nearly \$300 million, after 16 years of funding and construction challenges. Designed by Frank O. Gehry, in collaboration with Japanese acoustician Yasuhisa Toyota, it was applauded for its state-of-the-art acoustics.

The development of downtown Los Angeles continued throughout the twentieth century and beyond, surviving peaks and valleys in the real estate market. Recent trends have included conversion of historically significant, vacant office and residential hotel buildings to residential apartment and condominium uses. This movement has brought an entirely new

residential population to downtown and has encouraged the development and reintroduction of additional services and improvements. Although the inevitable problems that gentrification brings have been part of the revitalization of downtown, it has nonetheless invigorated what was recently a collective nine to five streetscape. New services include the completion of the Red, Blue, and Gold line transit systems in the 1990s, and redevelopment of the Convention Center area. The addition of Staples and Nokia Centers with these other factors has all worked toward returning downtown to a more animated character, with a less commuter-focused economy.

4.2 California Historic Resources Information Literature Search (CHRIS)

SWCA conducted a cultural resources records search for the Regional Connector Transit Corridor project at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) on February 10, 2009 in Fullerton, CA (Appendix B). Subsequent requests for information were made in March, April, and May 2009 and in January 2010. The records search included a review of the available documents and site records within a 0.25-mile radius of the project area. In addition to official maps and records, the following sources of information were consulted as part of the records search:

- National Register of Historic Places – Listed Properties (2006, updated to present)
- California Register of Historical Resources (2006, and review of minutes from State Historic Resources Commission meetings thereafter)
- California Inventory of Historical Resources (1976)
- California State Historical Landmarks (1996 and updates)
- California Points of Historical Interest (1992 and updates)
- Office of Historic Preservation Historic Property Directory and Determinations of Eligibility (2008)
- Survey of Surveys: A Summary of California's Historical and Architectural Resource Surveys (1986)
- Five Views: An Ethnic Sites Survey for California (1988)

The records search focused on obtaining information on private and public lands located within a 0.25-mile search radius of the project alignment.

4.2.1 Previous Studies in 0.25-mile Radius of APE

Downtown Los Angeles has been the subject of a large number of cultural resources studies in the last three decades. The SCCIC records search identified 143 prior cultural resources studies within a 0.25-mile radius of the direct APE. Twenty-three of the studies are located within the direct APE and 12 studies are adjacent to the direct APE (Table 4-1).

4.2.2 Previously Recorded Built Environment Resources within 0.25 miles Radius of Project APE

The SCCIC records search revealed 47 previously recorded built environment resources in the APE (Table 4-2). The majority of these resources were built in the early years of the twentieth century. Of these 47 resources, 33 were listed in, determined eligible for listing in, or found eligible for listing in the National Register. An additional three were listed in, determined eligible for listing in, or found eligible for listing in the California Registers. One of the resources is a designated California Historical Landmark. The remaining 10 properties were found not eligible for National or California Register-listing. Of the 47 previously recorded properties in Table 4-2, six resources were found in this survey to be no longer extant and one evaluation was found to have likely been made in error. Therefore, there are a total of 29 previously recorded properties that are listed in or eligible for listing in the National and/or California Registers.

Table 4-2 lists previously identified properties, including those listed in, determined eligible for listing in, or found eligible for listing in the National or California registers, otherwise recognized by the state or locally designated.

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA447	Preliminary Evaluation of Cultural Resources Located Along a Series of Proposed Urban Mass Transit System Alignment Alternatives in the City of Los Angeles, California	Singer, C.	unknown	within
LA483	Archaeological Resources Survey for the Proposed Downtown People Mover Project	Greenwood, R.	1978	within
LA982	Archaeological Resource Survey and Impact Assessment of a Proposed Parking Lot, Los Angeles, California	Bove, F.	1977	within
LA1578	Technical Report Archaeological Resources Los Angeles Rapid Rail Transit Project Draft Environmental Impact Statement and Environmental Impact Report	Westec Services, Inc.	1983	within
LA1770	Report of Archaeological Reconnaissance Survey of: ESA Project 7217B, City of Los Angeles, Los Angeles County, CA	Salls, R.	1989	within
LA3103	Cultural Resources Impact Mitigation Program Angeles Metro Red Line Segment 1	Greenwood, R.	1993	within
LA3668	St. Vibiana's Cathedral Los Angeles, California	Dillon, B.	1997	within

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA3813	An Archival Study of a Segment of the Proposed Pacific Pipeline, City of Los Angeles, California	Peak & Associates	1992	within
LA4215	Results of Cultural Resources Monitoring, L.A. Cellular Cell Site R104, Near West Third Street and South Grand Avenue, City and County of Los Angeles	Conkling, S.	1998	adjacent
LA4263	General Services Administration Federal Center: Archaeological Assessment Report Phase	Padon, B.	1986	within
LA4448	Section 106 Documentation for the Metro Rail Red Line East Extension in the City and County of Los Angeles, California	Anonymous	1994	within
LA4742	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 263-01, County of Los Angeles, California	Lapin, P.	1999	within
LA4836	Phase I Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Science Applications International Corporation	2000	adjacent
LA5093	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 679-11, County of Los Angeles, CA	Duke, C.	1999	within

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA5098	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA-226-01, County of Los Angeles, CA	Duke, C.	1999	adjacent
LA5200	Assessment of Archaeological and Paleontological Sensitivity on the Proposed California Department of Transportation District 7 Headquarters Replacement Project	Warren, K. <i>et al.</i>	2001	within
LA5447	Archaeological Monitoring Report: 911 Dispatch Center First and Los Angeles Streets	Schmidt, J.	1999	within
LA5448	Cultural Resource Assessment for AT&T Wireless Services Facility Number R299.1, County of Los Angeles	Duke, C.	2000	within
LA5451	The VA Outpatient Clinic Project	Padon, B.	unknown	within
LA6351	Nextel Communications CA-7837 A/Onizuka 332 2 nd Street, Los Angeles, California	Earthtouch, LLC	2001	within
LA6375	Highway Project to close Vignes Street on-ramp and Hewitt Street on/off ramp to US-101 and to construct new on/off ramps to the south at Garey Street, Los Angeles, California	Sylvia, Barbara	2002	adjacent

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA6396	An Archaeological Assessment of the Proposed Verizon Wireless Grand Avenue, East Los Angeles Unmanned Cellular Telecommunications Site to be Located at 601 West 5 th Street, Los Angeles County, California 90071	Tetra Tech, Inc.	2001	adjacent
LA6424	Cultural Resource Assessment Cingular Wireless Facility No. SM 140-01, Los Angeles County, California	Duke, C.	2002	adjacent
LA6435	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA679-11, County of Los Angeles, California	Duke, C.	1999	adjacent
LA6463	A Section 106 Historic Preservation Review of the Proposed Verizon Wireless Grand Avenue East Los Angeles Unmanned Cellular Telecommunications Site to be Located at 601 West 5 th Street, Los Angeles, CA 90071	Tetra Tech, Inc.	2002	adjacent
LA7178	Report on Cultural Resources Mitigation and Monitoring Activities Fluor/Level (3) Los Angeles Local Loops	unknown	2001	within
LA7527	Caltrans Statewide Historic Bridge Inventory Update Tunnels	Feldman, J. <i>et al.</i>	2006	within

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA7533	Archaeological/Paleontological Monitoring at 3 rd Street and San Pedro	McKenna, J.	2004	adjacent
LA7547	Phase I Archaeological Survey/Class III Inventory for the Hall of Justice Study Area, Los Angeles, Los Angeles County, California	Whitely, D.	2003	adjacent
LA7558	Archaeological Monitor Report, Alameda Street Improvement	Hale, Alice, and Scott Savastio	2004	within
LA7733	Cultural Resources Records Search Results and Site Visit for Cingular Wireless Candidate LSANCA0739 (811 Wilshire), 811 Wilshire Boulevard, Los Angeles, Los Angeles County, California	Bonner, W.	2006	within
LA8515	Historical Evaluation Report for the Downtown Bus Maintenance and Inspection Facility, Los Angeles, California	Wuellner, M.	2005	adjacent
LA8516	3 rd and San Pedro Archaeological Monitoring (Addendum)	McKenna, J.	2004	adjacent

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA8541	Cultural Resource Records Search Results and Site Visit for Cingular Telecommunications Facility Candidate LA-057-01, (EL-005-01), DWP Equipment Yard, 433 East Temple Avenue, Los Angeles, Los Angeles County, California	Bonner, W.	2005	within
LA8910	Archaeological Monitoring Report Mangrove Parking Lot Project, Los Angeles	Messick, P. and Hale, A.	2007	within

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-172125 2-2	Home Savings Building	654 South Figueroa Street	Hatheway, R. 1979	7R	No longer extant
P-19-170984, P-19-172126 2-3	Fine Arts Building, Global Marine House	811 West 7 th Street	Hatheway <i>et al.</i> 1982 Hatheway, R. 1979 Smith and Sitton, 1976	2S2, 5S1	Eligible for NRHP Listed in CRHR Locally listed or designated
P-19-167276 2-5	Engine Company No. 28	644 South Figueroa Street	Biele, H. 1979	1S, 5S1	Listed in NRHP and CRHR Locally listed or designated
P-19-170985 2-7	Roosevelt Building	727 West 7 th Street	Grimes, T. 2007	1S, 5S1	Listed in NRHP and CRHR Locally listed or designated

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-188406 2-10	811 Wilshire building, Tishman 615 building, Wilflower building	811 Wilshire Boulevard	Crawford, K. 2006	2S2 determination likely made in error	Eligible for NRHP Listed in CRHR
P-19-172123 2-1	Barker Brothers	818 West 7 th Street	Hatheway, R. 1979 Hatheway and Chase 1978 Hatheway <i>et al.</i> 1982	2S2, 5S1	Eligible for NRHP Locally listed or designated
P-19-188405 2-12	General Petroleum, Mobil Oil Building	612 South Flower Street	McAvoy and Trotoux, 2003	1S, 5S1	Listed in NRHP and CRHR
P-19-187083 2-13	Superior Oil Company Building	550 South Flower Street	McAvoy and Minasian, 2002	1S, 5S1	Listed in NRHP and CRHR
P-19-166934 3-1	The California Club	538 South Flower Street	Hatheway, R. 1978	2S	Eligible for NRHP

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-166803, P-19-167179 3-2	Los Angeles Central Library	630 West 5 th Street	McCoy, E. 1969	1S, 5S1	Listed in NRHP and CRHR
P-19-173800 n/a (nearby 3-3)	5 th Street Retaining Wall	5 th Street between Grand Avenue and Flower Street	Hatheway, R. 1978	2S2	no longer extant
P-19-187743 4-1	3 rd Street Tunnel, Bridge #53C1339	3 rd Street between Flower and Hill Streets	Feldman, J. and Greenwood, D. 2003	6	Not Eligible
P-19-173174 5-12	Hall of Justice Building	211 West Temple Street	Starzak, R. 1983	2S4	Eligible for NRHP Listed in CRHP
P-19-173225 6-1	U.S. Post Office and Courthouse Building	312 North Spring Street	Blalock, C. 1980; and unknown 2005	1S	Listed in NRHP and CRHR
P-19-173078 6-2	Los Angeles City Hall	200 North Spring Street	Hatheway, R. and Chase, J. 1978 Smith and Sitton, 1976	2S2. 5S1	Eligible for NRHP Listed in CRHR

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-167099 6-3	Site of the <i>Los Angeles Star</i>	300 block of North Main Street, between Temple and Aliso Streets	Arbuckle, J. 1971	1CL	Listed in CRHR
P-19-167104 6-3	Bella Union Hotel Site	314 North Main Street	unknown	7L	Needs to be reevaluated
P-19-186882 6-6	The Police Facilities Building, Parker Center	150 North Los Angeles Street	Gregory, C. and Wuellner, W. 2004	3CS	Eligible for CRHR
P-19-186888 6-6	Los Angeles Police Memorial	150 North Los Angeles Street	Gregory, C. and Wuellner, M. 2004	3CS	Eligible for CRHR
P-19-186883 6-7	Motor Transport Division	151 North John Judge Aiso Street	Gregory, C. 2004	6Z	Not Eligible
P-19-186887 6-8	Tinkertoy Parking Structure	140 North Judge John Aiso Street	Gregory, C. and Wuellner, M. 2004	3CS	Eligible for CRHR

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-186884 6-11	1-3 story commercial building	432 East Temple Street	Gregory, C. 2004	6Z	Not eligible
P-19-167499 7-7 through 7-19	Little Tokyo Historic District	301-369 East 1 st and 106-120 North San Pedro Streets, Los Angeles (38 acres, 9 buildings)	Los Angeles Conservancy, 1986	1D	Listed in NRHP and CRHR
P-19-167487 7-7	Japanese Union Church of Los Angeles	120 North San Pedro Street	Tanji, M. 1980 Sitton, T. 1977	1D, 5S1	Listed in NRHP and CRHR Locally listed or designated
P-19-167488, P-19-167499 7-8	San Pedro Firm Building	108-116 North San Pedro Street	Los Angeles Conservancy, 1986	1D, 5S1	Listed in NRHP and CRHR Locally listed or designated

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-167489, P-19-167499 7-9	1-3 story commercial building, Mark Kuwata Real Estate	301 East 1 st Street	Los Angeles Conservancy, 1986	7N	Needs reevaluation
P-19-167490, P-19-167499 7-10	1-3 story commercial building, Little Tokyo Visitor Center	303 and 307 East 1 st Street	Los Angeles Conservancy, 1986	7N	Needs reevaluation
P-19-167491, P-19-167499 7-11	1-3 story commercial building, Anzen Hardware	309-313 East 1 st Street	Los Angeles Conservancy, 1986	1D	Listed in NRHP and CRHR
P-19-167493, P-19-167499 7-13	1-3 story commercial building, Video Paradise	321-323 East 1 st Street	Los Angeles Conservancy, 1986	6X	Not Eligible
P-19-167494, P-19-167499 7-14	1-3 story commercial building, Little Tokyo Hotel	325 East 1 st Street	Los Angeles Conservancy, 1986	1D, 5S1	Listed in NRHP and CRHR Locally listed or designated

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-167495, P-19-167499 7-15	1-3 story commercial building, Ace Japanese Restaurant	331-335 East 1 st Street	Los Angeles Conservancy, 1986	1D	Listed in NRHP and CRHR
P-19-167496, P-19-167499 7-16	A. Sperl Building	337-339 East 1 st Street	Los Angeles Conservancy, 1986	1D	Listed in NRHP and CRHR
P-19-167497, P-19-167499 7-17	3+ story commercial building, Daimora Hotel	341-345 East 1 st Street	Los Angeles Conservancy, 1986	1D	Listed in NRHP and CRHR
P-19-167499 7-18	Far East Café Building	347-353 East 1 st Street	Los Angeles Conservancy, 1986	1D	Listed in NRHP and CRHR
P-19-167083, P-19-167498 7-19	Former Nishi Hongwanji Buddhist Temple	119 North Central Avenue	Tanji, M. 1980 Sitton, T. 1976	1D, 5S1	Listed in NRHP and CRHR Locally listed or designated

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-167026 7-21	Newmark Brothers Building	312 East 1 st Street	Sitton, T. 1976	3S	No longer extant
P-19-167027 7-23	Progressive Theatre	320 East 1 st Street	Sitton, T. 1976	3S	No longer extant
P-19-173342, P-19-173343, P-19-173344 7-26	Koyasan Buddhist Temple	342 East 1 st Street	Hlava, D. 1987	7N	Needs Reevaluation
P-19-167028 7-36	Moline Plow Company	352 East 1 st Street	Sitton, T. 1977	3S	No longer extant
P-19-173080 8-2	<i>Los Angeles Times</i> Building	202 West 1 st Street	Hatheway, R. and Chase, J. 1978 Hatheway, R. 1978	2S2	Eligible for NRHP Listed on CRHR
P-19-174925 8-3	The <i>Mirror</i> Building	145 South Spring St.	Arbuckle, J. 1979	7L, 1CL	Needs reevaluation

Table 4-2. Previously Recorded Buildings, Structures, Objects and Districts in the APE

Primary No. Property No.	Historic Name Resource Description	Address	Recorded by and Year	CHR Status Codes*	NRHP/CRHR/ Local Eligibility
P-19-173083 8-4	Astor Apartments	200 South Hill Street	Dolan, C. 2000	7N	Needs reevaluation
P-19-173103 8-6	2 nd Street Annex Building	222 South Hill Street	Hatheway and Chase 1978	7R	Not evaluated
P-19-150330, P-19-166842 8-12	Cathedral of St. Vibiana	114 East 2 nd Street	unknown, 1983 Sitton, T. 1974 unknown, 1963	3S, 5S1	Eligible for NRHR Locally listed or designated
9R-6	J.R. Newberry Company Building	900 East 1 st Street	JRP, 2002	2S2, 5S3	Eligible for NRHR Listed on CRHR Eligible for local listing
9R-7	1 st Street Viaduct (Bridge #53C-1166)	1 st Street between Vignes Street and Mission Road	FHWA, 2001	2S2	Eligible for NRHR
P-19-167029 9R-9	Los Angeles Soap Company Building	617 East 1 st Street	Hatheway, R. 1976	3S	No longer extant

Note: for California Historical Resource Status Codes, see Appendix F.

4.2.3 Recently Evaluated Built Environment Resources within a 0.25 Mile Radius of Project APE

Table 4-3 lists the 18 properties in the APE that were recently evaluated for the National and California Register eligibility as part of the Grand Avenue Project DEIR Technical Report (PCR Services Corporation 2006). Of these 18 properties, 13 were found eligible for listing in the National or California Registers. This survey, which identified the Los Angeles Civic Center Historic District, was not included in records on file at the SCCIC, and no California Department of Parks and Recreation (DPR) 523 forms were on file for the properties. Many of the buildings in the survey were found to “appear eligible for the National Register as an individual property through survey evaluation.” The Civic Center complex was found to “appear eligible for the California Register as a contributor to a California Register-eligible district through survey evaluation.” No evidence was found to demonstrate SHPO concurrence with the findings.

Los Angeles City Hall was recently determined eligible for listing in the National Register through the Section 106 process and is therefore listed in the California Register. City Hall was also found to be a contributor to the California Register-eligible Civic Center district.

4.2.4 Structures within the APE

The following 24 structures, including bridges, pedestrian overcrossings (POCs) and pedestrian undercrossings (PUCs), are in or cross the boundaries of the project APE (Table 4-4). One bridge within the APE was constructed prior to 1968; the 1st Street Viaduct (1929) was previously determined eligible for listing in the National Register. The remaining twenty-three structures within the APE were constructed after 1968 or were not found to be exceptionally significant, under Criteria Consideration G.

Table 4-3. Recently Evaluated Built Environment Resources in the APE

Historic Name Resource Description and Property No.	Address	Assessor's Parcel No.	Built Date	CHR Status Code*	NRHP/CRHR/ Local Eligibility
Walt Disney Concert Hall, 4-4	111 South Grand Avenue	5151-004-907	2003	3S	Eligible for NRHP
Los Angeles Civic Center Historic District, 5-1 through 5-13, 6-1 through 6-7, 6-12	various	various	1953– 2003	3CS	Eligible for CRHR
Dorothy Chandler Pavilion, 5-4	135 North Grand Avenue	5161-004-907	1964	3S, 3CD	Eligible for NRHP and CRHR
Mark Taper Forum, 5-3	135 North Grand Avenue	5161-004-907	1967	3S, 3CD	Eligible for NRHP and CRHR
Ahmanson Theatre, 5-2	135 North Grand Avenue	5161-004-907	1967	3S, 3CD	Eligible for NRHP and CRHR
Kenneth Hahn Hall of Administration, 5-5	500 West Temple Street	5161-004-905	1960	3CD	Eligible for CRHR

Table 4-3. Recently Evaluated Built Environment Resources in the APE

Historic Name Resource Description and Property No.	Address	Assessor's Parcel No.	Built Date	CHR Status Code*	NRHP/CRHR/ Local Eligibility
Civic Center Mall–El Paseo de los Pobladores de Los Angeles, 5-6	between Kenneth Hahn Hall of Administration and Los Angeles County Courthouse- Stanley Mosk Courthouse	5161-004-908	1966	3CD	Eligible for CRHR
Los Angeles County Courthouse–Stanley Mosk Courthouse, 5-7	111 North Hill Street	5161-004-906	1958	3CD	Eligible for CRHR
Los Angeles County Hall of Records, 5-9	320 West Temple Street	5161-005-910	1962	3CD	Eligible for CRHR

Table 4-3. Recently Evaluated Built Environment Resources in the APE

Historic Name Resource Description and Property No.	Address	Assessor's Parcel No.	Built Date	CHR Status Code*	NRHP/CRHR/ Local Eligibility
Civic Center Mall–Court of Historic Flags, 5-10	between Los Angeles County Hall of Records and Los Angeles County Law Library	5161-005-916	1968	3CD,5S2	Eligible for CRHR And Eligible for local listing or designation
Los Angeles County Law Library–Mildred E. Lille building, 5-11	301 West 1 st Street	5161-005-912	1953	3CD	Eligible for CRHR
Clara Shortridge Foltz Criminal Justice Center, 5- 13	210 West Temple Street	5161-005-915	1972	3CD	Eligible for CRHR
Los Angeles City Hall, 6-2	200 North Spring Street	5161-005-906	1928	2S2, 3CD	Eligible for NRHP and CRNR

Table 4-3. Recently Evaluated Built Environment Resources in the APE

Historic Name Resource Description and Property No.	Address	Assessor's Parcel No.	Built Date	CHR Status Code*	NRHP/CRHR/ Local Eligibility
parking lot	227 North Spring Street	5161-005-917 5161-005-918 5161-005-919 5161-005-920	n/a	6Z	Not eligible
vacant lot—concrete foundation of former State Office Building	217 West 1 st Street	5161-005-921 5161-005-922	unknown	6Z	Not eligible
Classic Parking (parking structure)	131 South Olive Street	5149-010-946	1968	6Z	Not eligible
Colburn Center of Performing Arts	200 South Grand Avenue	5149-010-266	1998	6Z	Not eligible
parking lot	—	5151-004-908	n/a	6Z	Not eligible

Source: *Grand Avenue Project DEIR, PCR Services Corporation, June 2006.*

* Note: for California Historical Resource Status Codes, see Appendix F.

Table 4-4. Structures within the APE

Structure No.	Name/Location	Description or Features Intersected	Year Built or Altered	NRHP/CRHR/ Local Eligibility
53C1165	Figueroa Street POC	4 th & 5 th Streets	1977	Not eligible
53C1168	Flower Street POC	3 rd & 4 th Streets	1976	Not eligible
53C1171	4 th Street Ramp “A”	Hope & Figueroa Streets	1972	Not eligible
53C1172	4 th Street Ramp “C”	Flower Street	1972	Not eligible
53C1173	4 th Street Ramp “D”	Flower Street	1972	Not eligible
53C1184	Grand Avenue Viaduct	2 nd Street	1975/1996	Not eligible
53C1184	Grand Avenue	2 nd . & 4 th Streets	1975	Not eligible
53C1202	Hill Street	1 st & Temple Streets	1970	Not eligible
53C1203	Hill Street	1 st & Temple Streets	1970	Not eligible
53C1208	Hope Street PUC	3 rd Street	1976	Not eligible
53C1209	Hope Street PUC	3 rd Street	1976	Not eligible

Table 4-4. Structures within the APE

Structure No.	Name/Location	Description or Features Intersected	Year Built or Altered	NRHP/CRHR/ Local Eligibility
53C1210	Hope Street Tunnel	Hope & Flower Streets	1972	Not eligible
53C1242	Main Street POC	1 st & Temple Streets	1970	Not eligible
53C1337	Temple Street POC	n/a	1975	Not eligible
53C1733	5 th Street POC	Flower Street	1978	Not eligible
53C1734	4 th Street POC	4 th Street	1979	Not eligible
53C1737	4 th Street POC	Flower & Figueroa Streets	1977	Not eligible
53C1338	3 rd Street POC	Figueroa Street	1976	Not eligible
53C1740	Figueroa Street POC	3 rd Street	1980	Not eligible
53C1771	Civic Center East Tunnel	Los Angeles Street	1971	Not eligible
53C1780	Civic Center East Mall PUC	Temple Street	1975	Not eligible
53C1827	Transit Tunnel	Grand Avenue	1982	Not eligible

Table 4-4. Structures within the APE

Structure No.	Name/Location	Description or Features Intersected	Year Built or Altered	NRHP/CRHR/ Local Eligibility
53C1907	Flower Street POC	5 th Street	1983	Not eligible
53C1166	1 st Street Viaduct	Between Vignes and Mission Road	1929 (altered 2008)	NRHP Eligible

4.3 Built Environment Survey

The built environment survey methods were described in Section 3.4.2.

4.3.1 Survey Results

The proposed APE includes a total of 289 properties. Appendix A lists all of the properties within the APE that were surveyed for this project. Of those, there were 118 buildings, structures, or objects that were constructed more than 50 years before the assumed project construction date of 2018. Of the 118 properties, 29 were previously listed in or determined eligible for the National and/or California Registers (Table 4-2). DPR forms were not prepared for those properties unless current conditions necessitated updating, because of changes in improvements or if improvements were no longer extant. The remaining properties in the APE that were built in or prior to 1968 and have not been listed in or determined eligible for the National and California Registers required evaluation for historical significance. Those properties are discussed in Section 4.3.2.

4.3.2 Significance Evaluations

A total of 118 resources, including buildings, structures, and objects were either previously identified or investigated for this project. California DPR series 523 forms were prepared for each property containing improvements completed in or before 1968 that were not previously listed in or determined eligible for the National and California Registers to evaluate their National and California Register eligibility. The results of those evaluations, in support of this section, are included in Appendix D.

Table 4-5 shows the 85 properties that contain improvements completed in or prior to 1968, according to Los Angeles County tax assessor records and/or building permits, and that were re-evaluated or evaluated for historic significance. The DPR 523 forms for these properties are included in Appendix D. Also included in Table 4-5 are properties that fall within the APE but do not have specific APNs. One building, Walt Disney Concert Hall, was completed in 2003, but meets Criteria Consideration G for properties that have achieved significance in less than 50 years and has therefore been included in the table. The Los Angeles Civic Center District was found eligible for listing in the National and California Registers for this project. Properties that are located within the district and that were built after 1968 were also evaluated for historical significance and therefore included in the table. Table 4-5 depicts resources that were evaluated or re-evaluated for National and California Register eligibility.

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
2-2	Home Savings of America Tower, Figueroa Tower	660 South Figueroa Street	5144-008-013	1989			6Z	Not eligible No longer extant
2-4	Bank of America, Coffee Bean & Tea Leaf, Quizno's	801 West 7 th Street	5144-008-009	1950			6Z	Not eligible
2-6	Metropolitan Federal Savings & Loan Building, G & G building	818 Wilshire Boulevard	5144-008-011	1948			6Z	Not eligible
2-8	700 Wilshire Boulevard, Honeywell Headquarters, Peck-Norman building	700 Wilshire Boulevard	5144-006-020	1966			6Z	Not eligible
2-9	Glore Forgan, William Staats, Inc. Investments Building, Japan California Bank, Fed Ex Kinko's	835 Wilshire Boulevard	5144-007-025	1968			6Z	Not eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
2-10	Tishman 615 Building, Wilflower Building	811 Wilshire Boulevard	5144-007-023	1960			6Z 2S2	Not eligible (National Register determination in 2006 likely made in error)
2-11	Tishman 615 Parking Garage, 811 Wilshire Parking	616 South Figueroa Street	5144-007-027	1960			6Z	Not eligible
3-3	5 th Street Retaining Wall	5 th Street between Grand and Flower	—	—			6Z	Not eligible (No longer extant)
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Hill Street, between 4 th and 5 th Streets, to Glendale and Beverly	—	1925			3CS 5S1	Eligible for CRHR Locally listed or designated

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
4-1	3 rd Street Tunnel, Bridge (tunnel) #53C 1339	3 rd Street, between Flower and Hill Streets	—	1907			6Z	Not eligible
4-2	Bunker Hill Central Plant	703 West 3 rd Street	5151-014-032; 5151-014-033	1966			6Z	Not eligible
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	2 nd Street, between Grand Avenue and Figueroa Street		1924			3S	Eligible for NRHP
4-4	Walt Disney Concert Hall	111 South Grand Avenue	5151-004-907	2003			3S	Eligible for NRHP

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	various	--	1925-1972	D ¹		3D, 3CD	Eligible for NRHP and CRHR
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	111 North Hope Street	5161-003-910	1965	C		3B, 3CB	Eligible for NRHP and CRHR
5-2	Ahmanson Theatre	135 North Grand Avenue	5161-004-907	1967	C		3B, 3CB	Eligible for NRHP and CRHR
5-3	Mark Taper Forum	135 North Grand Avenue	5161-004-907	1967	C		3B, 3CB	Eligible for NRHP and CRHR

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
5-4	Dorothy Chandler Pavilion	135 North Grand Avenue	5161-004-907	1964	C		3B, 3CB	Eligible for NRHP and CRHR
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	500 West Temple Street, 222 North Grand Avenue	5161-004-908	1956–1961	C		3B, 3CB	Eligible for NRHP and CRHR
5-6	El Paseo de los Pobladores de Los Angeles	224 North Grand Avenue	5161-004-908	1966	C		3D, 3CD	Eligible for NRHP and CRHR
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	111 North Hill Street	5161-004-906	1958	C		3B, 3CB	Eligible for NRHP and CRHR
5-8	County of Los Angeles Central Heating and Refrigeration Plant	301 North Broadway	5161-005-904	1958	C		3D, 3CD	Eligible for NRHP and CRHP

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
5-9	Los Angeles County Hall of Records	320 West Temple Street	5161-005-910	1962	C		3B, 3CB	Eligible for NRHP and CRHP
5-10	Court of Historic American Flags	224 North Hill Street, 100 block Hill Street	5161-005-916	1971	C		3D, 3CD, 5S2	Eligible for NRHP and CRHP Eligible for local listing or
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	301 West 1 st Street	5161-005-912	1953	C		3D, 3CD	Eligible for NRHP and CRHR
5-12	Hall of Justice, Los Angeles County Jail	211 West Temple Street	5161-005-903	1925	C		2S4, 3B, 3CB	Eligible for NRHP and CRHR

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
5-13	Clara Shortridge Foltz Criminal Justice Center	210 West Temple Street	5161-005-915	1972	C		3B, 3CB	Eligible for NRHP and CRHR
6-1	U.S. Post Office and Court House Building, Federal Building	312 North Spring Street	5161-005-902	1940	C		1S, 3B, 3CB	NRHP listed
6-2	Los Angeles City Hall	200 North Spring Street	5161-005-906	1928	C		2S2, 3B, 3CB	Eligible for NRHP and CRHR
6-3	City Hall East	200 North Main Street	5161-014-901	1973	NC		6Z	Not Eligible
6-4	City Health Building, City Hall South	111 East 1 st Street	5161-014-902	1954	C		3B, 3CB	Eligible for NRHP and CRHR

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
6-5	Federal Building, North Los Angeles Field office	300 North Los Angeles Street	5161-011-906	1965	C		3D, 3CD	Eligible for NRHP and CRHR
6-6, 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	150 North Los Angeles Street 151 North Judge John Aiso Street	5161-013-904, 5161-013-905	1955/ 1958	C		3B, 3CB	Eligible for NRHP and CRHP
6-8	City of Los Angeles Parking Lot 3, "Tinkertoy" Parking Structure	140 North Judge John Aiso Street	5161-012-901, 5161-012-902	1968			3CS	Eligible for CRHR
6-9	corrugated metal shed	140 North Judge John Aiso Street (in parking lot)	5161-012-902	c. late 1960s			6Z	Not eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
6-10	Union Hardware and Metal Company, Los Angeles Police Garage, The Geffen Contemporary at MOCA	152 North Central Avenue	5161-012-904, 5161-012-905	1947			6Z	Not eligible
6-11	Office Depot Warehouse, City of Los Angeles Medical Services Division Building	432 East Temple Street	5173-008-906	1952			6Z	Not eligible
6-12	201-225 Los Angeles Street Plaza Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	201-225 Los Angeles Street, 111 East 1 st Street, 314 North Main Street	5161-010-901	1974	NC		7L	Not Eligible No longer extant
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	220-226 ½ East 1 st Street	5161-016-007	1910			3CS	Eligible for CRHR

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
7-2	International Theater, San Kwo Low, S.K. Uyeda Store, La Chicken	230 East 1 st Street	5161-016-008	1907			6Z	Not eligible
7-3	Olympic Shop, Fianzas	114-116 Astronaut Ellison S. Onizuka Street	5161-016-009	1910/ 1926			6Z	Not eligible
7-4	Aid & Abet Bail Bonds, Fianzas, Joseph's Men's Wear (Clothier Shorter Men), Get Legal Immigrations Service	234-240 East 1 st Street	5161-016-011	1964			6Z	Not eligible
7-5	Sakura Rent-a-Car, Insurance, David Baraz Bail Bonds, Nail Service, Los Angeles Immigration and Photo Services	242-248 East 1 st Street	5161-016-010	1900			6Z	Not eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
7-6	Sumitomo Bank Tower, California Bank & Trust	101 South San Pedro Street	5161-016-014	1967			6Z	Not eligible
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	various	--	--	D		1D	NRHP listed National Historic Landmark
7-9	Mark Kuwata Real Estate	301 East 1 st Street, 104-106 North San Pedro Street, 104-106 Judge John Aiso Street	5161-012-004	1908		C	3D	Eligible for NRHP
7-10	Little Tokyo Visitor Center	303-307 East 1 st Street	5161-012-908	1907		NC	6Z	Not eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
7-12	Ace Hi Cleaners, Fugetsu-Do Sweet Shop, Little Tokyo Arts & Gift, Zippo DVD	315, 317, 319 East 1 st Street	5161-012-008	1957		NC	6Z	Not eligible
7-13	Video Paradise, Korean Barbeque	321-323 East 1 st Street	5161-012-007	1930		NC	6Z	Not eligible
7-21	Color and Copy	312 East 1 st Street	5161-017-035	1991			6Z	Not Eligible (No longer extant)
7-22	Mitsuru's Sushi-Bar & Grill, Mikarana	314 East 1 st Street	5161-017-005	1909			6Z	Not Eligible
7-23	Progressive Theatre, Sapporo-Ya	320 East 1 st Street	5161-017-003	1910			6Z	Not Eligible (No longer extant)

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
7-24	Citibank	324 East 1 st Street	5161-017-002	1965			6Z	Not Eligible
7-25	Bun Ka Do Gifts Music	340 East 1 st Street	5161-017-011	1964			6Z	Not Eligible
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	342 East 1 st Street	5161-017-019	1940			3S	Eligible for NRHP
7-27	Ginza-Ginza, Tokyo Salon	342-342 ½ East 1 st Street	5161-017-012	1938			6Z	Not Eligible
7-28	Three Twenty One building, Federal Public Defender building, Mitsubishi Bank	321 East 2 nd Street	5161-017-009	1965			6Z	Not Eligible
7-29	Weiland Brewery, Café Cuban Restaurant	114 South Central Avenue	5161-018-021	1897			6Z	Not Eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	416 East 1 st Street	5161-018-001	1913			3CS	Eligible for CRHR
7-31	Eigiku Café, Kouraku Japanese Restaurant	314 East 2 nd Street	5161-022-003	1896/ 1906			6Z	Not Eligible
7-32	Little Tokyo Movie Theatre, Rafu Busan	326 East 2 nd Street	5161-022-011	1967			6Z	Not Eligible
7-33	Brunswig Drug Company, Purepac Corporation, Brunswig Square, American Apparel	356-374 East 2 nd Street	5161-017-009	1930, 1985			6Z	Not Eligible
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	216 South Alameda Street	5163-009-005	1913			3S	Eligible for NRHP

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
7-36	Japanese Village Plaza (Moline Plow Company, Nisei Trading Company)	352 East 1 st Street	5161-017-003 (and various others)	1978			6Z	Not Eligible (No longer extant)
8-1	Parking Lot 17, "Tinkertoy" parking structure	131 South Olive Street	5149-010-946	1968			6Z	Not Eligible
8-3	The Mirror Building (Site of Butterfield Stage Station), Los Angeles Times-Mirror Annex, Times Building South, Mirror-News Building	145 South Spring Street	5149-001-003	1948			3S, 5S1	Eligible for NRHP Locally listed or designated
8-4	Astor Hotel, Kawada Hotel	200 South Hill Street	5149-009-017	1918			6Z	Not Eligible
8-5	Los Angeles Law Center, Redwood Bar & Grill	316 East 2 nd Street	5149-009-024	1926			6Z	Not Eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
8-6	2 nd Street Annex Garage	222 South Hill Street	5149-009-023	1926			6Z	Not Eligible
8-7	Los Angeles Law Center	205 South Broadway	5149-009-019	1911			6Z	Not Eligible
8-8	Los Angeles Law Center, Merchants Trust Building	207 South Broadway	5149-009-022	1905			6Z	Not Eligible
8-9	Wilcox Building, Wilcox Block, Cityside Federal Credit Union	206-210 South Spring Street	5149-007-006	1905			6Z	Not Eligible
8-10	Wilcox Annex, Blue Cube Burger, Metropolitan News Enterprise	212-218 South Spring Street	5149-007-005	1950			6Z	Not Eligible
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	108 West 2 nd Street	5149-006-010	1910			3CS, 5S1	Eligible for CRHR Locally listed or designated

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
8-12	Cathedral of Saint Vibiana	214 South Main Street	5161-026-022	1876			3S, 5S1	Eligible for NRHP Locally listed or designated
8-13	Cathedral of Saint Vibiana, Rectory	114 East 2 nd Street	5161-026-023, 5161-026-024	1934			3S	Eligible for NRHP
9R-1	S.K. Uyeda Building, Aloha Plumbing, Tactical Depot, P.G. Motoring, Kato's Sewing Machines Sales and Service	606 East 1 st Street	5163-002-023	1913			6Z	Not Eligible
9R-2	620 East 1 st Street building	620 East 1 st Street	5163-002-020	1913			6Z	Not Eligible
9R-3	Little Tokyo Carwash	622 East 1 st Street	5163-002-006	1931			6Z	Not Eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility

APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
9R-4	700 East 1 st Street building	700 East 1 st Street	5163-003-001	1909			6Z	Not Eligible
9R5	120 South Vignes Street building	120 South Vignes Street	5163-005-007	1909			6Z	Not Eligible
9R-6	J.R. Newberry Company Building	900 East 1 st Street	5163-005-006	1900			2S2, 5S3	Eligible for NRHP Eligible for local listing or designation
9R-7	1 st Street Viaduct	1 st Street between Vignes Street and Mission Road	n/a	1929			2S2, 5S1	Eligible for NRHP Eligible for local listing or designation
9R-8	Bordello Bar, Little Pedro's Restaurant & Cantina	901 East 1 st Street	5173-013-014	1885			6Z	Not eligible

Table 4-5. All Properties in Project APE Built in or Prior to 1968 Evaluated or Re-Evaluated for National and California Register Eligibility								
APE Map No.	Name	Address	Assessor's Parcel No.	Built Date	Civic Center	Little Tokyo	CHR Status Code*	NRHP/CRHR/ Local Eligibility
9R-9	Los Angeles Soap Company	617 East 1 st Street	5173-012-900	n/a			6Z	Not eligible (No longer extant)

* Note: California Historical Resource Status Codes, see Appendix F.

Of the total 118 resources that were investigated for this project, 49 were found to be listed in or eligible for listing in the National and California Register. Six were found eligible for listing only in the California Register, and 63 resources were found to be ineligible for either listing. Figure 4-4 shows eligible historic properties and historical resources within the APE. Table 4-6 outlines all of the resources (previously recorded and evaluated for this project) that are listed in or eligible for listing in the National and/or California Registers.

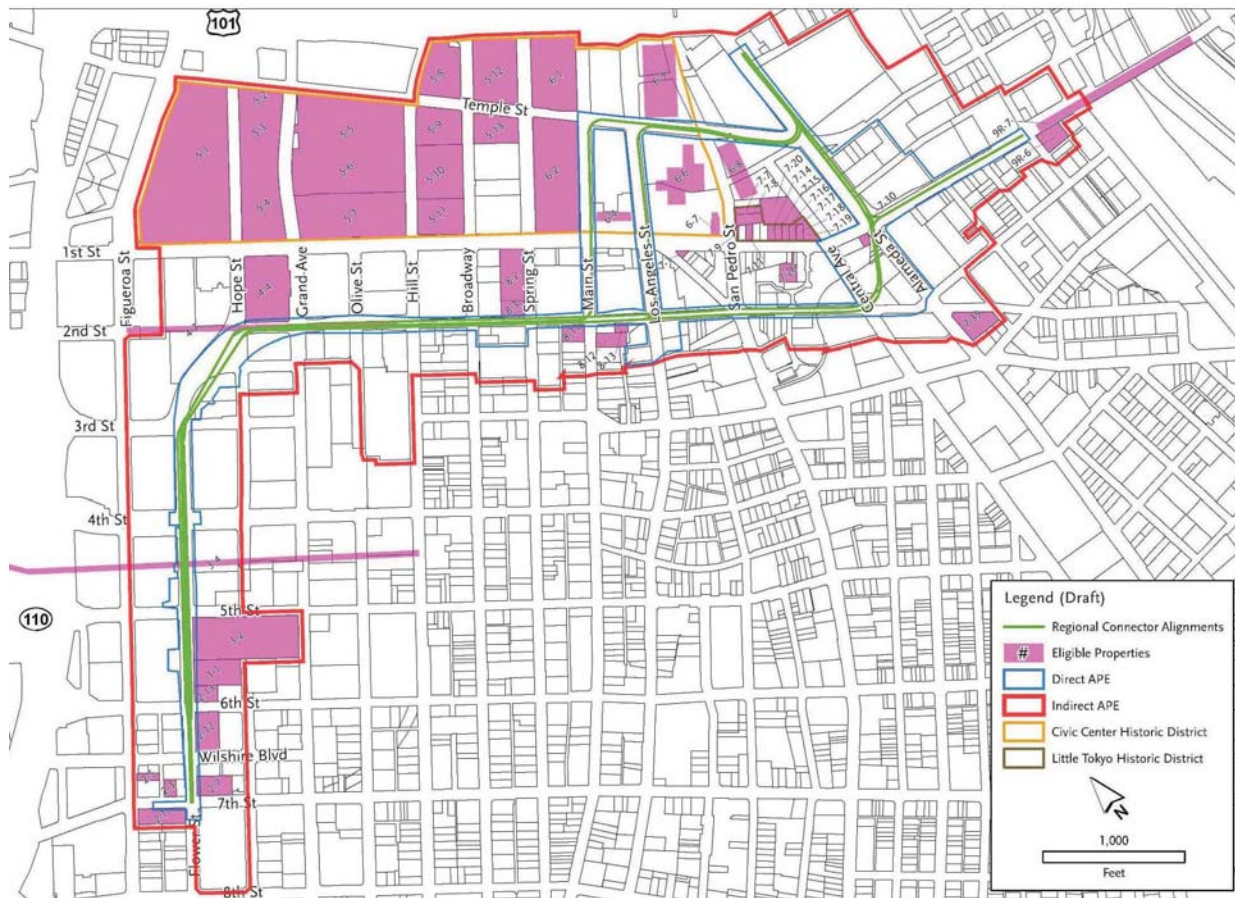


Figure 4-4. Historic Properties and Historical Resources within the APE Eligible for the National or California Registers

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
2-1	Barker Brothers	818 West 7 th Street		Eligible	Listed
2-3	Fine Arts Building, Global Marine House	811 West 7 th Street		Eligible	Listed
2-5	Engine Company No. 28	644 South Figueroa Street		Listed	Listed
2-7	Roosevelt Building	727 West 7 th Street		Listed	Listed
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	811 Wilshire Boulevard		Eligible	Listed
2-12	General Petroleum, Mobil Oil Building	612 South Flower Street		Listed	Listed
2-13	Superior Oil Company Building	550 South Flower Street		Listed	Listed
3-1	The California Club	538 South Flower Street		Eligible	Listed
3-2	Los Angeles Central Library	630 West 5 th Street		Listed	Listed

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Hill Street, between 4 th and 5 th Streets, to Glendale and Beverly			Eligible
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	2 nd Street, between Grand Avenue and Figueroa Street		Eligible	Eligible
4-4	Walt Disney Concert Hall	111 South Grand Avenue	5151-004-907	Eligible	Eligible
5-1 Through h 5-13, 6-1 through 6-7, 6- 12	Los Angeles Civic Center Historic District	Various		Eligible	Eligible
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	111 North Hope Street	5161-003-910	Eligible	Eligible

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
5-2	Ahmanson Theatre	135 North Grand Avenue	5161-004-907	Eligible	Eligible
5-3	Mark Taper Forum	135 North Grand Avenue	5161-004-907	Eligible	Eligible
5-4	Dorothy Chandler Pavilion	135 North Grand Avenue	5161-004-907	Eligible	Eligible
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	500 West Temple Street, 222 North Grand Avenue	5161-004-908	Eligible	Eligible
5-6	El Paseo de los Pobladores de Los Angeles	224 North Grand Avenue	5161-004-908	Eligible	Eligible
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	111 North Hill Street	5161-004-906	Eligible	Eligible

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
5-8	County of Los Angeles Central Heating and Refrigeration Plant	301 North Broadway	5161-005-904	Eligible	Eligible
5-9	Los Angeles County Hall of Records	320 West Temple Street	5161-005-910	Eligible	Eligible
5-10	Court of Historic American Flags	224 North Hill Street, 100 block Hill Street	5161-005-916	Eligible	Eligible
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	301 West 1 st Street	5161-005-912	Eligible	Eligible
5-12	Hall of Justice, Los Angeles County Jail	211 West Temple Street	5161-005-903	Eligible	Eligible
5-13	Clara Shortridge Foltz Criminal Justice Center	210 West Temple Street	5161-005-915	Eligible	Eligible

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
6-1	U.S. Post Office and Court House Building, Federal Building	312 North Spring Street	5161-005-902	Listed	Listed
6-2	Los Angeles City Hall	200 North Spring Street	5161-005-906	Eligible	Eligible
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	300 block of North Main Street, between Temple and Aliso Streets			Listed California Historical Landmark
6-4	City Health Building, City Hall South	111 East 1 st Street	5161-014-902	Eligible	Eligible
6-5	Federal Building, North Los Angeles Field office	300 North Los Angeles Street	5161-011-906	Eligible	Eligible
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	150 North Los Angeles Street 151 North Judge John Aiso Street	5161-013-904, 5161-013-905	Eligible	Eligible

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
6-8	City of Los Angeles Parking Lot 3, "Tinkertoy" Parking Structure	140 North Judge John Aiso Street	5161-012-901, 5161-012-902		Eligible
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	220-226 ½ East 1 st Street	5161-016-007		Eligible
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Various		Listed National Historic Landmark	Listed
7-7	Japanese Union Church of Los Angeles	120 North San Pedro Street		Listed	Listed
7-8	San Pedro Firm Building	108-116 North San Pedro Street		Listed	Listed

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
7-9	Mark Kuwata Real Estate	301 East 1 st Street, 104-106 North San Pedro Street, 104-106 Judge John Aiso Street	5161-012-004	Eligible	Eligible
7-11	1-3 story commercial building, Anzen Hardware	309-313 East 1 st Street		Listed	Listed
7-14	1-3 story commercial building, Little Tokyo Hotel	325 East 1 st Street		Listed	Listed
7-15	1-3 story commercial building, Ace Japanese Restaurant,	331-335 East 1 st Street		Listed	Listed
7-16	A. Sperl Building	337-339 East 1 st Street		Listed	Listed
7-17	3+ story commercial building, Daimora Hotel	341-345 East 1 st Street		Listed	Listed
7-18	Far East Café Building	347-353 East 1 st Street		Listed	Listed

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
7-19	Former Nishi Hongwanji Buddhist Temple	119 North Central Avenue		Listed	Listed
7-20	Aoyama Tree	119-135 North Central Avenue		Not Eligible	Eligible
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	342 East 1 st Street	5161-017-019	Eligible	Eligible
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	416 East 1 st Street	5161-018-001		Eligible
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	216 South Alameda Street	5163-009-005	Eligible	Eligible
8-2	<i>Los Angeles Times</i> Building	202 West 1 st Street		Eligible	Listed

Table 4-6. NRHP and CRHR Eligible and Listed Properties in APE

APE Map No.	Name	Address	Assessor's Parcel No.	NRHP Eligibility	CRHR Eligibility
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	145 South Spring Street	5149-001-003	Eligible	Eligible
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	108 West 2 nd Street	5149-006-010		Eligible
8-12	Cathedral of Saint Vibiana	214 South Main Street	5161-026-022	Eligible	Eligible
8-13	Cathedral of Saint Vibiana, Rectory	114 East 2 nd Street	5161-026-023, 5161-026-024	Eligible	Eligible
9-R6	J.R. Newberry Company Building	900 East 1 st Street	5163-005-006	Eligible	Eligible
9-R7	1 st Street Viaduct (Bridge #53C-1166)	1 st Street between Vignes Street and Mission Road		Eligible	Eligible

5.0 IMPACTS

The impacts analysis examined likely effects of the proposed project to historic properties under NHPA and impacts to historical resources under CEQA. This analysis incorporates the findings of other applicable technical studies, including displacement, right-of-way, noise and vibration studies, sound walls, retaining walls, geotechnical studies, and station designs. Tables 5-1 through 5-8 list the potential project effects to historic properties and impacts to historical resources by alternative. A discussion of the potential effects to historic properties and impacts to historical resources under the No Build Alternative and the TSM Alternatives are included in the text.

As noted previously in Section 3.0 of this technical memorandum, if a project affects a “historic property” within the APE, the lead federal agency must assess whether the effect is adverse in order to comply with Section 106 of the NHPA. This is accomplished in consultation with the SHPO by applying the “criteria of adverse effect” as stated in 36 CFR 800.5(a)(1).

If a project’s effects do not diminish the integrity of a historic property, then a “no adverse effect” finding is appropriate (36 CFR 800.5(b)). Adverse effects are defined in Section 3.2.

If an adverse effect is expected to occur as a result of a proposed project, the lead agency shall consult further to resolve the adverse effect, pursuant to 36 CFR Part 800.5(2) and develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties (36 CFR Part 800.6).

Section 110(f) of the NHPA of 1966, as codified in 36 CFR 800.10, requires federal agencies to undertake planning and actions to minimize harm to designated National Historic Landmark (NHL) properties. If a proposed project is found to have the potential for an adverse effect on a NHL, the Secretary of the Interior (typically represented by a representative of the National Park Service) is invited to participate under Section 110(f) of the NHPA. For this project, the Little Tokyo Historic District NHL is situated within the APE and would not be adversely affected by any of the alternatives. If project planning necessitates changes, and potential adverse effects to the NHL arise, consultation with the National Park Service will be conducted.

As noted in Section 3.0, CEQA also requires that proposed public projects be evaluated for their probability to cause significant effects on “historical resources.” CEQA equates a “substantial adverse change” in the significance of a historic property with a significant effect on the environment (PRC Section 21084.1). Thresholds of substantial adverse change are established in PRC Section 5020.1, and include demolition, destruction, relocation, or “alteration activities that would impair the significance of the historic resource.”

5.1 No Build Alternative

5.1.1 Construction Impacts

The No Build Alternative would not result in short-term or long-term construction related effects to historic properties or impacts to historical resources. This alternative does not include capital improvements, and thus would not result in construction or implementation-related effects to historic properties under NEPA or impacts on historical resources under CEQA within the project APE.

5.1.2 Operational Impacts

The No Build Alternative would not result in operational short- or long-term effects to historic properties or impacts to historical resources. This alternative would not result in the introduction of any new improvements that would be expected to cause effects on historic properties under NEPA or have impacts under CEQA on historical resources in the project APE.

5.1.3 Cumulative Impacts

The No Build Alternative would not result in cumulative effects to historic properties or impacts to historical resources, other than the current effects on resources though continued high and escalated levels of vehicular traffic, unabated by additional mass transit options. Therefore, the No Build Alternative would not contribute to a cumulative effect to historic properties or impacts to historical resources.

5.2 Transportation System Management (TSM) Alternative

Under the TSM Alternative, the transit infrastructure investment (two new bus routes and associated structures) would use the existing street and sidewalk networks and would not require the displacement or relocation of properties, residents, or employees.

Improvements under this alternative would entail minor physical modifications, such as the installation of bus stops along existing city streets and rebuilding some curbs, sidewalks, and street surfaces to accommodate increased bus weights and traffic frequency.

No detailed engineering plans for the TSM alternative have been prepared to date.

5.2.1 Construction Impacts

5.2.1.1 Addition of Bus Stops

Under the TSM Alternative, an unspecified number of buses would be added throughout the APE. Installation of up to six new bus stops within the APE would entail minor alterations to the sidewalks, curbs, and other features in the public right of way.

Section 106 Effects Analysis for Historic Properties

An effect, but no adverse effect, to historic properties would result from the addition of bus stops because the current streetscapes were historically busy transportation corridors. The new proposed features would not alter the characteristics of historic properties located in the APE in a manner that would diminish the integrity of any historic materials.

CEQA Impact Analysis for Historical Resources

The addition of a limited number of bus stops in the APE would not constitute a substantial adverse change that would impair the significance of historical resources. The resources' features would remain to convey their significance. The project, therefore, would have a less than significant impact upon historical resources.

5.2.1.2 One-Way Express Bus Traffic

The construction and implementation of the TSM Alternative may result in the rebuilding of curbs, sidewalks, and street surfaces to accommodate increased bus weights and traffic frequency.

Section 106 Effects Analysis for Historic Properties

The improvements to facilitate bus traffic would result in an effect, but no adverse effect, to historic properties because the current streetscapes were historically busy transportation corridors. The changes would not alter a characteristic of a historic property in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential changes to sidewalks and street surfaces to accommodate bus traffic would not constitute a substantial adverse change that would impair the significance of historical resources. The majority of the resource's features would remain to convey their significance. The TSM Alternative, therefore, would have a less than significant impact upon historical resources.

5.2.1.3 Noise and Vibration

According to the Noise and Vibration Technical Memorandum, the TSM Alternative may include minor construction, i.e. install new bus stop benches and signage. These activities would take less than a day to erect, require no heavy equipment, and would not exceed ambient levels of noise in the APE. Noise generated by this alternative is not expected to cause an adverse effect to historic properties or a significant impact to historical resources.

For the TSM Alternative, no major construction activities that use the larger equipment in Table 3-2 are planned, therefore no adverse effects or significant impacts under CEQA from ground borne vibration (GBV) are anticipated.

Section 106 Effects Analysis for Historic Properties

Selecting construction techniques that use specified equipment within safe distances from sensitive buildings would diminish the potential for ground borne vibration and noise. Large equipment would not adversely affect historic properties. Potential noise would also not rise above existing conditions. Any changes that could occur as a result of GBV or noise generated by this alternative would not alter a characteristic of a historic property in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential changes generated by GBV and noise for this alternative would not constitute a substantial adverse change that would impair the significance of historical resources. The resources' features would remain to convey their significance. The project, therefore, would have a less than significant impact upon historical resources.

5.2.2 Operational Impacts

5.2.2.1 Noise and Vibration

Under the TSM Alternative, potential sources of future noise and vibration levels would not increase over the existing sources of noise and vibration. Buses currently use the routes associated with this alternative. Therefore, the operation of additional buses along the proposed route would not result in a noticeable increase in vibration or noise levels over those currently generated by existing buses. Additional bus use may reduce cumulative noise by decreasing personal vehicle use.

Section 106 Effects Analysis for Historic Properties

Noise and vibration caused by the operation of buses would not adversely affect historic properties in the APE. Potential changes would not alter the characteristics of a historic property in a manner that would diminish the integrity of the location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Potential noise and vibration generated from bus service in the APE would not constitute a substantial adverse change that would impair the significance of any historical resources. Character defining features would remain to convey the significance of the historical resources. The TSM Alternative, therefore, would have a less than significant impact upon historical resources.

5.2.3 Cumulative and Indirect Impacts

There are no expected indirect impacts under the TSM Alternative.

Cumulative effects and impacts include short-term effects during construction such as noise, dirt, changes in setting from the use or storage of equipment, or lack of access due to congestion or revisions in traffic patterns. Cumulative effects may also result from long-term effects such as additional traffic brought about by increased density as new buildings are constructed. Taken collectively, the reasonably foreseeable projects in the project area do not appear to have additional effects upon historic properties or impacts upon historical resources that would be affected by the TSM Alternative.

5.2.4 Potential Effects to Section 4(f) Resources

Section 4(f) applies to the Regional Connector Transit Corridor project because several of the project alternatives potentially affect 4(f) properties. The TSM Alternative, however, would not affect, displace, alter, or use any 4(f) properties to implement construction and/or project operation.

5.3 At-Grade Emphasis Light Rail Transit (LRT) Alternative

The At-Grade Emphasis LRT Alternative would install double-track light-rail guideways in the existing street system, rebuild street surfaces and underground utilities, rebuild curbs and sidewalks, and install stations, all within the APE. Underground segments of the alternative would use parts of the existing 2nd Street Tunnel (APE Map # 4-3) and would require new cut and cover tunneling under Flower Street between 7th and 4th Streets north of the 7th Street/Metro Center Station.

5.3.1 Construction Impacts

Construction activities were analyzed using the Criteria of Adverse Effect for their potential to impact properties. The following discussion describes the types of effects that may occur in the APE due to construction activities for the At-Grade Emphasis LRT Alternative. Short-term effects from construction typically result from dirt, changes in the visual environment, or alteration to access. Other types of construction effects may be related to specific construction activities or locations. Operational effects are discussed in Section 5.3.2. Table 5-1 indicates the resources that may experience construction-related effects due to their location within the APE.

5.3.1.1 Temporary Dirt/Unintended Damage

Properties in the APE may experience effects from construction including dirt and unintended damaged. Metro would employ best management practices (BMPs) to ensure that these effects are short-term.

Section 106 Effects Analysis for Historic Properties

Dirt and other damage from construction would result in effects, but not adverse effects, to historic properties in the APE because the effects would be short-term. The effects would not

directly alter a characteristic of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Potential dirt and other unintended damage during construction would not constitute a substantial adverse change that would impair the significance of the historical resources. The impacts would be short-term and the majority of the resources' features would remain to convey their significance. This alternative, therefore, would have a less than significant impact upon historical resources.

5.3.1.2 Traffic Congestion/Parking/Access

Changes in access to properties and resources within the APE may result from road closures, use of equipment, and other construction activities. Metro would employ BMPs to minimize these changes and keep the public and property owners informed of potential issues.

Section 106 Effects Analysis for Historic Properties

Potential effects, but no adverse effects, would result from changes in access during construction. The effects would be short-term and would not alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Changes in access resulting from congestion and loss of parking during construction would not constitute a substantial adverse change that would impair the significance of the historical resources. The impacts would be short-term and the majority of the resources' features would remain to convey their significance. The At-Grade Emphasis LRT Alternative, therefore, would have a less than significant impact upon historical resources.

5.3.1.3 Visual

Visual changes may result from the storage and operation of equipment, cuts in the road, and signage used during construction. Metro would employ best management practices (BMPs) to minimize these changes and they would be short term.

Section 106 Effects Analysis for Historic Properties

Visual changes during construction would result in an effect, but not an adverse effect, to historic properties because the effects would be short-term. The changes would not directly alter a characteristic of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Visual changes during construction would not constitute a substantial adverse change that would impair the significance of historical resources. The impacts would be short-term and the resources' character-defining features would remain to convey their significance. The At-Grade Emphasis LRT Alternative, therefore, would have a less than significant impact upon historical resources.

5.3.1.4 Demolition, Partial Takes or Alteration of a Property:

As part of the At-Grade Emphasis LRT Alternative a portion of several properties may be acquired (partial takes). Portions of properties occupied by the Los Angeles Police Facilities Building (APE Map #6-6), Motor Transport Division Building (APE Map #6-7), and City Health Building (City Hall South) (APE Map #6-4), three contributing resources to the Los Angeles Civic Center Historic District, would be acquired to accommodate new stations (Metro 2010). A temporary construction staging easement would also be acquired. A portion of the CRHR eligible "Tinkertoy" Parking Structure (APE Map #6-8), would be acquired to accommodate the turning radius as the rail line joins the existing Gold Line Extension tracks. Drive way access would also be potentially limited. The Tinkertoy Parking Structure is not eligible for the NRHP.

Section 106 Effects Analysis for Historic Properties

There are no adverse effects to historic properties under this alternative from partial property acquisitions. Since only a portion of the properties would be acquired and converted to new uses, the change would not affect the physical buildings, the historic district that they are a part of, or the characteristics that make them eligible for the NRHP, and thus would not diminish their integrity of location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Partial property acquisitions would not constitute a substantial adverse change that would impair the significance of historical resources in the APE. The characteristics that make the historical resources eligible for the CRHR and NRHP would remain to convey their significance. This alternative, therefore, would not have a significant impact upon historical resources.

5.3.1.5 Above-Ground Station Construction

One potential at-grade station is proposed for the At-Grade Emphasis LRT Alternative. The proposed station would be a one-way couplet located on Main and Los Angeles Streets in the NRHP and CRHR Eligible Civic Center Historic District (APE Map #51-1 through 5-13, 6-1 through 7-7, 6-12) and immediately beside three NRHP and CRHR eligible properties; the Los Angeles Police Facilities Building (APE Map #6-6), Motor Transport Division Building (APE

Map #6-7) and City Health Building (City Hall South) (APE Map #6-4). Based upon the preliminary designs, the platforms would be simple poured concrete platforms with modest coverings (IBI Group 2009) similar to what are already used in the nearby Little Tokyo/ Arts District Station.

Section 106 Effects Analysis for Historic Properties

The construction of the proposed at-grade station would result in an effect, but not an adverse effect, to historic properties under this alternative. The proposed changes would not alter the setting of any historic properties in a manner that would diminish either the integrity of the individual properties that are contributors to the historic district or the historic district itself.

CEQA Impact Analysis for Historical Resources

Construction of the proposed station would not constitute a substantial adverse change that would impair the significance of either the Civic Center Historic District or the individual resources that contribute to the district. The historical resources' character-defining features would remain to convey the significance of the Historic District and the individual contributors. This alternative, therefore, would have a less than significant impact upon historical resources.

5.3.1.6 Flower Street Station Entry Construction

As part of the At-Grade Emphasis LRT Alternative, pedestrian entrances would be constructed to provide access to the underground station on Flower Street. Although not finalized, the initial designs show that escalators would rise from the underground station. A glass canopy, supported by a steel frame, would shelter the opening. The entrances would be located on the east side of Flower Street in areas that provide views of the NRHP and CRHR listed Central Public Library (APE Map #3-2). One entrance would also be located in front of NRHP eligible California Club (APE Map #3-1). A glass enclosed elevator would also be constructed on the southeast side of Flower Street in front of the Maguire Gardens. This elevator would be adjacent to Maguire Gardens, on the west side of the Central Library (IBI Station Planning Report 2009).

Section 106 Effects Analysis for Historic Properties

No adverse effects to historic properties would occur as the result of proposed improvements for the Flower Street Station. Although the improvements are a change to the setting of the California Club and the Central Public Library; the scale, massing, size, and materials of the new facilities would not alter characteristics of any of the historic properties in a manner that would diminish the integrity of the location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential entrances and elevators associated with Flower Street Station would not constitute a substantial adverse change that would impair the significance of historical resources (Central Public Library, see APE Map #3-2; and California Club, see APE Map #3-1). The character-defining features of these resources would remain to convey their significance. This alternative, therefore, would have a less than significant impact upon historical resources.

5.3.1.7 Catenary pole and Wire Installation

Catenary poles and wires would be installed in the portion of the APE where the trains run at-grade. Catenary poles provide support for the wires that would be suspended overhead. The final spacing, method of installation, and design for the poles and wires has not been established.

Section 106 Effects Analysis for Historic Properties

No adverse effects to historic properties would result from the installation of the catenary poles and wires because the project area streetscapes are historically dynamic and have changed dramatically over time. Changes to the streetscape resulting from the addition of catenary poles and wires as proposed under this alternative are within the range of past changes, and therefore, would not alter historic properties in a manner that would diminish the integrity of any property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential changes to install catenary poles and wires under this alternative would not constitute a substantial adverse change that would impair the significance of historical resources. The resources' features would remain to convey their significance. The project, therefore, would have a less than significant impact upon historical resources.

5.3.1.8 Tunnels

Under this alternative the NRHP eligible 2nd Street Tunnel (APE Map #4-3) would be altered. The walls of the tunnel would be partially demolished along its southwest interior wall to construct a new entrance and exit for the new tunnel in which the light rail would run. New elements that would be added to the tunnel include double tracks, catenary wires, and a sidewalk.

The cut and cover trench would also require demolition of a portion of the CRHR eligible Belmont Tunnel (APE Map #3-4). The Belmont Tunnel is not eligible for the NRHP.

Section 106 Effects Analysis for Historic Properties

In applying the criteria of adverse effect for historic properties (36 CFR 800.5(a)(1)) potentially affected by the construction near 2nd Street, an adverse effect would occur due to the demolition of a portion of the NRHP eligible 2nd Street Tunnel and the subsequent change in use. The changes would directly alter a characteristic of the historic property in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Documentation of the property in accordance with mitigation measure MM-BE-1 would resolve the potential adverse effect.

CEQA Impact Analysis for Historical Resources

Potential changes to the 2nd Street Tunnel would constitute a substantial adverse change that would impair the significance of the historical resource. However, the majority of the resource's features would remain to convey its significance. Additionally, implementation of MM-BE-1 would reduce the impact to a less than significant level. The implementation of MM-BE-1 would reduce any impact to the CRHR-eligible Belmont Tunnel to a less than significant level.

5.3.1.9 Traction Power Substations

Construction of traction power substations (TPSS) adjacent to the right-of-way along at-grade segments is proposed. The substations deliver electricity to overhead catenary systems. The designs have not been identified but the substations can fit in rooms or standalone buildings of 5,000 square feet or less. The only at-grade location currently identified as a proposed site for a TPSS is on the southwest corner of Spring and 2nd Streets. There are no historical resources or historic properties at this location.

Section 106 Effects Analysis for Historic Properties

The proposed location for the TPSS would not be located on or near any historic properties and therefore, there would be no adverse effects to historic properties. If any additional locations are identified, the criteria of adverse effect would be applied to any historic properties that might be affected (36 CFR 800.5(a)(1)). However, because of the small scale of the TPSS, their construction is an effect, but not an adverse effect, that would alter a characteristic of historic properties in a manner that would diminish the integrity of a property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The proposed TPSS location would not be on or near any historical resources and therefore there would be no impact under CEQA. If additional stations are proposed, a CEQA analysis would be conducted. However, due to the small scale of the feature, it is likely that the construction of a TPSS would not constitute a substantial adverse change that would impair the significance of any historical resources. The majority of the resources' features would

remain to convey their significance. The project, therefore, would have a less than significant impact upon historical resources.

5.3.1.10 Differential Settlement

According to the *Description of Construction*, some of the buildings situated near cut and cover excavation would be susceptible to differential settlement. Differential settlement is defined as “unequal settling of material; gradual downward movement of foundations due to compression of soil which can lead to damage if settlement is uneven” (Allaby 1999).

Differential settlement occurs when a building or feature’s shape is twisted, or is raised and lowered in different places, sometimes imperceptibly. Differential settlement can cause foundations to settle and crack, floors to buckle and go out of level, walls to shift out of plumb and plane, and roofs to twist and deform. The resulting changes in structural systems and cladding or finish materials, including wood and masonry, floor tiles, wood flooring, concrete floors, plaster, marble, and other decorative wall and ceiling treatments, and adobe, stucco, and wood-framed walls can be cracks, fractures, and other noticeable (as well as long term, not immediately visible) deformations and damage. Since historically significant buildings often have archaic construction and finish attachment systems, including unreinforced masonry, those building types are usually more susceptible to the effects of ground-borne vibration than more recently constructed buildings.

According to the *Description of Construction*, at least seven NRHP and/or CRHR eligible properties could be potentially affected by cut and cover construction associated with the At-Grade Emphasis LRT Alternative. These buildings include the Superior Oil Company Building (APE Map #2-13), California Club (APE Map #3-1), 2nd Street Tunnel (APE Map #4-3), Walt Disney Concert Hall (APE Map #4-4), the former Nishi Hongwanji Buddhist Temple (APE Map #7-19), Los Angeles Times Building (APE Map #8-2), and St. Vibiana’s Cathedral (APE Map #8-12).

Section 106 Effects Analysis for Historic Properties

The implementation of design measures would protect and stabilize the ground near historic properties as noted in MM-BE-2, MM-BE-3, and MM-BE-5. These measures would avoid adverse effects to all properties. If properly implemented, short term construction activities would not directly alter a characteristic of the historic property in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential for differential settlement could constitute a substantial adverse change that would impair the significance of the Superior Oil Company Building (APE Map #2-13), California Club (APE Map #3-1), 2nd Street Tunnel (APE Map #4-3), Walt Disney Concert Hall (APE Map #4-4), the former Nishi Hongwanji Buddhist Temple (APE Map #7-19), Los

Angeles Times Building (APE Map #8-2), and St. Vibiana’s Cathedral (APE Map #8-12). The implementation of MM-BE-2, MM-BE-3, and MM-BE-5 would reduce the potential impacts to these historical resources to a less than significant level.

5.3.1.11 Noise and Vibration

Noise generated by construction equipment can cause adverse effects to historic properties and significant impacts to historical resources when exposure exceeds the “severe level” established by FTA. Noise that reaches a severe level, which cannot be reduced through mitigation or other measures, may cause a reduction in use or access to historic properties or historical resources. This may result in an adverse effect to historic properties or a significant impact to historical resources. For properties or resources where a sense of quiet represents a characteristic of its historical significance, increases in noise may also cause adverse effects and/or significant impacts.

According to the Noise and Vibration Technical Memorandum, construction activities with the most potential for noise impacts under the At-Grade Emphasis LRT Alternative, include the cut and cover tunnel along Flower Street, the proposed cut and cover stations at Flower/6th/5th and 2nd/Hope Street, and the Temple and Alameda junction, which includes lowering Alameda Street. To ensure noise impacts are minimized during construction, all construction activities would conform to the provisions in Section 41.40(a) of the City of Los Angeles Code. Furthermore, best management practices (BMPs) would be employed to reduce any potential noise effects to historic properties and result in a no adverse effect finding and reduce potential impacts to historical resources to a less than significant level.

GBV generated by construction equipment can also cause adverse effects on historic properties and significant impacts to historical resources that are in close proximity to construction activities. Construction-related vibration can cause damage ranging from minor cosmetic damage to interior plaster or woodwork damage to major structural damage. Thus GBV can harm the characteristics that make historic properties eligible for the NRHP and historical resources eligible for the CRHR.

For the At-Grade Emphasis LRT Alternative, pre-augering of soldier piles at the cut and cover sections would eliminate the need for impact pile driving. This would leave “Large Bulldozer” and “Drill Rigs” as the main construction vibration sources (Table 3-2). If these large pieces of equipment are not used within the 21 feet of a historic property or historical resource, it is reasonably foreseeable that no adverse effects or significant impacts to historic properties and historical resources from GBV could occur. Buildings near potential construction activities include Barker Brothers (APE Map #2-1), Roosevelt Building (APE Map #2-7), General Petroleum-Mobil Oil Building (APE Map #2-12), Superior Oil Building (APE Map #2-13), California Club (APE Map #3-1), Los Angeles Central Library (APE Map #3-2), 2nd Street Tunnel (APE Map #4-3), Mirror Building (APE Map #8-3), Higgins Building (APE Map #8-11,

CRHR-eligible only), Cathedral of Saint Vibiana (APE Map #8-12), Cathedral of Saint Vibiana Rectory (APE Map #8-13).

Section 106 Effects Analysis for Historic Properties

No adverse effects would occur if measures MM-BE-2 and MM-BE-3 are implemented. If these measures are properly implemented, potential effects of the At-Grade Emphasis LRT Alternative would not diminish the integrity of the historic properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Under the At-Grade Emphasis LRT Alternative, construction-induced vibration could potentially cause a substantial adverse change that would impair the significance of any or all of the historical resources noted in this section. The implementation of MM-BE-2, MM-BE-3, and MM-BE-5 would reduce potential impacts to a less than significant level.

5.3.2 Operational Impacts

The At-Grade Emphasis LRT Alternative would add transit options that would be consistent with the historic use of streetcars within the APE. Additionally, the LRT could benefit historic properties and historical resources in the APE by increasing pedestrian access and use of the area.

Activities associated with the operation of the At-Grade Emphasis LRT Alternative may also cause impacts to properties within the APE. The potential effects are described below and summarized in Table 5-2.

5.3.2.1. Traffic Congestion/Parking/Access:

Operation of the At-Grade Emphasis LRT Alternative may result in loss of parking and changes to vehicular patterns that result in increased congestion.

Section 106 Effects Analysis for Historic Properties

Changes in access, parking, and traffic patterns would result in effects, but no adverse effects, to historic properties. The changes would not alter a characteristic of historic properties in the APE in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Potential changes to traffic patterns and access would not constitute a substantial adverse change that would impair the significance of historical resources. The majority of the resources' features would remain to convey their significance. This alternative, therefore, would have a less than significant impact upon historical resources.

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS			X	
2-5	Engine Company No. 28	Listed	Listed	LTS			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	SI				X
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	
5-1 Thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS			X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS		X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X		
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X		

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X		
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X		
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X		

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS			X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS			X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS		X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS	X		X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS			X	

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS	X		X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS	X	X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS		X		
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS			X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS			X	
7-8	San Pedro Firm Building	Listed	Listed	LTS			X	

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS			X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS			X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS			X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS			X	
7-16	A. Sperl Building	Listed	Listed	LTS			X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS			X	
7-18	Far East Café Building	Listed	Listed	LTS			X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-20	Aoyama Tree	Not Eligible	Listed	LTS		X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS				
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	LTS		X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS			X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	LTS			X	
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	SI			X	

Table 5-1. Potential At-Grade Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	LTS		X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI			X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS			X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS			X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.3.2.2 Visual:

Operation of the At-Grade Emphasis LRT Alternative above ground along 2nd, Main, Los Angeles, and Temple Streets would be a minimal change to the visual setting of properties in this area of the APE.

Section 106 Effects Analysis for Historic Properties

There would be an effect, but no adverse effect, to historic properties in areas in the APE where the new LRT would be visible. No adverse effect would occur because the changes would not directly alter characteristics of historic properties in the APE in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Potential changes to historical resources within the APE where the LRT would be visible would not constitute a substantial adverse change that would impair the significance of historical resources. The project, therefore, would have a less than significant impact upon historical resources.

5.3.2.3 Noise and Vibration

Noise from LRT operations would be generated from the interaction of wheels on track, motive power, signaling and warning systems, platform announcements, and operation of TPSS. The interaction of steel wheels on rails generates three different types of noise depending on the type of track work. These include: (1) noise generated from wheel squeal on tightly curved track, (2) noise generated on special trackway sections, such as at crossovers or turnouts, and (3) noise generated by rolling of the wheel over continuous rail. According to the Noise and Vibration Technical Memorandum, only one moderate noise effect/impact is anticipated from LRT operation to a CRHR-eligible property. Only the first floor of the Higgins Building (APE Map #8-11) would be subjected to a moderate noise effect/impact, but since the Higgins Building is not eligible for the NRHP, no historic properties would be affected. Wheel skirts would be included on LRT vehicles to reduce the wayside noise levels, but this design implementation would not reduce noise levels on the first floor of the Higgins Building to below moderate levels. Since the noise levels on the first floor of the Higgins Building would not be considered severe, the noise from LRT operation would not be considered a significant impact to a historical resource under CEQA.

Vibration impacts from transit operations would be generated by motions/actions at the wheel/rail interface. While vibration from a passing train would have a relatively small potential to move through the geologic strata, it could result in building vibration from energy transferred through the earth to the building's foundation. The principal concern with rail transit vibration is annoyance to building occupants; it is extremely unlikely that GBV from transit operations would cause any effect on or damage of any kind to buildings. For the At-

Grade Emphasis LRT Alternative no adverse effects or significant impacts to historic properties or historical resources would be expected.

Section 106 Effects Analysis for Historic Properties

Noise and vibration caused by project operation would be an effect, but not an adverse effect, to historic properties within the APE. Project operations would not alter characteristics of historic properties in the APE in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Potential noise and vibration impacts caused by operation of the At-Grade Emphasis LRT Alternative to the CRHR-eligible Higgins Building would not constitute a substantial adverse change that would impair the significance of the historical resource. The resource's features would remain to convey its significance. This alternative, therefore, would have a less than significant impact upon historical resources.

5.3.3 Cumulative and Indirect Impacts

There are no expected indirect impacts under the At-Grade Emphasis LRT Alternative on historic resources.

Cumulative effects and impacts include short-term effects during construction such as noise, dirt, changes in setting from the use or storage of equipment, or lack of access due to congestion or revisions in traffic patterns. Cumulative effects may also result from long-term effects such as additional traffic brought about by increased density as new buildings are constructed. Taken collectively, reasonably foreseeable projects within the project area do not appear to have additional effects upon historic properties or impacts upon historical resources that would be affected by the At-Grade Emphasis LRT Alternative.

5.3.4 Potential Effects to Section 4(f) Resources

The At-Grade Emphasis LRT Alternative would require the acquisition and/or use of property associated with five NRHP-eligible properties: Civic Center Historic District, Los Angeles Police Motor Transport Building (APE Map #6-7), City of Los Angeles Parker Center Police Department Building (APE Map #6-6), City Hall South (APE Map #6-4) as well as the 2nd Street Tunnel (APE Map #4-3).

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	LTS		X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS		X	
2-5	Engine Company No. 28	Listed	Listed	LTS		X	
2-7	Roosevelt Building	Listed	Listed	LTS		X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS		X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	LTS		X	
2-13	Superior Oil Company Building	Listed	Listed	LTS		X	
3-1	The California Club	Eligible	Listed	LTS		X	
3-2	Los Angeles Central Library	Listed	Listed	LTS		X	

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	LTS	X		
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS		X	
4-4	Walt Disney Concert Hall	Eligible	Eligible	LTS		X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS		X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS	X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS	X		

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-3	Mark Taper Forum	Eligible	Eligible	LTS	X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS	X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS	X		
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS	X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS	X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS	X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS	X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS	X		

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS	X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS	X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS	X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS		X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS		X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS	X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS		X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS		X	

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS		X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS	X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS	X		
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS		X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS		X	
7-8	San Pedro Firm Building	Listed	Listed	LTS		X	

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS		X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS		X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS		X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS		X	
7-16	A. Sperl Building	Listed	Listed	LTS		X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS		X	
7-18	Far East Café Building	Listed	Listed	LTS		X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	LTS		X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS	X		

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS		X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	LTS	X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS		X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	LTS		X	
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	LTS		X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	LTS	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	LTS		X	

Table 5-2. Potential At-Grade-Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	LTS		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS		X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS		X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

Los Angeles Police Motor Transport Building

The At-Grade Emphasis LRT Alternative would require the acquisition in-fee of a 16-foot strip of property that would be used for the construction of the proposed Los Angeles/1st Street station (northbound). An additional easement would be acquired for construction staging and would be situated to the east of the 16-foot strip. Neither the fee property nor the easement would touch or adversely affect the historic integrity of the Motor Transport Building as a more modern building currently buffers the Motor Transport Building from Los Angeles Street. Contingent upon consultation with the California SHPO and the Advisory Council on Historic Preservation (if the ACHP participates in consultation) and their respective concurrence, a *de minimus* impact finding would be consistent with FTA's *Guidance for Determining De Minimus Impacts to Section 4(f) Resources*.

City of Los Angeles Parker Center Police Department Building

The At-Grade Emphasis LRT Alternative would require the acquisition in-fee of a 16-foot strip of property that would be used for the construction of the proposed Los Angeles/1st Street station (northbound). An additional easement would be acquired for construction staging and would be situated to the east of the 16-foot strip. Both the fee property and construction staging easement are located on the east side of Los Angeles Street and neither would touch or adversely affect the historical integrity of the Parker Center. Contingent upon consultation with the California SHPO and their respective concurrence, a *de minimus* impact finding would be consistent with FTA's *Guidance for Determining De Minimus Impacts to Section 4(f) Resources*.

City Hall South

The At-Grade Emphasis LRT Alternative would require the acquisition of an 18-foot strip of property that would be used for the construction of the proposed Main/1st Street station (southbound). A construction staging easement would also be acquired along Main Street, as well as on the west side of Los Angeles Street. None of these acquisitions would touch or adversely affect the historical integrity of the City Hall South building. Contingent upon consultation with the California SHPO and the Advisory Council on Historic Preservation (if the ACHP participates in consultation) and their respective concurrence, a *de minimus* impact finding would be consistent with FTA's *Guidance for Determining De Minimus Impacts to Section 4(f) Resources*.

2nd Street Tunnel

The At-Grade Emphasis LRT Alternative would require the piercing and use of the 2nd Street Tunnel to accommodate the proposed LRT corridor. The “punch through” required by this alternative would adversely affect the characteristics that make the 2nd Street Tunnel eligible for the NRHP. This would constitute a direct use, as the tunnel would be permanently incorporated into the proposed project. This use could only occur if 1) there is no prudent and feasible alternative to using the resource; and 2) the project includes all possible planning

to minimize harm to the tunnel from the use. Additional analysis of project alternatives and consultation with the California SHPO would be required.

Civic Center Historic District

The At-Grade Emphasis LRT Alternative would require the fee acquisition of two strips of streetside property for the two parts of the split station as well as several construction staging easements on properties that are associated with three contributors to the NRHP/CRHR eligible Civic Center Historic District (as discussed above); the City Hall South Building, the City of Los Angeles Parker Center Police Department Building, and the Los Angeles Motor Transport Building. These acquisitions would not affect the historical integrity of these individual contributors and would also not affect the overall historical integrity and ability of the historic district as a whole to convey its significance. The property acquisitions, therefore, would have no adverse effect upon the Civic Center Historic District. Contingent upon consultation with the California SHPO and the Advisory Council on Historic Preservation (if the ACHP participates in consultation) and their respective concurrence, a *de minimus* impact finding would be consistent with FTA's *Guidance for Determining De Minimus Impacts to Section 4(f) Resources*.

5.4 Underground Emphasis LRT Alternative

5.4.1 Construction Impacts

Construction activities were analyzed using the Criteria of Adverse Effect (discussed in Section 3.2.1) for their potential to impact historic properties. Potential effects that may occur in the APE due to construction activities for the Underground Emphasis Alternative are discussed in this section. Short-term effects from construction typically result from dirt, changes in the visual environment, or alteration to access. Other types of construction effects may be related to specific construction activities or locations. Operational effects are discussed in Section 5.4.2. Table 5-3 indicates the resources that may experience construction effects due to their location within the APE.

5.4.1.1 Temporary Dirt/Unintended Damage:

Properties in the APE would be affected by construction activities including dirt and unintended damaged. Metro would employ BMPs to ensure that these effects are short-term.

Section 106 Effects Analysis for Historic Properties

Dirt and other damage from construction would affect, but not adversely affect, historic properties in the APE because the potential effects would be short-term. The potential effects would not directly alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Dirt and other unintended damage during construction would not constitute a substantial adverse change that would impair the significance of historical resources. The impacts would be short-term and the majority of the resources' features would remain to convey their significance. The Underground Emphasis LRT Alternative, therefore, would have a less than significant impact upon historical resources.

5.4.1.2 Traffic Congestion/Parking/Access:

Changes in access to properties and resources within the APE may result from road closures, use of equipment, and other construction activities. Metro would employ BMPs to minimize these changes and keep the public and property owners informed of potential issues.

Section 106 Effects Analysis for Historic Properties

Potential effects, but no adverse effects, would result from changes in access during construction. The effects would be short-term and would not alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Changes in access resulting from congestion and loss of parking during construction would not constitute a substantial adverse change that would impair the significance of historical resources. Potential impacts would be short-term and the majority of the resources' features would remain to convey their significance. The Underground Emphasis LRT Alternative, therefore, would have a less than significant impact upon historical resources.

5.4.1.3 Visual:

Visual changes may result from the storage and operation of equipment, cuts in the road, and signage used during construction. Metro would employ BMPs to minimize these changes and they should be short term.

Section 106 Effects Analysis for Historic Properties

Visual changes during construction would affect, but not adversely affect, historic properties because the effects would be short-term. The changes would not directly alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Visual changes during construction would not constitute a substantial adverse change that would impair the significance of historical resources. The impacts would be short-term and the resources' character-defining features would remain to convey their significance. The

Underground Emphasis LRT Alternative, therefore, would have a less than significant impact upon historical resources.

5.4.1.4 Demolition, Partial Takes, or Alteration of a Property:

To construct the Underground-Emphasis LRT Alternative, one parcel that contains a historical resource would be acquired. The S. Kamada Restaurant, Atomic Café, Senior Fish, and Coast Imports (APE Map #7-30) is a CRHR-eligible (not NRHP eligible) commercial building built in 1913. The entire parcel is anticipated to be acquired to serve as the underground egress/ingress portal.

A subsurface easement would be acquired for the Higgins Building (APE Map #8-11). The easement would extend approximately five feet beyond the property line for the CRHR-eligible Higgins Building (not NRHP eligible). No project-related construction would affect the Higgins Building.

The Underground Emphasis LRT Alternative would also require the acquisition of a subsurface easement beneath the NRHP Eligible Cathedral of St. Vibiana Rectory (APE Map #8-13). The subsurface easement would extend approximately five feet beyond the north (2nd Street side) property line of the building. The easement acquisition is a requirement of the project to provide a buffer between subsurface project facilities and at-grade structures.

Section 106 Effects Analysis for Historic Properties

The subsurface easement for the area beneath the Cathedral of St. Vibiana Rectory would affect, but not adversely affect, the historic property. No project facilities would use any portion of the Rectory building or adversely affect the characteristics that make it eligible for the NRHP.

CEQA Impact Analysis for Historical Resources

The subsurface easement acquisitions that would extend five feet beyond the north (2nd Street side) property lines of the Higgins Building and the Cathedral of St. Vibiana Rectory would not constitute a substantial adverse change that would impair the significance of the historical resources, as no other project-related construction or use would directly affect the buildings. Due to the proximity of proposed project facilities to the buildings, indirect effects such as differential settlement and project related vibration have the potential to affect the structures (see Differential Settlement, Section 5.4.1.8, and Noise and Vibration, Section 5.4.1.7).

The property acquisition and subsequent demolition of the S. Kamada Restaurant, Atomic Café, Senior Fish, and Coast Imports building would constitute a substantial adverse change that would impair the significance of the historical resource. However, implementation of MM-BE-1 and MM-BE-5 would reduce impacts to a less than significant level.

5.4.1.5 Station Construction

For the Underground Emphasis LRT Alternative, a new station would be constructed beneath Flower Street between 5th and 4th Streets. This would require demolition of a portion of the CRHR eligible Belmont Tunnel (APE Map #3-4). The Belmont Tunnel is not eligible for the NRHP. Another new station would be constructed on 2nd street. This alternative evaluates two possible locations for the proposed 2nd Street station: a location near Broadway or a location near Los Angeles Street. The Broadway Option would have entrances facing the NRHP eligible Los Angeles Mirror Building (APE Map #8-2). The Los Angeles Street Option has proposed entrances opposite and next to the NRHP eligible St Vibiana Rectory (APE Map #8-13). Although the design of proposed stations is not finalized, conceptual renderings indicate simple glass canopies supported on steel frames would be likely. The design and materials would be clearly differentiated from the PWA Moderne Style of the Mirror Building and the Classical Revival Style of the Rectory Building. The massing and scale would be modest in comparison with nearby historic properties.

Section 106 Effects Analysis for Historic Properties

Construction of proposed stations would affect, but not adversely affect, the Los Angeles Mirror Building or the St. Vibiana Rectory. No adverse effects would occur to these historic properties because the changes would not diminish the integrity of the location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Construction of proposed stations would not constitute a substantial adverse change that would impair the significance of the historical resources. The change in setting created by the station would not diminish the integrity of the properties' significant historic features. The Underground Emphasis LRT Alternative would therefore have a less than significant impact upon historical resources. Implementation of MM-BE-1 would reduce any impact to the CRHR-eligible Belmont Tunnel to a less than significant level.

5.4.1.6 Portal

The proposed train portal at the intersection of Alameda and 1st Street would be within the viewshed of two historic properties, the Little Tokyo National Historic Landmark Historic District and the NRHP eligible John A. Roebling Sons Co. Building (APE Map #7-35). However, the portal area is not encompassed within the boundary of a historic property, historical resource, or a contributing element to the significance of either property. An asphalt paved parking lot currently occupies the majority of the parcel.

Section 106 Effects Analysis for Historic Properties

No adverse effect would occur to the Little Tokyo National Historic Landmark District or the John A. Roebling Sons Co Building from the construction of the portal. Potential effects

would not alter the setting of historic properties in a manner that would diminish the integrity of the historic district.

CEQA Impact Analysis for Historical Resources

Construction of the portal would not constitute a substantial adverse change that would impair the significance of historical resources. The change in setting created by the portal would not diminish the integrity of the resources' significant historic features. The Underground Emphasis LRT Alternative, therefore, would have a less than significant impact upon historical resources.

5.4.1.7 Noise and Vibration

According to the Noise and Vibration Technical Memorandum, construction activities with the most potential for noise impacts include the cut and cover tunnel under Flower Street, proposed underground cut and cover stations at Flower/6th/5th Streets and 2nd/Hope Street, and the junction at Temple and Alameda Streets, which includes lowering Alameda Street. To ensure potential noise impacts are minimized during construction, all construction activities would conform to the provisions in Section 41.40(a) of the City of Los Angeles Code. Furthermore, BMPs would be employed to reduce any potential noise effects to historic properties to result in a “no adverse effect” finding and/or minimize potential impacts to historical resources to a less than significant level.

Noise levels for the tunnel boring machine (TBM) were not evaluated as a part of the Noise and Vibration Technical Memorandum because the TBM “is underground and produces little to no noise that reaches the surface land uses.” Operations at the portal/launch site for the TBM, where bored material is hauled out, treated, and removed, also would not impact historic properties and historical resources as noise levels from these activities would not exceed ambient noise levels.

For the Underground Emphasis LRT Alternative, pre-augering of soldier piles at cut and cover sections would eliminate the need for impact pile driving. This would leave “Large Bulldozer” and “Drill Rigs” as the main sources of construction vibration. If these large pieces of equipment are not used within 21 feet of a historic property or historical resource, there would be no adverse effects and significant impacts to historic properties and historical resources from GBV would not occur. Properties that are close to the project work zone and which may be affected by construction-related vibration include Barker Brothers (APE Map #2-1), Roosevelt Building (APE Map #2-7), General Petroleum-Mobil Oil Building (APE Map #2-12), Superior Oil Building (APE Map #2-13), California Club (APE Map #3-1), Los Angeles Central Library (APE Map #3-2), 2nd Street Tunnel (APE Map #4-3), Mirror Building (APE Map #8-3), Higgins Building (APE Map #8-11), Cathedral of Saint Vibiana (APE Map #8-12), and Cathedral of Saint Vibiana Rectory (APE Map #8-13).

The TBM would not cause vibratory effects or impacts to historic properties or historical resources because the TBM performs a slow moving drilling process that generates very little vibration to the surrounding areas. Studies have measured TBM vibration to be in the range of 0.0024 to 0.0394 inches per second PPV at a distance at 33 feet. The proposed TBM tunnels on 2nd Street would vary in depth due to the existing topography, as well as vertical curves in the alignment. The tunnel would range from about 140 feet below the surface (distance from street level to the top of the tunnel) to about 40 feet below the surface. The vibratory potential of the TBM is minimal and would be well below the FTA threshold for Category IV buildings (buildings extremely susceptible to vibration damage) of 0.12 inches per second PPV.

Section 106 Effects Analysis for Historic Properties

There would be an effect, but no adverse effect, to the Barker Brothers, Roosevelt, General Petroleum Mobil Oil Building, Superior Oil Building, California Club, Los Angeles Central Library, 2nd Street Tunnel, Mirror Building, Cathedral of Saint Vibiana, and the Cathedral of Saint Vibiana Rectory from noise and vibration-induced damage from construction, if measures MM-BE-2 and MM-BE-3 are implemented. If these measures are properly implemented, construction of this alternative would not diminish the integrity of the historic properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential for construction-related vibration could cause a substantial adverse change that would impair the Barker Brothers, Roosevelt, General Petroleum Mobil Oil Building, Superior Oil Building, California Club, Los Angeles Central Library 2nd Street Tunnel, Mirror Building, Cathedral of Saint Vibiana, the Cathedral of Saint Vibiana Rectory, or the Higgins Building. The implementation of MM-BE-2, MM-BE-3, and MM-BE-5 would reduce the potential impacts to a less than significant level.

5.4.1.8 Differential Settlement

According to the Description of Construction, at least eight NRHP and/or CRHR eligible properties could be potentially affected by tunneling (TBM operation) and cut and cover construction. They include the Standard Hotel (APE Map #2-13), California Club (APE Map #3-1), Walt Disney Concert Hall (APE Map #4-4), 2nd Street Tunnel (APE Map #4-3), former Nishi Hongwanji Buddhist Temple (APE Map #7-19), Los Angeles Times Building (APE Map #8-2), Higgins Building (APE Map #8-11), and St. Vibiana's Cathedral (APE Map #8-12). Implementation of mitigation measures MM-BE-2, MM-BE-3, and MM-BE-4 (when applicable) would avoid potential adverse effects to historic properties and reduce potential impacts to historical resources to a less than significant level.

Section 106 Effects Analysis for Historic Properties

Implementation of measures to protect and stabilize the ground near the Standard Hotel (APE Map #2-13), California Club (APE Map #3-1), 2nd Street Tunnel (APE Map #4-3), Walt Disney Concert Hall (APE Map #4-4), former Nishi Hongwanji Buddhist Temple (APE Map #7-19), Los Angeles Times Building (APE Map #8-2), and St. Vibiana's Cathedral (APE Map #8-12) noted in MM-BE-2, MM-BE-3, and MM-BE-5, would avoid adverse effects to all properties under this alternative. If properly implemented, differential settlement would not directly alter characteristics of historic properties in a manner that would diminish the integrity of each property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential for differential settlement could constitute a substantial adverse change that would impair the significance of any or all of the historical resources noted in this section. Implementation of MM-BE-2, MM-BE-3, and MM-BE-5 would reduce potential impacts to a less than significant level.

5.4.2 Operational Impacts

The additional transit options proposed under the Underground Emphasis LRT Alternative would be consistent with the historic use of streetcars within the APE. Additionally, the LRT could benefit historic properties and historical resources in the APE by increasing pedestrian use of the area.

Potential visual changes, traffic, and congestion from operation of the LRT under this alternative would have similar effects to historic properties under NEPA and impacts to historical resources under CEQA as those discussed for the At-Grade Emphasis LRT Alternative. Table 5-4 lists potential effects from operation of the Underground Emphasis LRT Alternative.

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS			X	
2-5	Engine Company No. 28	Listed	Listed	LTS			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI			X	
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS			X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS		X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X		

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X		
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X		

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS			X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS			X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS		X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS			X	

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS			X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS			X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS		X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS		X		
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS			X	

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS			X	
7-8	San Pedro Firm Building	Listed	Listed	LTS			X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS			X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS			X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS			X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS			X	
7-16	A. Sperl Building	Listed	Listed	LTS			X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS			X	

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-18	Far East Café Building	Listed	Listed	LTS			X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS		X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS			X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI	X	X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS			X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	

Table 5-3. Potential Underground Emphasis LRT Alternative Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X ^a	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X ^a		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS			X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS			X	

^a *Right of Way Required is a sub-surface easement*

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.4.2.1 Noise and Vibration

The Underground Emphasis LRT Alternative has the same potential sources of noise impacts during operations as the At-Grade Emphasis LRT Alternative. According to the Noise and Vibration Technical Memorandum, no noise, adverse effects, or significant impacts to historic properties or historical resources would be expected. Most of this alternative would be situated underground, and thus project operations would not exceed FTA Noise Impact Criteria. Operation of the Underground Emphasis LRT Alternative would result in a moderate noise impact at only one location, a proposed switch on Alameda near 1st Street. Moderate noise impacts do not exceed the FTA Noise Impact Criteria.

For the Underground Emphasis LRT Alternative, potential vibration impacts from transit operations would be generated by two of the same potential sources as the At-Grade Emphasis LRT Alternative: motions/actions at the wheel/rail interface and areas of special track work. While vibration from a passing train and areas of special track work have a relatively small potential to move through the geologic strata, it can result in building vibration from energy transferred through the earth to a building's foundation. The principal concern with rail transit vibration is annoyance to building occupants; it is extremely unlikely that GBV from transit operations would have any effect on or cause any damage to buildings. For the Underground Emphasis LRT Alternative, no adverse effects or significant impacts to historic properties or historical resources related to vibration would be expected.

Table 5-4 lists the potential operational effects and impacts for this alternative by resource.

5.4.3 Cumulative and Indirect Impacts

There would be no indirect impacts from the Underground Emphasis LRT Alternative.

Cumulative effects and impacts include short-term effects during construction such as noise, dirt, changes in setting from the use or storage of equipment, or lack of access due to congestion or revisions in traffic patterns. Cumulative effects may also result from long-term effects such as additional traffic generated by increased density as new buildings are constructed. Taken collectively, reasonably foreseeable projects in the project area do not appear to have additional effects upon historic properties or impacts upon historical resources that would be affected by the Underground Emphasis LRT Alternative.

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	LTS		X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS		X	
2-5	Engine Company No. 28	Listed	Listed	LTS		X	
2-7	Roosevelt Building	Listed	Listed	LTS		X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS		X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	LTS		X	
2-13	Superior Oil Company Building	Listed	Listed	LTS		X	
3-1	The California Club	Eligible	Listed	LTS		X	
3-2	Los Angeles Central Library	Listed	Listed	LTS		X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	LTS	X		

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS	X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	LTS		X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS		X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS		X	
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X	
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X	
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X	

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X	
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X	
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X	
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X	
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X	
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X	
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X	
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X	
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X	

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS		X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS		X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS	X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS		X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS		X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS		X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS	X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS	X		

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS		X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS		X	
7-8	San Pedro Firm Building	Listed	Listed	LTS		X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS		X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS		X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS		X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS		X	

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-16	A. Sperl Building	Listed	Listed	LTS		X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS		X	
7-18	Far East Café Building	Listed	Listed	LTS		X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	LTS		X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS	X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS		X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Resource demolished during construction	X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS		X	

Table 5-4. Potential Underground Emphasis LRT Alternative Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	LTS		X	
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	LTS		X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	LTS	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	LTS		X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	LTS		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS		X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS		X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.4.4 Potential Effects to Section 4(f) Resources

The Underground Emphasis LRT Alternative would require the acquisition of a subsurface easement beneath the Cathedral of St. Vibiana Rectory (APE Map #8-13). The subsurface easement would extend approximately five feet beyond the north (2nd Street side) property line of the building. The easement acquisition is a requirement of the project to provide a buffer between subsurface project facilities and at-grade structures. No project facilities would use any portion of the Rectory building or adversely affect the characteristics that make it eligible for the NRHP. Contingent upon consultation with the California SHPO and the Advisory Council on Historic Preservation (if the ACHP participates in consultation) and their respective concurrence, a *de minimus* impact finding would be consistent with FTA's *Guidance for Determining De Minimus Impacts to Section 4(f) Resources*.

5.5 Fully Underground LRT Alternative – Little Tokyo Variation 1

5.5.1 Construction Impacts

The following discussion describes potential effects in the APE due to construction activities for the Fully Underground LRT Alternative – Little Tokyo Variation 1. Table 5-5 lists the effects/impacts for each NRHP property/CRHR resource.

5.5.1.1 Temporary Dirt/Unintended Damage

Potential effects and impacts from dirt and unintended damage to historic properties and historical resources from the construction of the Fully Underground LRT Alternative – Little Tokyo Variation 1 would be similar to those previously described for the Underground Emphasis LRT Alternative.

5.5.1.2 Traffic Congestion/Parking/Access

Potential effects and impacts from changes in access, parking, and traffic patterns to historic properties and historical resources from the construction of the Fully Underground LRT Alternative – Little Tokyo Variation 1 would be similar to those described for the Underground Emphasis LRT Alternative

5.5.1.3 Visual

Potential visual effects and impacts to historic properties and historical resources from the construction of the Fully Underground LRT Alternative – Little Tokyo Variation 1 would be similar to those described for the Underground Emphasis LRT Alternative.

5.5.1.4 Demolition, Partial Takes or Alteration of a Property

Potential impacts to historical resources under this alternative from demolition or property acquisitions would be identical to those described for the Underground Emphasis LRT Alternative.

5.5.1.5 Station Construction

For the Fully Underground LRT Alternative - Little Tokyo Variation 1 a station would be constructed beneath Flower Street between 5th and 4th Streets. This would require demolition of a portion of the CRHR eligible Belmont Tunnel (APE Map #3-4). The Belmont Tunnel is not eligible for the NRHP. Another station would be constructed at the intersection of 2nd Street and Broadway. The effects of these construction activities on the NRHP eligible LA Mirror Building would be similar to those described for the Underground Emphasis LRT Alternative.

A proposed station would be constructed under Flower Street between 5th and 4th Streets. Although still conceptual and preliminary, the potential designs for station entrances would be modest glass canopies supported on steel frames. Largely transparent, the new entrances would not significantly alter views to the Los Angeles Central Library or the California Club.

Another proposed station would be constructed underground southwest of the intersection of 2nd and Hope Streets. The National Register eligible Walt Disney Concert Hall (APE Map #4-4) is located on the hill above the proposed station. The preliminary conceptual designs would be compatible with the contemporary forms, materials, and massing of this historical resource. The station is also near the NRHP eligible 2nd Street Tunnel (APE Map #4-3).

A fourth station would be constructed at 2nd Street and Central Avenue. This underground station may also include a small building at ground level on the southwest corner of 1st and Alameda Streets to house ventilation fans. If the entrances are similar to those proposed for the other stations, the changes would not result in a significant effect to the NRHP eligible John A. Roebling's Sons Co. Building (APE Map #7-35). While the station would also be near the CRHR eligible S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports (APE Map #7-30), this building would be removed as a result of the open cut method of construction in this portion of the alignment.

Section 106 Effects Analysis for Historic Properties

Construction of proposed stations would create effects to the Los Angeles Central Library, Walt Disney Concert Hall, California Club, and the John A. Roebling Sons Co Buildings. However, the effects on these historic properties would not be considered adverse because the potential changes would not diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Construction of proposed stations would not constitute a substantial adverse change that would impair the significance of the Los Angeles Central Library, California Club, John A. Roebling Sons Co building, or the 2nd Street Tunnel, or the Disney Concert Hall. Implementation of MM-BE-1 would reduce any potential impact to the CRHR-eligible Belmont

Tunnel to a less than significant level. Potential changes in setting created by stations would not diminish the integrity of the resources' significant historic features. The Fully Underground LRT Alternative – Little Tokyo Variation 1, therefore, would have a less than significant impact upon historical resources.

The property acquisition and subsequent demolition of the S. Kamada Restaurant, Atomic Café, Senior Fish, and Coast Imports building would constitute a substantial adverse change that would impair the significance of the historical resource. However, implementation of MM-BE-1 and MM-BE-5 would reduce impacts to a less than significant level.

5.5.1.6 Portals

For this alternative two portals would be constructed. One portal would be located northeast of the Little Tokyo/Arts District Station and tracks. There are no historical resources or historic properties in the vicinity of this portal.

The second portal would be located within 1st Street between Alameda and Vignes Streets. The NRHP eligible J.R. Newberry Company Building (APE Map #9-6R) is located just east of the intersection of 1st Street and Vignes Street but would not be affected by this alternative.

Section 106 Effects Analysis for Historic Properties

The NRHP eligible J.R. Newberry Company Building (APE Map #9-6R) would be affected by the construction of a portal. No adverse effect would occur because the changes would not directly alter the setting of the historic property in a manner that would diminish the integrity of the historic property.

CEQA Impact Analysis for Historical Resources

Construction of a portal would not constitute a substantial adverse change that would impair the significance of the J.R. Newberry Company Building (APE Map #9-6R). The change in setting created by the portal would not diminish the integrity of the property's significant historic features. This alternative, therefore, would have a less than significant impact upon historical resources.

5.5.1.7 Noise and Vibration

Potential effects and impacts to historic properties and historical resources caused by noise and vibration would be the same as those discussed for the Underground Emphasis LRT Alternative. Implementation of mitigation measures MM-BE-2 and MM-BE-3 would avoid adverse effects to historic properties and reduce potential impacts to historical resources to a less than significant level.

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS			X	
2-5	Engine Company No. 28	Listed	Listed	LTS			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS			X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS		X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X		

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X		
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X		

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS			X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS			X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS		X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS			X	

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS			X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS			X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS		X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS		X		
7-7 thru 7-9, 7-11, 7-14 thru 7- 19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS			X	

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS			X	
7-8	San Pedro Firm Building	Listed	Listed	LTS			X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS			X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS			X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS			X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS			X	
7-16	A. Sperl Building	Listed	Listed	LTS			X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS			X	

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-18	Far East Café Building	Listed	Listed	LTS			X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS		X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS			X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Resource demolished during construction	X	X		
7-35	John A. Roebling’s Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS			X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X (subsurface easement)	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Subsurface Easement)		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS			X	

Table 5-5. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS			X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.5.1.8 Differential Settlement

Potential effects and impacts to historic properties and historical resources caused by differential settlement would be the same as those discussed in the Underground Emphasis LRT Alternative. Implementation of mitigation measures MM-BE-2, MM-BE-3, and MM-BE-4 (when applicable), would avoid adverse effects to historic properties and lower impacts to historical resources to a less than significant level.

5.5.2 Operational Impacts

Potential operational effects and impacts of the Fully Underground LRT Alternative – Little Tokyo Variation 1 would be the same to historic properties and historical resources as those discussed for the Underground Emphasis LRT Alternative, except that a proposed switch, located at 1st and Alameda for the Underground Emphasis LRT Alternative, would instead be located at the intersection of 1st and Vignes Streets. Operation of the Fully Underground LRT Alternative - Little Tokyo Variation 1 would result in a moderate noise impact at this location. This switch is located near the NRHP eligible J.R. Newberry Company Building (APE Map #9R-6) and the 1st Street Viaduct (APE Map #9R-7). Moderate noise effects/impacts do not exceed the FTA Noise Impact Criteria, therefore no adverse effects to historic properties and no significant impacts to historical resources are anticipated from project operations. Table 5-6 lists potential effects and impacts by resource.

5.5.3 Cumulative and Indirect Impacts

There are no anticipated indirect impacts from the Fully Underground LRT Alternative – Little Tokyo Variation 1.

Cumulative effects and impacts include short-term effects during construction such as noise, dirt, changes in setting from the use or storage of equipment, or lack of access due to congestion or revisions in traffic patterns. Cumulative effects may also result from long-term effects such as additional traffic generated by an increase in density as new buildings are constructed. Taken collectively, the reasonably foreseeable projects in the project area do not appear to have additional effects upon historic properties or impacts upon historical resources that are affected by the Fully Underground LRT Alternative - Little Tokyo Variation 1.

5.5.4 Potential Effects to Section 4(f) Resources

The Fully Underground LRT Alternative - Little Tokyo Variation 1 would require the acquisition of a subsurface easement situated on one NRHP-eligible property; Cathedral of Saint Vibiana Rectory (APE Map # 8-13). No adverse effects would occur to the Rectory building as a result of the easement. This acquisition would result in a Section 4(f) *de minimus* finding.

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	LTS		X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS		X	
2-5	Engine Company No. 28	Listed	Listed	LTS		X	
2-7	Roosevelt Building	Listed	Listed	LTS		X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS		X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	LTS		X	
2-13	Superior Oil Company Building	Listed	Listed	LTS		X	
3-1	The California Club	Eligible	Listed	LTS		X	
3-2	Los Angeles Central Library	Listed	Listed	LTS		X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	LTS	X		

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS	X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	LTS		X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS		X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS	X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS	X		
5-3	Mark Taper Forum	Eligible	Eligible	LTS	X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS	X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS	X		

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS	X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS	X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS	X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS	X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS	X		
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS	X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS	X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS	X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS		X	

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-2	Los Angeles City Hall	Eligible	Eligible	LTS		X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS	X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS		X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS		X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS		X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS	X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS	X		

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS		X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS		X	
7-8	San Pedro Firm Building	Listed	Listed	LTS		X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS		X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS		X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS		X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS		X	
7-16	A. Sperl Building	Listed	Listed	LTS		X	

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS		X	
7-18	Far East Café Building	Listed	Listed	LTS		X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	LTS		X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS	X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS		X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Demolished under this alternative	X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS		X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	LTS		X	

Table 5-6. Potential Fully Underground LRT Alternative – Little Tokyo Variation 1 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	LTS		X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	LTS	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	LTS		X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	LTS		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS		X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS		X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.6 Fully Underground LRT Alternative – Little Tokyo Variation 2

The Fully Underground LRT Alternative - Little Tokyo Variation 2 would provide four new stations and a direct connection from 7th Street/Metro Center Station to the existing Metro Gold Line tracks to the north and east of 1st and Alameda Streets.

5.6.1 Construction Impacts

The following sections describe potential effects that may occur to historic properties in the APE due to construction activities for the Fully Underground LRT Alternative – Little Tokyo Variation 2. Table 5-7 lists the construction effects/impacts for each NRHP property/CRHR resource.

5.6.1.1 Temporary Dirt/Unintended Damage

Potential effects and impacts from dirt and unintended damage to historic properties and historical resources from the construction of the Fully Underground LRT Alternative – Little Tokyo Variation 2 would be similar to those previously described for the Underground Emphasis LRT Alternative.

5.6.1.2 Traffic Congestion/Parking/Access

Potential effects and impacts from changes in access, parking, and traffic patterns to historic properties and historical resources from the construction of the Fully Underground LRT Alternative – Little Tokyo Variation 2 would be similar to those described for the Underground Emphasis LRT Alternative.

5.6.1.3 Visual

Potential visual effects and impacts to historic properties and historical resources from construction of the Fully Underground LRT Alternative – Little Tokyo Variation 2 would be similar to those described for the Underground Emphasis LRT Alternative.

5.6.1.4 Portals

As part of the Fully Underground LRT Alternative – Little Tokyo Variation 2 new portals would be constructed to connect the proposed tracks to the Metro Gold Line tracks heading north to Azusa and east towards I-605. One portal containing the northbound and southbound tracks would be located northeast of the Little Tokyo/Arts District Station and tracks. There are no historical resources or historic properties within the APE that would be impacted by this new portal.

Two additional portals, each containing one track, would rise to the east within the widened median of 1st Street to allow a connection to the Metro Gold Line tracks towards I-605. The portal containing the westbound track would be located between Alameda and Garey Streets. The portal containing the eastbound track would be located adjacent to the westbound track

between Hewitt and Vignes Streets. The NRHP eligible J.R. Newberry Company Building (APE Map #9R-6) is located at the east side of the intersection of 1st Avenue and Vignes Street.

Section 106 Effects Analysis for Historic Properties

There would be an effect, but no adverse effect, to the J.R. Newberry Company Building (APE Map #9R-6). No adverse effect would occur to this historic property because potential changes would not directly alter the setting in a manner that would diminish its integrity.

CEQA Impact Analysis for Historical Resources

Construction of the portals would not constitute a substantial adverse change that would impair the significance of the J.R. Newberry Company Building. The change in setting created by the portals would not diminish the integrity of the resource's significant historic features. This alternative, therefore, would have a less than significant impact upon historical resources.

5.6.1.5 Station Construction

Potential effects/impacts from construction of proposed stations would be similar to those described for Fully Underground LRT Alternative – Little Tokyo Variation 1.

5.6.1.6 Demolition, Partial Takes or Alteration of a Property

Potential impacts to historical resources from this alternative due to demolition or property acquisitions would be identical to those described for the Underground Emphasis LRT Alternative.

5.6.1.7 Noise and Vibration

Potential effects and impacts to historic properties and historical resources caused by noise and vibration would be the same as those discussed for the Underground Emphasis LRT Alternative and the Fully Underground Emphasis LRT Alternative - Little Tokyo Variation 1. Implementation of mitigation measures MM-BE-2 and MM-BE-3 would avoid adverse effects to historic properties and reduce potential impacts to historical resources to a less than significant level.

5.6.1.8 Differential Settlement

Potential effects and impacts to historic properties and historical resources caused by differential settlement would be the same as those discussed for the Underground Emphasis LRT Alternative and the Fully Underground Emphasis LRT Alternative - Little Tokyo Variation 1. Implementation of mitigation measures MM-BE-2, MM-BE-3, and when applicable MM-BE-4, would avoid adverse effects to historic properties and reduce potential impacts to historical resources to a less than significant level. Table 5-7 lists the potential effects and impacts for construction for the Fully Underground LRT Alternative – Little Tokyo Variation 2.

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS			X	
2-5	Engine Company No. 28	Listed	Listed	LTS			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS			X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS			X	

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X		
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X		
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X		

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X		
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS			X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS			X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS		X		

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS			X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS			X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS			X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS		X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS		X		

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS			X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS			X	
7-8	San Pedro Firm Building	Listed	Listed	LTS			X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS			X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS			X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS			X	

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS			X	
7-16	A. Sperl Building	Listed	Listed	LTS			X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS			X	
7-18	Far East Café Building	Listed	Listed	LTS			X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS		X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS			X	

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Resource demolished during construction	X	X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS			X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI		X		

Table 5-7. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Sub surface Easement)		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS			X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS			X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.6.2 Operational Impacts

Potential operational impacts of the Fully Underground LRT Alternative – Little Tokyo Variation 2 would be largely the same on historic properties and historical resources as those described for the Underground Emphasis LRT Alternative, except that a proposed switch, located at 1st and Alameda for the Underground Emphasis LRT Alternative, would instead be located at the intersection of 1st and Vignes Streets. Operation of the Fully Underground LRT Alternative - Little Tokyo Variation 1 would result in a moderate noise impact at this location. This switch is located near the NRHP eligible J.R. Newberry Company Building (APE Map #9R-6) and the 1st Street Viaduct (APE Map #9R-7). Moderate noise effects/impacts do not exceed the FTA Noise Impact Criteria, therefore no adverse effects to historic properties and no significant impacts to historical resources are anticipated from project operations. Table 5-8 lists the potential effects and impacts for operation for the Fully Underground LRT Alternative - Little Tokyo Variation 2.

5.6.3 Cumulative and Indirect Impacts

There would be no expected indirect impacts from the Fully Underground LRT Alternative – Little Tokyo Variation 2.

Cumulative effects and impacts include short-term effects during construction such as noise, dirt, changes in setting from the use or storage of equipment, or lack of access due to congestion or revisions in traffic patterns. Cumulative effects may also result from long-term effects such as additional traffic generated by increased density created as new buildings are constructed. Taken collectively, the reasonable foreseeable projects do not appear to have additional effects upon historic properties or impacts upon historical resources that would be affected by the Fully Underground LRT Alternative – Little Tokyo Variation 2.

5.6.4 Potential Effects to Section 4(f) Resources

The Fully Underground LRT Alternative - Little Tokyo Variation 2 would require the acquisition of a subsurface easement situated on one NRHP-eligible property; Cathedral of Saint Vibiana Rectory (APE Map #8-13). No adverse effects would occur to the Rectory building as a result of the easement. This acquisition would result in a Section 4(f) *de minimus* finding.

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	LTS		X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS		X	
2-5	Engine Company No. 28	Listed	Listed	LTS		X	
2-7	Roosevelt Building	Listed	Listed	LTS		X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS		X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	LTS		X	
2-13	Superior Oil Company Building	Listed	Listed	LTS		X	
3-1	The California Club	Eligible	Listed	LTS		X	
3-2	Los Angeles Central Library	Listed	Listed	LTS		X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	LTS	X		

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS	X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	LTS		X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS		X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS		X	
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X	
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X	
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X	
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X	

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X	
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X	
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X	
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X	
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X	
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X	
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X	
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X	
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS		X	

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-2	Los Angeles City Hall	Eligible	Eligible	LTS		X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS	X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS		X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS		X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS		X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS	X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS	X		

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS		X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS		X	
7-8	San Pedro Firm Building	Listed	Listed	LTS		X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS		X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS		X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS		X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS		X	
7-16	A. Sperl Building	Listed	Listed	LTS		X	

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS		X	
7-18	Far East Café Building	Listed	Listed	LTS		X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	LTS		X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS	X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS		X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Resource demolished during construction	X		
7-35	John A. Roebling’s Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS		X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	LTS		X	

Table 5-8. Potential Fully Underground LRT Alternative – Little Tokyo Variation 2 Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	LTS		X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	LTS	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	LTS		X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	LTS		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS		X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS		X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.7 Locally Preferred Alternative (LPA)

5.7.1 Construction Impacts

Construction activities were analyzed using the Criteria of Adverse Effect (discussed in Section 3.2.1) for their potential to impact historic properties. The following discussion describes potential effects in the APE due to construction activities for the LPA. Table 5-9 lists the effects/impacts for each NRHP property/CRHR resource.

Short-term effects from construction typically result from dirt, changes in the visual environment, or alteration to access. Other types of construction effects may be related to specific construction activities or locations. Operational effects are discussed in Section 5.7.2.

5.7.1.1 Temporary Dirt/Unintended Damage

Properties in the APE would be affected by construction activities including dirt and unintended damaged. Metro would employ BMPs to ensure that these effects are short-term.

Section 106 Effects Analysis for Historic Properties

Dirt and other damage from construction would affect, but not adversely affect, historic properties in the APE because the potential effects would be short-term. The potential effects would not directly alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Dirt and other unintended damage during construction would not constitute a substantial adverse change that would impair the significance of historical resources. The impacts would be short-term and the majority of the resources' features would remain to convey their significance. The LPA, therefore, would have a less than significant impact upon historical resources.

5.7.1.2 Traffic Congestion/Parking/Access

Changes in access to properties and resources within the APE may result from road closures, use of equipment, and other construction activities. Metro would employ BMPs to minimize these changes and keep the public and property owners informed of potential issues.

Section 106 Effects Analysis for Historic Properties

Potential effects, but no adverse effects, would result from changes in access during construction. The effects would be short-term and would not alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Changes in access resulting from congestion and loss of parking during construction would not constitute a substantial adverse change that would impair the significance of historical resources. Potential impacts would be short-term and the majority of the resources' features would remain to convey their significance. The LPA therefore, would have a less than significant impact upon historical resources.

5.7.1.3 Visual

Visual changes may result from the storage and operation of equipment, cuts in the road, and signage used during construction. Metro would employ BMPs to minimize these changes and they should be short term.

Section 106 Effects Analysis for Historic Properties

Visual changes during construction would affect, but not adversely affect, historic properties because the effects would be short-term. The changes would not directly alter characteristics of historic properties in a manner that would diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Visual changes during construction would not constitute a substantial adverse change that would impair the significance of historical resources. The impacts would be short-term and the resources' character-defining features would remain to convey their significance. The LPA. therefore, would have a less than significant impact upon historical resources.

5.7.1.4 Demolition, Partial Takes or Alteration of a Property

To construct the LPA, one parcel that contains a historical resource would be acquired. The S. Kamada Restaurant, Atomic Café, Senior Fish, and Coast Imports (APE Map #7-30) is a CRHR-eligible (not NRHP eligible) commercial building built in 1913. The entire parcel is anticipated to be acquired for station construction.

A subsurface easement would be acquired for the Higgins Building (APE Map #8-11). The easement would extend approximately five feet beyond the property line for the CRHR-eligible Higgins Building (not NRHP eligible). No project-related construction would affect the Higgins Building.

The LPA., would also require the acquisition of a subsurface easement beneath the NRHP Eligible Cathedral of St. Vibiana Rectory (APE Map #8-13). The subsurface easement would extend approximately five feet beyond the north (2nd Street side) property line of the building. The easement acquisition is a requirement of the project to provide a buffer between subsurface project facilities and at-grade structures.

Section 106 Effects Analysis for Historic Properties

The subsurface easement for the area beneath the Cathedral of St. Vibiana Rectory would affect, but not adversely affect, the historic property. No project facilities would use any portion of the Rectory building or adversely affect the characteristics that make it eligible for the NRHP.

CEQA Impact Analysis for Historical Resources

The subsurface easement acquisitions that would extend five feet beyond the north (2nd Street side) property lines of the Higgins Building and the Cathedral of St. Vibiana Rectory would not constitute a substantial adverse change that would impair the significance of the historical resources, as no other project-related construction or use would directly affect the buildings. Due to the proximity of proposed project facilities to the buildings, indirect effects such as differential settlement and project related vibration have the potential to affect the structures (see Differential Settlement, Section 5.5.1.8, and Noise and Vibration, Section 5.5.1.7).

The property acquisition and subsequent demolition of the S. Kamada Restaurant, Atomic Café, Senor Fish, and Coast Imports building would constitute a substantial adverse change that would impair the significance of the historical resource. However, implementation of MM-BE-1 and MM-BE-5 would reduce impacts to a less than significant level.

5.7.1.5 Station Construction

For the LPA, a station is proposed to be constructed underground southwest of the intersection of 2nd and Hope Streets. The National Register eligible Walt Disney Concert Hall (APE Map #4-4) is located on the hill above the proposed station. The preliminary conceptual designs would be compatible with the contemporary forms, materials, and massing of this historical resource. However, noise and vibration from the construction of the station of the LRT would affect the use of the historic property as a concert hall and recording facility. The station is also near the NRHP eligible 2nd Street Tunnel (APE Map #4-3). This would require demolition of a portion of the CRHR eligible Belmont Tunnel (APE Map #3-4). The Belmont Tunnel is not eligible for the NRHP.

There will also be a station on 2nd Street between Broadway and Spring Street. Entrances will be located in the property currently used as a surface parking lot on the south side of 1st Street between Broadway and Spring Streets. A portion of the property located on the northwest corner of 2nd and Broadway will be used for access and other ancillary facilities. The construction of the station and other facilities are in the vicinity of the Los Angeles Mirror Building (APE #8-3).

A new underground station would be constructed to serve the Little Tokyo/ Arts District. The station is located under Central Avenue, Alameda Street and privately held properties on the south side of 1st Street behind Central Avenue. This station may include a small building at

ground level on the southwest corner of 1st and Alameda Streets to house ventilation fans. This shallow station may potentially be built without a roof or mezzanine, leaving the below-grade platform level exposed. The property currently contains the California Register Eligible S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports (APE Map #7-30), this building would be removed as part of construction for the LPA.

Section 106 Effects Analysis for Historic Properties

Construction of proposed stations would create effects to the Walt Disney Concert Hall (APE Map #4-4), and Los Angeles Mirror Building (APE Map #8-3). However, the effects on these historic properties would not be considered adverse because the potential changes would not diminish the integrity of the properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

Construction of proposed stations would not constitute a substantial adverse change that would impair the significance of the Walt Disney Concert Hall or Los Angeles Mirror Building (APE Map #8-3). I. Implementation of MM-BE-1 would reduce any potential impact to the CRHR-eligible Belmont Tunnel to a less than significant level. Potential changes in setting created by stations would not diminish the integrity of the resources' significant historic features. The Locally Preferred Alternative, therefore, would have a less than significant impact upon these historical resources.

The property acquisition and subsequent demolition of the S. Kamada Restaurant, Atomic Café, Senior Fish, and Coast Imports building would constitute a substantial adverse change that would impair the significance of the historical resource. However, implementation of MM-BE-1, MM-BE-5, MM-BE6, and MM-BE7 would reduce impacts to a less than significant level.

5.7.1.6 Portals

For this alternative two portals would be constructed. One would be located north of Temple Street, northeast of the existing at-grade Little Tokyo/Arts District Station and Metro Gold Line Tracks. There are no historic properties or historical resources within the vicinity of the portal.

The second portal would be located within 1st Street between Alameda and Gatey Streets. Tracks would rise to the east within this second portal and connect at-grade to the existing Metro Gold Line Tracks toward 1-605. 1st Street would be widened to the north to accommodate this second portal and maintain the existing number of through lanes. This portal would be within the viewshed of two historic properties, the Little Tokyo National Historic Landmark Historic District and the NRHP eligible John A. Roebling Sons Co. Building (APE MAP #7-35). However, the portal is not encompassed within the boundary of a historic property, historical resource, or a contributing element to the significance of either property.

Section 106 Effects Analysis for Historic Properties

No adverse effect would occur to the Little Tokyo National Historic Landmark District or the John A. Roebling Sons Co Building from the construction of the portal. Potential effects would not alter the setting of historic properties in a manner that would diminish the integrity of the historic district.

CEQA Impact Analysis for Historical Resources

Construction of the portal would not constitute a substantial adverse change that would impair the significance of historical resources. The change in setting created by the portal would not diminish the integrity of the resources' significant historic features. The LPA, therefore, would have a less than significant impact upon historical resources.

5.7.1.7 Noise and Vibration

According to the Noise and Vibration Technical Memorandum, construction activities with the most potential for noise impacts include the cut and cover tunnel under Flower Street, proposed underground cut and cover stations at Flower/6th/5th Streets and 2nd/Hope Street, and the junction at Temple and Alameda Streets, which includes lowering Alameda Street. To ensure potential noise impacts are minimized during construction, all construction activities would conform to the provisions in Section 41.40(a) of the City of Los Angeles Code. Furthermore, BMPs would be employed to reduce any potential noise effects to historic properties to result in a “no adverse effect” finding and/or minimize potential impacts to historical resources to a less than significant level.

Noise levels for the tunnel boring machine (TBM) were not evaluated as a part of the Noise and Vibration Technical Memorandum because the TBM “is underground and produces little to no noise that reaches the surface land uses.” Operations at the portal/launch site for the TBM, where bored material is hauled out, treated, and removed, also would not impact historic properties and historical resources as noise levels from these activities would not exceed ambient noise levels.

For the LPA, pre-augering of soldier piles at cut and cover sections would eliminate the need for impact pile driving. This would leave “Large Bulldozer” and “Drill Rigs” as the main sources of construction vibration. If these large pieces of equipment are not used within 21 feet of a historic property or historical resource, there would be no adverse effects and significant impacts to historic properties and historical resources from GBV would not occur. Properties that are close to the project work zone and which may be affected by construction-related vibration include Barker Brothers (APE Map #2-1), Roosevelt Building (APE Map #2-7), General Petroleum-Mobil Oil Building (APE Map #2-12), Superior Oil Building (APE Map #2-13), California Club (APE Map #3-1), Los Angeles Central Library (APE Map #3-2), 2nd Street Tunnel (APE Map #4-3), Mirror Building (APE Map #8-3), Higgins Building (APE Map

#8-11), Cathedral of Saint Vibiana (APE Map #8-12), and Cathedral of Saint Vibiana Rectory (APE Map #8-13).

The TBM would not cause vibratory effects or impacts to historic properties or historical resources because the TBM performs a slow moving drilling process that generates very little vibration to the surrounding areas. Studies have measured TBM vibration to be in the range of 0.0024 to 0.0394 inches per second PPV at a distance at 33 feet. The proposed TBM tunnels on 2nd Street would vary in depth due to the existing topography, as well as vertical curves in the alignment. The tunnel would range from about 140 feet below the surface (distance from street level to the top of the tunnel) to about 40 feet below the surface. The vibratory potential of the TBM is minimal and would be well below the FTA threshold for Category IV buildings (buildings extremely susceptible to vibration damage) of 0.12 inches per second PPV.

Section 106 Effects Analysis for Historic Properties

There would be an effect, but no adverse effect, to the Barker Brothers, Roosevelt, General Petroleum Mobil Oil Building, Superior Oil Building, California Club, Los Angeles Central Library, 2nd Street Tunnel, Walt Disney Concert Hall, Mirror Building, Cathedral of Saint Vibiana, and the Cathedral of Saint Vibiana Rectory, from noise and vibration-induced damage from construction, if measures MM-BE-2, MM-BE-3, MMBE-5, and MMBE-8 are implemented. If these measures are properly implemented, construction of this alternative would not diminish the integrity of the historic properties' location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential for construction-related vibration could cause a substantial adverse change that would impair the Barker Brothers, Roosevelt, General Petroleum Mobil Oil Building, Superior Oil Building, California Club, Los Angeles Central Library 2nd Street Tunnel, Mirror Building, Cathedral of Saint Vibiana, the Cathedral of Saint Vibiana Rectory, or the Higgins Building. The implementation of MM-BE-2, MM-BE-3, and MM-BE-8 would reduce the potential impacts to a less than significant level.

5.7.1.8 Differential Settlement

According to the Description of Construction, some of the buildings situated near cut and cover excavation would be susceptible to differential settlement. Differential settlement is defined as “unequal settling of material; gradual downward movement of foundations due to compression of soil which can lead to damage if settlement is uneven” (Allaby 1999). Differential settlement occurs when a building or feature's shape is twisted, or is raised and lowered in different places, sometimes imperceptibly. Differential settlement can cause foundations to settle and crack, floors to buckle and go out of level, walls to shift out of plumb and plane, and roofs to twist and deform. The resulting changes in structural systems and

cladding or finish materials, including wood and masonry, floor tiles, wood flooring, concrete floors, plaster, marble, and other decorative wall and ceiling treatments, and adobe, stucco, and wood-framed walls can be cracks, fractures, and other noticeable (as well as long term, not immediately visible) deformations and damage. Since historically significant buildings often have archaic construction and finish attachment systems, including unreinforced masonry, those building types are usually more susceptible to the effects of ground-borne vibration than more recently constructed buildings.

According to the Description of Construction, at least eight NRHP and/or CRHR eligible properties could be potentially affected by tunneling (TBM operation) and cut and cover construction. They include the Superior Oil Building/Standard Hotel (APE Map #2-13), California Club (APE Map #3-1), Walt Disney Concert Hall (APE Map #4-4), 2nd Street Tunnel (APE Map #4-3), former Nishi Hongwanji Buddhist Temple (APE Map #7-19), Los Angeles Times Building (APE Map #8-2), Higgins Building (APE Map #8-11), and St. Vibiana's Cathedral (APE Map #8-12). Implementation of mitigation measures MM-BE-2, MM-BE-3, and MM-BE-4 (when applicable) would avoid potential adverse effects to historic properties and reduce potential impacts to historical resources to a less than significant level.

Section 106 Effects Analysis for Historic Properties

Implementation of measures to protect and stabilize the ground near the Standard Hotel (APE Map #2-13), California Club (APE Map #3-1), 2nd Street Tunnel (APE Map #4-3), Walt Disney Concert Hall (APE Map #4-4), former Nishi Hongwanji Buddhist Temple (APE Map #7-19), Los Angeles Times Building (APE Map #8-2), and St. Vibiana's Cathedral (APE Map #8-12) noted in MM-BE-2, MM-BE-3, and MM-BE-5, would avoid adverse effects to all properties under this alternative. If these measures are properly implemented, differential settlement would not directly alter characteristics of historic properties in a manner that would diminish the integrity of each property's location, design, setting, materials, workmanship, feeling, or association.

CEQA Impact Analysis for Historical Resources

The potential for differential settlement could constitute a substantial adverse change that would impair the significance of any or all of the historical resources noted in this section. Implementation of MM-BE-2, MM-BE-3, and MM-BE-5 would reduce potential impacts to a less than significant level.

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS			X	
2-5	Engine Company No. 28	Listed	Listed	LTS			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS			X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS		X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS		X		

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-3	Mark Taper Forum	Eligible	Eligible	LTS		X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS		X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS		X		
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS		X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS		X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS		X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS		X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS		X		

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS		X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS		X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS		X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS			X	
6-2	Los Angeles City Hall	Eligible	Eligible	LTS			X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS		X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS			X	

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS			X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS			X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS		X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS		X		
7-7 thru 7-9, 7-11, 7-14 thru 7- 19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS			X	

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS			X	
7-8	San Pedro Firm Building	Listed	Listed	LTS			X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS			X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS			X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS			X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS			X	
7-16	A. Sperl Building	Listed	Listed	LTS			X	
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS			X	

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-18	Far East Café Building	Listed	Listed	LTS			X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS		X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS			X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Resource demolished during construction	X	X		
7-35	John A. Roebling’s Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS			X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X (subsurface easement)	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Subsurface Easement)		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS			X	

Table 5-9. LPA Construction Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS			X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

5.7.2 Operational Impacts

Operation of the LPA could cause noise and vibration at the Walt Disney Concert Hall (Ape Map 4-4). For this resource the implementation of mitigation measures MM-BE-9 would reduce the adverse effects. Moderate noise effects/impacts from other project activities do not exceed the FTA Noise Impact Criteria, therefore no adverse effects to historic properties and no significant impacts to historical resources are anticipated from project operations. Table 5-10 lists potential effects and impacts by resource.

5.7.3 Cumulative and Indirect Impacts

There are no anticipated indirect impacts from the LPA. Cumulative effects and impacts include short-term effects during construction such as noise, dirt, changes in setting from the use or storage of equipment, or lack of access due to congestion or revisions in traffic patterns. Cumulative effects may also result from long-term effects such as additional traffic generated by an increase in density as new buildings are constructed. Taken collectively, the reasonably foreseeable projects in the project area do not appear to have additional effects upon historic properties or impacts upon historical resources that are affected by the LPA.

5.7.4 Potential Effects to Section 4(f) Resources

The LPA would require the acquisition of a subsurface easement situated on one NRHP-eligible property; Cathedral of Saint Vibiana Rectory (APE Map # 8-13). No adverse effects would occur to the Rectory building as a result of the easement. This acquisition would result in a Section 4(f) *de minimus* finding.

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	LTS		X	
2-3	Fine Arts Building, Global Marine House	Eligible	Listed	LTS		X	
2-5	Engine Company No. 28	Listed	Listed	LTS		X	
2-7	Roosevelt Building	Listed	Listed	LTS		X	
2-10	811 Wilshire building, Tishman 615 building, Wilflower building	Eligible	Listed	LTS		X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	LTS		X	
2-13	Superior Oil Company Building	Listed	Listed	LTS		X	
3-1	The California Club	Eligible	Listed	LTS		X	
3-2	Los Angeles Central Library	Listed	Listed	LTS		X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	LTS	X		

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	LTS	X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	LTS		X	
5-1 thru 5-13, 6-1 thru 6-7, 6-12	Los Angeles Civic Center Historic District	Eligible	Eligible	LTS		X	
5-1	Los Angeles Department of Water and Power Building, John Ferraro Office Building	Eligible	Eligible	LTS	X		
5-2	Ahmanson Theatre	Eligible	Eligible	LTS	X		
5-3	Mark Taper Forum	Eligible	Eligible	LTS	X		
5-4	Dorothy Chandler Pavilion	Eligible	Eligible	LTS	X		
5-5	Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration	Eligible	Eligible	LTS	X		

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
5-6	El Paseo de los Pobladores de Los Angeles	Eligible	Eligible	LTS	X		
5-7	Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse	Eligible	Eligible	LTS	X		
5-8	County of Los Angeles Central Heating and Refrigeration Plant	Eligible	Eligible	LTS	X		
5-9	Los Angeles County Hall of Records	Eligible	Eligible	LTS	X		
5-10	Court of Historic American Flags	Eligible	Eligible	LTS	X		
5-11	Los Angeles County Law Library, Mildred L. Lillie Building	Eligible	Eligible	LTS	X		
5-12	Hall of Justice, Los Angeles County Jail	Eligible	Eligible	LTS	X		
5-13	Clara Shortridge Foltz Criminal Justice Center	Eligible	Eligible	LTS	X		
6-1	U.S. Post Office and Court House Building, Federal Building	Listed	Listed	LTS		X	

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
6-2	Los Angeles City Hall	Eligible	Eligible	LTS		X	
6-3	Site of the <i>Los Angeles Star</i> Fletcher Bowron Square, Los Angeles Mall, Triforium, Bella Union Hotel site	Not Eligible	Listed California Historical Landmark	LTS	X		
6-4	City Health Building, City Hall South	Eligible	Eligible	LTS		X	
6-5	Federal Building, North Los Angeles Field office	Eligible	Eligible	LTS		X	
6-6 6-7	The Police Facilities Building, Parker Center, Motor Transport Division	Eligible	Eligible	LTS		X	
6-8	City of Los Angeles Parking Lot 3, “Tinkertoy” Parking Structure	Not Eligible	Eligible	LTS	X		
7-1	Dorner & Hinz Saloon, Nelson Hotel, Red Wing Shoes, California Floral Company	Not Eligible	Eligible	LTS	X		

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-7 thru 7-9, 7-11, 7-14 thru 7-19	Little Tokyo Historic District	Listed National Historic Landmark	Listed	LTS		X	
7-7	Japanese Union Church of Los Angeles	Listed	Listed	LTS		X	
7-8	San Pedro Firm Building	Listed	Listed	LTS		X	
7-9	Mark Kuwata Real Estate	Eligible	Eligible	LTS		X	
7-11	1-3 story commercial building, Anzen Hardware	Listed	Listed	LTS		X	
7-14	1-3 story commercial building, Little Tokyo Hotel	Listed	Listed	LTS		X	
7-15	1-3 story commercial building, Ace Japanese Restaurant,	Listed	Listed	LTS		X	
7-16	A. Sperl Building	Listed	Listed	LTS		X	

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-17	3+ story commercial building, Daimora Hotel	Listed	Listed	LTS		X	
7-18	Far East Café Building	Listed	Listed	LTS		X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	LTS		X	
7-20	Aoyama Tree	Not Eligible	Listed	LTS	X		
7-26	Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple	Eligible	Eligible	LTS		X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI Demolished under this alternative	X		
7-35	John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated	Eligible	Eligible	LTS		X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	LTS		X	

Table 5-10. LPA Operation Effects

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	LTS		X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	LTS	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	LTS		X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	LTS		X	
9-R6	J.R. Newberry Company Building	Eligible	Eligible	LTS		X	
9-R7	1 st Street Viaduct (Bridge #53C-1166)	Eligible	Eligible	LTS		X	

Key for CEQA Impacts

LTS = Less Than Significant impact, no mitigation required

SI = Significant Impact that can be mitigated to less than significant

SU = Significant and Unavoidable impact

6.0 POTENTIAL MITIGATION MEASURES

Consistent with 36 CFR 800.6(a), federal agencies are required to develop and evaluate alternatives that could avoid, minimize, or mitigate adverse effects on historic properties. Since the proposed Regional Connector project has the potential for adverse effects, this report outlines measures to mitigate the potential effects. The mitigation measures presented in this section are also intended to assist Metro in reducing the project's potential impacts on historical resources to a less than significant level.

The only National Register eligible historic property that would be adversely affected by any of the project alternatives would be the 2nd Street Tunnel. Proposed mitigation measures for the adverse effects to this property are listed in Table 6-2.

There are 14 historical resources where construction activities could significantly impact the resource. These resources are listed in Table 6-1. The resources and measures proposed as mitigation to reduce potential impacts to a less than significant level are listed in Table 6-3.

Table 6-1. Historical Resources Potentially Affected by Construction

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Impact
2-7	Roosevelt Building	Listed	Listed	Vibration
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	Vibration
2-13	Superior Oil Company Building	Listed	Listed	Vibration Settlement
3-1	The California Club	Eligible	Listed	Vibration Settlement
3-2	Los Angeles Central Library	Listed	Listed	Vibration
3-4	Belmont Tunnel	Not Eligible	Eligible	Partial Removal
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	Vibration
4-4	Walt Disney Concert Hall	Eligible	Eligible	Vibration Settlement
7-19	former Nishi Hongwanji Buddhist Temple	Listed (NHL)	Listed	Settlement

Table 6-1. Historical Resources Potentially Affected by Construction

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Impact
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	Settlement
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	Vibration
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	Vibration Settlement
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	Vibration Settlement
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	Vibration

Table 6-2. Mitigation Measures for Resources Adversely Affected Under Section 106 of the NHPA

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Adverse Effect	Proposed Mitigation	Project Alternative
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	Partial Demolition/ Alteration	MM_BE-1 MM-BE-5	AGELRT ¹

¹ AGELRT = At-Grade Emphasis LRT Alternative

Table 6-3. Mitigation Measures to Reduce Impacts on Historical Resources to a Less-Than-Significant Level

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Impact	Proposed Mitigation	Project Alternative
2-7	Roosevelt Building	Listed	Listed	Vibration	MM-BE-2, MM-BE-3, MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	Vibration	MM-BE-2, MM-BE-3, MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG
2-13	Superior Oil Company Building	Listed	Listed	Vibration Settlement	MM-BE-2, MM-BE-3, MM-BE-5 MM-BE-4	AGELRT UELRT FULRT (Var. 1&2) FUG
3-1	The California Club	Eligible	Listed	Vibration Settlement	MM-BE-2, MM-BE-3, MM-BE-5 MM-BE-4	AGELRT UELRT FULRT (Var. 1&2) FUG

Table 6-3. Mitigation Measures to Reduce Impacts on Historical Resources to a Less-Than-Significant Level

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Impact	Proposed Mitigation	Project Alternative
3-2	Los Angeles Central Library	Listed	Listed	Vibration	MM-BE-2, MM-BE-3, MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG
3-4	Belmont Tunnel	Not Eligible	Eligible	Partial Removal	MM-BE-1	AGELRT UELRT FULRT (Var. 1&2) FUG
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	Vibration	MM-BE-2, MM-BE-3, MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG

Table 6-3. Mitigation Measures to Reduce Impacts on Historical Resources to a Less-Than-Significant Level

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Impact	Proposed Mitigation	Project Alternative
4-4	Walt Disney Concert Hall	Eligible	Eligible	Vibration Settlement	MM-BE-2, MM-BE-3, MM-BE-5 MM-BE-4 MM-BE-8 MM-BE-9	AGELRT UELRT FULRT (Var. 1&2) FUG
7-19	Former Nishi Hongwanji Buddhist Temple	Listed (NHL)	Listed	Settlement	MM-BE-4	UELRT FULRT (Var. 1&2) FUG
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	Settlement	MM-BE-4 MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG
8-3	The <i>Mirror</i> Building (Site of Butterfield Stage Station), <i>Los Angeles Times-Mirror</i> Annex, <i>Times</i> Building South, <i>Mirror-News</i> Building	Eligible	Eligible	Vibration	MM-BE-2, MM-BE-3, MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG

Table 6-3. Mitigation Measures to Reduce Impacts on Historical Resources to a Less-Than-Significant Level

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	Impact	Proposed Mitigation	Project Alternative
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	Vibration Settlement	MM-BE-2, MM-BE-3, MM-BE-4	AGELRT UELRT FULRT (Var. 1&2) FUG
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	Vibration Settlement	MM-BE-2, MM-BE-3, MM-BE-5 MM-BE-4	AGELRT UELRT FULRT (Var. 1&2) FUG
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	Vibration	MM-BE-2, MM-BE-3, MM-BE-5	AGELRT UELRT FULRT (Var. 1&2) FUG

AGELRT = At-Grade Emphasis LRT Alternative

UELRT = Underground Emphasis LRT Alternative

FULRT (Var. 1&2) = Fully Underground LRT Alternative – Little Tokyo Variations 1 and 2

LPA = Locally Preferred Alternative

6.1 Proposed Construction Impact Mitigation Measures

MM-BE-1 Historic Properties/Historical Resources Documentation

Documentation of historic properties and historical resources adversely affected by the project would consist of the development of individual Historic American Building Survey/Historic American Engineering Record (HABS/HAER) submissions. The HABS/HAER documents would be prepared so that the original archival-quality documentation could be donated for inclusion in the Library of Congress if the National Park Service accepts these materials. Archival copies of the documentation would also be offered for donation to local repositories, including the Los Angeles Central Library and the Los Angeles Conservancy. The appropriate level of recordation would be established in consultation with the California SHPO and formalized as a part of MM-BE-5.

MM-BE-2 Pre-construction baseline survey and geo-technical investigations

A survey of historic properties and/or historical resources within 21 feet of vibration producing construction activity would be conducted to assess the building category and the potential for GBV to cause damage. The survey would also be used to establish baseline, pre-construction conditions for historic properties and historical resources.

During preliminary and final design of the project, subsurface (geotechnical) investigations would be undertaken under this measure to evaluate soil, groundwater, seismic, and environmental conditions along the alignment. This analysis would assist in the development of appropriate support mechanisms for cut and fill construction areas. The subsurface investigation would also identify areas that could experience differential settlement as a result of using a tunnel boring machine in close proximity to historic properties and/or historical resources. An architectural historian or historical architect who meets the Secretary of the Interior's Professional Qualification Standards would provide input and review of final design documents prior to implementation of measures (36 CFR Part 61).

MM-BE-3 Building Protection Measures, Geotechnical and Vibration Monitoring, and Post Construction Survey

For those historic properties and historical resources that have the potential to be affected or impacted by ground borne vibrations and/or differential settlement, Metro would use building protection measures such as underpinning, soil grouting, or other forms of ground improvement, as well as lower vibration equipment and/or construction techniques. These techniques, combined with a geotechnical and vibration monitoring program, would help protect identified historic properties and historical resources. The historic property and historical resource protection measures as well as the geotechnical and vibration monitoring program would be reviewed by an architectural historian or historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) to ensure that the measures would adequately protect the properties/resources. A post construction survey

would also be undertaken to ensure that no adverse effects or significant impacts had occurred to historic properties and historical resources.

MM-BE-4 TBM Specifications/Requirements near Historic Properties and Historical Resources

For those historic properties and historical resources that have the potential to be affected or impacted by differential settlement caused by TBM construction, a contractor would be required to develop and use an earth pressure balance or slurry shield tunnel boring machine. The method of machine operation would be based on the anticipated ground conditions near historic properties and historical resources. These construction methods and machinery types would reduce the potential for differential settlement near historic properties and historical resources.

MM-BE-5 Memorandum of Agreement

For those historic properties and that would be anticipated to experience adverse effects, a memorandum of agreement would be developed to resolve those adverse effects consistent with 36 CFR 800. This agreement, developed by FTA and Metro in consultation with the CA SHPO and other consulting parties would resolve and/or avoid, minimize, or mitigate potential effects to historic properties and/or historical resources. The agreement would include stipulations that outline the specific requirements for consultation and decision making between the lead federal agency and consulting parties, specify the level of HABS/HAER recordation, outline specific requirements for pre- and post- construction surveys, geotechnical investigations, building protection measures, and TBM specifications.

MM-BE-6 Relocation of Señor Fish Building

The Señor Fish/Atomic Café building (to be removed) shall be offered for a period of one year following certification of the Final EIS/EIR for the price of \$1 to any party willing to move it off of the 1st/Central Avenue station site at their own expense. Should no parties come forward, Metro shall incorporate materials from the building into the project facilities.

MM-BE-7 Interpretive Programs for Señor Fish Building

Metro shall explore keeping portions of the building intact for use in the 1st/Central Avenue station. Metro shall also offer to provide an exhibit commemorating the building at the Japanese American National Museum, the 1st/Central Avenue station site, or other suitable location. An individual Historic American Building Survey/Historic American Engineering Record (HABS/HAER) submission shall be developed. MM-BE-8 Mitigation for effects from noise and vibration during operation to the Walt Disney Concert Hall.

Metro shall conduct additional evaluations during the preliminary engineering phases to verify the appropriate criteria for recording activities and to verify initial estimates. If necessary, Metro shall specify that the contractor will employ high compliance resilient

fasteners, floating slab trackbed or other appropriate measures to reduce operational groundborne noise impact during operation.

6.2 Operation Impacts Mitigation Measures

The implementation of the following mitigation measures would reduce the effects on the Walt Disney Concert Hall from the operation of the LRT.

MM-BE-9 Mitigation for effects from noise and vibration during construction to the Walt Disney Concert Hall

During construction Metro shall provide monitoring for groundborne noise at the Walt Disney Concert Hall and the Roy and Edna Disney/CalArts Theater (REDCAT). LACMTA shall also provide advance notification to Walt Disney Concert Hall and the Roy and Edna Disney/CalArts Theater (REDCAT) regarding schedules for tunneling and other activities.

7.0 CONCLUSIONS

7.1 No Build Alternative

7.1.1 NEPA Findings

This alternative would not include capital improvements, and thus the No Build Alternative would be expected to result in no adverse construction or implementation-related effects on historic properties in the project APE.

7.1.2 CEQA Determination

The No Build Alternative does not include the introduction of any new improvements that would be expected to result in construction or operational impacts to historical resources in the project APE. The No Build Alternative would not be expected to result in cumulative impacts to historical resources, other than potential impacts on resources through continued high and escalated levels of vehicular traffic, unabated by additional mass transit options. The No Build Alternative would not contribute to a cumulative impact on these resources.

7.1.3 Section 4(f) Effects

The No Build Alternative would not result in any Section 4(f) impacts.

7.2 Transportation System Management (TSM) Alternative

7.2.1 NEPA Findings

Project construction and operation would not result in any direct or indirect adverse effects to historic properties.

7.2.2 CEQA Determination

Construction and operation of the TSM Alternative would not result in any direct or indirect significant impacts on historical resources.

7.2.3 Section 4(f) Effects

The TSM Alternative would not result in the use of any Section 4(f) resources.

7.3 At-Grade Emphasis LRT Alternative

7.3.1 NEPA Findings

Construction of the At-Grade Emphasis LRT Alternative would be expected to result in one direct adverse effect. Alteration of the 2nd Street Tunnel (APE Map #4-3) during construction to accommodate the At-Grade Emphasis LRT Alternative would require the implementation of MM-BE-1 and MM-BE-5. Consistent with 36 CFR 800, consultation with the California SHPO

and other consulting parties would need to be completed before project construction could begin.

7.3.2 CEQA Determination

Construction of the At-Grade Emphasis LRT Alternative would potentially result in one direct significant impact and 14 indirect significant impacts to historical resources. All of these potential impacts could result in a substantial adverse change to a historical resource. Implementation of mitigation measures MM-BE-1 through MM-BE-5 would reduce these potential impacts to a less than significant level. Project operation is not expected to cause direct or indirect impacts. Refer to Table 7-2 for additional information.

7.3.3 Section 4(f) Effects

The At-Grade Emphasis LRT Alternative would require the acquisition and/or use of property associated with five NRHP-eligible properties: Los Angeles Civic Center Historic District, Los Angeles Police Motor Transport Building (APE Map #6-7), City of Los Angeles Parker Center Police Department Building (APE Map #6-6), City Hall South (APE Map #6-4) as well as the 2nd Street Tunnel (APE Map #4-3). Four of these acquisitions would result in a Section 4(f) *de minimus* finding. The 2nd Street Tunnel alterations could only occur if 1) there is no prudent and feasible alternative to using the resource; and 2) the project includes all possible planning to minimize harm to the tunnel from the use. Additional analysis of project alternatives and consultation with the California SHPO would be required.

7.4 Underground Emphasis LRT Alternative

7.4.1 NEPA Findings

Construction and operation of the Underground Emphasis LRT Alternative would be expected to result in no direct or indirect adverse effects to historic properties.

7.4.2 CEQA Determination

Construction of the Underground Emphasis LRT Alternative would result in one direct significant impact and 14 indirect significant impacts to historical resources. Implementation of mitigation measures MM-BE-1 through MM-BE-5 would reduce these potential impacts to a less than significant level. Project operation would not be expected to cause direct or indirect impacts. Refer to Table 7-3 for additional information.

Table 7-1. At-Grade Emphasis LRT Alternative Expected Effects to Historic Properties

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	SI				X

SI = Significant impact that can be mitigated to a less than significant level

Table 7-2. At-Grade Emphasis LRT Alternative Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-3	2 nd Street Tunnel, Bridge (tunnel) #53C 1318	Eligible	Eligible	SI				X

Table 7-2. At-Grade Emphasis LRT Alternative Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	
7-19	Former Nishi Hongwanji Buddhist Temple	Listed (NHL)	Listed	SI			X	
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	
8-3	<i>Mirror</i> Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI			X	

SI = Significant impact that can be mitigated to a less than significant level

Table 7-3. Underground Emphasis LRT Alternative Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect- Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	

Table 7-3. Underground Emphasis LRT Alternative Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect- Not Adverse	Adverse Effect
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-30	S. Kamada Restaurant, Atomic Café, Senor Fish, and Coast Imports	Not Eligible	Eligible	SI	X Property would be acquired and building demolished	X		
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	
8-3	Mirror Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X (Subsurface Easement)	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	

Table 7-3. Underground Emphasis LRT Alternative Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Subsurface easement)		X	

SI = Significant impact that can be mitigated to a less than significant level

7.4.3 Section 4(f) Effects

The Underground Emphasis LRT Alternative would require the acquisition of a subsurface easement situated on one NRHP-eligible property; Cathedral of Saint Vibiana Rectory (APE Map #8-13). No adverse effects would occur to the Rectory building as a result of the easement. This acquisition would result in a Section 4(f) *de minimus* finding.

7.5 Fully Underground LRT Alternative - Little Tokyo Variation 1

7.5.1 NEPA Findings

Construction and operation of the Fully Underground LRT Alternative - Little Tokyo Variation 1 would be expected to potentially result in no direct or indirect adverse effects to historic properties.

7.5.2 CEQA Determination

Construction of the Fully Underground LRT Alternative - Little Tokyo Variation 1 would potentially result in one direct significant impact and 14 indirect significant impacts to historical resources. Implementation of mitigation measures MM-BE-1 through MM-BE-5 would reduce these potential impacts to a less than significant level. Project operation is not expected to cause direct or indirect impacts. Refer to Table 7-4 for additional information.

7.5.3 Section 4(f) Effects

The Fully Underground LRT Alternative - Little Tokyo Variation 1 would require the acquisition of a subsurface easement situated on one NRHP-eligible property; Cathedral of Saint Vibiana Rectory (APE Map #8-13). No adverse effects would occur to the Rectory building as a result of the easement. This acquisition would result in a Section 4(f) *de minimus* finding.

7.6 Fully Underground LRT Alternative - Little Tokyo Variation 2

7.6.1 NEPA Findings

Construction and operation of the Fully Underground LRT Alternative - Little Tokyo Variation 2 would be expected to result in no potential direct or indirect adverse effects to historic properties.

7.6.2 CEQA Determination

Construction of the Fully Underground LRT Alternative - Little Tokyo Variation 2 would potentially result in one direct significant impact and 14 indirect significant impacts to historical resources. Implementation of mitigation measures MM-BE-1 through MM-BE-5, would reduce these potential impacts to a less than significant level. Project operation would not be expected to cause direct or indirect impacts. Refer to Table 7-5 for additional information.

Table 7-4. Fully Underground LRT Alternative - Little Tokyo Variation 1 Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Effect	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	

Table 7-4. Fully Underground LRT Alternative - Little Tokyo Variation 1 Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Effect	Effect-Not Adverse	Adverse Effect
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI	X	X		
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	
8-3	Mirror Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X (Subsurface Easement)	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Subsurface easement)		X	

SI = Significant impact that can be mitigated to a less than significant level

Table 7-5. Fully Underground LRT Alternative - Little Tokyo Variation 2 Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	

Table 7-5. Fully Underground LRT Alternative - Little Tokyo Variation 2 Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI	X	X		
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	
8-3	Mirror Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X (Subsurface Easement)	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	

Table 7-5. Fully Underground LRT Alternative - Little Tokyo Variation 2 Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Subsurface easement)		X	

SI = Significant impact that can be mitigated to a less than significant level

7.7 Locally Preferred Alternative

7.7.1 NEPA Findings

Construction and operation of the LPA would be expected to result in no potential direct or indirect adverse effects to historic properties.

7.7.2 CEQA Determination

Construction of the LPA would potentially result in one direct significant impact and 14 indirect significant impacts to historical resources. Implementation of mitigation measures MM-BE-1 through MM-BE-9, would reduce these potential impacts to a less than significant level. Project operation would not be expected to cause direct or indirect impacts. Refer to Table 7-6 for additional information.

7.7.3 Section 4(f) Effects

The LPA would require the acquisition of a subsurface easement situated on one NRHP-eligible property; Cathedral of Saint Vibiana Rectory (APE Map #8-13). No adverse effects would occur to the Rectory building as a result of the easement. This acquisition would result in a Section 4(f) *de minimus* finding.

Table 7-6. LPA Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
2-1	Barker Brothers	Eligible	Listed	SI			X	
2-7	Roosevelt Building	Listed	Listed	SI			X	
2-12	General Petroleum, Mobil Oil Building	Listed	Listed	SI			X	
2-13	Superior Oil Company Building	Listed	Listed	SI			X	
3-1	The California Club	Eligible	Listed	SI			X	
3-2	Los Angeles Central Library	Listed	Listed	SI			X	
3-4	Belmont Tunnel, Hollywood-Glendale-Burbank-San Fernando Valley Tunnel	Not Eligible	Eligible	SI		X		
4-4	Walt Disney Concert Hall	Eligible	Eligible	SI			X	

Table 7-6. LPA Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
7-19	Former Nishi Hongwanji Buddhist Temple	Listed	Listed	SI			X	
7-30	S. Kamada Restaurant, Atomic Café, Señor Fish, Coast Imports	Not Eligible	Eligible	SI	X	X		
8-2	<i>Los Angeles Times</i> Building	Eligible	Listed	SI			X	
8-3	Mirror Building	Eligible	Eligible	SI			X	
8-11	Higgins Building, General Petroleum Building, (Los Angeles) County Engineers Building	Not Eligible	Eligible	SI	X (Subsurface Easement)	X		
8-12	Cathedral of Saint Vibiana	Eligible	Eligible	SI			X	

Table 7-6. LPA Expected Impacts to Historical Resources

APE Map No.	Name	NRHP Eligibility	CRHR Eligibility	CEQA Evaluation	Right of Way Required	No Historic Properties Affected	Effect-Not Adverse	Adverse Effect
8-13	Cathedral of Saint Vibiana, Rectory	Eligible	Eligible	SI	X (Subsurface easement)		X	

8.0 REFERENCES CITED

- Allaby, Michael. 1999. *A Dictionary of Earth Sciences*. Oxford University Press, Oxford, England.
- Bluestone, Daniel M. 1988. “Detroit’s City Beautiful and Problem of Commerce.” *Journal of the Society of Architectural Historians*, Vol. XLVII, No. 3, September: 245–262.
- Caughey, John, and LaRee Caughey. 1977. *Los Angeles Biography of a City*. University of California Press, Berkeley and Los Angeles.
- CERES. 2009. Title 14, Article 9. Contents of Environmental Impact Reports: Sections 15120 to 15132. Available at: <http://ceres.ca.gov/ceqa/guidelines/art9.html>. Accessed on May 22, 2009.
- Croce, Paolo, et al. 2004. “Jet-Grouting Performance in Tunneling,” ASCE Conference Proceedings. Available at: [http://dx.doi.org/10.1061/40713\(2004\)78](http://dx.doi.org/10.1061/40713(2004)78)
- Dumke, Glenn S. 1944. *The Boom of the Eighties in Southern California*. Huntington Library Publications, San Marino, California.
- Fogelson, Robert M. 1993. *The Fragmented Metropolis: Los Angeles, 1850-1930*. University of California Press, Berkeley.
- Hanson, Carl E., David Towers, and Lance Meister. 2006. “Transit Noise and Vibration Impact Assessment.” U.S. DOT FTA, Washington, D.C.
- Hatheway, Roger. 1978. Los Angeles Downtown People Mover Program, Historic Resources Inventory Form–Barker Brothers Building, 19-172123. On file at South Central Coastal Information Center, California State University, Fullerton.
- Hayden, Dolores, 1996. *The Power of Place*. MIT Press, Cambridge, MA. p. 211–225.
- Hebert, Ray. 1965. “Little Tokyo Faces Crisis in Its Rebirth.” *Los Angeles Times*. 19 July 1965.
- Hill, Laurence L. 1929. *La Reina: Los Angeles in Three Centuries*. Security Trust & Savings Bank, Los Angeles, CA. p. 44.
- IBI Group. 2009. Draft, Regional Connector Station Planning Report. Portland, Oregon.
- Kawaratani, Yukio. 2008. “Reluctant Samurai: Memoirs of an Urban Planner from Tule Lake to Bunker Hill.” self-published.

Lantis, David W. Rodney Steiner, and Arthur E. Karien. 1973. *California: A Land of Contrast*. Kendall/Hunt Publishing Company, Dubuque, IA.

Longstreth, Richard. 1998. *City Center to Regional Mall, Architecture, the Automobile and Retailing in Los Angeles, 1920-1950*. MIT Press, Cambridge, MA. p. 11.

Los Angeles Police Department. no date. "History of the Parker Center." Available at: http://www.lapdonline.org/history_of_the_lapd/content_basic_view/1123. Accessed on June 1, 2009.

Los Angeles Times. 1924. "Redskins and Whites Gather for Great Event." July 24, 1924: A1.

Los Angeles Times. 1967. "New 'Main Street' Changing LA." February 19, 1967: J1.

Mikesell, Stephen D. 1986. "The Los Angeles River Bridges: A Study in the Bridge As a Civic Monument." Historical Society of Southern California. Number 68, Winter 1986.

Newmark, Maurice H., and Marco R. Newmark, eds. 1970. *Sixty Years in Southern California, 1853–1913, Containing the Reminiscences of Harris Newmark*, 4th edition. Originally published 1916. Zeitlin & Ver Brugge, Los Angeles, CA., p. 97.

O'Flaherty, Joseph S. 1978. *Those Powerful Years: The South Coast and Los Angeles, 1887–1917*. Exposition Press, Hicksville, NY. p. 33.

PCR Services Corporation. 2006. *Grand Avenue Project Historic Resources Technical Report*. Available at: http://ftp.cajaeir.com/eirs/2006_Projects/Grand_Ave/DEIR%20Sections/Appendices/Appendix%20C%20Historic%20Resources%20Tech%20Report.pdf. Accessed June 5, 2009.

Poole, Jean Bruce. 2002. *El Pueblo: The Historic Heart of Los Angeles*. Getty Publications, Los Angeles, CA. p. 13–36.

Ríos-Bustamante, Antonio, and Pedro Castillo. 1986. *An Illustrated History of Mexican Los Angeles, 1781–1985*. Monograph No. 12. Los Angeles, CA: University of California, Los Angeles, Chicano Studies Research Center Publications. p. 30.

Roseman, Curtis, Ruth Wallach, Dace Taube, Linda McCann, and Geoffrey DeVerteuil. 2004. *The Historic Core of Los Angeles*. Arcadia Publishing, San Francisco, CA.

Starr, Kevin. 1985. *Inventing the Dream: California through the Progressive Era*. Oxford University Press, United Kingdom. pp. 40-41.

Starr, Kevin. 1990. *Material Dreams: Southern California through the 1920s*. Oxford University Press, Oxford, United Kingdom. p. 69–109.

Starr, Kevin. 1997. *The Dream Endures: California Enters the 1930s*. Oxford University Press, Oxford, United Kingdom. p. 163, 170.

Starr, Kevin. 2002. *Embattled Dreams: California in War and Peace*. Oxford University Press, Oxford, United Kingdom. p. viii.

Svinkin, Mark. 2004. “Minimizing Construction Vibration Effects.” *Practice Periodical on Structural Design and Construction* 9: 2, May 1, 2004.

Waugh, Isami Arifuku, Alex Yamato, and Raymond Y. Okamura. 1988. “Japanese Americans in California.” In *Five Views: An Ethnic Historic Site Survey for California*. California Department of Parks and Recreation: Office of Historic Preservation.

Zimmerman, Tom. 2008. *Paradise Promoted: The Booster Campaign That Created Los Angeles, 1870-1930*. Angel City Press.

APPENDIX A

PROJECT AREA OF POTENTIAL EFFECTS

APPENDIX B

RECORDS SEARCH RESULTS

APPENDIX C

COORDINATION WITH LOCAL HISTORIC GROUPS/LOCAL GOVERNMENT

APPENDIX D

CALIFORNIA DEPARTMENT OF PARKS & RECREATION SERIES 523 FORMS

APPENDIX E

PROJECT-RELATED FTA/SHPO CORRESPONDENCE

APPENDIX F

CALIFORNIA HISTORICAL RESOURCE STATUS CODES

APPENDIX G

THE SECRETARY OF THE INTERIOR'S REHABILITATION GUIDELINES

